

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-K

(Mark One)

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

For the fiscal year ended December 31, 2023

or

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

For the transition period from _____ to _____

Commission file number: 001-31343

ASSOCIATED BANC-CORP

(Exact name of registrant as specified in its charter)

Wisconsin

(State or other jurisdiction of
incorporation or organization)

39-1098068

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

433 Main Street

Green Bay, Wisconsin

(Address of principal executive offices)

54301

(Zip Code)

Registrant's telephone number, including area code: (920) 491-7500

SECURITIES REGISTERED PURSUANT TO SECTION 12(b) OF THE ACT:

<u>Title of each class</u>	<u>Trading symbol(s)</u>	<u>Name of each exchange on which registered</u>
Common stock, par value \$0.01 per share	ASB	New York Stock Exchange
Depository Shrs, each representing 1/40th intrst in a shr of 5.875% Non-Cum. Perp Pref Stock, Srs E	ASB PrE	New York Stock Exchange
Depository Shrs, each representing 1/40th intrst in a shr of 5.625% Non-Cum. Perp Pref Stock, Srs F	ASB PrF	New York Stock Exchange
6.625% Fixed-Rate Reset Subordinated Notes due 2033	ASBA	New York Stock Exchange

SECURITIES REGISTERED PURSUANT TO SECTION 12(g) OF THE ACT:

None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.

Yes No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act.

Yes No

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

Yes No

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

Yes No

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

Large accelerated filer

Accelerated filer

Non-accelerated filer

Smaller reporting company

Emerging growth company

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

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

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

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

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

Yes No

As of June 30, 2023, (the last business day of the registrant's most recently completed second fiscal quarter) the aggregate market value of the voting stock held by nonaffiliates of the registrant was \$2,422,814,728. This excludes \$26,594,604 of market value representing the outstanding shares of the registrant owned by all directors and officers who may be deemed affiliates. This includes \$44,867,332 of market value representing 1.83% of the outstanding shares of the registrant held in a fiduciary capacity by the trust company subsidiary of the registrant.

As of January 31, 2024, 151,087,726 shares of common stock were outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's Proxy Statement for the Annual Meeting of Shareholders to be held on April 30, 2024 are incorporated by reference in this Form 10-K into Part III.

Auditor Name:

KPMG LLP

Auditor Location:

Chicago, Illinois

Auditor Firm ID:

185

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ASSOCIATED BANC-CORP

Commonly Used Terms

The following listing provides a reference of common acronyms, abbreviations, and other defined terms used throughout the document:

2017 Plan	2017 Incentive Compensation Plan
2020 Plan	2020 Incentive Compensation Plan
ABRC	Associated Benefits and Risk Consulting, the Corporation's insurance division which was sold on June 30, 2020
ABL	Asset-Based Lending
ACL	Allowance for Credit Losses on Loans and Investments
ACLL	Allowance for Credit Losses on Loans
ADC	Acquisition, Development, or Construction
AFS	Available for Sale
AI	Artificial Intelligence
ALCO	Asset/Liability Committee
AML	Anti-Money Laundering
APSN	Authorize Positive, Settle Negative
Associated / Corporation / our / us / we	Associated Banc-Corp collectively with all of its subsidiaries and affiliates
Associated Bank / the Bank	Associated Bank, National Association
ASU	Accounting Standards Update
ATR	Ability-to-Repay
Basel III	International framework established by the Basel Committee on Banking Supervision for the regulation of capital and liquidity
BHC Act	Bank Holding Company Act of 1956, as amended
bp	basis point(s)
BSA	Bank Secrecy Act
BTFP	Bank Term Funding Program
CAMELS	Capital adequacy, Asset quality, Management, Earnings, Liquidity, and Sensitivity
CAN-SPAM Act	Controlling the Assault of Non-Solicited Pornography and Marketing Act of 2003
CCPA	California Consumer Privacy Act
CDs	Certificates of Deposit
CDIs	Core Deposit Intangibles
CECL	Current Expected Credit Losses
CEO	Chief Executive Officer
CET1	Common Equity Tier 1
CFPB	Consumer Financial Protection Bureau
CGSRC	Corporate Governance and Social Responsibility Committee
CIO	Chief Information Officer
CISO	Chief Information Security Officer
CMO	Collateralized Mortgage Obligation
CPRA	California Privacy Rights Act
CRA	Community Reinvestment Act
CRE	Commercial Real Estate
CRO	Chief Risk Officer
DE&I	Diversity, Equity & Inclusion
DFPI	California Department of Financial Protection and Innovation

DIF	Deposit Insurance Fund
Dodd-Frank Act	Dodd-Frank Wall Street Reform and Consumer Protection Act
DOJ	Department of Justice
DOL	Department of Labor
DTAs	Deferred Tax Assets
DTI	Debt-to-Income
EAR	Earnings at Risk
Economic Growth Act	Economic Growth, Regulatory Relief, and Consumer Protection Act
EMS	Environmental Sustainability Risk Management System
ERC	Enterprise Risk Committee of the Board of Directors
ESG	Environmental, Social, and Governance
Exchange Act	Securities Exchange Act of 1934, as amended
FASB	Financial Accounting Standards Board
FDI Act	Federal Deposit Insurance Act
FDIC	Federal Deposit Insurance Corporation
FDICIA	Federal Deposit Insurance Corporation Improvement Act
Federal Reserve	Board of Governors of the Federal Reserve System
FFELP	Federal Family Education Loan Program
FFIEC	Federal Financial Institutions Examination Council
FHLB	Federal Home Loan Bank
FHLMC	Federal Home Loan Mortgage Corporation
FICO	Financing Corporation, established by the Competitive Equality Banking Act of 1987
FICO Score	Fair Isaac Corporation score, a broad-based risk score to aid in credit decisions
FinCEN	Financial Crimes Enforcement Network
FINRA	Financial Industry Regulatory Authority
First Staunton	First Staunton Bancshares, Incorporated
FNMA	Federal National Mortgage Association
FOMC	Federal Open Market Committee
FTC	Federal Trade Commission
FTEs	Full-time equivalent employees
FTP	Funds Transfer Pricing
GAAP	Generally Accepted Accounting Principles
GHG	Greenhouse Gas
GLBA	Gramm-Leach-Bliley Act of 1999
GNMA	Government National Mortgage Association
GSE	Government-Sponsored Enterprise
HQLA	High-Quality Liquid Assets
HTM	Held to Maturity
HVCRE	High Volatility Commercial Real Estate
IDI	Insured Depository Institution
LGBTQ+	Lesbian, Gay, Bisexual, Transgender, Queer, and Plus
LLC	Limited Liability Company
LMI	Low- to Moderate-Income
LOCOM	Lower of Cost or Market
LTV	Loan-to-Value
MBS	Mortgage-Backed Securities
Moody's	Moody's Investors Service
MSAs	Mortgage Servicing Assets
MSRs	Mortgage Servicing Rights

MVE	Market Value of Equity
NAICS	North American Industry Classification System
NDAA	National Defense Authorization Act
Net Free Funds	Noninterest-bearing sources of funds
NPA	Nonperforming Assets
NYSE	New York Stock Exchange
OCC	Office of the Comptroller of the Currency
OCI	Other Comprehensive Income
OREO	Other Real Estate Owned
Parent Company	Associated Banc-Corp individually
Patriot Act	Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism Act of 2001
PCD	Purchased Credit Deteriorated
PCI-DSS	Payment Card Industry Data Security Standard
QMs	Qualified Mortgages
RAP	Retirement Account Plan - the Corporation's noncontributory defined benefit retirement plan
REIT	Real Estate Investment Trust
Repurchase Agreements	Securities sold under agreements to repurchase
RESPA	Real Estate Settlement Procedures Act
Restricted Stock Awards	Restricted common stock and restricted common stock units to certain key employees
Retirement Eligible Colleagues	Colleagues whose retirement meets the early retirement or normal retirement definitions under the applicable equity compensation plan
Rockefeller	Rockefeller Capital Management
S&P	Standard & Poor's
SAR	Suspicious Activity Report
SBA	Small Business Administration
SBNY	Signature Bank
SEC	U.S. Securities and Exchange Commission
Securities Act	Securities Act of 1933, as amended
Series C Preferred Stock	The Corporation's 6.125% Non-Cumulative Perpetual Preferred Stock, Series C, liquidation preference \$1,000 per share
Series D Preferred Stock	The Corporation's 5.375% Non-Cumulative Perpetual Preferred Stock, Series D, liquidation preference \$1,000 per share
Series E Preferred Stock	The Corporation's 5.875% Non-Cumulative Perpetual Preferred Stock, Series E, liquidation preference \$1,000 per share
Series F Preferred Stock	The Corporation's 5.625% Non-Cumulative Perpetual Preferred Stock, Series F, liquidation preference \$1,000 per share
SMS	Short Message Service
SOFR	Secured Overnight Finance Rate
SVB	Silicon Valley Bank
Tax Act	U.S. Tax Cuts and Jobs Act of 2017
TCPA	Telephone Consumer Protection Act
TDR	Troubled Debt Restructuring
TILA	Truth in Lending Act
Whitnell	Whitnell & Co.

Special Note Regarding Forward-Looking Statements

This document, including the documents that are incorporated by reference, contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended and Section 21E of the Exchange Act. You can identify forward-looking statements by words such as "may," "should," "expect," "plan," "anticipate," "intend," "believe," "estimate," "predict," "potential," "continue," "could," "future," "outlook," or the negative of those terms or other words of similar meaning. You should read statements that contain these words carefully because they discuss our future expectations or state other "forward-looking" information. Such forward-looking statements may relate to our financial condition, results of operations, plans, objectives, future performance, or business and are based upon the beliefs and assumptions of our management and the information available to our management at the time these disclosures are prepared. These forward-looking statements involve risks and uncertainties that we may not be able to accurately predict or control and our actual results may differ materially from those we described in our forward-looking statements. Shareholders should be aware that the occurrence of the events discussed under the heading Risk Factors in this document, and in the information incorporated by reference herein, could have an adverse effect on our business, results of operations, and financial condition. These factors, many of which are beyond our control, include the following.

- Credit risks, including changes in economic conditions and risk relating to our ACL.
- Liquidity and interest rate risks, including the impact of capital market conditions and changes in monetary policy on our borrowings and net interest income.
- Operational risks, including processing, information systems, cybersecurity, vendor problems, business interruption, and fraud risks.
- Strategic and external risks, including economic, political, and competitive forces impacting our business.
- Legal, compliance, and reputational risks, including regulatory and litigation risks.
- The risk that our analyses of these risks and forces could be incorrect and/or that the strategies developed to address them could be unsuccessful.

For a discussion of these and other risks that may cause actual results to differ from expectations, please refer to the Risk Factors Summary and Risk Factors sections of this document. The forward-looking statements contained or incorporated by reference in this document relate only to circumstances as of the date on which the statements are made. We undertake no obligation to update or revise any forward-looking statements, whether as a result of new information, future events, or otherwise.

Risk Factors Summary

Our business is subject to a number of risks, a summary of which is set forth below. These risks are discussed more fully in Part I, Item 1A, Risk Factors herein.

Credit Risks

- Changes and instability in economic conditions, geopolitical matters and financial markets, including a contraction of economic activity, could adversely impact our business, results of operations and financial condition.
- Changes in U.S. trade policies, including the imposition of tariffs and retaliatory tariffs, may adversely impact our business, financial condition, and results of operations.
- Our allowance for credit losses may be insufficient.
- We are subject to lending concentration risks.
- CRE lending may expose us to increased lending risks.
- We depend on the accuracy and completeness of information furnished by and on behalf of our customers and counterparties.
- Lack of system integrity or credit quality related to funds settlement could result in a financial loss.
- We are subject to environmental liability risk associated with lending activities.

Liquidity and Interest Rate Risks

- Impairment of our access to liquidity could affect our ability to meet our obligations.
- The proportion of our deposit account balances that exceed FDIC insurance limits may expose the Bank to enhanced liquidity risk in times of financial distress.
- Adverse changes to our credit ratings could limit our access to funding and increase our borrowing costs.
- We are subject to interest rate risk.
- The impact of interest rates on our mortgage banking business can have a significant impact on revenues.
- Changes in interest rates could reduce the value of our investment securities holdings which would increase our accumulated other comprehensive loss and thereby negatively impact stockholders' equity.
- Changes in interest rates could also reduce the value of our residential mortgage-related securities and MSRs, which could negatively affect our earnings.
- We rely on dividends from our subsidiaries for most of our cash flow.

Operational Risks

- We face significant operational risks due to the high volume and the high dollar value nature of transactions we process.
- Unauthorized disclosure of sensitive or confidential client or customer information, whether through a cyber-attack, other breach of our computer systems or otherwise, could severely harm our business.
- Information security risks for financial institutions like us continue to increase in part because of new technologies, the increased use of the internet and telecommunications technologies (including mobile devices and cloud computing) to conduct financial and other business transactions, political activism, and the increased sophistication and activities of organized crime, perpetrators of fraud, hackers, terrorists and others.
- From time to time, the Corporation engages in acquisitions, including acquisitions of depository institutions. The integration of core systems and processes for such transactions often occurs after the closing, which may create elevated risk of cyber incidents.
- We rely heavily on communications and information systems to conduct our business. We have experienced cybersecurity attacks in the past and our communications and information systems may experience an interruption or breach in security from future attacks.
- We are subject to certain industry standards regarding our credit card-related services. Failure to meet those standards may significantly impact our ability to offer these services.
- Compliance with ever-evolving federal and state laws relating to the handling of information about individuals involves significant expenditure and resources, and any failure by us or our vendors to comply may result in significant liability, negative publicity, and/or an erosion of trust, which could materially adversely affect our business, results of operations, and financial condition.
- Any actual or perceived failure to comply with evolving regulatory frameworks around the development and use of artificial intelligence could adversely affect our business, results of operations, and financial condition.
- We are dependent upon third parties for certain information system, data management and processing services, and to provide key components of our business infrastructure.
- The potential for business interruption exists throughout our organization.
- Changes in the federal, state, or local tax laws may negatively impact our financial performance.
- Impairment of investment securities, goodwill, other intangible assets, or DTAs could require charges to earnings, which could result in a negative impact on our results of operations.
- Revenues from our investment management and asset servicing businesses are significant to our earnings.
- Climate change and related legislative and regulatory initiatives may result in operational changes and expenditures that could significantly impact our business.
- Severe weather, natural disasters, public health issues, civil unrest, acts of war or terrorism, and other external events could significantly impact our ability to conduct business.
- Increasing, complex and evolving regulatory, stakeholder, and other third party expectations on ESG matters could adversely affect our reputation, our access to capital and the market price of our securities.

Strategic and External Risks

- Our earnings are significantly affected by the fiscal and monetary policies of the federal government and its agencies.
- Our financial condition and results of operations could be negatively affected if we fail to grow or fail to manage our growth effectively.
- We operate in a highly competitive industry and market area.
- Fiscal challenges facing the U.S. government could negatively impact financial markets which in turn could have an adverse effect on our financial position or results of operations.
- Consumers may decide not to use banks to complete their financial transactions.
- Our profitability depends significantly on economic conditions in the states within which we do business.
- The earnings of financial services companies are significantly affected by general business and economic conditions.
- New lines of business or new products and services may subject us to additional risk.
- Failure to keep pace with technological change could adversely affect our business.
- We may be adversely affected by risks associated with potential and completed acquisitions.
- Acquisitions may be delayed, impeded, or prohibited due to regulatory issues.

Legal, Regulatory, Compliance and Reputational Risks

- We are subject to extensive government regulation and supervision.
- The Bank faces risks related to the adoption of future legislation and potential changes in federal regulatory agency leadership, policies, and priorities.
- Recent volatility in the banking sector, triggered by the failures of Silicon Valley Bank, Signature Bank and First Republic Bank, may result in legislative initiatives, agency rulemaking activities, or changes in agency policies and priorities that could subject the Corporation and the Bank to enhanced government regulation and supervision.
- We will experience increases in FDIC insurance assessments due to the bank failures that occurred in 2023.
- Changes in requirements relating to the standard of conduct for broker-dealers under applicable federal and state law may adversely affect our business.

- The CFPB has reshaped the consumer financial laws through rulemaking and enforcement of the prohibitions against unfair, deceptive and abusive business practices. Compliance with any such change may impact the business operations of depository institutions offering consumer financial products or services, including the Bank.
- The Bank is periodically examined for mortgage-related issues, including mortgage loan and default services, fair lending, and mortgage banking.
- We may experience unanticipated losses as a result of residential mortgage loan repurchase or reimbursement obligations under agreements with secondary market purchasers.
- Fee revenues from overdraft protection programs constitute a significant portion of our noninterest income and may be subject to increased supervisory scrutiny.
- We are subject to examinations and challenges by tax authorities.
- We are subject to claims and litigation pertaining to fiduciary responsibility.
- We are a defendant in a variety of litigation and other actions, which may have a material adverse effect on our financial condition and results of operation.
- Negative publicity could damage our reputation.
- Ethics or conflict of interest issues could damage our reputation.

Risks Related to an Investment in Our Securities

- The price of our securities can be volatile.
- There may be future sales or other dilution of our equity, which may adversely affect the market price of our securities.
- We may reduce or eliminate dividends on our common stock.
- Common stock is equity and is subordinate to our existing and future indebtedness and preferred stock and effectively subordinated to all the indebtedness and other non-common equity claims against our subsidiaries.
- Our articles of incorporation, bylaws, and certain banking laws may have an anti-takeover effect.
- An investment in our common stock is not an insured deposit.
- An entity holding as little as a 5% interest in our outstanding common stock could, under certain circumstances, be subject to regulation as a "bank holding company."
- Our ability to originate residential mortgage loans for portfolio has been adversely affected by the increased competition resulting from the unprecedented involvement of the U.S. government and GSEs in the residential mortgage market.

General Risk Factors

- Changes in our accounting policies or in accounting standards could materially affect how we report our financial results.
- Our internal controls may be ineffective.
- We may not be able to attract and retain skilled people.
- Loss of key employees may disrupt relationships with certain customers.

PART I

ITEM 1.

Business

General

Associated Banc-Corp is a bank holding company registered pursuant to the BHC Act. Our bank subsidiary, Associated Bank, traces its history back to the founding of the Bank of Neenah in 1861. We were incorporated in Wisconsin in 1964 and were inactive until 1969 when permission was received from the Federal Reserve to acquire three banks. At December 31, 2023, we owned one nationally chartered commercial bank headquartered in Green Bay, Wisconsin, which serves local communities across the upper Midwest, one nationally chartered trust company headquartered in Milwaukee, Wisconsin, and 12 limited purpose banking and nonbanking subsidiaries either located in or conducting business primarily in our three state branch footprint (Wisconsin, Illinois, and Minnesota) that are closely related or incidental to the business of banking or financial in nature. Measured by total assets reported at December 31, 2023, we are the largest bank holding company headquartered in Wisconsin.

Services

Through Associated Bank and various nonbanking subsidiaries, we provide a broad array of banking and nonbanking products and services to individuals and businesses through 196 banking branches at December 31, 2023, serving more than 100 communities, primarily within our three-state branch footprint. Our business is primarily relationship-driven and is organized into three reportable segments: Corporate and Commercial Specialty; Community, Consumer, and Business; and Risk Management and Shared Services.

See Note 21 Segment Reporting of the notes to consolidated financial statements in Part II, Item 8, Financial Statements and Supplementary Data, for additional information concerning our reportable segments.

We are not dependent upon a single or a few customers, the loss of which would have a material adverse effect on us.

Human Capital Matters

We are very fortunate to have a diverse, committed team of approximately 4,100 colleagues at December 31, 2023 who are capable, determined and empowered to drive our company forward. None of our colleagues are represented by unions.

Talent Acquisition, Development, and Retention: We believe attracting and retaining diverse talent in a highly competitive candidate market fuels our ability to serve our customers and support our communities. We are focused on sourcing talent from all backgrounds through engagement with workforce development programs, partnerships with diverse organizations, and active campus recruitment. As a result, we were able to hire nearly 750 external candidates in 2023. At the same time, in 2023, we had low voluntary turnover of 12% while 20% of colleagues advanced their careers at the Corporation through nearly 850 internal promotions or lateral moves. At December 31, 2023, the average tenure of our workforce was 8.5 years while the average tenure of our executive leadership team was 11.0 years.

Through internal and external training and development programs, we aim to help our colleagues improve their skills so they can achieve their career goals and transition to more challenging roles.

- Beginning in 2023, the Corporation initiated individual development plans for all colleagues designed to enhance colleague development, growth and career pathing through identification of career interests, and detailed action plans focused on development areas.
- In 2023, we introduced significant training and resources for development and career planning to include workshops for both leaders and colleagues. During the last six months of the year, we completed nearly 110 individual career coaching sessions and offered 30 hours of workshops to assist people in creating meaningful development plans.
- Since inception of the mentorship program in 2022, the program has logged nearly 1,950 self-reported hours as of January 31, 2024. In 2023, we added a third program aimed at successfully onboarding new leaders.

Colleague Engagement: By strengthening our workforce and providing opportunities for all colleagues to apply their talent and grow as professionals, we strive to foster pride in working for Associated and to be recognized as the employer of choice among Midwestern financial services firms. During 2023, many of our colleagues and community members responded to and recognized our efforts:

- Colleague engagement is a focus for our company. During 2023, 92% of our colleagues provided feedback through an annual workplace survey conducted by a third-party on key topics related to the overall health and culture of the organization. The survey respondent percentage is well above the average response rate for commercial banks. For the seventh year in a row, we received more than 8,000 colleague comments, including more than 9,000 in 2023, which we believe demonstrates that colleagues are interested in, and comfortable with, sharing candid feedback.
- Associated Bank continues to be recognized as a Top Workplace. In 2023, we earned the Top Workplaces USA Award for the fourth consecutive year. Regionally, Associated Bank was named a Top Workplaces 2023 award winner in Chicago, Milwaukee and Southeast Wisconsin, and the Greater Madison area. Associated Bank also received Top Workplaces 2023 for Professional Development, Employee Appreciation, Employee Well-Being, Leadership, Innovation, Compensation & Benefits, Work-Life Flexibility, and Financial Services. The Top Workplace awards are issued by Energage.

Health and Well-being: We are pleased to support total health and well-being through a variety of benefits, programs, activities, and educational opportunities throughout the year. Our dedicated Total Well-being team provides free and confidential health coaching while a 24/7/365 Employee Assistance Program (EAP) provides access to complimentary counseling services, financial coaching, and a variety of additional resources to support the unique needs of our colleagues and their families (e.g. elder, adult, child, family support and legal services). Additionally, our comprehensive Total Well-being platform provides all colleagues with an opportunity to earn incentives throughout the year for participating in activities, challenges, and educational opportunities. As of December 31, 2023:

- Nearly 3,000 colleagues and spouses participated in an annual wellness visit with a primary care provider.
- Nearly 1,725 colleagues received a well-being reimbursement for the purchase of items such as gym memberships, home fitness equipment, and/or fitness tracking devices. The total value for well-being reimbursements was nearly \$320,000.
- Nearly 1,200 colleagues earned an incentive through our Total Well-being platform totaling over \$130,000.

Market-based Pay and Rewards: We regularly review our pay and benefits programs so that we are offering a total compensation package, including salary, incentive opportunities, and benefits that we believe is fair, equitable, and competitive in our marketplace.

Culture: We believe our success begins and ends with people. For this reason, fostering a culture where people feel valued, respected, and comfortable sharing ideas and perspectives is a core focus of the Corporation. Our culture is anchored in the belief that we are better together, and great ideas can come from anywhere in the Corporation. During 2021, the Corporation launched our Associated Culture Team, with the intent to have approximately 12 colleagues representing diverse business lines, positions, and geographies across the Corporation. The team's purpose is to provide a voice for colleague feedback regarding current and desired states of our corporate culture.

Diversity, Equity and Inclusion: Our DE&I efforts focus on shared commitment and action across business lines to foster a culture of belonging and inclusion among our colleagues. Our efforts extend to our markets by strengthening our DE&I efforts in our relationships with customers and the communities that we live in and serve. These efforts are supported by the work of our seven Colleague Resource Groups and the members that drive actions and events. These groups, which are open to all employees, help to drive greater organizational awareness and work to address the unique needs of people of different cultures and underrepresented groups not limited to, but including, people of color, young professionals, women, veterans, LGBTQ+, and people with disabilities.

Further, we feel a critical component of our success is our ability to recognize and value diversity while promoting inclusion, both internally and in the communities we serve.

As of December 31, 2023, as a result of these efforts, our colleague representation is as follows:

- People of color represented 18%, protected veterans represented 2%, people with disabilities represented 11%, and women represented 62% of our total workforce.
- We continue to advance representation from all backgrounds at all levels across our organization. At year end, women and people of color represented 65% of all Assistant Vice President roles and women represented 31% of all Senior Vice President roles.
- In addition, 40% of both our Executive Leadership Team and Board of Directors are represented by women and people of color.

We continue to develop and implement programs to support DE&I:

- All colleagues participate in annual DE&I training and have the opportunity to attend a multitude of educational speaker events, workshops, and webinars on various DE&I related topics. Topics include, but are not limited to, educating on different lived experiences, determining factors that promote inclusion, benefits of having a diverse workforce, and the importance of having an intentional focus on hiring and retaining groups from different backgrounds. Additionally, sessions are offered specifically to leaders on topics such as cultural competency and interrupting bias to further promote inclusive leadership.
- We have an Associated Bank Honors Program that includes a wide range of veteran-focused initiatives in an effort to reach and recruit military veterans while helping support our military connected customers, colleagues, and communities.

In 2023, we used our expertise to provide loans and investments as well as financial support to:

- Promote affordable housing,
- Provide small business lending, and
- Advance neighborhood development through philanthropic support.

These initiatives and investments create opportunities for individuals, families, and businesses to fully participate in and share the rewards of building economic stability in our communities. Our work with Community Advisory Councils based in Illinois, Wisconsin, and Minnesota focuses on identifying and addressing systemic economic development and equity issues.

Our DE&I efforts have been recognized in 2023 by our communities as follows:

- Associated Bank was recognized with a top score of 100 on the Human Rights Campaign Foundation's 2023 Corporate Equality Index and recognized as a Leader in LGBTQ+ Workplace Inclusion.
- Recognized as a 2023 Best Places to Work for Disability Inclusion from Disability:IN Disability Equality Index®.
- Associated Bank continues to be recognized as a Best for Vets employer from Military Times for the seventh consecutive year.

Competition

The financial services industry is highly competitive. We compete for loans, deposits, and financial services in all of our principal markets. We compete directly with other bank and nonbank institutions located within our markets, internet-based banks, out-of-market banks and bank holding companies that advertise or otherwise serve our markets, money market funds and other mutual funds, brokerage houses, and various other financial institutions. Additionally, we compete with insurance companies, leasing companies, regulated small loan companies, credit unions, governmental agencies, and commercial entities offering financial services products, including nonbank lenders and financial technology companies. Competition involves, among other things, efforts to retain current customers and to obtain new loans and deposits, the scope and types of services offered, interest rates paid on deposits and charged on loans, as well as other aspects of banking. We also face direct competition from subsidiaries of bank holding companies that have far greater assets and resources than ours.

Supervision and Regulation

Overview

The Corporation and its banking and nonbanking subsidiaries are subject to extensive regulation and oversight both at the federal and state levels. The following is an overview of the statutory and regulatory framework that affects the business of the Corporation and our subsidiaries.

BHC Act Requirements

As a registered bank holding company under the BHC Act, we are regulated, supervised, and examined by the Federal Reserve. In connection with applicable requirements, bank holding companies file periodic reports and other information with the Federal Reserve. The BHC Act also governs the activities that are permissible for bank holding companies and their affiliates and permits the Federal Reserve, in certain circumstances, to issue cease and desist orders and other enforcement actions against bank holding companies and their nonbanking affiliates to correct and curtail unsafe or unsound banking practices. Under the Dodd-Frank Act and longstanding Federal Reserve policy, bank holding companies are required to act as a source of financial strength to each of their banking subsidiaries pursuant to which such holding company may be required to commit financial resources to support such subsidiaries in circumstances when, absent such requirements, they might not otherwise do so. The BHC Act further regulates holding company activities, including requirements and limitations relating to capital, transactions with officers, directors and affiliates, securities issuances, dividend payments, inter-affiliate liabilities, extensions of credit, and expansion through mergers and acquisitions.

The BHC Act allows certain qualifying bank holding companies that elect treatment as “financial holding companies” to engage in activities that are financial in nature and that explicitly include the underwriting and sale of insurance. The Parent Company thus far has not elected to be treated as a financial holding company. Bank holding companies that have not elected such treatment generally must limit their activities to banking activities and activities that are closely related to banking.

Regulation of Associated Bank and Trust Company Subsidiaries

Associated Bank and our nationally-chartered trust company subsidiary are regulated, supervised and examined by the OCC. The OCC has primary supervisory and regulatory authority over the operations of Associated Bank and the Corporation's trust company subsidiary. As part of this authority, Associated Bank and our trust company subsidiary are required to file periodic reports with the OCC and are subject to regulation, supervision and examination by the OCC. To support its supervisory function, the OCC has the authority to assess and charge fees on all national banks according to a set fee schedule. On December 1, 2023, the OCC published its assessment rates for the 2024 calendar year. The OCC elected to maintain its general assessment schedule from 2023 with no adjustments for inflation.

Associated Bank, our only subsidiary that accepts insured deposits, is also subject to examination by the FDIC. We are subject to the enforcement and rule-making authority of the CFPB regarding consumer financial products. The CFPB has the authority to create and enforce consumer protection rules and regulations and has the power to examine us for compliance with such rules and regulations. The CFPB also has the authority to prohibit “unfair, deceptive or abusive” acts and practices. The CFPB has examination and enforcement authority over all banks with more than \$10 billion in assets, such as the Bank.

Standards for Safety and Soundness

The federal banking agencies have adopted the Interagency Guidelines for Establishing Standards for Safety and Soundness (the “Guidelines”). The Guidelines establish certain safety and soundness standards for all depository institutions. The operational and managerial standards in the Guidelines relate to the following: (1) internal controls and information systems; (2) internal audit systems; (3) loan documentation; (4) credit underwriting; (5) interest rate exposure; (6) asset growth; (7)

compensation, fees and benefits; (8) asset quality; and (9) earnings. Rather than providing specific rules, the Guidelines set forth basic compliance considerations and guidance with respect to a depository institution. Failure to meet the standards in the Guidelines, however, could result in a request by the OCC for a written compliance plan to demonstrate efforts to come into compliance with such Guidelines. Failure to provide and implement a plan requires the appropriate federal banking agency to issue an order to the institution requiring compliance.

Corporate and Risk Governance

We are required as a supervisory matter to implement an effective corporate and risk governance framework commensurate with our size, complexity and risk profile. Fundamental components of this framework include the authorities and responsibilities of directors and senior managers to govern the operations and structure of the Corporation and the Bank, as well as the implementation and management of systems and processes designed to identify, measure, monitor and control the risks to the organization, specifically including strategic, reputation, compliance and operational risks.

Corporate and risk governance oversight is a core supervisory function of the federal banking agencies, including the OCC. National banks with at least \$50 billion in total assets are subject to prescribed standards for the implementation of risk governance frameworks addressing credit risk, interest rate risk, liquidity risk, price risk, operational risk, compliance risk, strategic risk, and reputation risks. Additionally, on October 11, 2023, the FDIC issued a proposed rule and guidelines that would require all FDIC-supervised IDs with total assets of \$10 billion or more to adopt heightened corporate governance and risk management standards pursuant to which covered institutions would be required to develop and implement a comprehensive and independent risk management function and effective programs for internal controls, risk management, and audits. The prospects and timing for the adoption by the FDIC of a final rule are not certain at this time.

Although the Bank presently is not subject to the existing OCC risk governance standards for larger banks based on its current asset size, and the Bank, as a national bank supervised by the OCC, is not within the scope of the FDIC's proposed rule, certain expectations set forth in existing and proposed regulatory guidelines may be imposed upon the Bank in the ordinary course of supervision and examination.

Further, the federal banking agencies have in recent years increased their focus on banks' third-party risk management controls and practices. On June 6, 2023, the federal banking agencies, including the OCC, adopted interagency guidance on risk management of third-party relationships. The guidance applies broadly to any business agreement between a banking organization and another entity, by contract or otherwise (including affiliated entities), and it requires banking organizations to analyze the risks associated with each third-party relationship and establish effective governance and risk management processes for all stages of a third-party relationship, including planning, due diligence and third-party selection, contract negotiation, ongoing monitoring, and termination. See Item 1A, Risk Factors — Operational Risks for additional discussion of this topic.

Banking Acquisitions

We are required to obtain prior Federal Reserve approval before acquiring more than 5 percent of the voting shares, or substantially all of the assets, of a bank holding company, bank or savings association. In addition, the prior approval of the OCC is required for a national bank to merge with another bank or purchase the assets or assume the deposits of another bank. In determining whether to approve a proposed bank acquisition, federal bank regulators will consider, among other factors, the effect of the acquisition on competition, the public benefits expected to be received from the acquisition, the projected capital ratios and levels on a post-acquisition basis, and the acquiring institution's record of addressing the credit needs of the communities it serves, including the needs of LMI neighborhoods, consistent with the safe and sound operation of the bank, under the CRA.

In July of 2021, President Biden issued an Executive Order on Promoting Competition in the American Economy. Among other initiatives, the Executive Order encouraged the federal banking agencies to review their current merger oversight practices under the BHC Act and the Bank Merger Act and adopt a plan for revitalization of such practices. In response, on March 25, 2022, the FDIC issued a request for information on the effectiveness of the existing framework for evaluating bank mergers and acquisitions under the FDI Act with particular focus on the increase in asset concentration among banking organizations with more than \$100 billion in total assets. Further, the FTC and DOJ jointly released the 2023 Draft Merger Guidelines for public comment to strengthen the agencies' oversight over mergers that would violate the federal antitrust laws. If adopted as proposed in draft form, the Merger Guidelines would substantially modify the existing regulatory framework for merger enforcement. It is not yet clear what effect, if any, the draft Merger Guidelines will have on the federal banking agencies as they consider revising the requirements for mergers involving banks and bank holding companies. The timing and prospects for the formal adoption by the federal banking agencies of modified regulatory standards for the evaluation of bank mergers and acquisitions is uncertain at this time. See Item 1A, Risk Factors — Operational Risks for additional discussion of this topic.

Banking Subsidiary Dividends

The Parent Company is a legal entity separate and distinct from the Bank and other nonbanking subsidiaries. A substantial portion of our cash flow comes from dividends paid to us by Associated Bank. The OCC's prior approval of the payment of dividends by Associated Bank to the Parent Company is required only if the total of all dividends declared by the Bank in any calendar year exceeds the sum of the Bank's retained net income for that year and its retained net income for the preceding two calendar years, less any required transfers to surplus. Federal law also prohibits national banks from paying dividends that would be greater than the bank's undivided profits after deducting statutory bad debt in excess of the bank's allowance for loan losses. In addition, under the FDICIA, an IDI, such as the Bank, is prohibited from making capital distributions, including the payment of dividends, if, after making such distribution, the institution would become "undercapitalized" (as such term is used in the FDICIA).

Holding Company Dividends

In addition, we and the Bank are subject to various general regulatory policies and requirements relating to the payment of dividends, including requirements to maintain adequate capital above regulatory minimums. The appropriate federal regulatory authority is authorized to determine under certain circumstances relating to the financial condition of a bank or bank holding company that the payment of dividends would be an unsafe or unsound practice and to prohibit payment thereof. Under the Dodd-Frank Act and the requirements of the Federal Reserve, the Parent Company, as a bank holding company, is required to serve as a source of financial strength to the Bank and to commit resources to support the Bank. In addition, consistent with its "source of strength" policy, the Federal Reserve has stated that, as a matter of prudent banking, a bank holding company should not maintain a level of cash dividends to its shareholders that places undue pressure on the capital of its bank subsidiaries, or that can be funded only through additional borrowings or other arrangements that may undermine the bank holding company's ability to serve as a source of strength. The appropriate federal regulatory authorities have indicated that paying dividends that deplete a bank's capital base to an inadequate level would be an unsafe and unsound banking practice and that banking organizations should generally pay dividends only out of current operating earnings.

Capital Requirements

We are subject to various regulatory capital requirements both at the Parent Company and at the Bank level administered by the Federal Reserve and the OCC, respectively. Failure to meet minimum capital requirements could result in certain mandatory and possible additional discretionary actions by regulators that, if undertaken, could have an adverse material effect on our financial condition and results of operations. Under capital adequacy guidelines and the regulatory framework for prompt corrective action (described below), we must meet specific capital guidelines that involve quantitative measures of our assets, liabilities, and certain off-balance sheet items as calculated under regulatory accounting policies. Our capital amounts and classification are also subject to judgments by the regulators regarding qualitative components, risk weightings, and other factors. We have consistently maintained regulatory capital ratios at or above the well capitalized standards.

The Federal Reserve, the OCC and the FDIC have adopted risk-based capital regulations implementing certain provisions of the Dodd-Frank Act and Basel III. The agencies' previous capital regulations were amended in 2013 following the enactment of the Dodd-Frank Act to strengthen the components of regulatory capital, increase risk-based capital requirements, and make selected changes to the calculation of risk-weighted assets. In general, subject to certain exceptions as discussed further below, minimum capital standards established under the risk-based capital regulations include a CET1 capital to risk-weighted assets ratio of 4.5 percent, a Tier 1 capital to risk-weighted assets ratio of 6.0 percent, a total capital to risk-weighted assets ratio of 8.0 percent, and a Tier 1 capital to adjusted average total assets leverage ratio of 4.0 percent. In determining the amount of risk-weighted assets for purposes of calculating risk-based capital ratios, all assets, including certain off-balance sheet assets (for example, recourse obligations, direct credit substitutes and residual interests) are multiplied by a risk-weight factor assigned by the regulations based on the risks believed inherent in the type of asset. Higher levels of capital are required for asset categories believed to present greater risk. CET1 capital is generally defined as common shareholders' equity and retained earnings. Tier 1 capital is generally defined as CET1 and additional Tier 1 capital. Additional Tier 1 capital includes certain noncumulative perpetual preferred stock and related surplus and minority interests in equity accounts of consolidated subsidiaries. Total capital includes Tier 1 capital (CET1 capital plus additional Tier 1 capital) and Tier 2 capital. Tier 2 capital is comprised of capital instruments and related surplus, meeting specified requirements, and may include cumulative preferred stock and long-term perpetual preferred stock, mandatory convertible securities, intermediate preferred stock and subordinated debt. Also included in Tier 2 capital is the allowance for credit losses limited to a maximum of 1.25 percent of risk-weighted assets. Calculation of all types of regulatory capital is subject to deductions and adjustments specified in the regulations. In assessing an institution's capital adequacy, the OCC takes into consideration not only these numeric factors, but qualitative factors as well, and has the authority to establish higher capital requirements for individual institutions where deemed necessary.

In addition to establishing the minimum regulatory capital requirements, the capital regulations limit capital distributions and certain discretionary bonus payments to management if the institution does not hold a capital conservation buffer consisting of 2.5 percent of CET1 capital to risk-weighted assets above the amount necessary to meet its minimum risk-based capital requirements.

Through subsequent rulemaking, the federal banking agencies provided certain forms of relief to banking organizations that are not subject to the capital regulation's advanced approaches, such as the Corporation. For instance, non-advanced approaches institutions are subject to simpler regulatory capital requirements for MSAs, certain DTAs arising from temporary differences, investments in the capital of unconsolidated financial institutions, and requirements for the amount of capital issued by a consolidated subsidiary of a banking organization and held by third parties (sometimes referred to as a minority interest) that is includable in regulatory capital.

Specifically, such institutions may deduct from CET1 capital any amount of MSAs, temporary difference DTAs, and investments in the capital of unconsolidated financial institutions that individually exceeds 25 percent of CET1 capital.

On July 27, 2023, the federal banking agencies issued a proposed rule to implement the final components of the Basel III standards set by the Basel Committee on Banking Supervision in 2017. The proposed rule, which would not apply to the Corporation and the Bank as proposed, would substantially revise the existing regulatory capital framework for institutions with \$100 billion or more of assets. See Item 1A, Risk Factors — Legal, Regulatory, Compliance and Reputational Risks for additional discussion of this topic.

We continue to exceed all capital requirements necessary to be deemed “well-capitalized” for all regulatory purposes under the capital regulations. For further detail on capital and capital ratios, see discussion under the Liquidity and Capital sections under Part II, Item 7, Management's Discussion and Analysis of Financial Condition and Results of Operations, and under Part II, Item 8, Financial Statements and Supplementary Data, Note 19 Regulatory Matters of the notes to consolidated financial statements.

Current Expected Credit Loss Treatment

In June 2016, the FASB issued an accounting standard update, “Financial Instruments-Credit Losses (Topic 326), Measurement of Credit Losses on Financial Instruments,” which replaced the “incurred loss” model for recognizing credit losses with an “expected loss” model referred to as the CECL model. Under the CECL model, we are required to present certain financial assets carried at amortized cost, such as loans held for investment and HTM securities, at the net amount expected to be collected. The measurement of expected credit losses is to be based on information about past events, including historical experience, current conditions, and reasonable and supportable forecasts that affect the collectability of the reported amount. On December 21, 2018, the federal banking agencies approved a final rule modifying their regulatory capital rules and providing an option to phase in over a period of three years the day-one regulatory capital effects of the CECL model. The final rule also revises the agencies’ other rules to reflect the update to the accounting standards. The final rule took effect April 1, 2019. However, on August 26, 2020, the federal bank regulatory agencies issued a final rule that provided institutions that had adopted the CECL accounting standard in 2020 with the option to mitigate the estimated capital effects of CECL for two years, followed by a three-year transition period. Taken together, these measures offer institutions a transition period of up to five years. The Corporation elected to utilize the 2020 Capital Transition Relief as permitted under applicable regulations. As a result, the three-year phase-out period described above commenced in 2022.

Capital Planning and Stress Testing Requirements

As part of the regulatory relief provided by the Economic Growth Act, the asset threshold requiring IDIs to conduct and report to their primary federal bank regulators annual company-run stress tests, as well as to comply with leverage limits, liquidity requirements, and resolution planning requirements, was raised from \$10 billion to \$250 billion in total consolidated assets and the stress testing requirement was made “periodic” rather than annual. As a result of the legislation and related OCC rulemaking thereunder, the Bank is no longer subject to Dodd-Frank Act stress testing requirements. The Economic Growth Act also provided that bank holding companies under \$100 billion in assets were no longer subject to stress testing requirements. The amended regulations also provide the Federal Reserve with discretion to subject bank holding companies with more than \$100 billion in total assets to enhanced supervision. In addition, Section 214 of the Economic Growth Act and its implementing regulation prohibit the federal banking agencies from requiring the Bank to assign a heightened risk weight to certain HVCRE ADC loans as previously required under the Basel III Capital Rules. Notwithstanding these regulatory amendments, the federal banking agencies indicated through interagency guidance that the capital planning and risk management practices of institutions with total assets less than \$100 billion would continue to be reviewed through the regular supervisory process. Although the Corporation will continue to monitor and stress test its capital consistent with the safety and soundness expectations of the

federal regulators, the Corporation no longer publishes stress testing results as a result of the legislative and regulatory amendments.

Enforcement Powers of the Federal Banking Agencies; Prompt Corrective Action

The Federal Reserve, the OCC, and the CFPB have extensive supervisory authority over their regulated institutions, including, among other things, the power to compel higher reserves, the ability to assess civil money penalties, the ability to issue cease-and-desist or removal orders and the ability to initiate injunctive actions. In general, these enforcement actions may be initiated for violations of laws and regulations or for unsafe or unsound banking practices. Other actions or inactions by the Parent Company may provide the basis for enforcement action, including misleading or untimely reports.

Federal banking regulators are authorized and, under certain circumstances, required to take certain actions against banks that fail to meet their capital requirements. The federal banking agencies have additional enforcement authority with respect to undercapitalized depository institutions.

“Well capitalized” institutions may generally operate without supervisory restriction. “Adequately capitalized” institutions cannot normally pay dividends or make any capital contributions that would leave them undercapitalized; they cannot pay a management fee to a controlling person if, after paying the fee, they would be undercapitalized; and they cannot accept, renew or roll over any brokered deposit unless the bank has applied for and been granted a waiver by the FDIC.

The federal banking agencies are required to take action to restrict the activities of an “undercapitalized,” “significantly undercapitalized,” or “critically undercapitalized” IDI. Any such bank must submit a capital restoration plan that is guaranteed by the parent holding company. Until such plan is approved, it may not increase its assets, acquire another institution, establish a branch or engage in any new activities, and generally may not make capital distributions. In certain situations, a federal banking agency may reclassify a well-capitalized institution as adequately capitalized and may require an adequately capitalized or undercapitalized institution to comply with supervisory actions as if the institution were in the next lower category.

Institutions must file a capital restoration plan with the OCC within 45 days of the date it receives a notice from the OCC that it is “undercapitalized,” “significantly undercapitalized,” or “critically undercapitalized.” Compliance with a capital restoration plan must be guaranteed by a parent holding company. In addition, the OCC is permitted to take any one of a number of discretionary supervisory actions, including but not limited to the issuance of a capital directive and the replacement of senior executive officers and directors.

Finally, bank regulatory agencies have the ability to impose higher than normal capital requirements known as individual minimum capital requirements for institutions with a high-risk profile.

At December 31, 2023, the Bank satisfied the capital requirements necessary to be deemed “well-capitalized.” In the event of a change to this status, the imposition of any of the measures described above could have a material adverse effect on the Corporation and on its profitability and operations. The Corporation’s shareholders do not have preemptive rights and, therefore, if the Corporation is directed by the OCC or the FDIC to issue additional shares of common stock, such issuance may result in dilution in shareholders’ percentage of ownership of the Corporation.

Deposit Insurance Premiums

Associated Bank is a member of the FDIC and pays an insurance premium to the FDIC based upon its assessment rates on a quarterly basis. Deposits are insured up to applicable limits by the FDIC and such insurance is backed by the full faith and credit of the United States Government.

Under the Dodd-Frank Act, a permanent increase in deposit insurance was authorized to \$250,000 per depositor, per IDI for each account ownership category.

The Dodd-Frank Act also set the minimum DIF reserve ratio at 1.35 percent of estimated insured deposits. The FDIC was required to attain this ratio by September 30, 2020. The Dodd-Frank Act also required the FDIC to define the deposit insurance assessment base for an IDI as an amount equal to the institution’s average consolidated total assets during the assessment period minus average tangible equity. The assessment rate schedule for larger institutions like Associated Bank (i.e., institutions with at least \$10 billion in assets) differentiates between such large institutions by use of a “scorecard” that combines an institution’s CAMELS ratings with certain forward-looking financial information to measure the risk to the DIF. Pursuant to this “scorecard” method, two scores (a performance score and a loss severity score) will be combined and converted to an initial base assessment rate. The performance score measures an institution’s financial performance and ability to withstand stress. The loss severity score measures the relative magnitude of potential losses to the DIF in the event of the institution’s failure.

Total scores are converted pursuant to a predetermined formula into an initial base assessment rate. Assessment rates range from 2.5 bp to 45 bp for large institutions.

The FDIC has the flexibility to adopt actual rates that are higher or lower than the total base assessment rates adopted without notice and comment, if certain conditions are met.

On October 18, 2022, the FDIC adopted a final rule, applicable to all IDIs, to increase base deposit insurance assessment rate schedules uniformly by 2 bp beginning in the first quarterly assessment period of 2023. The increase was instituted to account for extraordinary growth in insured deposits during the first and second quarters of 2020, which caused a substantial decrease in the DIF reserve ratio. The FDIC indicated that the new assessment rate schedules will remain in effect until the DIF reserve ratio meets or exceeds 2 percent.

Further, on November 16, 2023, the FDIC issued a final rule to implement a special assessment to recover the loss to the DIF associated with protecting uninsured depositors following the closure of SVB and SBNY. Under the final rule, the assessment base for an IDI will be equal to the institution's estimated uninsured deposits as of December 31, 2022, adjusted to exclude the first \$5 billion in estimated uninsured deposits. Under the final rule, the FDIC will collect the special assessment at an annual rate of 13.4 bp beginning with the first quarterly assessment period of 2024 and will continue to collect special assessments for an anticipated total of eight quarterly assessment periods. At December 31, 2023, our estimated level of uninsured deposits is \$14.8 billion. See Item 1A, Risk Factors — Legal, Regulatory, Compliance and Reputational Risks for additional discussion of this topic.

DIF-insured institutions pay a FICO assessment in order to fund the interest on bonds issued in the 1980s in connection with the failures in the thrift industry. The FICO assessment was computed on assets as required by the Dodd-Frank Act. These assessments continued until the bonds matured in September 2019. The Corporation's assessment rate for FDIC was approximately 9 bp for 2023.

The FDIC is authorized to conduct examinations of and require reporting by FDIC-insured institutions. It is also authorized to terminate a depository bank's deposit insurance upon a finding by the FDIC that the bank's financial condition is unsafe or unsound or that the institution has engaged in unsafe or unsound practices or has violated any applicable rule, regulation, order or condition enacted or imposed by the bank's regulatory agency. The termination of deposit insurance for our national bank subsidiary would have a material adverse effect on our earnings, operations and financial condition.

Historically, deposit insurance premiums we have paid to the FDIC have been deductible for federal income tax purposes; however, the Tax Act disallows the deduction of such premium payments for banking organizations with total consolidated assets of \$50 billion or more. For banks with less than \$50 billion in total consolidated assets, such as ours, the premium deduction is phased out based on the proportion of a bank's assets exceeding \$10 billion.

Brokered Deposits

Section 29 of the FDI Act and FDIC regulations thereunder limit the ability of an IDI, such as the Bank, to accept, renew or roll over brokered deposits unless the institution is well-capitalized under the prompt corrective action framework described above, or unless it is adequately capitalized and obtains a waiver from the FDIC. In addition, less than well-capitalized banks are subject to restrictions on the interest rates they may pay on deposits. The characterization of deposits as "brokered" may result in the imposition of higher deposit assessments on such deposits. As mandated by the Economic Growth Act, the FDIC adopted a final rule in February 2019 to include a limited exception for reciprocal deposits for FDIC-IDIs that are well rated and well capitalized (or adequately capitalized and have obtained a waiver from the FDIC as mentioned above). Under the limited exception, qualified FDIC-IDIs, like the Bank, are able to except from treatment as "brokered" deposits up to \$5 billion or 20 percent of the institution's total liabilities in reciprocal deposits (which is defined as deposits received by a financial institution through a deposit placement network with the same maturity (if any) and in the same aggregate amount as deposits placed by the institution in other network member banks).

In December of 2020, the FDIC issued a final rule amending its brokered deposits regulation. The final rule sought to clarify and modernize the FDIC's regulatory framework for brokered deposits. Notable aspects of the rule include (1) the establishment of bright-line standards for determining whether an entity meets the statutory definition of "deposit broker"; (2) the identification of a number of business relationships in which the agent of nominee is automatically not deemed to be a "deposit broker" because their primary purpose is not the placement of funds with depository institutions (the "primary purpose exception"); (3) the establishment of a more transparent application process for entities that seek the "primary purpose exception", but do not qualify as one of the identified business relationships to which the exception is automatically applicable; and (4) the clarification that third parties that have an exclusive deposit-placement arrangement with only one IDI are not considered a "deposit broker." Full compliance with the amended brokered deposits regulation was required by January 1, 2022.

The FDIC staff continues to implement the final rule through the issuance of interpretative guidance and other administrative actions.

Transactions with Affiliates and Insiders

Transactions between our national banking subsidiary and its related parties or any affiliate are governed by Sections 23A and 23B of the Federal Reserve Act. An affiliate is any company or entity, which controls, is controlled by or is under common control with the bank. In a holding company context, at a minimum, the parent holding company of a national bank, and any companies that are controlled by such parent holding company, are affiliates of the bank. Generally, Sections 23A and 23B (i) limit the extent to which an institution or its subsidiaries may engage in “covered transactions” with any one affiliate to an amount equal to 10 percent of such institution’s capital stock and surplus, and contain an aggregate limit on all such transactions with all affiliates to an amount equal to 20 percent of such capital stock and surplus, and (ii) require that all such transactions be on terms substantially the same, or at least as favorable, to the institution or subsidiary as those provided to a nonaffiliate. The term “covered transaction” includes the making of loans, purchase of assets, issuance of a guarantee and similar types of transactions. Certain types of covered transactions must be collateralized according to a schedule set forth in the statute based on the type of collateral.

Certain transactions with our directors, officers or controlling persons are also subject to conflicts of interest regulations. Among other things, these regulations require that loans to such persons and their related interests be made on terms substantially the same as for loans to unaffiliated individuals and must not create an abnormal risk of repayment or other unfavorable features for the financial institution. See Note 4 Loans of the notes to consolidated financial statements in Part II, Item 8, Financial Statements and Supplementary Data, for additional information on loans to related parties.

Community Reinvestment Act Requirements

Associated Bank is subject to periodic CRA reviews by the OCC. The CRA does not establish specific lending requirements or programs for financial institutions and does not limit the ability of such institutions to develop products and services believed best-suited for a particular community. An institution’s CRA assessment may be used by its regulators in their evaluation of certain applications, including a merger, acquisition or the establishment of a branch office. An unsatisfactory rating may be used as the basis for denial of such an application. The Bank received a “Satisfactory” CRA rating in its most recent evaluation.

On October 24, 2023, the federal banking agencies jointly issued a final rule to strengthen and modernize the existing CRA regulations. Under the final rule, the agencies will evaluate a bank’s CRA performance based upon the varied activities that it conducts and the communities in which it operates. CRA evaluations and data collection requirements will be tailored based on bank size and type. The Bank would be considered a large bank with assets of greater than \$10 billion under the final rule and therefore will be evaluated under new lending, retail services and products, community development financing, and community development services tests. The final rule includes CRA assessment areas associated with mobile and online banking, and new metrics and benchmarks to assess retail lending performance. In addition, the final rule emphasizes smaller loans and investments that can have a high impact and be more responsive to the needs of LMI communities. The final rule will take effect on April 1, 2024; however, compliance with the majority of the final rule's provisions will not be required until January 1, 2026, and the data reporting requirements of the final rule will not take effect until January 1, 2027.

Privacy, Data Protection, and Cybersecurity

We are subject to a number of U.S. federal, state, local and foreign laws and regulations relating to consumer privacy and data protection. Under privacy protection provisions of the GLBA and its implementing regulations and guidance, we are limited in our ability to disclose certain non-public information about consumers to nonaffiliated third parties. Financial institutions, such as the Bank, are required by statute and regulation to notify consumers of their privacy policies and practices and, in some circumstances, allow consumers to prevent disclosure of certain personal information to a nonaffiliated third party. In addition, such financial institutions must appropriately safeguard their customers’ nonpublic, personal information. Consumers and, in some instances, state and federal regulators, must be notified in the event of a data breach under applicable state laws and federal regulations.

The changing privacy laws in the United States, Europe and elsewhere create new individual privacy rights and impose increased obligations on companies handling personal information, including the CCPA, as amended by the CPRA. While GLBA-regulated nonpublic, personal information generally is exempt under the CCPA (as well as the other state consumer privacy laws), the CCPA and certain other state laws apply to the personal information of representatives of any business contacts that the Bank engages with who are California residents, employees who are California residents, and any other personal information that the Bank collects outside of the scope of GLBA, such as with respect to certain data collected from visitors to our website.

In addition, multiple states, Congress and regulators within and outside of the United States are considering similar laws or regulations which could create new individual privacy rights and impose increased obligations on companies handling personal information, specifically including financial institutions.

The federal banking agencies, including the OCC, have issued a rule imposing cybersecurity notification requirements for banking organizations and their service providers. Specifically, the rule requires banking organizations to notify their primary federal regulator as soon as possible and no later than 36 hours after the discovery of a "computer-security incident" that rises to the level of a "notification incident," as those terms are defined under the final rule. Banks' service providers are required under the rule to notify any affected bank to or on behalf of which the service provider provides services "as soon as possible" after determining that it has experienced an incident that materially disrupts or degrades, or is reasonably likely to materially disrupt or degrade, covered services provided to such bank for as much as four hours.

The federal banking agencies have also adopted guidelines for establishing information security standards and cybersecurity programs for implementing safeguards under the supervision of the board of directors. These guidelines, along with related regulatory materials, increasingly focus on risk management and processes related to information technology and the use of third parties in the provision of financial services. Moreover, recent cyberattacks against banks and other financial institutions that resulted in unauthorized access to confidential customer information have prompted the federal banking regulators to issue more extensive guidance on cybersecurity risk management. Among other things, financial institutions are expected to design multiple layers of security controls to establish lines of defense and ensure that their risk management processes address the risks posed by compromised customer credentials, including security measures to authenticate customers accessing internet-based services. A financial institution also should have a robust business continuity program to recover from a cyberattack and procedures for monitoring the security of third-party service providers that may have access to nonpublic data at the institution. See Item 1A, Risk Factors — Operational Risks for additional discussion of this topic.

Additionally, recent and ongoing developments may impact our data security- and privacy-related internal controls and risk profile. On October 19, 2023, the CFPB announced a proposed rule to adopt a regulation regarding personal financial data rights that is designed to promote "open banking." If enacted as proposed, the regulation would require, among other things, that data providers, including any financial institution, make available to consumers and certain authorized third parties upon request certain covered transaction, account and payment information.

On October 30, 2023, the current Presidential Administration issued an Executive Order on Safe, Secure and Trustworthy Development and Use of AI, emphasizing the need for transparency, accountability and fairness in the development and use of AI. The order seeks to balance innovation with addressing risks associated with AI by providing eight guiding principles and priorities, such as ensuring that consumers are protected from fraud, discrimination and privacy risks related to AI. The Executive Order also requires certain federal agencies, including the CFPB, to address potential discrimination in the housing and consumer financial markets relating to the use by financial institutions of AI technologies. Prior to the issuance of the Executive Order, the CFPB published a report addressing the use by financial institutions of AI chatbots in the provision of financial products and services, which report also highlighted the limitations and various risks posed by such activity. States have also started to regulate the use of AI technologies. For example, the California Privacy Protection Agency is currently in the process of finalizing regulations under the CCPA regarding the use of automated decision making.

Bank Secrecy Act / Anti-Money Laundering

The BSA, which is intended to require financial institutions to develop policies, procedures, and practices to prevent and deter money laundering, mandates that every national bank have a written, board-approved program that is reasonably designed to assure and monitor compliance with the BSA. The program must, at a minimum: (1) provide for a system of internal controls to assure ongoing compliance; (2) provide for independent testing for compliance; (3) designate an individual responsible for coordinating and monitoring day-to-day compliance; and (4) provide training for appropriate personnel. In addition, national banks are required to adopt a customer identification program as part of their BSA compliance program. National banks are also required to file SARs when they detect certain known or suspected violations of federal law or suspicious transactions related to a money laundering activity or a violation of the BSA. The regulations implementing the BSA require financial institutions to establish risk-based procedures for conducting ongoing customer due diligence and procedures for understanding the nature and purpose of customer relationships for the purpose of developing a customer risk profile. In addition, FinCEN has promulgated customer due diligence and customer identification rules that require banks to identify and verify the identity of the beneficial owners of all legal entity customers (other than those that are excluded) at the time a new account is opened (other than accounts that are exempted).

In addition to complying with the BSA, the Bank is subject to the Patriot Act. The Patriot Act is designed to deny terrorists and criminals the ability to obtain access to the United States' financial system and has significant implications for depository institutions, brokers, dealers, and other businesses involved in the transfer of money. The Patriot Act mandates that financial

service companies implement additional policies and procedures and take heightened measures designed to address any or all of the following matters: customer identification programs, money laundering, terrorist financing, identifying and reporting suspicious activities and currency transactions, currency crimes, and cooperation between financial institutions and law enforcement authorities.

On December 3, 2019, three federal banking agencies and FinCEN issued a joint statement clarifying the compliance procedures and reporting requirements that banks must file for customers engaged in the growth or cultivation of hemp, including a clear statement that banks need not file a SAR on customers engaged in the growth or cultivation of hemp in accordance with applicable laws and regulations. This statement does not apply to cannabis-related business; thus, the statement only pertains to customers who are lawfully growing or cultivating hemp and are not otherwise engaged in unlawful or suspicious activity.

Further, on January 1, 2021, Congress passed the NDAA, which enacted the most significant overhaul of the BSA and related AML laws since the Patriot Act. Notable amendments include (1) significant changes to the collection of beneficial ownership information and the establishment of a beneficial ownership registry, which requires corporate entities (generally, any corporation, LLC, or other similar entity with 20 or fewer employees and annual gross income of \$5 million or less) to report beneficial ownership information to FinCEN (which will be maintained by FinCEN and made available upon request to financial institutions); (2) enhanced whistleblower provisions, which provide that one or more whistleblowers who voluntarily provide original information leading to the successful enforcement of violations of the AML laws in any judicial or administrative action brought by the Secretary of the Treasury or the Attorney General resulting in monetary sanctions exceeding \$1 million (including disgorgement and interest but excluding forfeiture, restitution, or compensation to victims) will receive not more than 30 percent of the monetary sanctions collected and will receive increased protections; (3) increased penalties for violations of the BSA; (4) improvements to existing information sharing provisions that permit financial institutions to share information relating to SARs with foreign branches, subsidiaries, and affiliates (except those located in China, Russia, or certain other jurisdictions) for the purpose of combating illicit finance risks; and (5) expanded duties and powers of FinCEN. Many of the amendments require the Department of Treasury and FinCEN to promulgate rules. On September 29, 2022, FinCEN issued a final regulation implementing the BSA amendments included in the NDAA with respect to beneficial ownership.

Interstate Branching

Pursuant to the Dodd-Frank Act, national and state-chartered banks may open an initial branch in a state other than its home state (e.g., a host state) by establishing a *de novo* branch at any location in such host state at which a bank chartered in such host state could establish a branch. Applications to establish such branches must still be filed with the appropriate primary federal regulator.

Volcker Rule

The Dodd-Frank Act prohibits IDIs and their holding companies from engaging in proprietary trading except in limited circumstances, and prohibits them from owning equity interests in excess of three percent of Tier 1 Capital in private equity and hedge funds (known as the “Volcker Rule”). Five U.S. financial regulators with jurisdiction over the Volcker Rule, including the Federal Reserve and the OCC, have adopted implementing regulations. Those regulations prohibit banking entities from (1) engaging in short-term proprietary trading for their own accounts, and (2) having certain ownership interests in and relationships with hedge funds or private equity funds, which are referred to as “covered funds.” The regulations also require each regulated entity to establish an internal compliance program that is consistent with the extent to which it engages in activities covered by the Volcker Rule. Historically, this meant that the largest banking entities (*i.e.*, those with \$50 billion or more in assets) had higher reporting requirements, but in November 2019, the agencies issued a final rule revising certain aspects of the Volcker Rule. The final rule simplified and streamlined compliance requirements for firms that do not have significant trading activities and enhanced requirements for firms that do. Under the rule, compliance requirements are based on the amount of assets and liabilities that a bank trades. Firms with significant trading activities (*i.e.*, those with \$20 billion or more in trading assets and liabilities) have heightened compliance obligations. Although we benefit from significantly reduced compliance obligations due to the level of our trading assets being below the \$20 billion threshold as a result of the final rule, we remain subject to the modified rules and requirements related to covered funds.

Further, in June of 2020, the five agencies referenced above issued a final rule that modified the Volcker Rule's prohibition on banking entities' investing in or sponsoring "covered funds." The final rule (1) streamlined the covered funds portion of the rule; (2) addressed the extraterritorial treatment of certain foreign funds; and (3) permits banking entities to offer financial services and engage in other activities that do not raise concerns that the Volcker Rule was intended to address.

Incentive Compensation Policies and Restrictions

The federal banking agencies have issued guidance on sound incentive compensation policies that applies to all banking organizations supervised by the agencies (thereby including both the Parent Company and the Bank). Pursuant to the guidance, to be consistent with safety and soundness principles, a banking organization's incentive compensation arrangements should: (1) provide employees with incentives that appropriately balance risk and reward; (2) be compatible with effective controls and risk management; and (3) be supported by strong corporate governance including active and effective oversight by the banking organization's board of directors. Monitoring methods and processes used by a banking organization should be commensurate with the size and complexity of the organization and its use of incentive compensation.

The Dodd-Frank Act required the federal banking agencies and the SEC to establish joint regulations or guidelines for specified regulated entities, such as us, having at least \$1 billion in total assets, to prohibit incentive-based payment arrangements that encourage inappropriate risk taking by providing an executive officer, employee, director or principal shareholder with excessive compensation, fees, or benefits or that could lead to material financial loss to the entity. In addition, these regulators must establish regulations or guidelines requiring enhanced disclosure to regulators of incentive-based compensation arrangements. Pursuant to SEC regulations and NYSE rules enacted in 2022, we adopted a "clawback" policy with respect to the recovery of incentive-based compensation paid to current or former executive officers in the event of material noncompliance with any financial reporting requirement under the securities laws. A copy of our clawback policy is attached as Exhibit 97 to this 10-K.

The Federal Reserve will review, as part of its standard, risk-focused examination process, the incentive compensation arrangements of banking organizations, such as the Corporation, that are not "large, complex banking organizations." These reviews will be tailored to each organization based on the scope and complexity of the organization's activities and the prevalence of incentive compensation arrangements. The findings of the supervisory initiatives will be included in reports of examination. Deficiencies will be incorporated into the organization's supervisory ratings, which can affect the organization's ability to make acquisitions and take other actions. Enforcement actions may be taken against a banking organization if its incentive compensation arrangements, or related risk-management control or governance processes, pose a risk to the organization's safety and soundness and the organization is not taking prompt and effective measures to correct the deficiencies.

The scope and content of the U.S. banking regulators' policies on executive compensation may continue to evolve in the near future. It cannot be determined at this time whether compliance with such policies will adversely affect the Corporation's ability to hire, retain and motivate its key employees.

Consumer Financial Services Regulations

Federal and applicable state banking laws also require us to take steps to protect consumers. Bank regulatory agencies are increasingly focusing attention on compliance with consumer protection laws and regulations. These laws include disclosures regarding truth in lending, truth in savings, and funds availability.

To promote fairness and transparency for mortgages, credit cards, and other consumer financial products and services, the Dodd-Frank Act established the CFPB. This agency is responsible for interpreting and enforcing federal consumer financial laws, as defined by the Dodd-Frank Act, that, among other things, govern the provision of deposit accounts along with mortgage origination and servicing. Some federal consumer financial laws enforced by the CFPB include the Equal Credit Opportunity Act, TILA, the Truth in Savings Act, the Home Mortgage Disclosure Act, RESPA, the Fair Debt Collection Practices Act, and the Fair Credit Reporting Act. The CFPB is also authorized to prevent any institution under its authority from engaging in an unfair, deceptive, or abusive act or practice in connection with consumer financial products and services.

Under TILA as implemented by Regulation Z, mortgage lenders are required to make a reasonable and good faith determination based on verified and documented information that a consumer applying for a mortgage loan has a reasonable ability to repay the loan according to its terms. Mortgage lenders are required to determine consumers' ATR in one of two ways. The first alternative requires the mortgage lender to consider the following eight underwriting factors when making the credit decision: (1) current or reasonably expected income or assets; (2) current employment status; (3) the monthly payment on the covered transaction; (4) the monthly payment on any simultaneous loan; (5) the monthly payment for mortgage-related obligations; (6) current debt obligations, alimony, and child support; (7) the monthly DTI ratio or residual income; and (8) credit history. Alternatively, the mortgage lender can originate "qualified mortgages," or QMs, which generally are mortgage loans without negative amortization, interest-only payments, balloon payments, or terms exceeding 30 years. QMs are entitled by rule to a presumption that the creditor making the loan satisfied the ATR requirements provided certain requirements are met. The Corporation is predominantly an originator of compliant QMs. The CFPB also has implemented the TILA-RESPA Integrated

Disclosure rules, which harmonize disclosure and certain regulatory compliance requirements required under those two statutes with respect to residential mortgage loans.

Additionally, the CFPB has the authority to take supervisory and enforcement action against banks and other financial services companies under the agency's jurisdiction that fail to comply with federal consumer financial laws. As an IDI with total assets of more than \$10 billion, the Bank is subject to the CFPB's supervisory and enforcement authorities. The Dodd-Frank Act also permits states to adopt stricter consumer protection laws and state attorneys general to enforce consumer protection rules issued by the CFPB. As a result of these aspects of the Dodd-Frank Act, the Bank operates in a stringent consumer compliance environment. Therefore, the Bank is likely to incur additional costs related to consumer protection compliance, including but not limited to potential costs associated with CFPB examinations, regulatory and enforcement actions and consumer-oriented litigation, which is likely to increase as a result of the consumer protection provisions of the Dodd-Frank Act. The CFPB has been active in bringing enforcement actions against banks and other financial institutions to enforce consumer financial laws. The federal financial regulatory agencies, including the OCC and states attorneys general, also have become increasingly active in this area with respect to institutions over which they have jurisdiction. We have incurred and may in the future incur additional costs in complying with these requirements.

Pursuant to the Dodd-Frank Act, the FDIC has backup enforcement authority over a depository institution holding company, such as the Parent Company, if the conduct or threatened conduct of such holding company poses a risk to the DIF, although such authority may not be used if the holding company is generally in sound condition and does not pose a foreseeable and material risk to the DIF. The Dodd-Frank Act may have a material impact on the Corporation's and the Bank's operations, particularly through increased compliance costs resulting from possible future consumer and fair lending regulations. See Item 1A, Risk Factors — Legal, Regulatory, Compliance and Reputational Risks for additional discussion of this topic.

In recent years, the CFPB—with the support of the current Presidential Administration—has launched an initiative aimed at eliminating or restricting a number of fees assessed by financial institutions, including overdraft and non-sufficient funds fees as well as other transaction- and account management-related fees deemed by the CFPB to be “junk fees.” The CFPB has carried out its initiative through a mixture of supervision, examination and enforcement actions. See Item 1A, Risk Factors — Legal, Regulatory, Compliance and Reputational Risks for additional discussion of this topic.

Climate-Related Risk Management and Regulation

In recent years the federal banking agencies have increased their focus on climate-related risks impacting the operations of banks, the communities they serve and the broader financial system. Accordingly, the agencies have begun to enhance their supervisory expectations regarding the climate risk management practices of larger banking organizations, including by encouraging such banks to: ensure that management of climate-related risk exposures has been incorporated into existing governance structures; evaluate the potential impact of climate-related risks on the bank's financial condition, operations and business objectives as part of its strategic planning process; account for the effects of climate change in stress testing scenarios and systemic risk assessments; revise expectations for credit portfolio concentrations based on climate-related factors; consider investments in climate-related initiatives and lending to communities disproportionately impacted by the effects of climate change; evaluate the impact of climate change on the bank's borrowers and consider possible changes to underwriting criteria to account for climate-related risks to mortgaged properties; incorporate climate-related financial risk into the bank's internal reporting, monitoring and escalation processes; and prepare for the transition risks to the bank associated with the adjustment to a low-carbon economy and related changes in laws, regulations, governmental policies, technology, and consumer behavior and expectations.

On October 21, 2021, the Financial Stability Oversight Council published a report identifying climate-related financial risks as an “emerging threat” to financial stability. On October 24, 2023, the OCC, the FDIC and the Federal Reserve jointly finalized principles for climate-related financial risk management for national banks with more than \$100 billion in total assets. Although these risk management principles do not apply to the Bank directly based upon our current size, the OCC has indicated that all banks, regardless of their size, may have material exposures to climate-related financial and other risks that require prudent management. As climate-related supervisory guidance is formalized, and relevant risk areas and corresponding control expectations are further refined, we may be required to expend significant capital and incur compliance, operating, maintenance and remediation costs in order to conform to such requirements.

In addition, states are considering taking similar actions on climate-related financial risks, including certain states in which we operate. For example, in January of 2023, the Minnesota Pollution Control Agency released its Greenhouse Gas Emissions Report for years 2005-2020. The Report indicated that Minnesota is on track to meet its GHG reduction goals, including reducing emissions 50% by 2030 and achieving net-zero emissions by 2050. The Report relies on the state's September 2022 Climate Action Framework as the path forward to a carbon-neutral, resilient, and equitable future. That same month, Illinois Governor JB Pritzker signed legislation preventing counties from enacting preemptive local ordinances that outright ban local

wind and solar projects, as such ordinances hinder the state's climate goals set forth in the Climate and Equitable Jobs Act of 2021. Then, in February 2023, Minnesota Governor Tim Walz signed a bill that will move the state to 100% clean energy by 2040. In October 2023, California Governor Gavin Newsom signed two climate-related disclosure bills into law. The Climate Corporate Data Accountability Act (referred to as SB 253) requires both public and private U.S. businesses with revenues greater than \$1 billion doing business in California to report their GHG emissions, including scopes 1, 2, and 3, beginning in 2026 (for 2025 data) and also requires reporting companies to get third-party assurance of their reports. Other states have proposed similar legislation to SB 253. The Climate-Related Financial Risk Act (referred to as SB 261) mandates that U.S. businesses with annual revenues over \$500 million doing business in California to bi-annually disclose climate-related financial risks and their mitigation strategies beginning January 1, 2026. Additionally, in November 2023, the Wisconsin legislature introduced 20 draft bills addressing, through a mix of funding and legal requirements, weatherization of public school buildings, green jobs training, climate change scholarships, environmental impacts on vulnerable communities, agricultural waste reduction, climate change consideration in local planning decisions, consideration of carbon when vetting utility projects, and increased funding for Focus on Energy, a state program that supports new energy efficiency and renewable energy projects. State-level initiatives such as these may require us to expend capital to conform to any requirements that apply to us.

Additionally, in March of 2022, the SEC proposed new climate-related disclosure rules, the Proposed Rules for The Enhancement and Standardization of the Climate-Related Disclosure for Investors File No. S7-10-22. If adopted as expected, the rules would require new climate-related disclosures in SEC filings and audited financial statements, including certain climate-related metrics and GHG emissions data, information about climate-related targets and goals, transition plans, if any, and attestation requirements.

The Corporation has established an Environmental Sustainability Risk Policy and Environmental Sustainability Statement focused on environmental risk management; climate change, carbon emissions and natural resources; and environmental and social lending which will serve as the foundation to Associated's Environmental Sustainability Risk Management System, a system for supporting the Environmental Sustainability Risk Policy and environmental sustainability risk reporting. The EMS is intended to help manage environmental and climate risk in a comprehensive, systematic, planned and documented manner, and to help all policy practices integrate into the Corporation's Enterprise Risk Management program and align them with business objectives. Oversight for climate-related risks includes Board-level, senior management and Board and management committee oversight.

The Corporation's Board of Directors is responsible for overseeing the corporate ESG strategies and risks of Associated, including risks and opportunities related to environmental sustainability. In fulfilling its responsibilities, the Board has delegated responsibilities to the following Board-level committees:

- **The Corporate Governance and Social Responsibility Committee** has oversight responsibility for the Corporation's ESG Framework and ESG Disclosures.
- **The Enterprise Risk Committee** is the approval authority for enterprise risk-related oversight, such as risk-related policies and the Risk Appetite Statement. With regard to environmental sustainability, this includes Environmental Risk Management; Climate Change, Carbon Emissions and Natural Resources; and Environmental and Social Lending.
- **The Compensation & Benefits Committee** is the approval authority for compensation and benefits related oversight, such as executive compensation, human capital, human rights, DE&I, and workforce practices and policies.
- **The Audit Committee** has been delegated responsibility to oversee management of financial reporting and audit functions.

The CGSRC has appointed senior management responsibility to the Environmental, Social and Governance Committee (ESGC), an executive level committee chaired by the Corporation's General Counsel. Additional committee members include the President and Chief Executive Officer; Head of Consumer and Business Banking; Chief Human Resources Officer; Director of ESG and Sustainability; Director of Diversity, Equity and Inclusion; Director of Community Accountability; and Director of Enterprise Risk Management and Corporate Risk Strategy.

The ERC has delegated to senior management responsibility for managing and maintaining enterprise risks through approved policies and within the risk appetite. The Corporation senior management carries out this mandate through the Enterprise Risk Management Committee (ERMC). The Chief Risk Officer oversees all aspects of environmental risk. As such, this role provides indirect strategic guidance into the Environmental Sustainability Risk Policy and gives second level approval for all policy components. The Chief Credit Officer oversees lending aspects of environmental risk.

During 2023, the Corporation elevated environmental sustainability as a mainstream corporate initiative and established a management-level Sustainability Committee which reports through ERM. The Sustainability Committee helps to identify, implement, and effectuate priorities for Associated's environmental sustainability initiatives. The Committee is led by the Director of ESG and Sustainability. Additional committee members include Director Customer Experience and Journey Mapping; Risk and Compliance Director; Director of Facilities Real Estate and Director of Special Assets.

Digital Asset Regulation

The federal banking agencies have issued interpretive guidance and statements regarding the engagement by banking organizations in certain digital asset activities. In November of 2021, the OCC published an interpretive letter clarifying that the digital asset activities of national banks that have been addressed by the OCC in prior interpretive precedent published in 2020 and 2021 are viewed by the agency as legally permissible provided that banks (i) are able to demonstrate to the OCC that their digital asset activities can be conducted in a safe and sound manner and (ii) notify the OCC's supervisory staff of their intention to engage in such activities and receive the OCC's non-objection prior to doing so. On August 16, 2022, the Federal Reserve released supervisory guidance encouraging all banking organizations supervised by the agency to notify its lead supervisory point of contact at the Federal Reserve prior to engaging in any digital asset-related activity. Prior to engaging in any such activities, banking organizations are expected to ensure their proposed activities are legally permissible under relevant state and federal laws, and ensure they have implemented adequate systems, risk management, and internal controls to ensure that the activities are conducted in a safe and sound manner consistent with applicable laws, including consumer protection laws.

On January 3, 2023, the federal banking agencies issued additional guidance in the form of a joint statement addressing digital asset-related risks to banking organizations. That statement noted the recent volatility and exposure of vulnerabilities in the digital asset sector and indicated that the agencies are continuing to assess whether or how the digital asset-related activities of banking organizations can be conducted in a safe and sound manner and in compliance with all applicable laws and regulations. The statement stressed that each agency has developed, and expects banking organizations to follow, supervisory processes for evaluating proposed and existing digital asset activities.

On February 23, 2023, the federal banking agencies issued a joint statement addressing liquidity risks to banking organizations resulting from crypto-asset market vulnerabilities. The joint statement noted that deposits placed by a crypto-asset-related entity and deposits that constitute stablecoin-related reserves may pose heightened liquidity risks to banking organizations due to the unpredictability of the scale and timing of deposit inflows and outflows. The statement stressed that banking organizations should establish and maintain effective risk management and controls commensurate with the level of liquidity risks from such funding sources. Further, on August 8, 2023, the Federal Reserve announced the establishment of a Novel Activities Supervision Program, which is designed in part to enhance the Federal Reserve's supervision processes in respect of banking organizations' crypto-asset related activities and use of distributed ledger technologies and other novel technologies in the delivery of financial products and services.

Although the federal banking agencies have not developed formal regulations governing the digital asset activities of banking organizations, the supervisory framework summarized above dictates that, in order to effectively identify and manage digital asset-related risks and obtain supervisory non-objection to the proposed engagement in digital asset activities, banking organizations must implement appropriate risk management practices, including with respect to board and management oversight, policies and procedures, risk assessments, internal controls and monitoring.

Other Banking Regulations

The Bank is also subject to a variety of other regulations with respect to the operation of its businesses, including but not limited to the Dodd-Frank Act, which among other restrictions placed limitations on the interchange fees charged for debit card transactions, TILA, Truth in Savings Act, Equal Credit Opportunity Act, Electronic Funds Transfer Act, Fair Housing Act, Home Mortgage Disclosure Act, Fair Debt Collection Practices Act, Fair Credit Reporting Act, Expedited Funds Availability (Regulation CC), Reserve Requirements (Regulation D), Insider Transactions (Regulation O), Privacy of Consumer Information (Regulation P), Margin Stock Loans (Regulation U), Right To Financial Privacy Act, Flood Disaster Protection Act, Homeowners Protection Act, Servicemembers Civil Relief Act, RESPA, TCPA, CAN-SPAM Act, Children's Online Privacy Protection Act, and the John Warner NDAA. Further, in January of 2021, the OCC issued a notice of proposed rulemaking to amend current rules related to national banks' ownership of real property. The proposal would provide a set of general standards, including an occupancy test and excess capacity standards, that the OCC will use to determine whether the acquisition and holding of real estate is necessary for the transaction of an institution's business. The prospects and timing for the adoption of a final rule are uncertain at this time.

The laws and regulations to which we are subject are constantly under review by Congress, the federal regulatory agencies, and the state authorities. These laws and regulations could be changed drastically in the future, which could affect our profitability, our ability to compete effectively, or the composition of the financial services industry in which we compete.

Government Monetary Policies and Economic Controls

Our earnings and growth, as well as the earnings and growth of the banking industry, are affected by the credit policies of monetary authorities, including the Federal Reserve. An important function of the Federal Reserve is to regulate the national supply of bank credit in order to combat recession and curb inflationary pressures. Among the instruments of monetary policy used by the Federal Reserve to implement these objectives are open market operations in U.S. government securities, changes in reserve requirements against member bank deposits, and changes in the Federal Reserve discount rate. These instruments are used in varying combinations to influence overall growth of bank loans, investments, and deposits, and may also affect interest rates charged on loans or paid for deposits. The monetary policies of the Federal Reserve authorities have had a significant effect on the operating results of commercial banks in the past and are expected to continue to have such an effect in the future.

In view of changing conditions in the national economy and in money markets, as well as the effect of credit policies by monetary and fiscal authorities, including the Federal Reserve, it is difficult to predict the impact of possible future changes in interest rates, deposit levels, and loan demand, or their effect on our business and earnings or on the financial condition of our various customers.

Other Regulatory Authorities

In addition to regulation, supervision and examination by federal banking agencies, the Corporation and certain of its subsidiaries, including those that engage in securities brokerage, dealing and investment advisory activities, are subject to other federal and applicable state securities laws and regulations, and to supervision and examination by other regulatory authorities, including the SEC, FINRA, NYSE, DOL and others.

Separately, in June of 2019, pursuant to the Dodd-Frank Act, the SEC adopted Regulation Best Interest, which, among other things, establishes a new standard of conduct for a broker-dealer to act in the best interest of a retail customer when making a recommendation of any securities transaction or investment strategy involving securities to such customer. The new rule requires us to review and possibly modify our compliance activities, which is causing us to incur some additional costs. In addition, state laws that impose a fiduciary duty also may require monitoring, as well as require that we undertake additional compliance measures.

Available Information

We file annual, quarterly, and current reports, proxy statements, and other information with the SEC. These filings are available to the public on the Internet at the SEC's web site at www.sec.gov.

Our principal internet address is www.associatedbank.com. We make available free of charge on or through our website our annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as soon as reasonably practicable after we electronically file such material with, or furnish it to, the SEC. In addition, shareholders may request a copy of any of our filings (excluding exhibits) at no cost by writing at Associated Banc-Corp, Attn: Investor Relations, 433 Main Street, Green Bay, WI 54301 or e-mailing us at investor.relations@associatedbank.com.

ITEM 1A.

Risk Factors

An investment in our common stock is subject to risks inherent to our business. The material risks and uncertainties that management believes affect us are described below. Before making an investment decision, you should carefully consider the risks and uncertainties described below, together with all of the other information included or incorporated by reference herein. The risks and uncertainties described below are not the only ones facing us. Additional risks and uncertainties that management is not aware of or focused on or that management currently deems immaterial may also impair our business operations. This report is qualified in its entirety by these risk factors. See also, Special Note Regarding Forward-Looking Statements and Risk Factors Summary.

If any of the events described in the risk factors should actually occur, our financial condition and results of operations could be materially and adversely affected. If this were to happen, the value of our securities could decline significantly, and you could lose all or part of your investment.

Credit Risks

Changes and instability in economic conditions, geopolitical matters and financial markets, including a contraction of economic activity, could adversely impact our business, results of operations and financial condition.

Our success depends, to a certain extent, upon global, domestic and local economic and political conditions, as well as governmental monetary policies. Conditions such as changes in interest rates, money supply, levels of employment and other factors beyond our control may have a negative impact on economic activity. Any contraction of economic activity, including an economic recession, may adversely affect our asset quality, deposit levels and loan demand and, therefore, our earnings. In particular, interest rates are highly sensitive to many factors that are beyond our control, including global, domestic and local economic conditions and the policies of various governmental and regulatory agencies and, specifically, the Federal Reserve. Throughout 2022 and 2023, the FOMC raised the target range for the federal funds rate on eleven separate occasions, citing factors including the hardships caused by the ongoing Russia-Ukraine conflict, continued global supply chain disruptions and imbalances, and increased inflationary pressure.

The tightening of the Federal Reserve's monetary policies, including repeated and aggressive increases in target range for the federal funds rate as well as the conclusion of the Federal Reserve's tapering of asset purchases, together with ongoing economic and geopolitical instability, increases the risk of an economic recession. Although forecasts have varied, many economists are projecting that, while indicators of U.S. economic performance, such as income growth, may be strong and levels of inflation may continue to decrease, the U.S. economy may be flat or experience a modest decrease in gross domestic output in 2024 while inflation is expected to remain elevated relative to historic levels in the coming quarters. Any such downturn in economic output, especially domestically and in the regions in which we operate, may adversely affect our asset quality, deposit levels, loan demand and results of operations.

As a result of the economic and geopolitical factors discussed above, financial institutions also face heightened credit risk, among other forms of risk. Of note, because we have a significant amount of real estate loans, decreases in real estate values could adversely affect the value of property used as collateral, which, in turn, can adversely affect the value of our loan and investment portfolios. Adverse economic developments, specifically including inflation-related impacts, may have a negative effect on the ability of our borrowers to make timely repayments of their loans or to finance future home purchases. According to the Federal Reserve's October 2023 Financial Stability Report, CRE values remained elevated relative to fundamentals, even as prices continued to decline. While CRE values continue to fluctuate, some markets are showing signs of stabilizing prices. However, the outlook for CRE remains dependent on the broader economic environment and, specifically, how major subsectors respond to a rising interest rate environment and higher prices for commodities, goods and services. In any case, credit performance over the medium- and long-term is susceptible to economic and market forces and therefore forecasts remain uncertain; however, some degree of instability in the CRE markets is expected in the coming quarters as loans are refinanced in markets with higher vacancy rates under current economic conditions. Instability and uncertainty in the commercial and residential real estate markets, as well as in the broader commercial and retail credit markets, could have a material adverse effect on our financial condition and results of operations.

Changes in U.S. trade policies, including the imposition of tariffs and retaliatory tariffs, may adversely impact our business, financial condition, and results of operations.

There continues to be discussion and dialogue regarding potential changes to U.S. trade policies, legislation, treaties and tariffs with countries such as China and those within the European Union. The prior Presidential Administration imposed certain tariffs and retaliatory tariffs, as well as other trade restrictions on products and materials that our customers import or export. These restrictions may cause the prices of our customers' products to increase, which could reduce demand for such products, or reduce our customers' margins, and adversely impact their revenues, financial results, and ability to service debt. This in turn could adversely affect our financial condition and results of operations. In addition, to the extent changes in the political environment have a negative impact on us or on the markets in which we operate our business, our results of operations and financial condition could be materially and adversely impacted in the future. Although the current Presidential Administration has expressed interest in improving relations with key transatlantic partners, including by relaxing certain tariffs imposed by the prior Presidential Administration, the trade policies of the current Presidential Administration remain somewhat unsettled. The current Presidential Administration is also conducting a statutorily-required quadrennial review of some of these tariffs, but it remains unclear what may result from the review. Accordingly, it remains unclear what the U.S. government or foreign governments will or will not do with respect to tariffs already imposed, additional tariffs that may be imposed, or international trade agreements and policies.

Our allowance for credit losses may be insufficient.

All borrowers have the potential to default, and our remedies in the event of such default (such as seizure and/or sale of collateral, legal actions, and guarantees) may not fully satisfy the debt owed to us. We maintain an allowance for credit losses, which is a reserve established through a provision for credit losses charged to expense, that represents management's best estimate of probable credit losses over the life of the loan within the existing portfolio of loans. The allowance for credit losses, in the judgment of management, is necessary to reserve for estimated credit losses and risks inherent in the loan portfolio. The level of the allowance for credit losses reflects management's continuing evaluation of industry concentrations; specific credit risks; loan loss experience; current loan portfolio quality; present economic, political, and regulatory conditions; and unidentified losses inherent in the current loan portfolio. The determination of the appropriate level of the allowance for credit losses inherently involves a high degree of subjectivity and requires us to make significant estimates of current credit risks using existing qualitative and quantitative information, all of which may undergo material changes. Changes in economic conditions affecting borrowers, new information regarding existing loans, identification of additional problem loans, and other factors, both within and outside of our control, may require an increase in the allowance for credit losses. In addition, bank regulatory agencies periodically review our allowance for credit losses and may require an increase in the provision for credit losses or the recognition of additional loan charge offs, based on judgments different than those of management. An increase in the allowance for credit losses would result in a decrease in net income, and possibly risk-based capital, and could have a material adverse effect on our financial condition and results of operations.

We are subject to lending concentration risks.

As of December 31, 2023, approximately 62% of our loan portfolio consisted of commercial and industrial, real estate construction, and CRE loans (collectively, "commercial loans"). Commercial loans are generally viewed as having more inherent risk of default than residential mortgage loans or other consumer loans. Further, the commercial loan balance per borrower is typically larger than that for residential mortgage loans and other consumer loans, implying higher potential losses on an individual loan basis. Because our loan portfolio contains a number of commercial loans with balances over \$25 million, the deterioration of one or a few of these loans could cause a significant increase in nonaccrual loans, which could have a material adverse effect on our financial condition and results of operations.

CRE lending may expose us to increased lending risks.

Our policy generally has been to originate CRE loans primarily in the states in which the Bank operates. At December 31, 2023, CRE loans, including owner occupied, investor, and real estate construction loans, totaled \$8.5 billion, or 29%, of our total loan portfolio. As a result of our growth in this portfolio over the past several years and planned future growth, these loans require more ongoing evaluation and monitoring and we are implementing enhanced risk management policies, procedures and controls. CRE loans generally involve a greater degree of credit risk than residential mortgage loans because they typically have larger balances and are more affected by adverse conditions in the economy. Because payments on loans secured by CRE often depend upon the successful operation and management of the properties and the businesses which operate from within them, repayment of such loans may be affected by factors outside the borrower's control, such as adverse conditions in the real estate market or the economy or changes in government regulation. In recent years, CRE markets have been experiencing substantial growth, and increased competitive pressures have contributed significantly to historically low capitalization rates and rising property values. However, CRE markets have been facing downward pressure since 2022 due in large part to increasing interest rates and declining property values. Accordingly, the federal banking agencies have expressed concerns about weaknesses in the current CRE market and have applied increased regulatory scrutiny to institutions with CRE loan portfolios that are fast growing or large relative to the institutions' total capital. To address supervisory expectations with respect to financial institutions' handling of CRE borrowers who are experiencing financial difficulty, in June of 2023, the federal banking agencies, including the OCC, issued an interagency policy statement addressing prudent CRE loan accommodations and workouts. Our failure to adequately implement enhanced risk management policies, procedures and controls could adversely affect our ability to increase this portfolio going forward and could result in an increased rate of delinquencies in, and increased losses from, this portfolio. At December 31, 2023, nonaccrual CRE loans totaled \$1 million, or less than 1% of our total portfolio of CRE loans.

We depend on the accuracy and completeness of information furnished by and on behalf of our customers and counterparties.

In deciding whether to extend credit or enter into other transactions, we may rely on information furnished by or on behalf of customers and counterparties, including financial statements, credit reports, and other financial information. We may also rely on representations of those customers, counterparties, or other third parties, such as independent auditors, as to the accuracy and completeness of that information. Reliance on inaccurate or misleading financial statements, credit reports, or other financial

information could cause us to enter into unfavorable transactions, which could have a material adverse effect on our financial condition and results of operations.

Lack of system integrity or credit quality related to funds settlement could result in a financial loss.

We settle funds on behalf of financial institutions, other businesses and consumers and receive funds from clients, card issuers, payment networks and consumers on a daily basis for a variety of transaction types. Transactions we facilitate include wire transfers, debit card, credit card and electronic bill payment transactions, supporting consumers, financial institutions and other businesses. These payment activities rely upon the technology infrastructure that facilitates the verification of activity with counterparties and the facilitation of the payment. If the continuity of operations or integrity of processing were compromised, this could result in a financial loss to us due to a failure in payment facilitation. In addition, we may issue credit to consumers, financial institutions or other businesses as part of the funds settlement. A default on this credit by a counterparty could result in a financial loss to us.

We are subject to environmental liability risk associated with lending activities.

A significant portion of our loan portfolio is secured by real property. During the ordinary course of business, we may foreclose on and take title to properties securing certain loans. In doing so, there is a risk that hazardous or toxic substances could be found on these properties. If hazardous or toxic substances are found, we may be liable for remediation costs, as well as for personal injury and property damage. Environmental laws may require us to incur substantial expenses which may materially reduce the affected property's value or limit our ability to use or sell the affected property. In addition, future laws or more stringent interpretations or enforcement policies with respect to existing laws may increase our exposure to environmental liability. Although we have policies and procedures to perform an environmental review before lending against or initiating any foreclosure action on real property, these reviews may not be sufficient to detect all potential environmental hazards. The remediation costs and any other financial liabilities associated with an environmental hazard could have a material adverse effect on our financial condition and results of operations.

Liquidity and Interest Rate Risks

Impairment of our access to liquidity could affect our ability to meet our obligations.

The Corporation requires liquidity to meet its deposit and debt obligations as they come due. Access to liquidity could be impaired by an inability to access the capital markets or unforeseen outflows of deposits. Risk factors that could impair our ability to access capital markets include a downturn in our Midwest markets, difficult credit markets, credit rating downgrades, or regulatory actions against the Corporation. The Corporation's access to deposits can be impacted by the liquidity needs of our customers as a substantial portion of the Corporation's liabilities are demand while a substantial portion of the Corporation's assets are loans that cannot be sold in the same timeframe. Historically, the Corporation has been able to meet its cash flow needs as necessary. If a sufficiently large number of depositors sought to withdraw their deposits for whatever reason, the Corporation may be unable to obtain the necessary funding at favorable terms.

The proportion of our deposit account balances that exceed FDIC insurance limits may expose the Bank to enhanced liquidity risk in times of financial distress.

In its assessment of the failures of SVB and SBNY in the first quarter of 2023, the FDIC concluded that a significant contributing factor to the failures of the institutions was the proportion of the deposits held by each institution that exceeded FDIC insurance limits. Noting that uninsured deposits accounted for nearly 47 percent of domestic deposits in 2021, the FDIC stated that large concentrations of uninsured deposits increase the potential for bank runs and can threaten financial stability. The FDIC similarly concluded that an overreliance on uninsured deposits contributed to the subsequent failure of First Republic Bank in the second quarter of 2023. In response to the failures of SVB, SBNY, and First Republic Bank, many large depositors across the industry have withdrawn deposits in excess of applicable deposit insurance limits and deposited these funds in other financial institutions and, in many instances, moved these funds into money market mutual funds or other similar securities accounts in an effort to diversify the risk of further bank failure(s).

Uninsured deposits historically have been viewed by the FDIC as less stable than insured deposits. According to statements made by the FDIC staff and the leadership of the federal banking agencies, customers with larger uninsured deposit account balances often are small- and mid-sized businesses that rely upon deposit funds for payment of operational expenses and, as a result, are more likely to closely monitor the financial condition and performance of their depository institutions. As a result, in the event of financial distress, uninsured depositors historically have been more likely to withdraw their deposits. To that end, the federal banking agencies, including the FDIC and OCC, issued an interagency policy statement in July 2023 to underscore the importance of robust liquidity risk management and contingency funding planning. In the policy statement, the regulators noted that banks should maintain actionable contingency funding plans that take into account a range of possible stress

scenarios, assess the stability of their funding and maintain a broad range of funding sources, ensure that collateral is available for borrowing, and review and revise contingency funding plans periodically and more frequently as market conditions and strategic initiatives change.

If a significant portion of our deposits were to be withdrawn within a short period of time such that additional sources of funding would be required to meet withdrawal demands, the Corporation may be unable to obtain funding at favorable terms, which may have an adverse effect on our net interest margin. Moreover, obtaining adequate funding to meet our deposit obligations may be more challenging during periods of elevated prevailing interest rates, such as the present period. Our ability to attract depositors during a time of actual or perceived distress or instability in the marketplace may be limited. Further, interest rates paid for borrowings generally exceed the interest rates paid on deposits. This spread may be exacerbated by higher prevailing interest rates. In addition, because our AFS investment securities lose value when interest rates rise, after-tax proceeds resulting from the sale of such assets may be diminished during periods when interest rates are elevated. Under such circumstances, we may be required to access funding from sources such as the Federal Reserve's discount window or its recently established BTFP in order to manage our liquidity risk. For additional information regarding uninsured deposits and liquidity, see sections Deposits and Customer Funding and Liquidity of Part II, Item 7, Management's Discussion and Analysis of Financial Condition and Results of Operations.

Adverse changes to our credit ratings could limit our access to funding and increase our borrowing costs.

Credit ratings are subject to ongoing review by rating agencies, which consider a number of factors, including our financial strength, performance, prospects and operations as well as factors not under our control. Other factors that influence our credit ratings include changes to the rating agencies' methodologies for our industry or certain security types; the rating agencies' assessment of the general operating environment for financial services companies; our relative positions in the markets in which we compete; our various risk exposures and risk management policies and activities; pending litigation and other contingencies; our reputation; our liquidity position, diversity of funding sources and funding costs; the current and expected level and volatility of our earnings; our capital position and capital management practices; our corporate governance; current or future regulatory and legislative initiatives; and the agencies' views on whether the U.S. government would provide meaningful support to the Corporation or its subsidiaries in a crisis. Rating agencies could make adjustments to our credit ratings at any time, and there can be no assurance that they will maintain our ratings at current levels or that downgrades will not occur.

In August 2023, Moody's and S&P Global Ratings each downgraded our long-term issuer credit ratings. Any additional downgrade in our credit ratings could potentially adversely affect the cost and other terms upon which we are able to borrow or obtain funding, increase our cost of capital and/or limit our access to capital markets. Credit rating downgrades or negative watch warnings could also negatively impact our reputation and the perception of the Corporation by lenders, investors and other third parties, which could also impair our ability to compete in certain markets or engage in certain transactions. In particular, holders of deposits which exceed FDIC insurance limits may perceive such a downgrade or warning negatively and withdraw all or a portion of such deposits. While certain aspects of a credit rating downgrade are quantifiable, the impact that such a downgrade would have on our liquidity, business and results of operations in future periods is inherently uncertain and would depend on a number of interrelated factors, including, among other things, the magnitude of the downgrade, the rating relative to peers, the rating assigned by the relevant agency pre-downgrade, individual client behavior and future mitigating actions we might take.

We are subject to interest rate risk.

Our earnings and cash flows are largely dependent upon our net interest income. Interest rates are highly sensitive to many factors that are beyond our control, including general economic conditions and policies of various governmental and regulatory agencies and, in particular, the Federal Reserve. Changes in monetary policy, including changes in interest rates, could influence not only the interest we receive on loans and investments and the amount of interest we pay on deposits and borrowings, but such changes could also affect (i) our ability to originate loans and obtain deposits; (ii) the fair value of our financial assets and liabilities; and (iii) the average duration of our mortgage portfolio and other interest-earning assets. In January 2022, due to elevated levels of inflation and corresponding pressure to raise interest rates, the Federal Reserve announced after several periods of historically low federal funds rates and yields on Treasury notes that it would be slowing the pace of its bond purchasing and increasing the target range for the federal funds rate over time. The FOMC since has increased the target range eleven times throughout 2022 and 2023. As of December 31, 2023, the target range for the federal funds rate had been increased to 5.25% to 5.50%. It remains uncertain whether the FOMC will further increase the target range for the federal funds rate to attain a monetary policy sufficiently restrictive to return inflation to more normalized levels, begin to reduce the federal funds rate or leave the rate at its current elevated level for a lengthy period of time. Our interest rate spread, net interest margin and net interest income increased during this period of rising interest rates as our interest earning assets generally repriced more quickly than our interest earning liabilities.

If the interest rates paid on deposits and other borrowings increase at a faster rate than the interest rates received on loans and other investments, our net interest income, and therefore earnings, could be adversely affected. Earnings could also be adversely affected if the interest rates received on loans and other investments fall more quickly than the interest rates paid on deposits and other borrowings. The Corporation's interest rate risk profile is such that, generally, a higher yield curve adds to income while a lower yield curve has a negative impact on earnings. Our most significant interest rate risk may result from timing differences in the maturity and re-pricing characteristics of assets and liabilities, changes in the shape of the yield curve, and the potential exercise of explicit or embedded options.

Although management believes it has implemented effective asset and liability management strategies, including the potential use of derivatives as hedging instruments, to reduce the potential effects of changes in interest rates on our results of operations, any substantial, unexpected, prolonged change in market interest rates could have a material adverse effect on our financial condition and results of operations, and any related economic downturn, especially domestically and in the regions in which we operate, may adversely affect our asset quality, deposit levels, loan demand and results of operations. Also, our interest rate risk modeling techniques and assumptions likely may not fully predict or capture the impact of actual interest rate changes on our balance sheet.

The impact of interest rates on our mortgage banking business can have a significant impact on revenues.

Changes in interest rates can impact our mortgage-related revenues and net revenues associated with our mortgage activities. A decline in mortgage rates generally increases the demand for mortgage loans as borrowers refinance, but also generally leads to accelerated payoffs. Conversely, in a constant or increasing rate environment, we would expect fewer loans to be refinanced and a decline in payoffs. Although we use models to assess the impact of interest rates on mortgage-related revenues, the estimates of revenues produced by these models are dependent on estimates and assumptions of future loan demand, prepayment speeds and other factors which may differ from actual subsequent experience.

Changes in interest rates could reduce the value of our investment securities holdings which would increase our accumulated other comprehensive loss and thereby negatively impact stockholders' equity.

The Corporation maintains an investment portfolio consisting of various high quality liquid fixed-income securities. The total carrying value of the securities portfolio, which includes FHLB and Federal Reserve Bank stocks, was \$7.7 billion as of December 31, 2023, and the estimated duration of the aggregate portfolio was approximately 5.7 years. The nature of fixed-income securities is such that changes in market interest rates impact the value of these assets.

Changes in interest rates could also reduce the value of our residential mortgage-related securities and MSRs, which could negatively affect our earnings.

The Corporation earns revenue from the fees it receives for originating mortgage loans and for servicing mortgage loans. When rates rise, the demand for mortgage loans tends to fall, reducing the revenue the Corporation receives from loan originations. At the same time, revenue from MSRs can increase through increases in fair value. When rates fall, mortgage originations tend to increase and the value of MSRs tends to decline, also with some offsetting revenue effect. Even though the origination of mortgage loans can act as a "natural hedge," the hedge is not perfect, either in amount or timing. For example, the negative effect on revenue from a decrease in the fair value of residential MSRs is immediate, but any offsetting revenue benefit from more originations and the MSRs relating to the new loans would accrue over time. It is also possible that even if interest rates were to fall, mortgage originations may also fall or any increase in mortgage originations may not be enough to offset the decrease in the MSRs value caused by the lower rates.

The Corporation typically uses derivatives and other instruments to hedge its mortgage banking interest rate risk. The Corporation generally does not hedge all of its risks and the fact that hedges are used does not mean they will be successful. Hedging is a complex process, requiring sophisticated models and constant monitoring. The Corporation could incur significant losses from its hedging activities. There may be periods where the Corporation elects not to use derivatives and other instruments to hedge mortgage banking interest rate risk.

We rely on dividends from our subsidiaries for most of our cash flow.

The Parent Company is a separate and distinct legal entity from its banking and other subsidiaries. A substantial portion of the Parent Company's cash flow comes from dividends from its subsidiaries. These dividends are the principal source of funds to pay dividends on the Parent Company's common and preferred stock, and to pay interest and principal on the Parent Company's debt. Various federal and/or applicable state laws and regulations limit the amount of dividends that the Bank and certain of our nonbanking subsidiaries may pay to us. Also, our right to participate in a distribution of assets upon a subsidiary's liquidation or reorganization is subject to the prior claims of the subsidiary's creditors. In the event the Bank subsidiary is unable to pay dividends to us, we may not be able to service debt, pay obligations, or pay dividends on our common and preferred stock. The inability to receive dividends from the Bank could have a material adverse effect on our business, financial condition, and results of operations.

Operational Risks

We face significant operational risks due to the high volume and the high dollar value nature of transactions we process.

We operate in many different businesses in diverse markets and rely on the ability of our employees and systems to process transactions. Operational risk is the risk of loss resulting from our operations, including but not limited to, the risk of fraud by employees or persons outside the Corporation, the execution of unauthorized transactions, errors relating to transaction processing and technology, breaches of our internal control systems or failures of those of our suppliers or counterparties, compliance failures, cyber-attacks, technology failures, or unforeseen problems encountered while implementing new computer systems or upgrades to existing systems, business continuation and disaster recovery issues, and other external events. Insurance coverage may not be available for such losses, or where available, such losses may exceed insurance limits. This risk of loss also includes the potential legal actions that could arise as a result of an operational deficiency or as a result of noncompliance with applicable regulatory standards, adverse business decisions or their implementation, and customer attrition due to potential negative publicity. The occurrence of any of these events could cause us to suffer financial loss, face regulatory action and suffer damage to our reputation.

Unauthorized disclosure of sensitive or confidential client or customer information, whether through a cyber-attack, other breach of our computer systems or otherwise, could severely harm our business.

In the normal course of our business, we collect, process, and retain sensitive and confidential client and customer information on our behalf and on behalf of other third parties. Despite the security measures we have in place, our facilities and systems may be vulnerable to cyber-attacks, security breaches, acts of vandalism, computer viruses, malware, misplaced or lost data, programming and/or human errors, or other similar events.

Information security risks for financial institutions like us continue to increase in part because of new technologies, the increased use of the internet and telecommunications technologies (including mobile devices and cloud computing) to conduct financial and other business transactions, political activism, and the increased sophistication and activities of organized crime, perpetrators of fraud, hackers, terrorists and others.

We rely on computer systems, hardware, software, technology infrastructure and online sites and networks for both internal and external operations that are critical to our business. Operational risk related to cyber-attacks is increasing as cyber-attacks evolve and have a greater and more pervasive economic impact. In addition to cyber-attacks or other security breaches involving the theft of sensitive and confidential information, hackers have engaged in attacks against large financial institutions, designed to disrupt key business services, such as customer-facing web sites. Critical infrastructure sectors, including financial services, increasingly have been the targets of cyber-attacks, including attacks emanating from foreign countries. Cyber-attacks involving large financial institutions, including distributed denial of service attacks designed to disrupt external customer-facing services, nation state cyberattacks and ransomware attacks designed to deny organizations access to key internal resources or systems or other critical data, as well as targeted social engineering and phishing email and text message attacks designed to allow unauthorized persons to obtain access to an institution's information systems and data or that of its customers, are becoming more common and increasingly sophisticated. In particular, there has been an observed increase in the number of distributed denial of service attacks against the financial sector, for which the increase is believed to be partially attributable to politically motivated attacks as well as financial demands coupled with extortion. Further, threat actors are increasingly seeking to target vulnerabilities in software systems (including bugs, vulnerabilities in third-party systems or software and technical misconfigurations in hardware and software) and weak authentication controls used by large numbers of banking organizations in order to conduct malicious cyber activities. These types of attacks have resulted in increased supply chain and third-party risk. In addition, on March 21, 2022, the current Presidential Administration issued a warning regarding the potential for Russia to engage in malicious cyber activities, specifically including attacks on critical infrastructure such as the financial sector, in

response to the international economic sanctions that have been imposed against the Russian government and organizations and individuals within Russia relating to its invasion of and ongoing conflict with Ukraine.

Because the methods of cyber-attacks change frequently or, in some cases, are not recognized until launch, we are not able to anticipate or implement effective preventive measures against all possible security breaches and the probability of a successful attack cannot be predicted. Although we employ detection and response mechanisms designed to contain and mitigate security incidents, early detection may be thwarted by persistent sophisticated attacks and malware designed to avoid detection.

We also face risks related to cyber-attacks and other security breaches in connection with card transactions that typically involve the transmission of sensitive information regarding our customers through various third parties. Some of these parties have in the past been the target of security breaches and cyber-attacks, and because the transactions involve third parties and environments that we do not control or secure, future security breaches or cyber-attacks affecting any of these third parties could impact us, and in some cases we may have exposure and suffer losses for breaches or attacks relating to them. We also rely on numerous other third-party service providers to conduct other aspects of our business operations and face similar risks relating to them. We cannot be sure that such third-party information security protocols are sufficient to withstand a cyber-attack or other security breach.

Cybersecurity risks for financial institutions also have evolved as a result of the increased interconnectedness of operating environments and the use of new technologies, devices and delivery channels to transmit data and conduct financial transactions. The adoption of new products, services and delivery channels contribute to a more complex operating environment, which enhances operational risk and presents the potential for additional structural vulnerabilities. As such, a single cyber-attack is now able to compromise hundreds of organizations and affect a significant number of consumers. In addition, the adoption of hybrid and remote work environments following the COVID-19 pandemic presents institutions with additional cybersecurity vulnerabilities and risks.

The Corporation regularly evaluates its systems and controls and implements upgrades as necessary. The additional cost to the Corporation of our cyber security monitoring and protection systems and controls includes the cost of hardware and software, third party technology providers, consulting and forensic testing firms, insurance premium costs and legal fees, in addition to the incremental cost of our personnel who focus a substantial portion of their responsibilities on cyber security.

Any successful cyber-attack or other security breach involving the misappropriation, loss, leak or other unauthorized disclosure of sensitive or confidential customer information, confidential and proprietary information relating to our bank and operations, unauthorized access to our information systems or that of our third-party service providers, or unauthorized access to other data that compromises our ability to function could severely damage our reputation, erode confidence in the security of our systems, products and services, expose us to the risk of litigation and liability, disrupt our operations and have a material adverse effect on our business. Any successful cyber-attack may also subject the Corporation to regulatory investigations, litigation (including class action litigation) or enforcement, or require the payment of regulatory fines or penalties or undertaking costly remediation efforts with respect to third parties affected by a cyber security incident, all or any of which could adversely affect the Corporation's business, financial condition or results of operations and damage its reputation. Finally, we cannot guarantee that any costs and liabilities incurred in relation to an attack or incident will be covered by our existing insurance policies or that applicable insurance will be available to us in the future on economically reasonable terms or at all.

From time to time, the Corporation engages in acquisitions, including acquisitions of depository institutions. The integration of core systems and processes for such transactions often occurs after the closing, which may create elevated risk of cyber incidents.

The Corporation may be subject to the data risks and cyber security vulnerabilities of the acquired company until the Corporation has sufficient time to fully integrate the acquiree's customers and operations. Although the Corporation conducts comprehensive due diligence of cyber-security policies, procedures and controls of our acquisition counterparties, and the Corporation maintains adequate policies, procedures, controls and information security protocols to facilitate a successful integration, there can be no assurance that such measures, controls and protocols are sufficient to withstand a cyber-attack or other security breach with respect to the companies we acquire, particularly during the period of time between closing and final integration.

We rely heavily on communications and information systems to conduct our business. We have experienced cybersecurity attacks in the past and our communications and information systems may experience an interruption or breach in security from future attacks.

We have experienced cybersecurity attacks in the past. Any failure, interruption, or breach in security or operational integrity of our or our third-party vendors' communications and information systems, including those caused by a cybersecurity attack, could result in failures or disruptions in our customer relationship management, general ledger, deposit, loan, and other systems. While we have policies and procedures designed to prevent or limit the effect of the failure, interruption, or security breach of our communications and information systems, we cannot completely ensure that any such failures, interruptions, or security breaches will not occur or, if they do occur, that they will be adequately addressed. The occurrence of any failures, interruptions, or security breaches of our or our third-party vendors' communications and information systems, including those caused by a cybersecurity attack, could damage our reputation, result in a loss of customer business, subject us to additional regulatory scrutiny, or expose us to civil litigation and possible financial liability, any of which could have a material adverse effect on our financial condition and results of operations.

We are subject to certain industry standards regarding our credit card-related services. Failure to meet those standards may significantly impact our ability to offer these services.

We are subject to the PCI-DSS, issued by the Payment Card Industry Security Standards Council. PCI-DSS contains compliance guidelines with regard to our security surrounding the physical and electronic storage, processing and transmission of cardholder data. Compliance with PCI-DSS and implementing related procedures, technology and information security measures requires significant resources and ongoing attention. Costs and potential problems and interruptions associated with the implementation of new or upgraded systems and technology, such as those necessary to achieve compliance with PCI-DSS or with maintenance or adequate support of existing systems could also disrupt or reduce the efficiency of our operations. Any material interruptions or failures in our payment-related systems or third parties that we rely upon could have a material adverse effect on our business, results of operations and financial condition. If there are amendments to PCI-DSS, the cost of compliance could increase, and we may suffer loss of critical data and interruptions or delays in our operations as a result. If we or our service providers are unable to comply with the standards imposed by PCI-DSS, we may be subject to fines and restrictions on our ability to offer certain services, which could materially and adversely affect our business.

Compliance with ever-evolving federal and state laws relating to the handling of information about individuals involves significant expenditure and resources, and any failure by us or our vendors to comply may result in significant liability, negative publicity, and/or an erosion of trust, which could materially adversely affect our business, results of operations, and financial condition.

We are subject to a number of U.S. federal, state, local and foreign laws and regulations relating to consumer privacy and data protection. Under privacy protection provisions of the GLBA and its implementing regulations and guidance, we are limited in our ability to disclose certain non-public information about consumers to nonaffiliated third parties. The GLBA regulates, among other things, the use of certain information about individuals ("non-public personal information") in the context of the provision of financial services, including by banks and other financial institutions. The GLBA includes both a "Privacy Rule," which imposes obligations on financial institutions relating to the use or disclosure of non-public personal information, and a "Safeguards Rule," which imposes obligations on financial institutions and, indirectly, their service providers to implement and maintain physical, administrative and technological measures to protect the security of non-public personal financial information. Any failure to comply with the GLBA could result in substantial financial penalties and significant reputational harm.

While GLBA-regulated nonpublic, personal information generally is exempt under the CCPA, the CCPA applies to the personal information of representatives of any business contacts that the Bank engages with who are California residents, California employees, and California consumers whose personal information we may collect outside the scope of the GLBA (e.g., certain personal information collected from visitors to our websites). The CCPA went into effect in 2020 and imposes obligations on businesses that process personal information of California residents. Among other things, the CCPA: requires disclosures to such residents about the data collection, use and disclosure practices of covered businesses; provides such individuals expanded rights to access, delete, and correct their personal information, and opt-out of certain sales or transfers of personal information; and provides such individuals with a private right of action and statutory damages for certain data breaches. The CCPA and CPRA mark the beginning of a trend toward more stringent privacy legislation in the United States, and multiple states have enacted, or are expected to enact, similar laws, including the Oregon Consumer Privacy Law which takes effect on July 1, 2024, not all of which exempt financial institutions categorically. Many other states are currently reviewing or proposing the need for greater regulation of the collection, sharing, use and other processing of information related to individuals for marketing purposes or otherwise, and there remains increased interest at the federal level as well. Further, in order to comply with the

varying state laws around data breaches, we must maintain adequate security measures, which require significant investments in resources and ongoing attention.

Additionally, laws, regulations, and standards covering marketing, advertising, and other activities conducted by telephone, email, mobile devices, and the internet are or may become applicable to our business, such as the TCPA, the CAN-SPAM Act, and similar state consumer protection and communication privacy laws, such as California's Invasion of Privacy Act.

We occasionally make telephone calls and/or send SMS text messages to customers. The actual or perceived improper calling of customer phones and/or sending of text messages may subject us to potential risks, including liabilities or claims relating to consumer protection laws such as the TCPA. Numerous class-action suits under federal and state laws have been filed in recent years against companies who conduct telemarketing and/or SMS texting programs, with many resulting in multi-million-dollar settlements to the plaintiffs. Any future such litigation against us could be costly and time-consuming to defend. In particular, the TCPA imposes significant restrictions on the ability to make telephone calls or send text messages to mobile telephone numbers without the prior consent of the person being contacted. Federal or state regulatory authorities or private litigants may claim that the notices and disclosures we provide, form of consents we obtain or our outreach practices are not adequate or violate applicable law. This may in the future result in civil claims against us. Claims that we have violated the TCPA could be costly to litigate, whether or not they have merit, and could expose us to substantial statutory damages or costly settlements.

We also send marketing messages via email and are subject to the CAN-SPAM Act. The CAN-SPAM Act imposes certain obligations regarding the content of emails and providing opt-outs (with the corresponding requirement to honor such opt-outs promptly). While we strive to ensure that all of our marketing communications comply with the requirements set forth in the CAN-SPAM Act, any violations could result in the FTC seeking civil penalties against us.

Moreover, we are considered a "user" of consumer reports provided by consumer reporting agencies under the Fair Credit Reporting Act, as amended by the Fair and Accurate Credit Transactions Act (collectively, "FCRA"). FCRA regulates and protects consumer information collected by consumer reporting agencies and imposes specific obligations on "users" of consumer reports. Such obligations may include restricting the sharing of information contained in a consumer report, notifying consumers when such reports are used to make an adverse decision, and, in the context of completing employee background checks, providing a notice containing certain disclosures to the consumer and obtaining their consent.

Any actual or perceived failure to comply with evolving regulatory frameworks around the development and use of artificial intelligence could adversely affect our business, results of operations, and financial condition.

Our business increasingly relies on AI, machine learning and automated decision making to improve our services and our customer's experience. The regulatory framework around the development and use of these emerging technologies is rapidly evolving, and many federal, state and foreign government bodies and agencies have introduced and/or are currently considering additional laws and regulations. As a result, implementation standards and enforcement practices are likely to remain uncertain for the foreseeable future, and we cannot yet determine the impact future laws, regulations, standards, or perception of their requirements may have on our business.

Any of the foregoing, together with developing guidance and/or decisions in this area, may affect our use of AI and our ability to provide and improve our services, require additional compliance measures and changes to our operations and processes, and result in increased compliance costs and potential increases in civil claims against us. Any actual or perceived failure to comply with evolving regulatory frameworks around the development and use of AI, machine learning and automated decision making could adversely affect our business, results of operations, and financial condition.

We are dependent upon third parties for certain information system, data management and processing services, and to provide key components of our business infrastructure.

We outsource certain information system and data management and processing functions to third-party providers, including, among others, Fiserv, Inc. and its affiliates to compete in a rapidly evolving financial marketplace. These third-party service providers are sources of operational and informational security risk to us, including risks associated with operational errors, information system interruptions or breaches, and unauthorized disclosures of sensitive or confidential client or customer information. Concentration among larger third-party providers servicing large segments of the banking industry can also potentially affect wide segments of the financial industry. If third-party service providers encounter any of these issues, or if we have difficulty communicating with them, we could be exposed to disruption of operations, loss of service or connectivity to customers, reputational damage, and litigation risk that could have a material adverse effect on our results of operations or our business.

Third-party vendors provide key components of our business infrastructure, such as internet connections, network access and core application processing. While we have selected these third-party vendors in accordance with supervisory requirements, we

do not control their actions. The actions of these third parties, including as a result of their not providing us their services for any reason or their performing their services poorly, could adversely affect our ability to deliver products and services to our customers and otherwise to conduct our business. Replacing these third-party vendors could also entail significant delay and expense.

The potential for business interruption exists throughout our organization.

Integral to our performance is the continued efficacy of our technical systems, operational infrastructure, relationships with third parties and the vast array of associates and key executives in our day-to-day and ongoing operations. Failure by any or all of these resources subjects us to risks that may vary in size, scale and scope. This includes, but is not limited to, operational or technical failures, ineffectiveness or exposure due to interruption in third party support, problems arising from systems conversions, as well as the loss of key individuals or failure on the part of key individuals to perform properly. Although management has established policies and procedures to address such failures, the occurrence of any such event could have a material adverse effect on our business, which, in turn, could have a material adverse effect on our financial condition and results of operations.

Changes in the federal, state, or local tax laws may negatively impact our financial performance.

We are subject to changes in tax law that could increase our effective tax rates. These law changes may be retroactive to previous periods and as a result could negatively affect our current and future financial performance. For example, legislation enacted in 2017 resulted in a reduction in our federal corporate tax rate from 35% in 2017 to 21% in 2018, which had a favorable impact on our earnings and capital generation abilities. However, this legislation also enacted limitations on certain deductions, such as the deduction of FDIC deposit insurance premiums, which partially offset the anticipated increase in net earnings from the lower tax rate. Any increase in the corporate tax rate or surcharges that may be adopted by Congress would adversely affect our results of operations in future periods.

In addition, the Bank's customers experienced and likely will continue to experience varying effects from both the individual and business tax provisions of the Tax Act and other future changes in tax law and such effects, whether positive or negative, may have a corresponding impact on our business and the economy as a whole.

Further, on August 16, 2022, the Inflation Reduction Act of 2022 was enacted into law. The legislation imposed a non-deductible 1% excise tax on repurchases of stock by "covered corporations," including the Corporation. As a result, our results of operations in future periods may be impacted adversely to the extent of any significant stock repurchases by the Corporation.

Impairment of investment securities, goodwill, other intangible assets, or DTAs could require charges to earnings, which could result in a negative impact on our results of operations.

In assessing whether the impairment of investment securities is related to a deterioration in credit factors, management considers the length of time and extent to which the fair value has been less than cost, the financial condition and near-term prospects of the issuer, and the intent and ability to retain our investment in the security for a period of time sufficient to allow for any anticipated recovery in fair value in the near term.

Under current accounting standards, goodwill is not amortized but, instead, is subject to impairment tests on at least an annual basis or more frequently if an event occurs or circumstances change that reduce the fair value of a reporting unit below its carrying amount. A decline in our stock price or occurrence of a triggering event following any of our quarterly earnings releases and prior to the filing of the periodic report for that period could, under certain circumstances, cause us to perform a goodwill impairment test and result in an impairment charge being recorded for that period which was not reflected in such earnings release. During 2023, the annual impairment test conducted in May, using a qualitative assessment, indicated that the estimated fair value of all of the Corporation's reporting units exceeded the carrying value. In the event that we conclude in a future assessment that all or a portion of our goodwill may be impaired, a non-cash charge for the amount of such impairment would be recorded to earnings. Such a charge would have no impact on tangible capital. At December 31, 2023, we had goodwill of \$1.1 billion, which represents approximately 26% of stockholders' equity.

In assessing the realizability of DTAs, management considers whether it is more likely than not that some portion or all of the DTAs will not be realized. Assessing the need for, or the sufficiency of, a valuation allowance requires management to evaluate all available evidence, both negative and positive, including the recent trend of quarterly earnings. Positive evidence necessary to overcome the negative evidence includes whether future taxable income in sufficient amounts and character within the carryback and carryforward periods is available under the tax law, including the use of tax planning strategies. When negative evidence (e.g., cumulative losses in recent years, history of operating loss or tax credit carryforwards expiring unused) exists, more positive evidence than negative evidence will be necessary.

The impact of each of these impairment matters could have a material adverse effect on our business, results of operations, and financial condition.

Revenues from our investment management and asset servicing businesses are significant to our earnings.

Generating returns that satisfy clients in a variety of asset classes is important to maintaining existing business and attracting new business. Administering or managing assets in accordance with the terms of governing documents and applicable laws is also important to client satisfaction. Failure in either of the foregoing areas can expose us to liability, and result in a decrease in our revenues and earnings.

Climate change and related legislative and regulatory initiatives may result in operational changes and expenditures that could significantly impact our business.

The current and anticipated effects of climate change are creating an increasing level of concern for the state of the global environment. As a result, political and social attention to the issue of climate change has increased. In recent years, governments across the world have entered into international agreements or have otherwise acted to attempt to reduce global temperatures, in part by limiting GHG emissions. The Federal Reserve Board became a member of the Network of Central Banks and Supervisors for Greening the Financial System and, in its Financial Stability Report of November 2020, specifically addressed the implications of climate change for markets, financial exposures, financial institutions, and financial stability. The U.S. Congress, state legislatures and federal and state regulatory agencies have continued to propose and advance numerous legislative and regulatory initiatives seeking to mitigate the effects of climate change, including mandatory substantive and/or disclosure requirements regarding climate change. Such initiatives have been pursued with rigor under the current Presidential Administration. The Financial Stability Oversight Council, of which the OCC is a member, published a report in October 2021 identifying climate-related financial risk as an “emerging threat” to financial stability. The leadership of the federal banking agencies, including the Comptroller of the Currency, have emphasized that climate-related risks are faced by banking organizations of all types and sizes, specifically including physical and transition risks, and are in the process of enhancing supervisory expectations regarding banks' risk management practices. To that end, on October 24, 2023, the federal banking agencies, including the OCC, issued interagency guidance on principles for climate-related financial risk management by large financial institutions. The guidance reiterates the agencies' view that financial institutions are likely to be affected by both the physical risks and transition risks associated with climate change, which can manifest as traditional risks such as credit, market, liquidity, operation, and legal risks. To address these risks, the guidance covers six areas: governance; policies, procedures, and limits; strategic planning; risk management; data, risk management, and reporting; and scenario analysis. The guidance applies only to banking organizations with total consolidated assets of greater than \$100 billion and therefore does not apply to the Bank directly. In addition, the OCC stressed in its 2024 Bank Supervision Operating Plan that climate-related financial risk is one of its supervision priorities and objectives; however, the OCC noted that its focus on climate-related financial risks will be limited to financial institutions with total assets of over \$100 billion. Additionally, in March 2022, the SEC proposed new climate-related disclosure rules, which if finalized, would require new climate-related disclosures in SEC filings and audited financial statements, including certain climate-related metrics and direct and indirect GHG emissions data, information about climate-related targets and goals, transition plans, if any, and attestation requirements. In October 2023, California Governor Gavin Newsom signed two climate-related disclosure bills into law. The Climate Corporate Data Accountability Act (referred to as SB 253) requires both public and private U.S. businesses with revenues greater than \$1 billion doing business in California to report their GHG emissions including scopes 1, 2, and 3, beginning in 2026 (for 2025 data) and also requires reporting companies to get third-party assurance of their reports. Other states have proposed legislation similar to SB 253. The Climate-Related Financial Risk Act (referred to as SB 261) mandates U.S. businesses with annual revenues over \$500 million doing business in California to bi-annually disclose climate-related financial risks and their mitigation strategies beginning January 1, 2026. Disclosure requirements imposed by different regulators may not always be uniform, which may result in increased complexity, and cost, for compliance. Additionally, many of our suppliers and business partners may be subject to similar requirements, which may augment or create additional risks, including risks that may not be known to us.

Although these new guidelines do not apply to a banking organization of our size, as the Corporation continues to grow and expand the scope of our operations, our regulators generally will expect us to enhance our internal control programs and processes, including with respect to risk management and stress testing under a variety of adverse scenarios and related capital planning. In the event the federal banking agencies were to expand the scope of coverage of the new climate risk guidelines to institutions of our size or promulgate new regulations or supervisory guidance applicable to the Corporation, we would expect to experience increased compliance costs and other compliance-related risks.

The above measures may also result in the imposition of taxes and fees, the required purchase of emission credits, and the implementation of significant operational changes, each of which may require the Corporation to expend significant capital and incur compliance, operating, maintenance and remediation costs. Given the lack of empirical data on the credit and other financial risks posed by climate change, it is impossible to predict how climate change may impact our financial condition and

operations; however, as a banking organization, the physical effects of climate change may present certain unique risks to the Corporation. For example, weather disasters, shifts in local climates and other disruptions related to climate change may adversely affect the value of real properties securing our loans, which could diminish the value of our loan portfolio. Such events may also cause reductions in regional and local economic activity that may have an adverse effect on our customers, which could limit our ability to raise and invest capital in these areas and communities, each of which could have a material adverse effect on our financial condition and results of operations.

In recognition of the risks posed by climate change, as discussed above, the Corporation has taken a variety of actions to manage its carbon footprint and has sought to engage in sustainable lending and investment activities, specifically including supporting renewable energy projects. However, we cannot guarantee the success of these actions, nor can we make any assurances that our regulators, investors in our securities or other third parties, such as environmental advocacy organizations, will find our efforts to support climate-related initiatives to be sufficient.

Severe weather, natural disasters, public health issues, civil unrest, acts of war or terrorism, and other external events could significantly impact our ability to conduct business.

Such events could affect the stability of our deposit base, impair the ability of borrowers to repay outstanding loans, impair the value of collateral securing loans, adversely impact our employee base, cause significant property damage, result in loss of revenue, and/or cause us to incur additional expenses. Although management has established disaster recovery policies and procedures, the occurrence of any such event could have a material adverse effect on our business, which, in turn, could have a material adverse effect on our financial condition and results of operations.

Increasing, complex and evolving regulatory, stakeholder, and other third party expectations on ESG matters could adversely affect our reputation, our access to capital and the market price of our securities.

The Corporation is subject to a variety of risks arising from ESG matters as governmental and regulatory bodies, investors, customers, employees and other stakeholders and third parties have been increasingly focused on ESG matters. ESG matters include, among other things, climate risk, hiring practices, the diversity of our work force, and racial and social justice issues involving our personnel, customers and third parties with whom we otherwise do business. Risks arising from ESG matters may adversely affect, among other things, our reputation and the market price of our securities.

Further, we may be exposed to negative publicity based on the identity and activities of those to whom we lend and with which we otherwise do business and the public's view of the approach and performance of our customers and business partners with respect to ESG matters. Any such negative publicity could arise from adverse news coverage in traditional media and could also spread through the use of social media platforms. The Corporation's relationships and reputation with its existing and prospective customers and third parties with which we do business could be damaged if we were to become the subject of any such negative publicity. This, in turn, could have an adverse effect on our ability to attract and retain customers and employees and could have a negative impact on the market price for securities.

Investors have begun to consider the steps taken and resources allocated by financial institutions and other commercial organizations to address ESG matters when making investment and operational decisions. Certain investors are beginning to incorporate the business risks of climate change and the adequacy of companies' responses to the risks posed by climate change and other ESG matters into their investment theses. Additionally, organizations that provide information to investors on corporate governance and related matters have developed ratings processes for evaluating companies on their approach to ESG matters. Unfavorable ratings of the Corporation may adversely affect investor sentiment towards the Corporation or the market price of our securities.

Further, as we continue to focus on developing ESG practices, and as investor and other stakeholder expectations, voluntary and regulatory ESG disclosure standards and policies continue to evolve, we have expanded and expect to further expand our public disclosures in these areas. Such disclosures may reflect aspirational goals, targets, and other expectations and assumptions, which are necessarily uncertain and may not be realized. Failure to realize (or timely achieve progress on) such aspirational goals and targets could adversely affect our third party ESG ratings, our reputation or otherwise adversely affect us.

Increased attention to ESG matters also has caused public officials, including certain state attorneys general, treasurers, and legislators, to take various actions to impact the extent to which ESG principles are considered by private investors. For instance, certain states have enacted laws or issued directives designed to penalize financial institutions that the state believes are boycotting certain industries such as the fossil fuel and firearms industries. These developments illustrate that ESG-based investing has become a divisive political issue. Shifts in investing priorities based on ESG principles may result in adverse effects on the market price of our securities to the extent that investors that give significant weight to such principles determine that the Corporation has not made sufficient progress on ESG matters. Conversely, the market price of our securities may be

adversely affected if a government official or agency seeks to limit the Corporation's business with a certain government entity or initiates an investigation or enforcement action because of what is perceived to be the Corporation's unwarranted focus on ESG matters.

Strategic and External Risks

Our earnings are significantly affected by the fiscal and monetary policies of the federal government and its agencies.

The policies of the Federal Reserve impact us significantly. The Federal Reserve regulates the supply of money and credit in the United States. Its policies directly and indirectly influence the rate of interest earned on loans and paid on borrowings and interest-bearing deposits and can also affect the value of financial instruments we hold. Those policies determine to a significant extent our cost of funds for lending and investing. Changes in those policies are beyond our control and are difficult to predict. Federal Reserve policies can also affect our borrowers, potentially increasing the risk that they may fail to repay their loans. For example, a tightening of the money supply by the Federal Reserve could reduce the demand for a borrower's products and services. This could adversely affect the borrower's earnings and ability to repay its loan, which could have a material adverse effect on our financial condition and results of operations.

Our financial condition and results of operations could be negatively affected if we fail to grow or fail to manage our growth effectively.

Our business strategy includes significant growth plans. We intend to continue pursuing a profitable growth strategy. Our prospects must be considered in light of the risks, expenses and difficulties frequently encountered by companies in significant growth stages of development. Sustainable growth requires that we manage our risks by balancing loan and deposit growth at acceptable levels of risk, maintaining adequate liquidity and capital, hiring and retaining qualified employees, successfully managing the costs and implementation risks with respect to strategic projects and initiatives, and integrating acquisition targets and managing the costs. We may not be able to expand our market presence in our existing markets or successfully enter new markets, and any such expansion may adversely affect our results of operations. Failure to manage our growth effectively could have a material adverse effect on our business, future prospects, financial condition or results of operations and could adversely affect our ability to successfully implement our business strategy. Also, if we grow more slowly than anticipated, our operating results could be materially adversely affected.

We operate in a highly competitive industry and market area.

We face substantial competition in all areas of our operations from a variety of different competitors, both within and beyond our principal markets, many of which are larger and may have more financial resources. Such competitors primarily include national, regional, and internet banks within the various markets in which we operate. We also face competition from many other types of financial institutions, including, without limitation, savings and loans, credit unions, finance companies, brokerage firms, insurance companies, and other financial intermediaries. The financial services industry could become even more competitive as a result of legislative and regulatory changes and continued consolidation. In recent years, the OCC has begun to accept applications from financial technology companies to become special purpose national banks. These and similar developments at the state level are likely to result in even greater competition within all areas of our operations.

In addition, as customer preferences and expectations continue to evolve, technology has lowered barriers to entry and made it possible for nonbanks to offer products and services traditionally provided by banks, such as automatic transfer and automatic payment systems. In addition, some of the largest technology firms are engaging in joint ventures with the largest banks to provide and/or expand financial service offerings with a technological sophistication and breadth of marketing that smaller institutions do not have. Many of our competitors have fewer regulatory constraints and may have lower cost structures. Additionally, due to their size, many competitors may be able to achieve economies of scale and, as a result, may offer a broader range of products and services as well as better pricing for those products and services than we can.

Our ability to compete successfully depends on a number of factors, including, among other things:

- the ability to develop, maintain, and build upon long-term customer relationships based on top quality service, high ethical standards, and safe, sound assets;
- the ability to expand our market position;
- the scope, relevance, and pricing of products and services offered to meet customer needs and demands;
- the rate at which we introduce new products and services relative to our competitors;
- customer satisfaction with our level of service; and

- industry and general economic trends.

Failure to perform in any of these areas could significantly weaken our competitive position, which could adversely affect our growth and profitability, which, in turn, could have a material adverse effect on our financial condition and results of operations.

Fiscal challenges facing the U.S. government could negatively impact financial markets which in turn could have an adverse effect on our financial position or results of operations.

Federal budget deficit concerns and the potential for political conflict over legislation to fund U.S. government operations and raise the U.S. government's debt limit may increase the possibility of a default by the U.S. government on its debt obligations, related credit-rating downgrades, or an economic recession in the United States. Many of our investment securities are issued by the U.S. government and government agencies and sponsored entities. As a result of uncertain domestic political conditions, including potential future federal government shutdowns, the possibility of the federal government defaulting on its obligations for a period of time due to debt ceiling limitations or other unresolved political issues, investments in financial instruments issued or guaranteed by the federal government pose liquidity risks. In connection with prior political disputes over U.S. fiscal and budgetary issues leading to the U.S. government shutdown in 2011, S&P lowered its long term sovereign credit rating on the U.S. from AAA to AA+. In 2023, Congress narrowly averted two separate government shutdowns by passing continuing resolutions. In part due to repeated debt-limit political standoffs and last-minute resolutions, in 2023 a rating agency downgraded the U.S. long-term foreign-currency issuer default rating to AA+ from AAA. A further downgrade, or a downgrade by other rating agencies, as well as sovereign debt issues facing the governments of other countries, could have a material adverse impact on financial markets and economic conditions in the U.S. and worldwide.

Consumers may decide not to use banks to complete their financial transactions.

Technology and other changes are allowing parties to complete financial transactions through alternative methods that historically have involved banks. For example, consumers can now maintain funds that would have historically been held as bank deposits in brokerage accounts, mutual funds or general-purpose reloadable prepaid cards. Consumers can also complete transactions, such as paying bills and/or transferring funds directly without the assistance of banks. Although the digital asset marketplace has in recent months experienced substantial instability, transactions utilizing digital assets, including cryptocurrencies, stablecoins and other similar assets, have increased substantially over the course of the last several years. Certain characteristics of digital asset transactions, such as the speed with which such transactions can be conducted, the ability to transact without the involvement of regulated intermediaries, the ability to engage in transactions across multiple jurisdictions, and the anonymous nature of the transactions, are appealing to certain consumers notwithstanding the various risks posed by such transactions as illustrated by the current and ongoing market volatility. Accordingly, digital asset service providers, which at present are not subject to the extensive regulation of banking organizations and other financial institutions, have become active competitors for our customers' banking business. The process of eliminating banks as intermediaries, known as "disintermediation," could result in the loss of fee income, as well as the loss of customer deposits and the related income generated from those deposits. Further, an initiative by the CFPB, as prompted by the current Presidential Administration, to promote "open and decentralized banking" through the proposal of a Personal Financial Data Rights rule designed to facilitate the transfer of customer information at the direction of the customer to other financial institutions could lead to greater competition for products and services among banks and nonbanks alike if a final rule is adopted. The timing of and prospects for any such action are uncertain at this time. The loss of these revenue streams and the lower cost of deposits as a source of funds could have a material adverse effect on our financial condition and results of operations.

Our profitability depends significantly on economic conditions in the states within which we do business.

Our success depends on the general economic conditions of the specific local markets in which we operate, particularly Wisconsin, Illinois and Minnesota. Local economic conditions have a significant impact on the demand for our products and services, as well as the ability of our customers to repay loans, on the value of the collateral securing loans, and the stability of our deposit funding sources. A significant decline in general local economic conditions caused by inflation, recession, unemployment, changes in securities markets, changes in housing market prices, or other factors could have a material adverse effect on our financial condition and results of operations.

The earnings of financial services companies are significantly affected by general business and economic conditions.

Our operations and profitability are impacted by general business and economic conditions in the United States and abroad. These conditions include short-term and long-term interest rates, inflation, money supply, political issues, ramifications of conflicts including the Russia-Ukraine conflict, legislative and regulatory changes, fluctuations in both debt and equity capital markets, broad trends in industry and finance, the strength of the United States economy, and uncertainty in financial markets

globally, all of which are beyond our control. A deterioration in economic conditions, including those arising from government shutdowns, defaults, anticipated defaults or rating agency downgrades of sovereign debt (including debt of the U.S.), or increases in unemployment, could result in an increase in loan delinquencies and NPAs, decreases in loan collateral values, and a decrease in demand for our products and services, among other things, any of which could have a material adverse impact on our financial condition and results of operations.

New lines of business or new products and services may subject us to additional risk.

From time to time, we may implement new lines of business or offer new products and services within existing lines of business. There are substantial risks and uncertainties associated with these efforts, particularly in instances where the markets are not fully developed. In developing and marketing new lines of business and/or new products and services, we may invest significant time and resources. Initial timetables for the introduction and development of new lines of business and/or new products or services may not be achieved and price and profitability targets may not prove feasible. External factors, such as competitive alternatives and shifting market preferences, may also impact the successful implementation of a new line of business and/or a new product or service. Furthermore, strategic planning remains important as we adopt innovative products, services, and processes in response to the evolving demands for financial services and the entrance of new competitors, such as out-of-market banks and financial technology firms. Any new line of business and/or new product or service could have a significant impact on the effectiveness of our system of internal controls, so we must responsibly innovate in a manner that is consistent with sound risk management and is aligned with the Bank's overall business strategies. Failure to successfully manage these risks in the development and implementation of new lines of business and/or new products or services could have a material adverse effect on our business, results of operations and financial condition.

Failure to keep pace with technological change could adversely affect our business.

The financial services industry is continually undergoing rapid technological change with frequent introductions of new technology-driven products and services, including the potential utilization of blockchain technology to provide alternative high speed payment systems. The effective use of technology increases efficiency and enables financial institutions to better serve customers and to reduce costs. Our future success depends, in part, upon our ability to address the needs of our customers by using technology to provide products and services that will satisfy customer demands, as well as to create additional efficiencies in our operations. Many of our competitors have substantially greater resources to invest in technological improvements. We may not be able to effectively implement new technology-driven products and services or be successful in marketing these products and services to our customers. Failure to successfully keep pace with technological change affecting the financial services industry could have a material adverse impact on our business and, in turn, our financial condition and results of operations.

We may be adversely affected by risks associated with potential and completed acquisitions.

As part of our growth strategy, we regularly evaluate merger and acquisition opportunities and conduct due diligence activities related to possible transactions with other financial institutions and financial services companies. As a result, negotiations may take place and future mergers or acquisitions involving cash, debt, or equity securities may occur at any time. We seek merger or acquisition partners that are culturally similar, have experienced management, and possess either significant market presence or have potential for improved profitability through financial management, economies of scale, or expanded services.

Acquiring other banks, businesses, or branches involves potential adverse impact to our financial results and various other risks commonly associated with acquisitions, including, among other things:

- incurring time and expense associated with identifying and evaluating potential acquisitions and negotiating potential transactions, and with integrating acquired businesses, resulting in the diversion of resources from the operation of our existing businesses;
- difficulty in estimating the value of target companies or assets and in evaluating credit, operations, management, and market risks associated with those companies or assets;
- payment of a premium over book and market values that may dilute our tangible book value and earnings per share in the short and long term;
- potential exposure to unknown or contingent liabilities of the target company, including, without limitation, liabilities for regulatory and compliance issues;
- exposure to potential asset quality issues of the target company;

- there may be volatility in reported income as goodwill impairment losses could occur irregularly and in varying amounts;
- difficulties, inefficiencies or cost overruns associated with the integration of the operations, personnel, technologies, services, and products of acquired companies with ours;
- inability to realize the expected revenue increases, cost savings, increases in geographic or product presence, and/or other projected benefits;
- potential disruption to our business;
- the possible loss of key employees and customers of the target company; and
- potential changes in banking or tax laws or regulations that may affect the target company.

Acquisitions also involve operational risks and uncertainties, and acquired companies may have unknown or contingent liabilities, exposure to unexpected asset quality problems that require write-downs or write-offs (as well as restructuring and impairment or other charges), difficulty retaining key employees and customers and other issues that could negatively affect our business. We may not be able to realize any projected cost savings, synergies or other benefits associated with any such acquisition we complete. Acquisitions typically involve the payment of a premium over book and market values and, therefore, some dilution of our tangible book value and net income per common share may occur in connection with any future transaction. Failure to successfully integrate the entities we acquire into our existing operations could increase our operating costs significantly and have a material adverse effect on our business, financial condition, and results of operations.

In addition, we face significant competition from other financial services institutions, some of which may have greater financial resources than we do, when considering acquisition opportunities. Accordingly, attractive opportunities may not be available to us and there can be no assurance that we will be successful in identifying or completing future acquisitions.

Acquisitions may be delayed, impeded, or prohibited due to regulatory issues.

Acquisitions by the Corporation, particularly those of financial institutions, are subject to approval by a variety of federal and state regulatory agencies (collectively, “regulatory approvals”). The process for obtaining these required regulatory approvals has become substantially more difficult in recent years. Regulatory approvals could be delayed, impeded, restrictively conditioned or denied due to existing or new regulatory issues the Corporation has, or may have, with regulatory agencies, including, without limitation, issues related to BSA compliance, CRA issues, fair lending laws, fair housing laws, consumer protection laws, unfair, deceptive, or abusive acts or practices regulations, and other similar laws and regulations. We may fail to pursue, evaluate or complete strategic and competitively significant acquisition opportunities as a result of our inability, or perceived or anticipated inability, to obtain regulatory approvals in a timely manner, under reasonable conditions or at all. The regulatory approvals may contain conditions on the completion of the merger that adversely affect our business following the closing, or which are not anticipated or cannot be met. Difficulties associated with potential acquisitions that may result from these factors could have a material adverse impact on our business, and, in turn, our financial condition and results of operations.

Moreover, in July 2021, President Biden issued an Executive Order on Promoting Competition in the American Economy which encouraged the federal banking agencies to review their current merger oversight practices. In response, the FDIC issued a request for public comment on the effectiveness of the existing framework for evaluating bank mergers and acquisitions under the FDI Act. In addition, the acting Comptroller of the Currency publicly stressed the need to update the framework used for analyzing bank mergers and noted that, without enhancements, there is an increased risk of approving mergers that diminish competition, hurt communities, or present systemic risks. The FTC and DOJ closely evaluate proposed mergers and acquisitions, including within the financial services sector, that have the potential to limit competition. To that end, the FTC and DOJ jointly released final Merger Guidelines, which includes a more expansive, context-specific method of analysis to evaluate competitive effects. Further, the Director of the CFPB has publicly sought a greater role for the CFPB in the evaluation of proposed bank mergers. The prospects and timing for the adoption by the federal banking agencies of revised bank merger guidelines are not certain at this time.

Any enhanced regulatory scrutiny of bank mergers and acquisitions and revision of the framework for merger application review may adversely affect the marketplace for such transactions, could result in our acquisitions in future periods being delayed, impeded or restricted in certain respects and result in new rules that possibly limit the size of financial institutions we may be able to acquire in the future and alter the terms for such transactions.

Legal, Regulatory, Compliance and Reputational Risks

We are subject to extensive government regulation and supervision.

We are subject to extensive federal and applicable state regulation and supervision, primarily through Associated Bank and certain nonbank subsidiaries. Banking regulations are primarily intended to protect depositors' funds, federal deposit insurance funds, and the banking system as a whole, not shareholders. These regulations affect our lending practices, capital structure, investment practices, dividend policy, and growth, among other things. Congress and federal regulatory agencies continually review banking laws, regulations, and policies for possible changes, and proposed changes can continue to be expected under the current Presidential Administration. Changes to statutes, regulations, or regulatory policies, including changes in interpretation or implementation of statutes, regulations, or policies, could affect us in substantial and unpredictable ways. Such changes could subject us to additional costs, limit the types of financial services and products we may offer, and/or increase the ability of nonbanks to offer competing financial services and products, among other things. Failure to comply with laws, regulations, or policies could result in sanctions by regulatory agencies, civil money penalties, and/or reputation damage, which could have a material adverse effect on our business, financial condition, and results of operations. While we have policies and procedures designed to prevent these types of violations, there can be no assurance that such violations will not occur.

Significantly, the enactment of the Economic Growth Act, and the promulgation of its implementing regulations, repealed or modified several important provisions of the Dodd-Frank Act. Among other things, the Economic Growth Act and its implementing regulations raised the total asset thresholds to \$250 billion for Dodd-Frank Act annual company-run stress testing, leverage limits, liquidity requirements, and resolution planning requirements for bank holding companies, subject to the ability of the Federal Reserve to apply such requirements to institutions with assets of \$100 billion or more to address financial stability risks or safety and soundness concerns. However, in response to several large bank failures in the spring of 2023, the federal banking agencies have engaged in rulemaking that likely will significantly increase compliance costs should we grow in excess of \$50 billion in assets.

On August 29, 2023, the federal banking agencies, including the OCC, issued proposals and guidance regarding resolution planning. Banks with \$50 billion to \$100 billion have not been required to submit resolution plans since 2018 because of a moratorium adopted by the FDIC. Under the proposed rule, however, the moratorium would be lifted and the FDIC would require banks with at least \$50 billion in assets to submit an informational filing, which would not require a resolution strategy and demonstration of valuation capabilities, but would require substantially all of the informational elements otherwise required for inclusion in a resolution plan that banks with \$100 billion or more in assets currently are required to submit. The proposed rule, if adopted as proposed, would not apply to the Bank directly based on the Bank's current asset size.

Further, on July 27, 2023, the federal banking agencies, including the OCC, issued a proposed rule to implement the final components of the Basel III standards. Among other things, the proposed rule would substantially change the existing calculation of risk-weighted assets and require banking organizations to use revised models for such calculations. The proposed rule, if adopted as proposed, would be applicable to banking organizations with \$100 billion or more in total consolidated assets, and therefore would not apply to the Bank directly based upon its current asset size. However, many of the principles included in this proposed rulemaking could result in increased supervisory expectations and closer regulatory scrutiny for institutions that experience substantial growth. For example, the proposed rulemaking would add back the impact of accumulated other comprehensive income (loss) to the calculation of regulatory capital for institutions above \$100 billion in assets. The federal banking agencies have discretion during the examination process to require institutions to have higher capital cushions to address a variety of supervisory concerns, which may include a high level of accumulated other comprehensive loss.

In addition, the federal banking agencies, including the OCC, and the CFPB have in recent years adopted a more aggressive enforcement posture—specifically with respect to fair lending and loan servicing, bank and financial institution sales practices, management of consumer accounts and the charging of various fees.

The Bank faces risks related to the adoption of future legislation and potential changes in federal regulatory agency leadership, policies, and priorities.

Last Congress, Democrats controlled the White House and both Chambers of Congress. As a result, Democrats were able to set the policy agenda both legislatively and in the regulatory agencies that have rulemaking and supervisory authority over the financial services industry generally and the Bank specifically. These dynamics shifted after the 2022 midterm elections. While Democrats retained control of the U.S. Senate, the party has a slim majority of 51 seats. Republicans assumed control of the U.S. House of Representatives, with a slim majority of 222 seats. In consideration of the divided control of Congress, the narrow majorities in each chamber, and the current political environment, the legislative process is expected to be more

challenging in the current legislative session. In addition, two vacant seats previously held by Republicans will need to be filled in early 2024, which could impact the margin by which Republicans control the House of Representatives.

Although agendas are expected to vary substantially in each chamber, congressional committees with jurisdiction over the banking sector have pursued, and likely will continue to pursue, oversight in a variety of areas, including addressing climate-related risks, promoting diversity and equality within the banking industry and addressing other ESG matters, improving competition in the banking sector and enhancing oversight of bank mergers and acquisitions, and establishing a regulatory framework for digital assets and markets. The prospects for the enactment of major banking reform legislation under the new Congress are unclear at this time.

Moreover, the turnover of the Presidential Administration in 2021 resulted in certain changes in the leadership and senior staffs of the federal banking agencies and the Treasury Department, with certain significant leadership positions yet to be filled, including the Comptroller of the Currency. These changes have impacted the rulemaking, supervision, examination and enforcement priorities and policies of the agencies and likely will continue to do so over the next several years. The potential impact of any changes in agency personnel, policies and priorities on the financial services sector, including the Bank, cannot be predicted at this time.

Recent volatility in the banking sector, triggered by the failures of Silicon Valley Bank, Signature Bank and First Republic Bank, may result in legislative initiatives, agency rulemaking activities, or changes in agency policies and priorities that could subject the Corporation and the Bank to enhanced government regulation and supervision.

On March 10, 2023, SVB was closed by the DFPI. Two days later, on March 12, 2023, SBNY also failed. Nearly two months later, on May 1, 2023, First Republic Bank was closed by the DFPI. In each case, the FDIC was appointed as receiver. With respect to the failures of SVB and SBNY, the FDIC, together with the Federal Reserve and the U.S. Treasury Secretary, took action under applicable emergency systemic risk authority to fully protect the depositors of each bank as the institutions were wound down. SVB and SBNY each had substantial business relationships with, and exposure to, entities within the innovation sector, including financial technology and digital asset companies, and had received an influx of deposits over the course of several years which coincided with the rapid growth of that sector. In recent periods, however, SVB and SBNY each had begun to experience significant deposit losses. These losses increased rapidly in early March, ultimately causing each institution to fail. While First Republic Bank's business model was different in certain respects, it too experienced rapid growth as peer banks stalled and had significant asset and funding concentrations, each of which contributed to the failure of the institution.

Investor and customer confidence in the banking sector, particularly with regard to mid-size and larger regional banking organizations, waned in response to the failures of SVB, SBNY and First Republic Bank. Notably, the Corporation's share price decreased by 22% during the month of March, consistent with other regional banking organizations. According to data published by the Federal Reserve, deposits at domestic commercial banks decreased by approximately \$280 billion between the end of February 2023 and the week ended March 29, 2023. The Bank's deposits decreased by \$248 million during this period, which was a decrease of less than 1%. According to the data published by the Federal Reserve, deposits at domestic commercial banks have been stable throughout the last three quarters of 2023, with no further notable decrease.

Congress and the federal banking agencies have and continue to evaluate the events leading to the failures of SVB, SBNY and First Republic Bank to ascertain possible explanations for these developments. Legislators and the leadership of the federal banking agencies noted that inadequate prudential regulation of regional banking organizations (generally, institutions with less than \$250 billion in total assets), insufficient supervision of such organizations, poor management and inadequate risk management practices, specifically including interest rate and liquidity risks in consideration of each institution's business model, and substantial uninsured deposit liabilities were causes of the failures.

Further evaluation of recent developments in the banking sector may lead to governmental initiatives intended to prevent future bank failures and stem significant deposit outflows from the banking sector, including (i) legislation aimed at preventing similar future bank runs and failures and stabilizing confidence in the banking sector over the long term, (ii) agency rulemaking to modify and enhance relevant regulatory requirements, specifically with respect to liquidity risk management, deposit concentrations, capital adequacy, stress testing and contingency planning, and safe and sound banking practices, and (iii) enhancement of the agencies' supervision and examination policies and priorities. In fact, in July 2023, the federal banking agencies issued a notice of proposed rulemaking that would substantially revise the regulatory capital framework for banking organizations with total assets of \$100 billion or more and banking organizations with significant trading activity. Among other things, the proposed rule would require all banking organizations with over \$100 billion in assets to include unrecognized gains and losses on AFS debt securities via the inclusion of accumulated other comprehensive income in capital. In addition, banking organizations with over \$100 billion in assets would be subject to the supplementary leverage ratio and countercyclical capital buffer. The proposed rule, if adopted as proposed, would not apply to the Bank directly based on the Bank's current asset size. The federal banking agencies may also re-evaluate applicable liquidity risk management standards, such as by reconsidering the

mix of assets that are deemed to be "high-quality liquid assets" and/or how HQLA holdings and cash inflows and outflows are tabulated and weighted for liquidity management purposes.

Although we cannot predict with certainty which initiatives may be pursued by lawmakers and agency leadership, nor can we predict the terms and scope of any such initiatives, any of the potential changes referenced above could, among other things, subject us to additional costs, limit the types of financial services and products we may offer, and limit our future growth, any of which could materially and adversely affect our business, results of operations or financial condition.

We will experience increases in FDIC insurance assessments due to the bank failures that occurred in 2023.

On November 16, 2023, the FDIC issued a final rule on special assessment to recover the loss to the DIF associated with the resolution of SVB and SBNY, which was estimated to be approximately \$16.3 billion as of the date of the issuance of the final rule. Under the final rule, the assessment base for an IDI will be equal to the institution's estimated uninsured deposits as of December 31, 2022, adjusted to exclude the first \$5 billion in estimated uninsured deposits. Under the final rule, the FDIC will collect the special assessment at an annual rate of 13.4 bp beginning with the first quarterly assessment period of 2024 and will continue to collect special assessments for an anticipated total of eight quarterly assessment periods. The Bank had uninsured deposits of \$16.4 billion as of December 31, 2022, and the Bank expects that it will pay a special assessment based on the assessment base of \$11.4 billion, which excludes the first \$5 billion from the \$16.4 billion uninsured deposits the Bank had as of December 31, 2022. Such an increase in our assessment fees may have a materially adverse effect on our results of operations and financial condition.

Changes in requirements relating to the standard of conduct for broker-dealers under applicable federal and state law may adversely affect our business.

The SEC's Regulation Best Interest which was implemented in 2019 established a new standard of conduct for a broker-dealer to act in the best interest of a retail customer when making a recommendation of any securities transaction or investment strategy involving securities to such customer. The regulation required us to review and modify our compliance activities, including our policies, procedures, and controls, which caused us to incur additional costs. In addition, state laws that impose a fiduciary duty also may require monitoring, as well as require that we undertake additional compliance measures. In addition, the Bank's insurance agency subsidiary is also subject to regulation and supervision in the various states in which it operates. The implementation and administration by the SEC of Regulation Best Interest, as well as any new state laws that impose a fiduciary duty, may negatively impact our results of operation, as well as increase costs associated with legal, compliance, operations, and information technology.

The CFPB has reshaped the consumer financial laws through rulemaking and enforcement of the prohibitions against unfair, deceptive and abusive business practices. Compliance with any such change may impact the business operations of depository institutions offering consumer financial products or services, including the Bank.

The CFPB has broad rulemaking authority to administer and carry out the provisions of the Dodd-Frank Act with respect to financial institutions that offer covered financial products and services to consumers. As an independent bureau within the Federal Reserve System, the CFPB may impose requirements more severe than the previous bank regulatory agencies. The CFPB has also been directed to write rules identifying practices or acts that are unfair, deceptive or abusive in connection with any transaction with a consumer for a consumer financial product or service, or the offering of a consumer financial product or service. The CFPB has initiated enforcement actions against a variety of bank and non-bank market participants with respect to a number of consumer financial products and services that have resulted in those participants expending significant time, money and resources to adjust to the initiatives being pursued by the CFPB. The CFPB has pursued a more aggressive enforcement policy with respect to a range of regulatory compliance matters under the current Presidential Administration, specifically including fair lending, loan servicing, financial institution sales and marketing practices, and financial institution consumer fee and account management practices. CFPB enforcement actions may serve as precedent for how the CFPB interprets and enforces consumer protection laws, including practices or acts that are deemed to be unfair, deceptive or abusive, with respect to all supervised institutions, which may result in the imposition of higher standards of compliance with such laws. Moreover, the Bank is subject to supervision and examination by the CFPB for compliance with the CFPB's regulations and policies. The costs and limitations related to this additional regulatory reporting regimen have yet to be fully determined, although they may be material, and the limitations and restrictions that will be placed upon the Bank with respect to its consumer product offerings and services may produce significant, material effects on the Bank's (and the Corporation's) profitability.

The Bank is periodically examined for mortgage-related issues, including mortgage loan and default services, fair lending, and mortgage banking.

Federal and state banking agencies closely examine the mortgage and mortgage servicing activities of depository financial institutions. Should any of these regulators have serious concerns with respect to our mortgage or mortgage servicing activities in this regard, the regulators' response to such concerns could result in material adverse effects on our growth strategy and profitability. Further, staff changes to key positions within the CFPB under the current Presidential Administration have resulted in the CFPB pursuing more strict enforcement policies, specifically in the area of fair lending, loan servicing, collections and other consumer related areas.

We may experience unanticipated losses as a result of residential mortgage loan repurchase or reimbursement obligations under agreements with secondary market purchasers.

We may be required to repurchase residential mortgage loans, or to reimburse the purchaser for losses with respect to residential mortgage loans, which have been sold to secondary market purchasers in the event there are breaches of certain representations and warranties contained within the sales agreements, such as representations and warranties related to credit information, loan documentation, collateral and insurability. Consequently, we are exposed to credit risk, and potentially funding risk, associated with sold loans. As a result we have established reserves in our consolidated financial statements for potential losses related to the residential mortgage loans we have sold. The adequacy of the reserves and the ultimate amount of losses incurred will depend on, among other things, the actual future mortgage loan performance, the actual level of future repurchase and reimbursement requests, the actual success rate of claimants, actual recoveries on the collateral and macroeconomic conditions. Due to uncertainties relating to these factors, there can be no assurance that the reserves we establish will be adequate or that the total amount of losses incurred will not have a material adverse effect on our financial condition or results of operations.

Fee revenues from overdraft protection programs constitute a significant portion of our noninterest income and may be subject to increased supervisory scrutiny.

Revenues derived from transaction fees associated with overdraft protection programs offered to our customers represent a significant portion of our noninterest income. In 2023, the Corporation collected approximately \$14 million in overdraft transaction fees. Members of Congress and the leadership of the OCC and CFPB have expressed a heightened interest in bank overdraft protection programs. In December 2021, the CFPB published a report providing data on banks' overdraft and non-sufficient funds fee revenues as well as observations regarding consumer protection issues relating to participation in such programs. Since then, the CFPB has used the supervision process to obtain additional information about financial institutions' overdraft practices. In 2023, the CFPB brought enforcement actions against a number of financial institutions for overdraft practices that the CFPB alleged to be unlawful and ordered each of these institutions to pay a substantial civil money penalty in addition to customer restitution. The CFPB found that these institutions engaged in unlawful overdraft practices by, among other things, systematically and repeatedly charging fees to customers with insufficient funds in their accounts, imposing overdraft fees without adequate disclosures, charging overdraft fees without proper consent, and misleading customers about the terms and costs of overdraft coverage. The CFPB also has published guidance containing instructions for financial institutions to avoid the imposition of unlawful overdraft fees. The CFPB is expected to commence rulemaking in this area in the coming months. These actions are a component of the CFPB's broader supervision and enforcement initiative targeting so-called consumer "junk fees."

In addition, the OCC issued a bulletin to banks in April 2023 to address the risks associated with overdraft protection programs and overdraft fees. Specifically, the OCC noted in the bulletin that APSN transaction and representment fee practices may present a heightened risk of violations of Section 5 of the Federal Trade Commission Act of 2010, which prohibits unfair, deceptive, or abusive acts or practices. An APSN transaction refers to the practice of assessing overdraft fees on debit card transactions that authorize when a customer's available balance is positive but later post to the account when the available balance is negative. Representment fees refer to assessing an additional fee each time a third party submits the same transaction for payment after a bank returns the transaction for non-sufficient funds. The OCC further noted that banks should establish and maintain sound risk management of overdraft protection programs by establishing effective board and management oversight and appropriate procedures and practices for managing risks associated with overdraft protection programs.

In response to this increased congressional and regulatory scrutiny, and in response to enhanced supervision and enforcement of overdraft protection practices, certain banking organizations have modified their overdraft protection programs, including by discontinuing the imposition of overdraft transaction fees. In 2022, the Corporation eliminated non-sufficient funds fees, overdraft protection transfer fees, and continuous overdraft fees and reduced the daily limit of overdraft fee occurrences from four to two. We may further modify our overdraft program and practices in response to competitive pressures, supervisory guidance and observable trends from public enforcement actions. Despite our ongoing compliance efforts, we may become

subject to regulatory enforcement actions with respect to our programs and practices with respect to overdraft and non-sufficient funds fees. In addition, as supervisory expectations and industry practices regarding overdraft protection programs change, our continued offering of overdraft protection may result in negative public opinion and increased reputation risk.

We are subject to examinations and challenges by tax authorities.

We are subject to federal and applicable state income tax regulations. Income tax regulations are often complex and require interpretation. Changes in income tax regulations could negatively impact our results of operations. In the normal course of business, we are routinely subject to examinations and challenges from federal and applicable state tax authorities regarding the amount of taxes due in connection with investments we have made and the businesses in which we have engaged. Recently, federal and state taxing authorities have become increasingly aggressive in challenging tax positions taken by financial institutions. These tax positions may relate to tax compliance, sales and use, franchise, gross receipts, payroll, property and income tax issues, including tax base, apportionment and tax credit planning. The challenges made by tax authorities may result in adjustments to the timing or amount of taxable income or deductions or the allocation of income among tax jurisdictions. If any such challenges are made and are not resolved in our favor, they could have a material adverse effect on our financial condition and results of operations.

We are subject to claims and litigation pertaining to fiduciary responsibility.

From time to time, customers make claims and take legal action pertaining to the performance of our fiduciary responsibilities. Whether customer claims and legal action related to the performance of our fiduciary responsibilities are founded or unfounded, if such claims and legal actions are not resolved in a manner favorable to us, they may result in significant financial liability and/or adversely affect the market perception of us and our products and services, as well as impact customer demand for those products and services. Any financial liability or reputation damage could have a material adverse effect on our business, which, in turn, could have a material adverse effect on our financial condition and results of operations.

We are a defendant in a variety of litigation and other actions, which may have a material adverse effect on our financial condition and results of operation.

We may be involved from time to time in a variety of litigation arising out of our business. Our insurance may not cover all claims that may be asserted against us, and any claims asserted against us, regardless of merit or eventual outcome, may harm our reputation. Should the ultimate judgments or settlements in any litigation exceed our insurance coverage, they could have a material adverse effect on our financial condition and results of operation for any period. In addition, we may not be able to obtain appropriate types or levels of insurance in the future, nor may we be able to obtain adequate replacement policies with acceptable terms, if at all.

Negative publicity could damage our reputation.

Reputation risk, or the risk to our earnings and capital from negative public opinion, is inherent in our business. Negative public opinion could adversely affect our ability to keep and attract customers and expose us to adverse legal and regulatory consequences. Negative public opinion could result from our actual or alleged conduct in any number of activities, including lending or foreclosure practices, corporate governance, regulatory compliance, mergers and acquisitions, and disclosure, sharing or inadequate protection of customer information, and from actions taken by government regulators and community organizations in response to that conduct. Because we conduct most of our business under the "Associated Bank" brand, negative public opinion about one business could affect our other businesses.

Ethics or conflict of interest issues could damage our reputation.

We have established a Code of Business Conduct and Ethics and Related Party Transaction Policies and Procedures to address the ethical conduct of business and to avoid potential conflicts of interest. Any system of controls, however well designed and operated, is based, in part, on certain assumptions and can provide only reasonable, not absolute, assurances that the objectives of the system are met. Any failure or circumvention of our related controls and procedures or failure to comply with the established Code of Business Conduct and Ethics and Related Party Transaction Policies and Procedures could have a material adverse effect on our reputation, business, results of operations, and/or financial condition.

Risks Related to an Investment in Our Securities

The price of our securities can be volatile.

Price volatility may make it more difficult for you to sell your securities when you want and at prices you find attractive. Our securities prices can fluctuate widely in response to a variety of factors including, among other things:

- actual or anticipated variations in quarterly results of operations or financial condition;
- operating results and stock price performance of other companies that investors deem comparable to us;
- news reports relating to trends, concerns, and other issues in the financial services industry;
- perceptions in the marketplace regarding us and/or our competitors;
- new technology used or services offered by competitors;
- significant acquisitions or business combinations, strategic partnerships, joint ventures, or capital commitments by or involving us or our competitors;
- failure to integrate acquisitions or realize anticipated benefits from acquisitions;
- changes in government regulations;
- changes in international trade policy and any resulting disputes or reprisals;
- geopolitical conditions, such as acts or threats of terrorism or military conflicts; and
- recommendations by securities analysts.

General market fluctuations, industry factors, and general economic and political conditions and events, such as economic slowdowns or recessions, interest rate changes, or credit loss trends, could also cause our securities prices to decrease regardless of our operating results.

There may be future sales or other dilution of our equity, which may adversely affect the market price of our securities.

We are not restricted from issuing additional securities, including preferred stock, common stock and securities that are convertible into or exchangeable for, or that represent the right to receive, common stock. The issuance of additional shares of common stock or the issuance of convertible securities would dilute the ownership interest of our existing common shareholders. The market price of our common stock could decline as a result of an equity offering, as well as other sales of a large block of shares of our common stock or similar securities in the market after an equity offering, or the perception that such sales could occur. Both we and our regulators perform a variety of analyses of our assets, including the preparation of stress case scenarios, and as a result of those assessments we could determine, or our regulators could require us, to raise additional capital.

We may reduce or eliminate dividends on our common stock.

Although we have historically paid a quarterly cash dividend to the holders of our common stock, holders of our common stock are not entitled to receive dividends. Downturns in the domestic and global economies could cause our board of directors to consider, among other things, the elimination of dividends paid on our common stock. This could adversely affect the market price of our common stock. Furthermore, as a bank holding company, our ability to pay dividends is subject to the guidelines of the Federal Reserve regarding capital adequacy and dividends. Dividends also may be limited as a result of safety and soundness considerations.

Common stock is equity and is subordinate to our existing and future indebtedness and preferred stock and effectively subordinated to all the indebtedness and other non-common equity claims against our subsidiaries.

Shares of the common stock are equity interests in us and do not constitute indebtedness. As such, shares of the common stock will rank junior to all of our indebtedness and to other non-equity claims against us and our assets available to satisfy claims against us, including our liquidation. Additionally, holders of our common stock are subject to prior dividend and liquidation rights of holders of our outstanding preferred stock. Our board of directors is authorized to issue additional classes or series of preferred stock without any action on the part of the holders of our common stock, and we are permitted to incur additional debt. Upon liquidation, lenders and holders of our debt securities and preferred stock would receive distributions of our available assets prior to holders of our common stock. Furthermore, our right to participate in a distribution of assets upon any of our subsidiaries' liquidation or reorganization is subject to the prior claims of that subsidiary's creditors, including holders of any preferred stock of that subsidiary.

Our articles of incorporation, bylaws, and certain banking laws may have an anti-takeover effect.

Provisions of our articles of incorporation and bylaws, and federal banking laws, including regulatory approval requirements, could make it more difficult for a third party to acquire us, even if doing so would be perceived to be beneficial to our shareholders. The combination of these provisions may prohibit a non-negotiated merger or other business combination, which, in turn, could adversely affect the market price of our common stock.

An investment in our common stock is not an insured deposit.

Our common stock is not a bank deposit and, therefore, is not insured against loss by the FDIC, any other DIF, or by any other public or private entity. An investment in our common stock is inherently risky for the reasons described in this "Risk Factors" section and elsewhere in this report and is subject to the same market forces that affect the price of common stock in any company. As a result, if you acquire our common stock, you may lose some or all of your investment.

An entity holding as little as a 5% interest in our outstanding common stock could, under certain circumstances, be subject to regulation as a "bank holding company."

An entity (including a "group" composed of natural persons) owning or controlling with the power to vote 25% or more of our outstanding common stock, or 5% or more if such holder otherwise exercises a "controlling influence" over us, may be subject to regulation as a "bank holding company" in accordance with the BHC Act. In addition, (1) any bank holding company or foreign bank with a U.S. presence may be required to obtain the approval of the Federal Reserve under the BHC Act to acquire or retain 5% or more of our outstanding common stock, and (2) any person not otherwise defined as a company by the BHC Act and its implementing regulations may be required to obtain the approval of the Federal Reserve under the Change in Bank Control Act to acquire or retain 10% or more of our outstanding common stock. Becoming a bank holding company imposes certain statutory and regulatory restrictions and obligations, such as providing managerial and financial strength for its bank subsidiaries. Regulation as a bank holding company could require the holder to divest all or a portion of the holder's investment in our common stock or such nonbanking investments that may be deemed impermissible or incompatible with bank holding company status, such as a material investment in a company unrelated to banking. Further, in 2020, the Federal Reserve implemented a final rule that simplifies and increases the transparency of its rules for determining when one company controls another company for purposes of the BHC Act. The rule, which has been further interpreted by the Federal Reserve staff since its implementation, has and will likely continue to have a meaningful impact on control determinations related to investments in banks and bank holding companies and investments by bank holding companies in nonbank companies.

Our ability to originate residential mortgage loans for portfolio has been adversely affected by the increased competition resulting from the unprecedented involvement of the U.S. government and GSEs in the residential mortgage market.

Over the past several years, we have faced increased competition for residential mortgage loans due to the unprecedented involvement of the GSEs in the mortgage market as a result of the economic crisis, which has caused the interest rate for 30 year fixed-rate mortgage loans that conform to GSE guidelines to remain artificially low. In addition, the U.S. Congress has expanded the conforming loan limits in many of our operating markets, allowing larger balance loans to continue to be acquired by the GSEs. Although reform of the GSE system has been viewed as a priority by many within Congress and the executive branch for several years, it is unknown at this time what reforms, if any, will be made, the extent of the future involvement in the residential mortgage market and the impact of any reforms on that market and the United States economy as a whole.

General Risk Factors

Changes in our accounting policies or in accounting standards could materially affect how we report our financial results.

Our accounting policies are fundamental to understanding our financial results and condition. Some of these policies require the use of estimates and assumptions that may affect the value of our assets or liabilities and financial results. Some of our accounting policies are critical because they require management to make difficult, subjective and complex judgments about matters that are inherently uncertain and because it is likely that materially different amounts would be reported under different conditions or using different assumptions. If such estimates or assumptions underlying our financial statements are incorrect, we may experience material losses.

From time to time, the FASB and the SEC change the financial accounting and reporting standards or the interpretation of those standards that govern the preparation of our external financial statements. These changes are beyond our control, can be hard to predict and could materially impact how we report our results of operations and financial condition. We could be required to apply a new or revised standard retroactively, resulting in our restating prior period financial statements in material amounts.

Our internal controls may be ineffective.

Management regularly reviews and updates our internal controls, disclosure controls and procedures, and corporate governance policies and procedures. Any system of controls, however well designed and operated, is based in part on certain assumptions and can provide only reasonable, not absolute, assurances that the objectives of the controls are met. Any failure or circumvention of our controls and procedures or failure to comply with regulations related to controls and procedures could have a material adverse effect on our business, results of operations, and financial condition.

We may not be able to attract and retain skilled people.

Our success depends, in large part, on our ability to attract and retain skilled people. Competition for the best people in most activities engaged in by us can be intense, and we may not be able to hire sufficiently skilled people or to retain them. The unexpected loss of services of one or more of our key personnel could have a material adverse impact on our business because of their skills, knowledge of our markets, years of industry experience, and the difficulty of promptly finding qualified replacement personnel.

Loss of key employees may disrupt relationships with certain customers.

Our business is primarily relationship-driven in that many of our key employees have extensive customer relationships. Loss of a key employee with such customer relationships may lead to the loss of business if the customers were to follow that employee to a competitor or otherwise choose to transition to another financial services provider. While we believe our relationship with our key personnel is good, we cannot guarantee that all of our key personnel will remain with our organization. Loss of such key personnel could result in the loss of some of our customers.

ITEM 1B. Unresolved Staff Comments

None.

ITEM 1C. Cybersecurity

Risk Management and Strategy

The Corporation recognizes the security of our banking operations is critical to protecting our customers, maintaining our reputation and preserving the value of the Corporation. The Board of Directors, through the ERC, provides direction and oversight of the enterprise-wide risk management framework of the Corporation, and cybersecurity represents a component of the Corporation’s overall approach to enterprise-wide risk management. The Information Security Program establishes policies and procedures for the measurement of the effectiveness and efficiency of information security controls related to both design and operations. The Corporation leverages the following guidelines and frameworks to develop and maintain the Information Security Program: FFIEC Information Security IT Examination Handbook, FFIEC Business Continuity Planning Handbook, FFIEC Cybersecurity Assessment Tool, Center for Internet Security Critical Security Controls, National Institute of Standards and Technology Special Publication 800 Series, ISO-27000 Standard and GLBA 501(b). In general, the Corporation seeks to address cybersecurity risks through a comprehensive, cross-functional approach that is focused on confidentiality, security and availability of the information that the Corporation collects and stores by identifying, preventing, and mitigating cybersecurity threats and effectively responding to cyber threats when they occur.

As one of the elements of the Corporation’s overall enterprise-wide risk management approach, the Information Security Program is focused on the following key areas:

- **Security Operation and Governance:** As discussed in more detail under the heading “Governance,” the ERC has delegated to senior management responsibility for managing the Information Security Program. Senior management carries out this mandate through the Operational Risk and Enterprise Risk Management Committees. To maintain alignment and appropriate insight regarding information security activities, an Information Security Steering Committee provides general program insight.
- **Collaborative Approach:** The Corporation has implemented a cross-functional approach to identifying, preventing and mitigating cybersecurity threats and incidents, while also implementing controls and procedures that provide for the prompt escalation of certain cybersecurity incidents so that decisions regarding the public disclosure and reporting of such incidents can be made by management in a timely manner.
- **Security Competencies:** The Information Security organization oversees a program of security competencies and tools designed to protect the confidentiality, integrity, and availability of our data. These assets represent a blend of

various management (e.g., policies), operational (e.g., standards and processes), and technical controls (e.g., tools and configurations).

- **Cyber Defense Center and the Incident Response Plan:** The Corporation has a Security Operations Center, known as the “Cyber Defense Center,” which provides continual security monitoring 24 hours per day, seven days per week, where resources actively deliver threat analysis, vulnerability management, intrusion detection, intrusion hunting and red team exercises. The Corporation’s Incident Response Plan helps reduce the risks related to security incidents by providing guidelines on responding to incidents by focusing on a roadmap for coordinating personnel, policies, and procedures to ensure incidents are detected, analyzed, and handled.
- **Third-Party Risk Management:** Management of the Corporation’s third parties, including vendors and service providers, is conducted through a risk-based approach and the level of due diligence is driven from risk factors established by Corporate Risk Management. The process provides awareness and collaboration across all internal teams including Information Security and Business Resumption. A Technical Requirements review process is conducted on new or significantly changed third parties, applications, or technology to ensure that systems or third parties meet certain security baseline requirements. This process is aimed at advocating the necessary security, infrastructure, and application standards or controls so that information systems and the third party have recovery plans in place.
- **Security Awareness and Education:** The Corporation provides annual, mandatory training for personnel regarding security awareness as a means to equip the Corporation’s personnel with the understanding of how to properly use and protect the computing resources entrusted to them, and to communicate the Corporation’s information security policies, standards, processes and practices.

The Corporation leverages regular assessments to identify current and potential threats and vulnerabilities within the Corporation’s environment. Technical vulnerabilities are identified using automated vulnerability scanning tools, penetration testing, and system management tools, whereas non-technical vulnerabilities are identified via process or procedural reviews. The Corporation conducts a variety of assessments throughout the year, both internally and through third parties. Vulnerability assessment and penetration tests are performed on a regular basis to provide the Corporation with an unbiased view of its environment and controls. Vulnerabilities identified during these assessments are inventoried in a centralized tracking system and reported to management on a regular basis. A multi-step approach is applied to identify, report and remediate these vulnerabilities, and the Corporation adjusts its information security policies, standards, processes and practices as necessary based on the information provided by these assessments. The results of key assessments are reported in summary to the Board of Directors annually.

Governance

The Board of Directors, through the ERC, provides direction and oversight of the enterprise-wide risk management framework of the Corporation, including the management of risks arising from cybersecurity threats. The ERC reviews and approves the Information Security Policy. The Board of Directors receives regular presentations which include updates on cybersecurity risks, including the threat environment, evolving standards, projects and initiatives, vulnerability assessments, third-party and independent reviews, technological trends and information security considerations arising with respect to the Corporation’s peers and third parties. The Board of Directors also receives information regarding any cybersecurity incident that meets established reporting thresholds, as well as ongoing updates regarding any such incident until it has been addressed. On an annual basis, the full Board of Directors discusses the Corporation’s approach to cybersecurity risk management with the Corporation’s CISO.

The CISO, under the guidance of our CIO, CRO, CEO and General Counsel, works collaboratively across the Corporation to implement a program designed to protect the Corporation’s information systems from cybersecurity threats and to promptly respond to any cybersecurity incidents in accordance with the Corporation’s incident response and recovery plans including an assessment of the potential materiality of any cybersecurity incident. To facilitate the success of the Corporation’s cybersecurity risk management program, multidisciplinary teams throughout the Corporation are deployed to address cybersecurity threats and to respond to cybersecurity incidents. Through ongoing communications with these teams, the CISO and the 2nd Line Information Security Risk Management team monitor the prevention, detection, mitigation and remediation of cybersecurity threats and incidents in real time, and report such threats and incidents to the Corporate Crisis Management Team and ultimately the ERC when appropriate.

The CISO has served in various roles in Information Technology and Information Security for over 35 years, including serving in a Chief Information Security Officer role of two large public companies, including Associated Bank for 17 years. The CISO holds an undergraduate degree in Management Information Systems and has attained the professional Information Systems

Audit and Control Association certification of Certified Information Security Manager in 2005. The CIO holds an undergraduate degree in business management, with a minor in international business, and is currently pursuing a master's degree in cybersecurity and has served in various roles in information technology for over 30 years, including serving as either the Chief Technology Officer or Chief Information Officer of four public companies. The CRO has over 30 years of banking experience, holds a degree in computer science, and earned the CERT Certificate in Cybersecurity Oversight from the National Association of Corporate Directors. The Corporation's CEO and General Counsel each hold degrees in their respective fields, and each has extensive experience managing risks at the Corporation and similar financial institutions, including risks arising from cybersecurity threats.

To our knowledge, cybersecurity threats, including as a result of any previous cybersecurity incidents, have not materially affected the Corporation, including its business strategy, results of operations or financial condition. With regard to the possible impact of future cybersecurity threats or incidents, see Item 1A, Risk Factors — Operational Risks.

ITEM 2. Properties

The Corporation operated 2.4 million square feet of space spread across 222 facilities, including 196 banking branches at December 31, 2023. Our corporate headquarters is located at 433 Main Street in Green Bay, Wisconsin and is approximately 118,000 square feet. The Corporation owns two dedicated operations centers, located in Green Bay and Stevens Point, Wisconsin, with approximately 91,000 and 96,000 square feet, respectively. The Corporation also owns a 28 story, 374,000 square foot office tower located at 111 E. Kilbourn Avenue in Milwaukee, Wisconsin, and an adjoining 37,000 square foot building at 815 Water Street, which serves as the headquarters for Associated Trust Company (both buildings are now part of the "Associated Bank River Center"). Associated Bank N.A. is headquartered in a 61,000 square foot building at 200 North Adams Street in Green Bay, Wisconsin. Based on gross square feet, at December 31, 2023, Associated Bank owned 92% of our total property portfolio.

At December 31, 2023, Associated Bank operated 196 banking branches serving over 100 different communities throughout Wisconsin, Illinois, and Minnesota. Most of the banking locations are freestanding buildings owned by us, with a drive thru and a parking lot; a smaller subset resides in supermarkets and office towers, which are generally leased. Associated Bank also operated loan production offices in Indiana, Michigan, Missouri, New York, Ohio and Texas.

ITEM 3. Legal Proceedings

The information required by this item is set forth in Part II, Item 8, Financial Statements and Supplementary Data, under Note 16 Commitments, Off-Balance Sheet Arrangements, and Legal Proceedings.

ITEM 4. Mine Safety Disclosures

Not applicable.

INFORMATION ABOUT OUR EXECUTIVE OFFICERS

The following is a list of names and ages of executive officers of Associated indicating all positions and offices held by each such person and each such person's principal occupation(s) or employment during the past five years. Officers are appointed annually by the Board of Directors at the meeting of directors immediately following the annual meeting of shareholders. There are no family relationships among these officers, nor any arrangement or understanding between any officer and any other person pursuant to which the officer was selected. No person other than those listed below has been chosen to become an executive officer of Associated. The information presented below is as of February 8, 2024.

Andrew J. Harmening - Age: 54

Andrew J. Harmening has been President, Chief Executive Officer of Associated and Associated Bank and member of the Board of Directors since April 2021. Prior to joining Associated, he served as senior executive vice president, consumer and business banking director for Huntington Bank from 2017 to 2021. Mr. Harmening also held several key consumer, small business and commercial banking positions at Bank of The West from 2005 to 2017.

Patrick E. Ahern - Age: 57

Patrick E. Ahern has been Executive Vice President, Chief Credit Officer of Associated and Associated Bank since February 2020 and was named Chicago Market President in October 2022. He served as Deputy Chief Credit Officer from October 2019 to February 2020. Mr. Ahern joined Associated as a Senior Vice President in 2010 to manage the CRE portfolio underwriting and administrative teams, before moving into the role Corporate Senior Credit Officer in 2018. He has more than 30 years of experience in CRE and corporate credit, including experience with LaSalle Bank and Bank of America.

Matthew R. Braeger - Age: 48

Matthew R. Braeger has been Executive Vice President, Chief Audit Executive of Associated and Associated Bank since February 2018. He served as Deputy Chief Audit Executive from October 2017 to February 2018. He joined Associated in April 2013 as Senior Vice President, Business Support Audit Director. Previously, he held audit management positions with Fiserv, Inc. and public accounting audit roles with Ernst & Young, LLP. Mr. Braeger has more than 20 years of auditing experience, primarily in banking technology and financial services.

Bryan J. Carson - Age: 53

Bryan J. Carson has been Executive Vice President, Chief Product and Marketing Officer of Associated and Associated Bank since July 2022. He served as Executive Vice President of Deposit Products, Customer Segmentation, and Branch & ATM Distribution at Huntington Bank from 2018 to 2022. Prior to that, he served as Chief Marketing Officer from 2015 to 2018 and Senior Vice President of Deposit Products & Pricing at Huntington Bank from 2010 to 2015.

Dennis M. DeLoye - Age: 60

Dennis M. DeLoye has been Executive Vice President, Head of Community Markets and Regional President Northeast Wisconsin of Associated and Associated Bank since April 2022. Mr. DeLoye previously served as Executive Vice President, Deputy Head of Community Markets and Regional President Northeast Wisconsin from November 2021 to April 2022. DeLoye joined Associated in 2016 and has served as community market president for the Central and Northern Wisconsin markets.

Angie M. DeWitt - Age: 54

Angie M. DeWitt has been Executive Vice President, Chief Human Resources Officer of Associated and Associated Bank since April 2019. Ms. DeWitt previously served as Deputy Chief Human Resources Officer from October 2018 to April 2019 and Senior Vice President, Director of Human Resources from February 2018 to October 2018. She joined Associated in August 2008 as a member of the finance team and has held multiple leadership roles. Prior to joining Associated, she held senior finance roles at Schneider National, Inc. from January 2002 to August 2008.

Randall J. Erickson - Age: 64

Randall J. Erickson has been Executive Vice President, General Counsel and Corporate Secretary of Associated and Associated Bank since April 2012, and was Chief Risk Officer from May 2016 to February 2018. Prior to joining Associated, he served as senior vice president, chief administrative officer and general counsel of Milwaukee-based bank holding company Marshall & Ilsley Corporation from 2002 until it was acquired by BMO Financial in 2011. Upon leaving M&I, he became a member of Milwaukee law firm Godfrey & Kahn S.C.'s securities practice group. He had been a partner at Godfrey & Kahn S.C. from 1990 to 2002 prior to joining M&I as its general counsel. Mr. Erickson served as a director of Renaissance Learning, Inc., a publicly-held educational software company, from 2009 until it was acquired by Permira Funds in 2011.

Jayne C. Hladio - Age: 56

Jayne C. Hladio has been Executive Vice President, President of Private Wealth of Associated and Associated Bank since October 2023. Prior to joining Associated, she served as President of Midland Wealth Management and Midland Trust Co. for U.S. markets from May 2022 to September 2023. Prior to that, she served as Senior Vice President, National Wealth Management Executive from June 2009 to June 2021 at U.S. Bank; Senior Vice President, Head of Consumer Banking Regional Executive at Charter One (Citizens) Royal Bank of Scotland from October 2005 to January 2009; and Senior Vice President, Strategic Growth Executive, Retail / Affluent Wealth and Denovo Delivery at Fifth Third Bank from September 1994 to October 2005.

Nicole M. Kitowski - Age: 48

Nicole M. Kitowski has been Executive Vice President, Chief Risk Officer of Associated and Associated Bank since February 2018. She joined Associated in 1992 and has held leadership roles in Consumer Banking, Operations and Technology, and Corporate Risk, including Deputy Chief Risk Officer from March 2016 to February 2018 and Corporate BSA, AML, OFAC Officer from June 2014 to March 2016.

Derek S. Meyer - Age: 57

Derek S. Meyer has been Executive Vice President, Chief Financial Officer of Associated and Associated Bank since August 2022. Prior to joining Associated, Derek served as the Executive Vice President, Corporate Treasurer of Huntington Bank from 2019 to June 2022. Mr. Meyer also served as Executive Vice President, Financial Planning & Analysis Director from February 2015 to 2019. During his 22 years at Huntington Bank, he held various senior leadership roles and was responsible for crucial finance functions including treasury, financial planning and analysis, stress testing, mergers and acquisition due diligence, regulatory matters, and process and controls implementation.

Paul G. Schmidt - Age: 61

Paul G. Schmidt has been Executive Vice President, Head of CRE of Associated and Associated Bank since January 2016 and was appointed Head of Facilities and Twin Cities Market President in July 2022. He joined Associated in April 2015 as Executive Vice President of CRE. He was named Deputy Head of CRE in September 2015. Mr. Schmidt brings more than 32 years of banking experience to Associated. Most recently, he held the position of Executive Vice President, Division Manager, CRE at Wells Fargo from 2002 to 2015.

Tammy C. Stadler - Age: 58

Tammy C. Stadler has been Executive Vice President, Corporate Controller and Chief Accounting Officer of Associated and Associated Bank since July 2021. She previously served as Executive Vice President, Principal Accounting Officer from April 2017 until July 2021. She joined Associated in April 1996 as Corporate Tax Director and has served as Executive Vice President, Corporate Controller since April 2014. From 1992 to 1996 she was the Assistant Treasurer and Taxes for Air Wisconsin Airline Corp. From 1990 to 1992 she held the position of Senior Tax Analyst with Fort Howard Paper Corp. Prior to her time with Fort Howard, Ms. Stadler worked as a certified public accountant with Coopers and Lybrand and Deloitte and Touche.

David L. Stein - Age: 60

David L. Stein has been Executive Vice President, Head of Consumer and Business Banking of Associated and Associated Bank since January 2017 and was named Madison Market President in January 2019. He was previously Executive Vice President, Head of Consumer and Commercial Banking from April 2014 until January 2017 and Executive Vice President, Head of Retail Banking from June 2007 until April 2014. He was the President of the Southwest Region of Associated Bank from January 2005 until June 2007. He held various positions with J.P. Morgan Chase & Co., and one of its predecessors, Bank One Corporation, from 1989 until joining Associated in 2005.

John A. Utz - Age: 55

John A. Utz has been Executive Vice President, Head of Corporate Banking and Milwaukee Market President of Associated and Associated Bank since September 2015 and was Head of Wealth Management from April 2020 to July 2021. He joined Associated in March 2010 with upwards of 20 years of banking experience, having previously served as President of Union Bank's UnionBanCal Equities and head of its Capital Markets division from September 2007 to March 2010, and as head of the National Banking and Asset Management teams from October 2002 to September 2007.

Terry L. Williams Age: 64

Terry L. Williams has been Executive Vice President, Chief Information Officer of Associated and Associated Bank since January 2023. Prior to joining Associated, he served as Chief Information Officer and Chief Technology Officer for Belcan, LLC from 2016 to 2022. Prior to that, he served as Executive Vice President and General Manager Customer-Facing Solutions of Standard Register from 2014 to 2015.

PART II

ITEM 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities

Information in response to this item is incorporated by reference to the discussion of dividend restrictions under Part I, Item 1, Business - Supervision and Regulation - Holding Company Dividends, and in Note 10 Stockholders' Equity of the notes to consolidated financial statements included under Part II, Item 8, Financial Statements and Supplementary Data, of this Annual Report on Form 10-K. The Corporation's common stock is traded on the NYSE under the symbol ASB.

The number of shareholders of record of the Corporation's common stock, \$0.01 par value, as of January 31, 2024, was 6,669. Certain of the Corporation's shares are held in "nominee" or "street" name and the number of beneficial owners of such shares was 29,828.

Payment of future dividends is within the discretion of the Board of Directors and will depend, among other factors, on earnings, capital requirements, and the operating and financial condition of the Corporation. The Board of Directors makes the dividend determination on a quarterly basis.

During the fourth quarter of 2023, the Corporation repurchased approximately \$86,000 of common stock, all of which were repurchases related to tax withholding on equity compensation, with no open market repurchases during the quarter. The repurchase details are presented in the table below. For a detailed discussion of the common stock and depositary share purchases during 2023 and 2022, see Part II, Item 8, Note 10 Stockholders' Equity of the notes to consolidated financial statements.

Common Stock Purchases

Period	Total Number of Shares Purchased ^(a)	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Maximum Number of Shares that May Yet Be Purchased Under the Plans or Programs ^(b)
October 1, 2023 - October 31, 2023	—	\$ —	—	—
November 1, 2023 - November 30, 2023	2,704	16.88	—	—
December 1, 2023 - December 31, 2023	1,889	21.28	—	—
Total	4,593	\$ 18.69	—	3,723,512

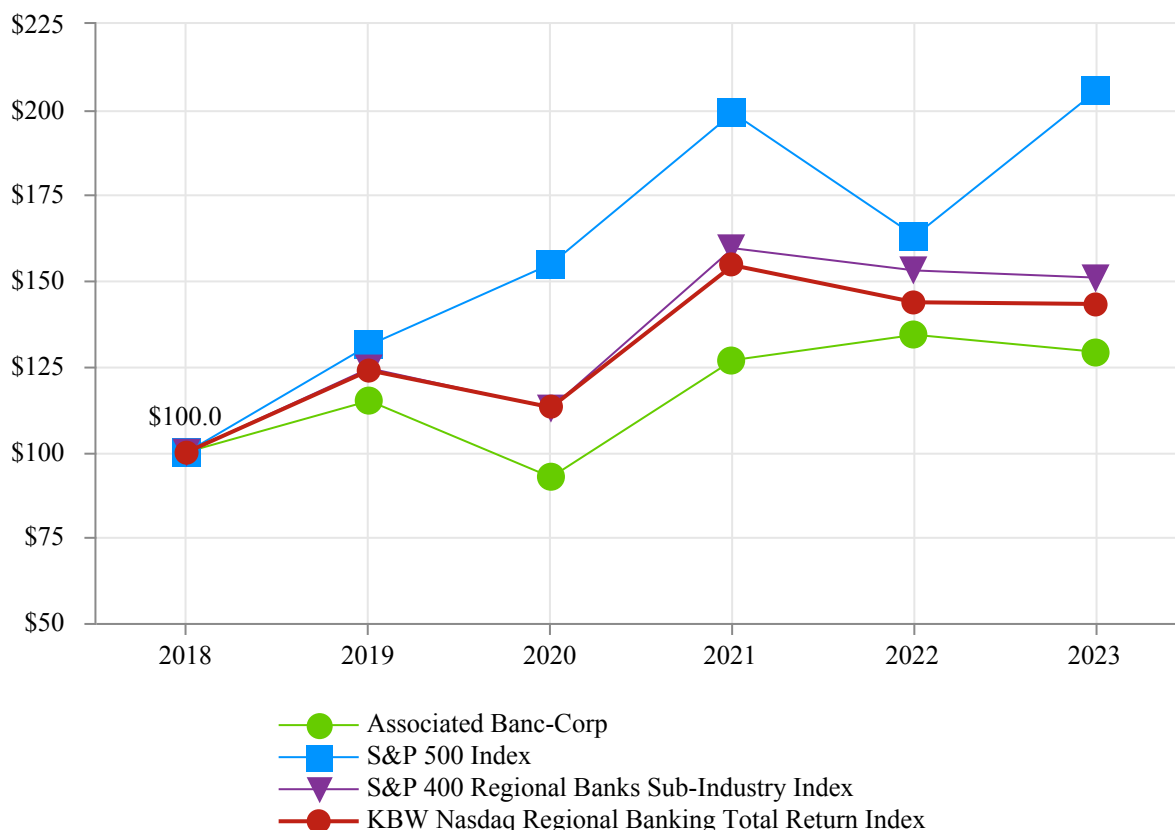
(a) During the fourth quarter of 2023, all common shares repurchased were for minimum tax withholding settlements on equity compensation. These purchases do not count against the maximum value of shares remaining available for purchase under the Board of Directors' authorization.

(b) At December 31, 2023, there remained \$80 million authorized to be repurchased under the Board of Directors' 2021 authorization. The maximum number of shares that may yet be purchased under this authorization is based on the closing share price on December 31, 2023.

Total Shareholder Return Performance Graph

Set forth below is a line graph (and the underlying data points) comparing the yearly percentage change in the cumulative total shareholder return (change in year-end stock price plus reinvested dividends) on the Corporation's common stock with the cumulative total return of the S&P 500 Index, the S&P 400 Regional Banks Sub-Industry Index, and the KBW Nasdaq Regional Banking Total Return Index for the period of five fiscal years commencing on January 1, 2019 and ending December 31, 2023. The S&P 400 Regional Banks Sub-Industry Index is comprised of stocks on the S&P Total Market Index that are classified in the regional banks sub-industry. The KBW Nasdaq Regional Banking Total Return Index is comprised of U.S. companies that do business as regional banks or thrifts. The graph assumes the respective values of the investment in the Corporation's common stock and each index were \$100 on December 31, 2018. Historical stock price performance shown on the graph is not necessarily indicative of the future price performance.

5 Year Trend



	2018	2019	2020	2021	2022	2023
Associated Banc-Corp	\$ 100.0	\$ 114.9	\$ 92.6	\$ 126.8	\$ 134.2	\$ 129.2
S&P 500 Index	\$ 100.0	\$ 131.2	\$ 154.9	\$ 199.0	\$ 163.1	\$ 205.5
S&P 400 Regional Banks Sub-Industry Index	\$ 100.0	\$ 124.4	\$ 112.8	\$ 159.5	\$ 153.0	\$ 150.9
KBW Nasdaq Regional Banking Total Return Index	\$ 100.0	\$ 123.8	\$ 113.0	\$ 154.5	\$ 143.7	\$ 143.2

Source: Bloomberg

The Total Shareholder Return Performance Graph shall not be deemed incorporated by reference by any general statement incorporating by reference this Annual Report on Form 10-K into any filing under the Securities Act or under the Exchange Act, except to the extent the Corporation specifically incorporates this information by reference, and shall not otherwise be deemed filed under such Acts.

ITEM 6.

[Reserved]

ITEM 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

The following discussion is management's analysis to assist in the understanding and evaluation of the consolidated financial condition and results of operations of the Corporation. It should be read in conjunction with the consolidated financial statements and footnotes and the selected financial data presented elsewhere in this report. Within the tables presented, certain columns and rows may not sum due to the use of rounded numbers for disclosure purposes.

The detailed financial discussion that follows focuses on 2023 results compared to 2022. For a discussion of 2022 results compared to 2021, see the Corporation's [Annual Report on Form 10-K for the year ended December 31, 2022](#).

Overview

The Corporation is a bank holding company headquartered in Wisconsin, providing a broad array of banking and nonbanking products and services to businesses and consumers primarily within our three-state footprint. The Corporation's primary sources of revenue, through the Bank, are net interest income (predominantly from loans and investment securities) and noninterest income (principally fees and other revenue from financial services provided to customers or ancillary services tied to loans and deposits).

Performance Summary and 2024 Outlook

- Diluted earnings per common share of \$1.13 in 2023 decreased \$1.21, or 52%, from 2022, mainly as a result of one-time items related to the balance sheet repositioning the Corporation announced in the fourth quarter of 2023 and the FDIC special assessment.
- Average loans of \$29.5 billion for the full year of 2023 increased \$3.3 billion, or 13%, from a year ago, driven by increases in all major loan categories. For 2024, the Corporation expects period end loan growth of 4% to 6%.
- Average deposits of \$31.3 billion for the full year of 2023 increased \$2.6 billion, or 9%, from a year ago, driven by increases in time deposits, network transaction deposits, interest-bearing demand deposits, and savings deposits, partially offset by decreases in noninterest-bearing demand deposits and money market deposits. For 2024, the Corporation expects period end core customer deposit growth of 3% to 5%.
- Net interest income of \$1.0 billion in 2023 increased \$82 million, or 9%, from 2022. Net interest margin of 2.81% in 2023 decreased 10 bp from 2.91% in 2022. The increase in net interest income was driven by growth of earning assets while margin compressed as a result of a shift in mix within deposits into higher cost funding from noninterest-bearing demand deposits. For 2024, the Corporation expects net interest income growth of 2% to 4%.
- Provision for credit losses was \$83 million in 2023, compared to \$33 million in 2022. For 2024, the Corporation expects to adjust the provision to reflect changes to risk grades, economic conditions, loan volumes, and other indications of credit quality.
- Noninterest income of \$63 million in 2023 decreased \$219 million, or 78%, from 2022, primarily due to one-time items related to the balance sheet repositioning announced in the fourth quarter of 2023. For 2024, the Corporation expects noninterest income compression of 0% to 2%.
- Noninterest expense of \$814 million in 2023 increased \$67 million, or 9%, from 2022, as a result of the FDIC special assessment of \$31 million and the continued investment in people and technology. For 2024, the Corporation expects noninterest expense growth of 2% to 3%.

Income Statement Analysis Net Interest Income

Table 1 Net Interest Income Analysis

(\$ in thousands)	Years Ended December 31,								
	2023			2022			2021		
	Average Balance	Interest Income / Expense	Average Yield / Rate	Average Balance	Interest Income / Expense	Average Yield / Rate	Average Balance	Interest Income / Expense	Average Yield / Rate
Assets									
Earning assets									
Loans ^{(a)(b)(c)}									
Commercial and business lending	\$ 10,831,275	\$ 740,017	6.83 %	\$ 9,852,303	\$ 384,155	3.90 %	\$ 9,104,483	\$ 250,085	2.75 %
Commercial real estate lending	7,314,651	520,028	7.11 %	6,595,635	281,485	4.27 %	6,156,214	178,354	2.90 %
Total commercial	18,145,926	1,260,045	6.94 %	16,447,938	665,640	4.05 %	15,260,697	428,439	2.81 %
Residential mortgage	8,696,706	293,446	3.37 %	8,052,277	245,975	3.05 %	7,847,564	221,099	2.82 %
Auto finance	1,793,959	89,454	4.99 %	805,179	30,749	3.82 %	19,815	871	4.39 %
Other retail	897,702	80,189	8.93 %	894,948	52,266	5.84 %	929,905	44,852	4.82 %
Total loans	29,534,293	1,723,134	5.83 %	26,200,341	994,630	3.80 %	24,057,980	695,260	2.89 %
Investment securities									
Taxable	5,243,805	146,006	2.78 %	4,362,394	75,444	1.73 %	3,369,612	37,916	1.13 %
Tax-exempt ^(a)	2,288,328	79,673	3.48 %	2,419,262	82,771	3.42 %	2,036,030	73,975	3.63 %
Other short-term investments	564,284	28,408	5.03 %	570,887	11,475	2.01 %	1,644,995	7,833	0.48 %
Investments and other	8,096,417	254,087	3.14 %	7,352,542	169,690	2.31 %	7,050,637	119,724	1.70 %
Total earning assets	\$ 37,630,710	\$ 1,977,221	5.25 %	\$ 33,552,884	\$ 1,164,320	3.47 %	\$ 31,108,616	\$ 814,984	2.62 %
Other assets, net	3,018,214			3,105,049			3,355,640		
Total assets	<u>\$ 40,648,923</u>			<u>\$ 36,657,932</u>			<u>\$ 34,464,257</u>		
Liabilities and stockholders' equity									
Interest-bearing liabilities									
Interest-bearing deposits									
Savings	\$ 4,773,366	\$ 63,945	1.34 %	\$ 4,652,774	\$ 5,033	0.11 %	\$ 4,138,732	\$ 1,435	0.03 %
Interest-bearing demand	6,904,514	154,136	2.23 %	6,638,592	35,169	0.53 %	6,113,660	4,610	0.08 %
Money market	6,668,930	177,311	2.66 %	7,164,518	36,370	0.51 %	6,940,513	4,028	0.06 %
Network transaction deposits	1,469,616	75,294	5.12 %	821,804	14,721	1.79 %	929,544	1,120	0.12 %
Time deposits	4,905,748	202,939	4.14 %	1,315,793	7,016	0.53 %	1,495,060	7,429	0.50 %
Total interest-bearing deposits	24,722,174	673,624	2.72 %	20,593,482	98,309	0.48 %	19,617,508	18,622	0.09 %
Federal funds purchased and securities sold under agreements to repurchase	345,519	12,238	3.54 %	388,701	3,480	0.90 %	207,132	143	0.07 %
Commercial paper	8,582	1	0.01 %	20,540	2	0.01 %	49,546	22	0.04 %
FHLB advances	3,741,790	196,535	5.25 %	2,784,403	75,487	2.71 %	1,623,508	36,493	2.25 %
Long-term funding	504,438	36,080	7.15 %	249,478	10,653	4.27 %	407,912	17,053	4.18 %
Total short and long-term funding	4,600,329	244,855	5.32 %	3,443,123	89,621	2.60 %	2,288,098	53,712	2.35 %
Total interest-bearing liabilities	\$ 29,322,503	\$ 918,479	3.13 %	\$ 24,036,605	\$ 187,931	0.78 %	\$ 21,905,605	\$ 72,334	0.33 %
Noninterest-bearing demand deposits	6,620,965			8,163,703			8,075,906		
Other liabilities	594,318			482,538			403,296		
Stockholders' equity	4,111,138			3,975,086			4,079,449		
Total liabilities and stockholders' equity	<u>\$ 40,648,923</u>			<u>\$ 36,657,932</u>			<u>\$ 34,464,257</u>		
Interest rate spread			2.12 %			2.69 %			2.29 %
Net free funds			0.69 %			0.22 %			0.10 %
Fully tax-equivalent net interest income and net interest margin	<u>\$ 1,058,742</u>	<u>2.81 %</u>		<u>\$ 976,389</u>	<u>2.91 %</u>		<u>\$ 742,650</u>	<u>2.39 %</u>	
Fully tax-equivalent adjustment	19,168			19,068			16,796		
Net interest income	<u>\$ 1,039,573</u>			<u>\$ 957,321</u>			<u>\$ 725,855</u>		

(a) The yield on tax-exempt loans and securities is computed on a fully tax-equivalent basis using a tax rate of 21% and is net of the effects of certain disallowed interest deductions.

(b) Nonaccrual loans and loans held for sale have been included in the average balances.

(c) Interest income includes amortization of net deferred loan origination costs and net accreted purchase loan discount.

Net interest income is the primary source of the Corporation's revenue. Net interest income is the difference between interest income on interest-earning assets, such as loans and investment securities, and the interest expense on interest-bearing deposits and other borrowings used to fund interest-earning and other assets or activities. Net interest income is affected by the amount and composition of earning assets and interest-bearing liabilities, as well as the sensitivity of the balance sheet to changes in interest rates, including characteristics such as the fixed or variable nature of the financial instruments, contractual maturities, re-pricing frequencies, loan prepayment behavior, and the use of interest rate derivative financial instruments.

Interest rate spread and net interest margin are utilized to measure and explain changes in net interest income. Interest rate spread is the difference between the yield on earning assets and the rate paid on interest-bearing liabilities that fund those assets. The net interest margin is expressed as the percentage of net interest income to average earning assets. The net interest margin

exceeds the interest rate spread because net free funds, principally noninterest-bearing demand deposits and stockholders' equity, also support earning assets. To compare tax-exempt asset yields to taxable yields, the yield on tax-exempt loans and investment securities is computed on a fully tax-equivalent basis. Net interest income, interest rate spread, and net interest margin are discussed on a fully tax-equivalent basis.

Table 1 provides average daily balances of earning assets and interest-bearing liabilities, the associated interest income and expense, and the corresponding interest rates earned and paid, as well as net interest income, interest rate spread, and net interest margin on a fully tax-equivalent basis for the years ended December 31, 2023, 2022, and 2021. Table 2 presents additional information to facilitate the review and discussion of fully tax-equivalent net interest income, interest rate spread, and net interest margin.

Notable Contributions to the Change in 2023 Net Interest Income

- Fully tax-equivalent net interest income and net interest income were both up \$82 million, or 8% and 9%, respectively, compared to 2022. Average loans increased \$3.3 billion, or 13%, and average investments and other short-term investments increased \$744 million, or 10%, compared to 2022. The increase in net interest income was driven by a higher federal funds target rate combined with growth in all major loan categories. Since December 31, 2022, the Federal Reserve increased the federal funds target interest rate 100 bp, which contributed to the yield on earning assets increasing by 178 bp. See sections Interest Rate Risk and Quantitative and Qualitative Disclosures about Market Risk for a discussion of interest rate risk and market risk.
- Average interest-bearing liabilities increased \$5.3 billion, or 22%, compared to 2022. Average interest-bearing deposits increased \$4.1 billion, or 20%, compared to 2022, primarily driven by increases in time deposits, network transaction deposits, interest-bearing demand deposits, and savings deposits, partially offset by a decrease in money market deposits. Average noninterest-bearing demand deposits decreased \$1.5 billion, or 19%, compared to 2022. Average FHLB advances increased \$957 million, or 34%, to fund balance sheet growth. The cost of interest-bearing liabilities increased 235 bp from 2022.

Table 2 Rate/Volume Analysis^(a)

(\$ in thousands)	2023 Compared to 2022 Increase (Decrease) Due to			2022 Compared to 2021 Increase (Decrease) Due to		
	Volume	Rate	Net	Volume	Rate	Net
Interest income						
Loans ^(b)						
Commercial and business lending	41,522	314,340	355,862	21,952	112,118	134,071
Commercial real estate lending	33,560	204,983	238,544	13,520	89,610	103,130
Total commercial	75,082	519,323	594,405	35,473	201,728	237,201
Residential mortgage	20,578	26,892	47,470	5,883	18,994	24,877
Auto finance	47,003	11,702	58,705	30,007	(129)	29,878
Other retail	161	27,761	27,923	(1,740)	9,154	7,414
Total loans	142,825	585,679	728,504	69,622	229,748	299,370
Investment securities						
Taxable	17,557	53,005	70,562	13,296	24,231	37,528
Tax-exempt ^(b)	(4,539)	1,442	(3,098)	13,304	(4,508)	8,796
Other short-term investments	(134)	17,067	16,933	(7,891)	11,534	3,642
Investments and other	12,883	71,513	84,397	18,709	31,257	49,966
Total earning assets	\$ 155,708	\$ 657,192	\$ 812,900	\$ 88,331	\$ 261,005	\$ 349,336
Interest expense						
Savings	\$ 134	\$ 58,777	\$ 58,911	\$ 199	\$ 3,399	\$ 3,598
Interest-bearing demand	1,464	117,503	118,968	429	30,129	30,558
Money market	(2,687)	143,628	140,941	134	32,208	32,342
Network transaction deposits	18,029	42,543	60,572	(145)	13,746	13,602
Time deposits	143,015	52,908	195,923	1,061	(1,473)	(413)
Total interest-bearing deposits	159,955	415,359	575,315	1,679	78,009	79,687
Federal funds purchased and securities sold under agreements to repurchase	(428)	9,187	8,759	228	3,109	3,337
Commercial paper	(1)	—	(2)	(9)	(11)	(20)
FHLB advances	32,485	88,564	121,049	30,269	8,724	38,994
Long-term funding	15,312	10,115	25,428	(6,758)	357	(6,401)
Total short and long-term funding	47,368	107,865	155,233	23,731	12,179	35,910
Total interest-bearing liabilities	207,323	523,225	730,548	25,409	90,188	115,597
Fully tax-equivalent net interest income (loss)	\$ (51,615)	\$ 133,968	\$ 82,352	\$ 62,922	\$ 170,817	\$ 233,739

(a) The change in interest due to both rate and volume has been allocated in proportion to the relationship to the dollar amounts of the change in each.

(b) The yield on tax-exempt loans and securities is computed on a fully tax-equivalent basis using a tax rate of 21% and is net of the effects of certain disallowed interest deductions.

Provision for Credit Losses

The provision for credit losses is predominantly a function of the Corporation's reserving methodology and judgments as to other qualitative and quantitative factors used to determine the appropriate level of the ACLL, which focuses on changes in the size and character of the loan portfolio, changes in levels of individually evaluated and other nonaccrual loans, historical losses and delinquencies in each portfolio category, the risk inherent in specific loans, concentrations of loans to specific borrowers or industries, existing economic conditions and economic forecasts, the fair value of underlying collateral, and other factors which could affect potential credit losses. The forecast the Corporation used for December 31, 2023 was the Moody's baseline scenario from November 2023, which was reviewed against the December 2023 baseline scenario with no material updates made, over a 2 year reasonable and supportable period with straight-line reversion to historical losses over the second year of the period. See additional discussion under the sections titled Loans, Credit Risk, Nonperforming Assets, and Allowance for Credit Losses on Loans.

Noninterest Income

Table 3 Noninterest Income

(\$ in thousands)	Years Ended December 31,			Change From Prior Year			
	2023	2022	2021	\$ Change 2022	% Change 2022	\$ Change 2021	% Change 2021
Wealth management fees	\$ 82,502	\$ 84,122	\$ 89,854	\$ (1,620)	(2)%	\$ (5,732)	(6)%
Service charges and deposit account fees	49,045	62,310	64,406	(13,265)	(21)%	(2,096)	(3)%
Card-based fees	45,020	44,014	43,014	1,006	2 %	1,000	2 %
Other fee-based revenue	17,268	15,903	17,086	1,365	9 %	(1,183)	(7)%
Total fee-based revenue	193,835	206,350	214,360	(12,515)	(6)%	(8,010)	(4)%
Capital markets, net	24,649	29,917	30,602	(5,268)	(18)%	(685)	(2)%
Mortgage banking, net	19,429	18,873	50,751	556	3 %	(31,878)	(63)%
Loss on mortgage portfolio sale	(136,239)	—	—	(136,239)	N/M	—	N/M
Bank and corporate owned life insurance	10,266	11,431	13,254	(1,165)	(10)%	(1,823)	(14)%
Other	9,691	10,715	11,366	(1,024)	(10)%	(651)	(6)%
Subtotal	121,631	277,286	320,333	(155,655)	(56)%	(43,047)	(13)%
Asset gains, net	454	1,338	11,009	(884)	(66)%	(9,671)	(88)%
Investment securities gains (losses), net	(58,903)	3,746	(16)	(62,649)	N/M	3,762	N/M
Gains on sale of branches, net ^(a)	—	—	1,038	—	N/M	(1,038)	(100)%
Total noninterest income	\$ 63,182	\$ 282,370	\$ 332,364	\$ (219,188)	(78)%	\$ (49,994)	(15)%
Mortgage loans originated for sale during period	\$ 395,834	\$ 600,114	\$ 1,749,556	\$ (204,280)	(34)%	\$ (1,149,442)	(66)%
Mortgage loan settlements during period	1,212,069	715,035	1,774,791	497,034	70 %	(1,059,756)	(60)%
Mortgage portfolio loans transferred to held for sale during period	968,595	—	—	968,595	N/M	—	N/M
Assets under management, at market value ^(b)	13,545	11,843	13,679	1,702	14 %	(1,836)	(13)%

N/M = Not Meaningful

(a) Includes the deposit premium on the sale of branches net of miscellaneous costs to sell. See Note 2 Acquisitions and Dispositions of the notes to the consolidated financial statements for additional details on the branch sales.

(b) \$ in millions. Excludes assets held in brokerage accounts.

Notable Contributions to the Change in 2023 Noninterest Income

- The one-time 2023 loss on the mortgage portfolio sale was the result of a sale of \$969 million of residential mortgages, related to the balance sheet repositioning announced in the fourth quarter of 2023, the net proceeds which were used to pay down higher cost funding.
- Investment securities gains (losses), net decreased from 2022, driven primarily by the sale of lower yielding AFS securities with a carrying value of \$715 million at a net loss of \$65 million, related to the balance sheet repositioning announced in the fourth quarter of 2023, in order to reinvest in higher yielding and lower risk-weighted GNMA securities.
- Service charges and deposit account fees are down from 2022, driven by the reduction and elimination of many deposit account fees in the third quarter of 2022.

Noninterest Expense

Table 4 Noninterest Expense

(\$ in thousands)	Years Ended December 31,			Change From Prior Year			
	2023	2022	2021	\$ Change 2022	% Change 2022	\$ Change 2021	% Change 2021
Personnel	\$ 468,355	\$ 454,101	\$ 426,687	\$ 14,254	3 %	\$ 27,414	6 %
Technology	102,018	90,700	81,689	11,318	12 %	9,011	11 %
Occupancy	57,204	59,794	63,513	(2,590)	(4)%	(3,719)	(6)%
Business development and advertising	28,405	25,525	21,149	2,880	11 %	4,376	21 %
Equipment	19,663	19,632	21,104	31	— %	(1,472)	(7)%
Legal and professional	19,911	18,250	21,923	1,661	9 %	(3,673)	(17)%
Loan and foreclosure costs	5,408	5,925	8,143	(517)	(9)%	(2,218)	(27)%
FDIC assessment	67,072	22,650	18,150	44,422	196 %	4,500	25 %
Other intangible amortization	8,811	8,811	8,844	—	— %	(33)	— %
Other	36,837	41,675	38,721	(4,838)	(12)%	2,954	8 %
Total noninterest expense	\$ 813,682	\$ 747,063	\$ 709,924	\$ 66,619	9 %	\$ 37,139	5 %
Average FTEs ^(a)	4,199	4,118	4,003	81	2 %	115	3 %

(a) Average FTEs without overtime

Notable Contributions to the Change in 2023 Noninterest Expense

- FDIC assessment expense increased from 2022, primarily driven by a one-time assessment of \$31 million resulting from the special assessment pursuant to systemic risk incurred by the FDIC on member banks as a result of the bank failures in the first quarter of 2023 and higher assessment rates for 2023.
- Personnel costs increased from 2022, largely driven by merit increases and benefits expense.
- Technology costs increased from 2022, driven by digital investments tied to our strategic initiatives.

Income Taxes

The Corporation recognized income tax expense of \$23 million for 2023, compared to income tax expense of \$94 million for 2022. The Corporation's effective tax rate was 11.21% for 2023, compared to an effective tax rate of 20.34% for 2022. The decrease in income tax expense during 2023 was primarily driven by a decrease in income before taxes in 2023. The decrease in the effective tax rate during 2023 was primarily driven by a decrease in state tax expense and the effect of tax exempt interest.

See Note 1 Summary of Significant Accounting Policies of the notes to consolidated financial statements for the Corporation's income tax accounting policy. Income tax expense recorded on the consolidated statements of income involves the interpretation and application of certain accounting pronouncements and federal and state tax laws and regulations. The Corporation is subject to examination by various taxing authorities. Examination by taxing authorities may impact the amount of tax expense and/or the reserve for uncertainty in income taxes if their interpretations differ from those of management, based on their judgments about information available to them at the time of their examinations. See Note 13 Income Taxes of the notes to consolidated financial statements for more information.

Balance Sheet Analysis

- At December 31, 2023, total assets were \$41.0 billion, up \$1.6 billion, or 4%, from December 31, 2022.
- Interest-bearing deposits in other financial institutions were \$425 million at December 31, 2023, up \$268 million, or 171%, from December 31, 2022. AFS investment securities, at fair value increased \$859 million, or 31%, to \$3.6 billion, while HTM investment securities, net, at amortized cost decreased by \$100 million, or 3%, to \$3.9 billion. See section Investment Securities Portfolio and Note 3 Investment Securities of the notes to consolidated financial statements for additional information on the Corporation's portfolio of investment securities.
- At December 31, 2023, total loans were \$29.2 billion, up \$417 million, or 1%, from December 31, 2022, due to increases of \$874 million, or 63%, in auto finance and \$160 million, or 2%, in CRE lending, partially offset by a decrease of \$647 million, or 8%, in residential mortgages as a result of a one-time mortgage portfolio sale related to the balance sheet repositioning announced in the fourth quarter of 2023. See section Loans and Note 4 Loans of the notes to consolidated financial statements for additional information on loans.
- At December 31, 2023, total deposits of \$33.4 billion were up \$3.8 billion, or 13%, from December 31, 2022, driven by increases in brokered CDs of \$3.9 billion and interest-bearing demand deposits of \$1.7 billion, or 25%, partially offset by decreases in money market deposits of \$1.9 billion, or 23%, and noninterest-bearing demand deposits of \$1.6 billion, or 21%. See section Deposits and Customer Funding and Note 8 Deposits of the notes to consolidated financial statements for additional information on deposits.
- At December 31, 2023, FHLB advances of \$1.9 billion were down \$2.4 billion, or 55%, from December 31, 2022, and securities sold under agreements to repurchase of \$327 million were down \$258 million, or 44%, as proceeds from the issuance of brokered deposits and the balance sheet repositioning were used to pay down the advances. Additionally, other long-term funding of \$541 million was up \$293 million, or 118%, as a result of the issuance of subordinated debt. See section Other Funding Sources and Note 9 Short and Long-Term Funding of the notes to consolidated financial statements for additional details on funding.

Loans

Table 5 Period End Loan Composition

(\$ in thousands)	As of December 31,									
	2023		2022		2021		2020		2019	
	Amount	% of Total	Amount	% of Total	Amount	% of Total	Amount	% of Total	Amount	% of Total
Commercial and industrial	\$ 9,731,555	33 %	\$ 9,759,454	34 %	\$ 8,452,385	35 %	\$ 8,469,179	35 %	\$ 7,354,594	32 %
Commercial real estate — owner occupied	1,061,700	4 %	991,722	3 %	971,326	4 %	900,912	4 %	911,265	4 %
Commercial and business lending	10,793,255	37 %	10,751,176	37 %	9,423,711	39 %	9,370,091	38 %	8,265,858	36 %
Commercial real estate — investor	5,124,245	18 %	5,080,344	18 %	4,384,569	18 %	4,342,584	18 %	3,794,517	17 %
Real estate construction	2,271,398	8 %	2,155,222	7 %	1,808,976	7 %	1,840,417	8 %	1,420,900	6 %
Commercial real estate lending	7,395,644	25 %	7,235,565	25 %	6,193,545	26 %	6,183,001	25 %	5,215,417	23 %
Total commercial	18,188,898	62 %	17,986,742	62 %	15,617,256	64 %	15,553,091	64 %	13,481,275	59 %
Residential mortgage	7,864,891	27 %	8,511,550	30 %	7,567,310	31 %	7,878,324	32 %	8,136,980	36 %
Auto finance	2,256,162	8 %	1,382,073	5 %	143,045	1 %	11,177	— %	2,982	— %
Home equity	628,526	2 %	624,353	2 %	595,615	2 %	707,255	3 %	852,025	4 %
Other consumer	277,740	1 %	294,851	1 %	301,723	1 %	301,876	1 %	348,177	2 %
Total consumer	11,027,319	38 %	10,812,828	38 %	8,607,693	36 %	8,898,632	36 %	9,340,164	41 %
Total loans	\$ 29,216,218	100 %	\$ 28,799,569	100 %	\$ 24,224,949	100 %	\$ 24,451,724	100 %	\$ 22,821,440	100 %
Commercial real estate and real estate construction loan detail										
Non-owner occupied	\$ 3,362,085	66 %	\$ 3,313,959	65 %	\$ 2,972,584	68 %	\$ 2,969,906	68 %	\$ 2,589,838	68 %
Multi-family	1,759,504	34 %	1,762,608	35 %	1,405,264	32 %	1,360,305	31 %	1,201,835	32 %
Farmland	2,656	— %	3,776	— %	6,720	— %	12,373	— %	2,844	— %
Commercial real estate — investor	\$ 5,124,245	100 %	\$ 5,080,344	100 %	\$ 4,384,569	100 %	\$ 4,342,584	100 %	\$ 3,794,517	100 %
1-4 family construction	\$ 275,292	12 %	\$ 436,210	20 %	\$ 380,160	21 %	\$ 270,467	15 %	\$ 261,908	18 %
All other construction	1,996,106	88 %	1,719,012	80 %	1,428,816	79 %	1,569,950	85 %	1,158,992	82 %
Real estate construction	\$ 2,271,398	100 %	\$ 2,155,222	100 %	\$ 1,808,976	100 %	\$ 1,840,417	100 %	\$ 1,420,900	100 %

The Corporation has long-term guidelines relative to the proportion of Commercial and Business, CRE, and Consumer loan commitments within the overall loan portfolio, with each targeted to represent 30 to 40% of the overall loan portfolio. The targeted long-term guidelines were unchanged during 2023 and 2022. Furthermore, certain sub-asset classes within the respective portfolios are further defined and dollar limitations are placed on these sub-portfolios. These guidelines and limits are reviewed quarterly and approved annually by the ERC. These guidelines and limits are designed to create balance and diversification within the loan portfolios.

During the fourth quarter of 2023, the Corporation completed a one-time mortgage portfolio sale of \$969 million of residential mortgages sold at a loss of \$136 million related to the balance sheet repositioning. The proceeds of this sale were used to pay down higher cost funding and increase liquidity capacity.

The Corporation's loan distribution and interest rate sensitivity as of December 31, 2023 are summarized in the following table:

Table 6 Loan Distribution and Interest Rate Sensitivity

(\$ in thousands)	Within 1 Year ^(a)	1-5 Years	5-15 Years	Over 15 Years	Total	% of Total
Commercial and industrial	\$ 8,771,143	\$ 667,794	\$ 283,924	\$ 8,694	\$ 9,731,555	33 %
Commercial real estate — owner occupied	637,814	285,069	138,817	—	1,061,700	4 %
Commercial real estate — investor	4,756,542	240,671	127,033	—	5,124,245	18 %
Real estate construction	2,224,599	36,129	2,689	7,982	2,271,398	8 %
Commercial - adjustable	11,303,477	33,697	4,695	—	11,341,869	39 %
Commercial - fixed	5,086,621	1,195,966	547,768	16,676	6,847,030	23 %
Residential mortgage - adjustable	210,230	558,089	1,548,170	298	2,316,787	8 %
Residential mortgage - fixed	4,207	79,045	519,173	4,945,680	5,548,105	19 %
Auto finance	496	909,152	1,346,514	—	2,256,162	8 %
Home equity	571,213	10,994	36,939	9,380	628,526	2 %
Other consumer	207,549	34,318	23,427	12,447	277,740	1 %
Total loans	\$ 17,383,792	\$ 2,821,260	\$ 4,026,684	\$ 4,984,481	\$ 29,216,218	100 %
Fixed-rate	\$ 5,100,644	\$ 2,228,434	\$ 2,473,820	\$ 4,984,183	\$ 14,787,081	51 %
Floating or adjustable rate	12,283,148	592,826	1,552,864	298	14,429,137	49 %
Total	\$ 17,383,792	\$ 2,821,260	\$ 4,026,684	\$ 4,984,481	\$ 29,216,218	100 %

(a) Demand loans, past due loans, overdrafts, and credit cards are reported in the "Within 1 Year" category.

At December 31, 2023, \$19.5 billion, or 67%, of the total loans outstanding and \$16.4 billion, or 90%, of the commercial loans outstanding were floating rate, adjustable rate, re-pricing within one year, or maturing within one year.

Credit Risk

An active credit risk management process is used for commercial loans to ensure that sound and consistent credit decisions are made. Credit risk is controlled by detailed underwriting procedures, comprehensive loan administration, and periodic review of borrowers' outstanding loans and commitments. Borrower relationships are formally reviewed and graded on an ongoing basis for early identification of potential problems. Further analysis by customer, industry, and geographic location are performed to monitor trends, financial performance, and concentrations. See Note 4 Loans of the notes to consolidated financial statements for additional information on managing overall credit quality.

The loan portfolio is widely diversified by types of borrowers, industry groups, and market areas primarily within the Corporation's lending footprint. Significant loan concentrations are considered to exist when there are amounts loaned to numerous borrowers engaged in similar activities that would cause them to be similarly impacted by economic or other conditions. At December 31, 2023, no significant concentrations existed in the Corporation's loan portfolio in excess of 10% of total loan exposure.

Commercial and business lending: The commercial and business lending classification primarily includes commercial loans to large corporations, middle market companies, small businesses, and asset-based and equipment financing.

Table 7 Largest Commercial and Industrial Industry Group Exposures, by NAICS Subsector

December 31, 2023	NAICS Subsector	Outstanding Balance	Total Exposure	% of Total Loan Exposure
Real Estate ^(a)	531	\$ 1,830,774	\$ 3,515,883	9 %
Utilities ^(b)	221	2,449,882	3,026,705	7 %
Credit Intermediation and Related Activities ^(c)	522	728,036	1,818,559	4 %
Merchant Wholesalers, Durable Goods	423	480,616	903,738	2 %

(a) Includes REIT lines

(b) 58% of the total utilities exposure comes from renewable energy sources (wind, solar, hydroelectric, and geothermal).

(c) Includes mortgage warehouse lines

The remaining commercial and industrial portfolio is spread over a diverse range of industries, none of which exceed 2% of total loan exposure.

The CRE-owner occupied portfolio is spread over a diverse range of industries, none of which exceed 2% of total loan exposure.

The credit risk related to commercial and business lending is largely influenced by general economic conditions and the resulting impact on a borrower's operations or on the value of underlying collateral, if any.

Commercial real estate - investor: CRE-investor is comprised of loans secured by various non-owner occupied or investor income producing property types.

Table 8 Largest Commercial Real Estate-Investor Property Type Exposures

December 31, 2023	% of Total Loan Exposure	% of Total Commercial Real Estate - Investor Loan Exposure
Multi-Family	4 %	33 %
Industrial	3 %	25 %
Office	3 %	21 %

The remaining CRE-investor portfolio is spread over various other property types, none of which exceed 2% of total loan exposure.

Credit risk is managed in a similar manner to commercial and business lending by employing sound underwriting guidelines, lending primarily to borrowers in local markets and businesses, periodically evaluating the underlying collateral, and formally reviewing the borrower's financial soundness and relationship on an ongoing basis.

Real estate construction: Real estate construction loans are primarily short-term or interim loans that provide financing for the acquisition or development of commercial income properties, multi-family projects, or residential development, both single family and condominium. Real estate construction loans are made to developers and project managers who are generally well known to the Corporation and have prior successful project experience. The credit risk associated with real estate construction loans is generally confined to specific geographic areas but is also influenced by general economic conditions. The Corporation controls the credit risk on these types of loans by making loans in familiar markets to developers, reviewing the merits of individual projects, controlling loan structure, and monitoring project progress and construction advances.

Table 9 Largest Real Estate Construction Property Type Exposures

December 31, 2023	% of Total Loan Exposure	% of Total Real Estate - Construction Loan Exposure
Multi-Family	5 %	45 %
Industrial	2 %	24 %

The remaining real estate construction portfolio is spread over various other property types, none of which exceed 2% of total loan exposure.

The Corporation's current lending standards for CRE and real estate construction lending are determined by property type and specifically address many criteria, including: maximum loan amounts, maximum LTV, requirements for pre-leasing and/or presales, minimum borrower equity, and maximum loan-to-cost. Currently, the maximum standard for LTV is 80%, with lower limits established for certain higher risk types, such as raw land that has a 50% LTV maximum. The Corporation's LTV guidelines are in compliance with regulatory supervisory limits. In most cases, for real estate construction loans, the loan amounts include interest reserves, which are built into the loans and sized to fund loan payments through construction and lease up and/or sell out.

Residential mortgages: Residential mortgage loans are primarily first lien home mortgages with a maximum loan-to-collateral value without credit enhancement (e.g., private mortgage insurance) of 80%. The residential mortgage portfolio is focused primarily in the Corporation's three-state branch footprint, with approximately 88% of the outstanding loan balances in the Corporation's branch footprint at December 31, 2023. The rates on adjustable rate mortgages adjust based upon the movement in the underlying index which is then added to a margin and rounded to the nearest 0.125%. That result is then subjected to any periodic caps to produce the borrower's interest rate for the coming term. Most of the adjustable rate mortgages have an initial fixed rate term of 3, 5, 7 or 10 years.

The Corporation generally retains certain fixed-rate residential real estate mortgages in its loan portfolio, including retail and private banking jumbo mortgages and CRA-related mortgages. As part of management's historical practice of originating and servicing residential mortgage loans, generally the Corporation's 30 year, agency conforming, fixed-rate residential real estate mortgage loans have been sold in the secondary market with servicing rights retained. Subject to management's analysis of the current interest rate environment, among other market factors, the Corporation may choose to retain mortgage loan production on its balance sheet.

The Corporation's underwriting and risk-based pricing guidelines for residential mortgage loans include minimum borrower FICO score and maximum LTV of the property securing the loan. Residential mortgage products generally are underwritten using FHLMC and FNMA secondary marketing guidelines.

Home equity: Home equity consists of both home equity lines of credit and closed-end home equity loans. The Corporation's credit risk monitoring guidelines for home equity are based on an ongoing review of loan delinquency status, as well as a quarterly review of FICO score deterioration and property devaluation. The Corporation does not routinely obtain appraisals on performing loans to update LTV ratios after origination; however, the Corporation monitors the local housing markets by reviewing the various home price indices and incorporates the impact of the changing market conditions in its ongoing credit monitoring process. For junior lien home equity loans, the Corporation is unable to track the performance of the first lien loan if it does not own or service the first lien loan. However, the Corporation obtains a refreshed FICO score on a quarterly basis and monitors this as part of its assessment of the home equity portfolio.

The Corporation's underwriting and risk-based pricing guidelines for home equity lines of credit and loans consist of a combination of both borrower FICO score and the original cumulative LTV against the property securing the loan. Currently, the Corporation's policy sets the maximum acceptable LTV at 90%. The Corporation's current home equity line of credit offering is priced based on floating rate indices and generally allows 10 years of interest-only payments followed by a 20-year amortization of the outstanding balance. The loans in the Corporation's portfolio generally have an original term of 20 years with principal and interest payments required.

Indirect Auto: The Corporation currently purchases retail auto sales contracts via a network of approved auto dealerships across 14 states throughout the Northeast, Mid-Atlantic, and Midwestern United States. The auto dealerships finance the sale of automobiles as the initial lender and then assign the contracts to the Corporation pursuant to dealer agreements. The Corporation's underwriting and pricing guidelines are based on a dual risk grade derived from a combination of FICO auto score and proprietary internal custom score. Minimum grade and FICO score standards ensure the credit risk is appropriately managed to the Corporation's risk appetite. Further, the grade influences loan-specific parameters such as vehicle age, term, LTV, loan amount, mileage, payment and debt service thresholds, and pricing. Maximum loan terms offered are 84 months on select grades with vehicle age, mileage, and other limitations in place to qualify. The program is designed to capture primarily prime and super prime contracts. Over time, the Corporation expects roughly 60% of originations to be secured by used vehicles.

Other consumer: Other consumer consists of student loans, short-term personal installment loans, and credit cards. The Corporation had \$63 million and \$76 million of student loans at December 31, 2023 and 2022, respectively, the majority of which are government guaranteed. Federally guaranteed student loan payments resumed in October 2023 after over three years of payment moratoriums that began as a result of the COVID-19 pandemic. The Corporation is not originating new student loans and the student loan portfolio is in run-off. Credit risk for non-government guaranteed student loans, short-term personal installment loans, and credit cards is influenced by general economic conditions, the characteristics of individual borrowers, and the nature of the loan collateral. Risks of loss are generally on smaller average balances per loan spread over many borrowers. Once charged off, there is usually less opportunity for recovery of these smaller consumer loans. Credit risk is primarily controlled by reviewing the creditworthiness of the borrowers, monitoring payment histories, and taking appropriate collateral and guarantee positions.

Nonperforming Assets

Management is committed to a proactive nonaccrual and problem loan identification philosophy. This philosophy is implemented through the ongoing monitoring and review of all pools of risk in the loan portfolio to ensure that problem loans are identified quickly and the risk of loss is minimized. Table 10 provides detailed information regarding NPAs, which include nonaccrual loans, OREO, and other nonperforming assets:

Table 10 Nonperforming Assets

(\$ in thousands)	As of December 31,				
	2023	2022	2021	2020	2019
Nonperforming assets					
Commercial and industrial	\$ 62,022	\$ 14,329	\$ 6,279	\$ 61,859	\$ 46,312
Commercial real estate — owner occupied	1,394	—	—	1,058	67
Commercial and business lending	63,416	14,329	6,279	62,917	46,380
Commercial real estate — investor	—	29,380	60,677	78,220	4,409
Real estate construction	6	105	177	353	493
Commercial real estate lending	6	29,485	60,855	78,573	4,902
Total commercial	63,422	43,814	67,134	141,490	51,282
Residential mortgage	71,142	58,480	55,362	59,337	57,844
Auto finance	5,797	1,490	52	49	—
Home equity	8,508	7,487	7,726	9,888	9,104
Other consumer	128	197	170	91	152
Total consumer	85,574	67,654	63,309	69,364	67,099
Total nonaccrual loans	148,997	111,467	130,443	210,854	118,380
Commercial real estate owned	914	325	984	2,185	3,530
Residential real estate owned	1,290	2,878	3,666	1,194	5,696
Bank properties real estate owned ^(a)	8,301	11,580	24,969	10,889	11,874
OREO	10,506	14,784	29,619	14,269	21,101
Other nonperforming assets ^(b)	919	215	—	—	6,004
Total nonperforming assets	\$ 160,421	\$ 126,466	\$ 160,062	\$ 225,123	\$ 145,485
Accruing loans past due 90 days or more					
Commercial	\$ 19,812	\$ 282	\$ 151	\$ 175	\$ 342
Consumer	1,876	1,446	1,111	1,423	1,917
Total accruing loans past due 90 days or more	\$ 21,689	\$ 1,728	\$ 1,263	\$ 1,598	\$ 2,259
Restructured loans (accruing)^(c)					
Commercial	\$ 306	\$ 13,093	\$ 22,763	\$ 41,119	\$ 18,944
Consumer	2,414	19,775	19,768	10,973	7,097
Total restructured loans (accruing)	\$ 2,719	\$ 32,868	\$ 42,530	\$ 52,092	\$ 26,041
Nonaccrual restructured loans (included in nonaccrual loans) ^(c)	\$ 805	\$ 20,127	\$ 17,426	\$ 20,190	\$ 22,494
Ratios					
Nonaccrual loans to total loans	0.51 %	0.39 %	0.54 %	0.86 %	0.52 %
NPAs to total loans plus OREO and other nonperforming assets	0.55 %	0.44 %	0.66 %	0.92 %	0.64 %
NPAs to total assets	0.39 %	0.32 %	0.46 %	0.67 %	0.45 %
Allowance for credit losses on loans to nonaccrual loans	258.98 %	315.34 %	245.16 %	204.63 %	188.61 %

Table 10 Nonperforming Assets (continued)

(\$ in thousands)	As of December 31,				
	2023	2022	2021	2020	2019
Accruing loans 30-89 days past due					
Commercial and industrial	\$ 5,565	\$ 6,283	\$ 715	\$ 6,119	\$ 821
Commercial real estate — owner occupied	358	230	163	373	1,369
Commercial and business lending	5,923	6,512	878	6,492	2,190
Commercial real estate — investor	18,697	1,067	616	12,793	1,812
Real estate construction	—	39	1,620	991	97
Commercial real estate lending	18,697	1,105	2,236	13,784	1,909
Total commercial	24,619	7,618	3,114	20,276	4,099
Residential mortgage	13,446	9,874	6,169	10,385	9,274
Auto finance	17,386	9,408	11	57	—
Home equity	4,208	5,607	3,711	4,802	5,647
Other consumer	2,166	1,610	2,307	1,543	2,083
Total consumer	37,205	26,499	12,198	16,786	17,005
Total accruing loans 30-89 days past due	\$ 61,825	\$ 34,117	\$ 15,312	\$ 37,062	\$ 21,104
Potential problem loans					
Commercial and industrial	\$ 197,202	\$ 136,549	\$ 140,258	\$ 139,489	\$ 110,308
Commercial real estate — owner occupied	38,699	34,422	26,723	26,179	19,889
Commercial and business lending	235,900	170,971	166,981	165,668	130,197
Commercial real estate — investor	196,163	92,535	106,138	91,396	29,449
Real estate construction	—	970	21,408	19,046	—
Commercial real estate lending	196,163	93,505	127,546	110,442	29,449
Total commercial	432,063	264,476	294,527	276,111	159,646
Residential mortgage	784	1,978	2,214	3,749	1,451
Home equity	118	197	165	2,068	—
Total consumer	901	2,175	2,379	5,817	1,451
Total potential problem loans	\$ 432,965	\$ 266,651	\$ 296,905	\$ 281,928	\$ 161,097

(a) Primarily closed branches and other bank operated real estate facilities, pending disposition.

(b) 2023 and 2022 include repossessed assets while 2019 includes a partial settlement of a debt by receiving units of ownership interest in an oil and gas LLC.

(c) On January 1, 2023, the Corporation adopted ASU 2022-02. Under this update, TDRs were eliminated and replaced with a modified loan classification. As a result, amounts reported for 2023 and forward will not be comparable to prior period reported amounts.

Nonaccrual loans: Nonaccrual loans are considered to be one indicator of potential future loan losses. See management's accounting policy for nonaccrual loans in Note 1 Summary of Significant Accounting Policies and Note 4 Loans of the notes to consolidated financial statements for additional nonaccrual loan disclosures. See also sections Credit Risk and Allowance for Credit Losses on Loans.

Accruing loans past due 90 days or more: Loans past due 90 days or more but still accruing interest are classified as such where the underlying loans are both well secured (the collateral value is sufficient to cover principal and accrued interest) and are in the process of collection.

Restructured loans: Loans are considered restructured loans if concessions have been granted to borrowers that are experiencing financial difficulty. On January 1, 2023, the Corporation adopted ASU 2022-02 prospectively. As a result, loans that were restructured prior to adoption are no longer considered TDRs, and loans restructured since January 1, 2023 are considered restructured. As a result, periods prior to 2023 are no longer comparable. See also Note 4 Loans of the notes to consolidated financial statements for additional restructured loans disclosures.

Potential problem loans: The level of potential problem loans is another predominant factor in determining the relative level of risk in the loan portfolio and in determining the appropriate level of the ACLL. Potential problem loans are generally defined by management to include loans rated as substandard by management that are collectively evaluated; however, there are circumstances present to create doubt as to the ability of the borrower to comply with present repayment terms. The decision of management to include performing loans in potential problem loans does not necessarily mean that the Corporation expects losses to occur, but that management recognizes a higher degree of risk associated with these loans.

OREO: Management actively seeks to ensure OREO properties held are monitored to minimize the Corporation's risk of loss.

Allowance for Credit Losses on Loans

Credit risks within the loan portfolio are inherently different for each loan type. Credit risk is controlled and monitored through the use of lending standards, a thorough review of potential borrowers, and ongoing review of loan payment performance. Active asset quality administration, including early problem loan identification and timely resolution of problems, aids in the management of credit risk and the minimization of loan losses. Credit risk management for each loan type is discussed in the section entitled Credit Risk. See Note 4 Loans of the notes to consolidated financial statements for additional disclosures on the ACLL.

To assess the appropriateness of the ACLL, the Corporation focuses on the evaluation of many factors, including but not limited to: evaluation of facts and issues related to specific loans, management's ongoing review and grading of the loan portfolio, credit report refreshes, consideration of historical loan loss and delinquency experience on each portfolio category, trends in past due and nonaccrual loans, the level of potential problem loans, the risk characteristics of the various classifications of loan segments, changes in the size and character of the loan portfolio, concentrations of loans to specific borrowers or industries, existing economic conditions and economic forecasts, the fair value of underlying collateral, funding assumptions on lines, and other qualitative and quantitative factors which could affect potential credit losses. The forecast the Corporation used for December 31, 2023 was the Moody's baseline scenario from November 2023, which was reviewed against the December 2023 baseline scenario with no material updates made, over a 2 year reasonable and supportable period with straight-line reversion to historical losses over the second year of the period. Assessing these factors involves significant judgment. Because each of the criteria used is subject to change, the ACLL is not necessarily indicative of the trend of future credit losses on loans in any particular segment. Therefore, management considers the ACLL a critical accounting estimate, see section Critical Accounting Estimates for additional information on the ACLL. See section Nonperforming Assets for a detailed discussion on asset quality. See also Note 4 Loans of the notes to consolidated financial statements for additional ACLL disclosures. Table 5 provides information on loan growth and period end loan composition, Table 10 provides additional information regarding NPAs, and Table 11 and Table 12 provide additional information regarding activity in the ACLL.

The loan segmentation used in calculating the ACLL at December 31, 2023 and December 31, 2022 was generally comparable. The methodology to calculate the ACLL consists of the following components: a valuation allowance estimate is established for commercial and consumer loans determined by the Corporation to be individually evaluated, using discounted cash flows, estimated fair value of underlying collateral, and/or other data available. Loans are segmented for criticized loan pools by loan type as well as for non-criticized loan pools by loan type, primarily based on risk rating rates after considering loan type, historical loss and delinquency experience, credit quality, and industry classifications. Loans that have been criticized are considered to have a higher risk of default than non-criticized loans, as circumstances were present to support the lower loan grade, warranting higher loss factors. Additionally, management allocates ACLL to absorb losses that may not be provided for by the other components due to qualitative factors evaluated by management, such as limitations within the credit risk grading process, known current economic or business conditions that may not yet show in trends, industry or other concentrations with current issues that impose higher inherent risks than are reflected in the loss factors, and other relevant considerations. The total allowance is available to absorb losses from any segment of the loan portfolio.

Table 11 Allowance for Credit Losses on Loans

(\$ in thousands)	Years Ended December 31,				
	2023	2022	2021	2020	2019
Allowance for loan losses					
Balance at beginning of period	\$ 312,720	\$ 280,015	\$ 383,702	\$ 201,371	\$ 238,023
Cumulative effect of ASU 2016-13 adoption (CECL)	N/A	N/A	N/A	112,457	N/A
Balance at beginning of period, adjusted	312,720	280,015	383,702	313,828	238,023
Provision for loan losses	87,000	34,000	(80,000)	164,457	18,500
Provision for loan losses recorded at acquisition	—	—	—	2,543	—
Gross up of allowance for PCD loans at acquisition	—	—	—	3,504	—
Loans charged off					
Commercial and industrial	(45,687)	(4,491)	(21,564)	(80,320)	(63,315)
Commercial real estate — owner occupied	(25)	—	—	(419)	(222)
Commercial and business lending	(45,713)	(4,491)	(21,564)	(80,739)	(63,537)
Commercial real estate — investor	(252)	(50)	(14,346)	(22,920)	—
Real estate construction	(25)	(48)	(5)	(19)	(60)
Commercial real estate lending	(277)	(98)	(14,351)	(22,938)	(60)
Total commercial	(45,989)	(4,588)	(35,915)	(103,677)	(63,597)
Residential mortgage	(952)	(567)	(880)	(1,867)	(3,322)
Auto finance	(5,950)	(1,041)	(22)	(7)	—
Home equity	(424)	(587)	(668)	(1,719)	(1,846)
Other consumer	(5,453)	(3,363)	(3,168)	(4,783)	(5,548)
Total consumer	(12,779)	(5,558)	(4,738)	(8,376)	(10,716)
Total loans charged off	(58,768)	(10,146)	(40,652)	(112,053)	(74,313)
Recoveries of loans previously charged off					
Commercial and industrial	3,015	5,282	8,564	7,004	11,875
Commercial real estate — owner occupied	11	13	120	147	2,795
Commercial and business lending	3,026	5,295	8,684	7,151	14,670
Commercial real estate — investor	3,016	50	3,162	643	31
Real estate construction	80	106	126	49	302
Commercial real estate lending	3,095	156	3,288	692	333
Total commercial	6,121	5,451	11,972	7,844	15,003
Residential mortgage	541	908	841	500	692
Auto finance	1,241	98	31	25	10
Home equity	1,262	1,385	2,854	1,978	2,599
Other consumer	978	1,010	1,267	1,076	858
Total consumer	4,021	3,401	4,993	3,579	4,158
Total recoveries	10,142	8,852	16,965	11,422	19,161
Net (charge offs)	(48,626)	(1,294)	(23,687)	(100,631)	(55,152)
Balance at end of period	\$ 351,094	\$ 312,720	\$ 280,015	\$ 383,702	\$ 201,371
Allowance for unfunded commitments					
Balance at beginning of period	\$ 38,776	\$ 39,776	\$ 47,776	\$ 21,907	\$ 24,336
Cumulative effect of ASU 2016-13 adoption (CECL)	N/A	N/A	N/A	18,690	N/A
Balance at beginning of period, adjusted	38,776	39,776	47,776	40,597	24,336
Provision for unfunded commitments	(4,000)	(1,000)	(8,000)	7,000	(2,500)
Amount recorded at acquisition	—	—	—	179	70
Balance at end of period	\$ 34,776	\$ 38,776	\$ 39,776	\$ 47,776	\$ 21,907
Allowance for credit losses on loans	\$ 385,870	\$ 351,496	\$ 319,791	\$ 431,478	\$ 223,278
Provision for credit losses on loans	83,000	33,000	(88,000)	174,000	16,000

Table 11 Allowance for Credit Losses on Loans (continued)

(\$ in thousands)	Years Ended December 31,				
	2023	2022	2021	2020	2019
Net loan (charge offs) recoveries					
Commercial and industrial	\$ (42,672)	\$ 791	\$ (13,000)	\$ (73,316)	\$ (51,441)
Commercial real estate — owner occupied	(15)	13	120	(272)	2,573
Commercial and business lending	(42,687)	804	(12,880)	(73,588)	(48,868)
Commercial real estate — investor	2,763	—	(11,184)	(22,277)	31
Real estate construction	55	58	121	31	243
Commercial real estate lending	2,819	58	(11,063)	(22,246)	274
Total commercial	(39,868)	862	(23,943)	(95,834)	(48,594)
Residential mortgage	(411)	341	(38)	(1,367)	(2,630)
Auto finance	(4,709)	(943)	9	19	10
Home equity	837	798	2,186	259	753
Other consumer	(4,475)	(2,353)	(1,901)	(3,707)	(4,690)
Total consumer	(8,758)	(2,157)	256	(4,797)	(6,558)
Total net (charge offs)	\$ (48,626)	\$ (1,294)	\$ (23,687)	\$ (100,631)	\$ (55,152)
Ratios					
Allowance for credit losses on loans to total loans	1.32 %	1.22 %	1.32 %	1.76 %	0.98 %
Allowance for credit losses on loans to net charge offs	7.9x	N/M	13.5x	4.3x	4.0x
Loan evaluation method for ACLL					
Individually evaluated for impairment	\$ 15,492	\$ 10,324	\$ 15,194	\$ 79,831	\$ 14,026
Collectively evaluated for impairment	370,378	341,172	304,597	351,646	209,252
Total ACLL	\$ 385,870	\$ 351,496	\$ 319,791	\$ 431,478	\$ 223,278
Loan balance					
Individually evaluated for impairment	\$ 62,712	\$ 76,577	\$ 115,643	\$ 259,497	\$ 111,595
Collectively evaluated for impairment	29,153,505	28,722,992	24,109,306	24,192,227	22,709,845
Total loan balance	\$ 29,216,218	\$ 28,799,569	\$ 24,224,949	\$ 24,451,724	\$ 22,821,440

Table 12 Net (Charge Offs) Recoveries^(a)

(In basis points)	Years Ended December 31,				
	2023	2022	2021	2020	2019
Net loan (charge offs) recoveries					
Commercial and industrial	(44)	1	(16)	(86)	(69)
Commercial real estate — owner occupied	—	—	1	(3)	28
Commercial and business lending	(39)	1	(14)	(78)	(58)
Commercial real estate — investor	5	—	(26)	(54)	—
Real estate construction	—	—	1	—	2
Commercial real estate lending	4	—	(18)	(38)	1
Total commercial	(22)	1	(16)	(63)	(36)
Residential mortgage	—	—	—	(2)	(3)
Auto finance	(26)	(12)	4	14	37
Home equity	14	13	34	3	9
Other consumer	(161)	(79)	(65)	(117)	(133)
Total consumer	(8)	(2)	—	(5)	(7)
Total net (charge offs)	(16)	—	(10)	(41)	(24)

(a) Ratio of net charge offs to average loans by loan type.

Notable Contributions to the Change in the Allowance for Credit Losses on Loans

- Total loans increased \$417 million, or 1%, from December 31, 2022, driven by increases in auto finance and CRE lending resulting from the Corporation's strategic initiatives, partially offset by a decrease in residential mortgage lending. See also Note 4 Loans of the notes to consolidated financial statements for additional information on loans.
- Potential problem loans increased \$166 million, or 62%, from December 31, 2022, largely driven by increases in potential problem loans within the Corporation's CRE-investor and commercial and industrial portfolios. See also Note 4 Loans of the notes to consolidated financial statements and section Nonperforming Assets for additional disclosures on the changes in asset quality.
- Total nonaccrual loans increased \$38 million, or 34%, from December 31, 2022, primarily driven by increases in nonaccrual loans within the Corporation's commercial and industrial and residential mortgage portfolios, partially offset by a decrease in nonaccrual loans within the CRE-investor portfolio. See also Note 4 Loans of the notes to consolidated financial statements and section Nonperforming Assets for additional disclosures on the changes in asset quality.
- For the year ended December 31, 2023, net charge offs increased \$47 million from December 31, 2022, primarily driven by an increase in charge off amounts in the Corporation's commercial and industrial portfolio. See Tables 11 and 12 for additional information regarding the activity in the ACLL.

Management believes the level of ACLL to be appropriate at December 31, 2023.

Consolidated net income and stockholders' equity could be affected if management's estimate of the ACLL is subsequently materially different, requiring additional or less provision for credit losses to be recorded. Management carefully considers numerous detailed and general factors, its assumptions, and the likelihood of materially different conditions that could alter its assumptions. While management uses currently available information to recognize losses on loans, future adjustments to the ACLL may be necessary based on newly received appraisals, updated commercial customer financial statements, rapidly deteriorating customer cash flow, and changes in economic conditions that affect our customers. Additionally, larger credit relationships do not inherently create more risk, but can create wider fluctuations in net charge offs and asset quality measures. As an integral part of their examination processes, various federal and state regulatory agencies also review the ACLL. These agencies may require additions to the ACLL or may require that certain loan balances be charged off or downgraded into criticized loan categories when their credit evaluations differ from those of management, based on their judgments about information available to them at the time of their examinations.

Investment Securities Portfolio

Management of the investment securities portfolio involves the maximization of income while actively monitoring the portfolio's liquidity, market risk, quality of the investment securities, and its role in balance sheet and capital management. The Corporation classifies its investment securities as AFS, HTM, or equity securities on the consolidated balance sheets at the time of purchase. Securities classified as AFS may be sold from time to time in order to help manage interest rate risk, liquidity, credit quality, capital levels, or to take advantage of relative value opportunities in the marketplace. Investment securities classified as AFS and equity are carried at fair value on the consolidated balance sheets, while investment securities classified as HTM are carried at amortized cost on the consolidated balance sheets.

Table 13 Investment Securities Portfolio

(\$ in thousands)	At December 31,					
	2023	% of Total	2022	% of Total	2021	% of Total
AFS investment securities						
Amortized cost						
U.S. Treasury securities	\$ 39,984	1 %	\$ 124,441	4 %	\$ 124,291	3 %
Agency securities	—	— %	15,000	1 %	15,000	— %
Obligations of state and political subdivisions (municipal securities)	94,008	3 %	235,693	8 %	381,517	9 %
Residential mortgage-related securities:						
FNMA/FHLMC	1,274,052	34 %	1,820,642	61 %	2,709,399	62 %
GNMA	2,021,242	54 %	502,537	17 %	66,189	2 %
Private-label	—	— %	—	— %	332,028	8 %
Commercial mortgage-related securities:						
FNMA/FHLMC	18,691	— %	19,038	1 %	357,240	8 %
GNMA	161,928	4 %	115,031	4 %	165,439	4 %
Asset backed securities:						
FFELP	135,832	4 %	157,138	5 %	177,974	4 %
SBA	1,077	— %	4,512	— %	6,594	— %
Other debt securities	3,000	— %	3,000	— %	3,000	— %
Total amortized cost	<u>\$ 3,749,814</u>	<u>100 %</u>	<u>\$ 2,997,032</u>	<u>100 %</u>	<u>\$ 4,338,671</u>	<u>100 %</u>
Fair value						
U.S. Treasury securities	\$ 35,902	1 %	\$ 109,378	4 %	\$ 122,957	3 %
Agency securities	—	— %	13,532	— %	14,897	— %
Obligations of state and political subdivisions (municipal securities)	91,817	3 %	230,714	8 %	400,457	9 %
Residential mortgage-related securities:						
FNMA/FHLMC	1,120,794	31 %	1,604,610	59 %	2,691,879	62 %
GNMA	2,042,675	57 %	497,596	18 %	67,780	2 %
Private-label	—	— %	—	— %	329,724	8 %
Commercial mortgage-related securities:						
FNMA/FHLMC	16,937	— %	17,142	1 %	350,623	8 %
GNMA	154,793	4 %	110,462	4 %	166,799	4 %
Asset backed securities:						
FFELP	133,975	4 %	151,191	6 %	177,325	4 %
SBA	1,051	— %	4,477	— %	6,580	— %
Other debt securities	2,950	— %	2,922	— %	2,994	— %
Total fair value and carrying value	<u>\$ 3,600,892</u>	<u>100 %</u>	<u>\$ 2,742,025</u>	<u>100 %</u>	<u>\$ 4,332,015</u>	<u>100 %</u>
Net unrealized holding gains (losses)	<u>\$ (148,922)</u>		<u>\$ (255,007)</u>		<u>\$ (6,656)</u>	

Table 13 Investment Securities Portfolio (continued)

(\$ in thousands)	At December 31,					
	2023	% of Total	2022	% of Total	2021	% of Total
HTM investment securities						
Amortized cost						
U.S. Treasury securities	\$ 999	— %	\$ 999	— %	\$ 1,000	— %
Obligations of state and political subdivisions (municipal securities)	1,682,473	44 %	1,732,351	44 %	1,628,759	73 %
Residential mortgage-related securities:						
FNMA/FHLMC	941,973	24 %	961,231	24 %	34,347	2 %
GNMA	48,979	1 %	52,979	1 %	48,053	2 %
Private-label	345,083	9 %	364,728	9 %	—	— %
Commercial mortgage-related securities:						
FNMA/FHLMC	780,995	20 %	778,796	20 %	425,937	19 %
GNMA	59,733	2 %	69,369	2 %	100,907	5 %
Total amortized cost and carrying value	<u>\$ 3,860,235</u>	<u>100 %</u>	<u>\$ 3,960,451</u>	<u>100 %</u>	<u>\$ 2,239,003</u>	<u>100 %</u>
Fair value						
U.S. Treasury securities	\$ 963	— %	\$ 936	— %	\$ 1,001	— %
Obligations of state and political subdivisions (municipal securities)	1,554,059	46 %	1,551,647	46 %	1,739,988	74 %
Residential mortgage-related securities:						
FNMA/FHLMC	804,393	24 %	816,771	24 %	36,139	2 %
GNMA	46,170	1 %	49,628	1 %	49,631	2 %
Private-label	289,507	9 %	303,505	9 %	—	— %
Commercial mortgage-related securities:						
FNMA/FHLMC	632,914	19 %	615,839	18 %	419,400	18 %
GNMA	52,619	2 %	62,691	2 %	102,506	4 %
Total fair value	<u>\$ 3,380,624</u>	<u>100 %</u>	<u>\$ 3,401,018</u>	<u>100 %</u>	<u>\$ 2,348,664</u>	<u>100 %</u>
Net unrealized holding gains (losses)	<u>\$ (479,610)</u>		<u>\$ (559,433)</u>		<u>\$ 109,662</u>	
Equity securities						
Equity securities carrying value and fair value	<u>\$ 41,651</u>	<u>100 %</u>	<u>\$ 25,216</u>	<u>100 %</u>	<u>\$ 18,352</u>	<u>100 %</u>

At December 31, 2023, the Corporation's investment securities portfolio did not contain securities of any single non-government or non-GSE issuer that were payable from and secured by the same source of revenue or taxing authority where the aggregate carrying value of such securities exceeded 5% of stockholders' equity.

During the fourth quarter of 2023 as part of the balance sheet repositioning, the Corporation sold lower yielding AFS securities with a carrying value of \$715 million at a net loss of \$65 million and reinvested the proceeds in higher yielding and lower risk-weighted GNMA securities.

During the first quarter of 2022, the Corporation redesignated approximately \$1.6 billion of mortgage-related securities from AFS to HTM. The reclassification of these investment securities was accounted for at fair value. Management elected to transfer these investment securities as the Corporation has the positive intent and ability to hold these investment securities to maturity. See Note 22 Accumulated Other Comprehensive Income (Loss) of the notes to consolidated financial statements for additional information on the unrealized losses on investment securities transferred from AFS to HTM.

The Corporation did not recognize any credit-related write-downs to the allowance for credit losses on investments during 2023, 2022, or 2021. See Note 1 Summary of Significant Accounting Policies for management's accounting policy for investment securities and Note 3 Investment Securities of the notes to consolidated financial statements for additional investment securities disclosures.

AFS and HTM Securities

U.S. Treasury Securities: U.S. Treasury Securities, including Treasury bills, notes, and bonds, are debt obligations issued by the U.S. Department of the Treasury and are backed by the full faith and credit of the U.S. government.

Municipal Securities: The municipal securities relate to various state and political subdivisions and school districts. The municipal securities portfolio is regularly assessed for credit quality and deterioration.

Agency Residential and Agency Commercial Mortgage-Related Securities: Residential and commercial mortgage-related securities include predominantly GNMA, FNMA, and FHLMC MBS and CMOs. The fair value of these mortgage-related

securities is subject to inherent risks, such as prepayment risk and interest rate changes. The Corporation regularly assesses the valuation of these securities.

Private-Label Residential Mortgage-Related Securities: Private-label residential mortgage-related securities are the most senior AAA-rated tranche CMO securities issued by a non-agency sponsor and collateralized by Prime Jumbo residential mortgage loans.

AFS Securities

Agency Securities: Agency securities are debt obligations that are issued by a U.S. GSE or other federally related entity, and have an implied guarantee from the U.S. government.

FFELP Asset Backed Securities: FFELP asset backed securities are collateralized with government guaranteed student loans.

SBA Asset Backed Securities: SBA asset backed securities are securities whose underlying assets are loans from the SBA. These loans are backed by the U.S. government.

Other Debt Securities: Other debt securities are primarily comprised of debt securities that mature within 3 years and have a rating of A.

Equity Securities

Equity Securities with Readily Determinable Fair Values: The Corporation's portfolio of equity securities with readily determinable fair values is primarily comprised of CRA Qualified Investment mutual funds and other mutual funds.

Equity Securities without Readily Determinable Fair Values: The Corporation's portfolio of equity securities without readily determinable fair values primarily consists of Visa Class B restricted shares that the Corporation received in 2008 as part of Visa's initial public offering, along with an investment in a private SBA loan fund.

Regulatory Stock (FHLB and Federal Reserve System)

In addition to the AFS, HTM, and equity investment securities noted above, the Corporation is also required to hold certain regulatory stock. The Corporation is required to maintain Federal Reserve Bank stock and FHLB stock as member banks of both the Federal Reserve System and the FHLB, and in amounts as required by these institutions. See Note 3 Investment Securities of the notes to consolidated financial statements for additional information on the regulatory stock.

Table 14 Investment Securities Portfolio Maturity Distribution^(a)

(\$ in thousands)	December 31, 2023		
	Amortized Cost	Fair Value	Weighted Average Yield ^(b)
AFS securities			
U.S. Treasury securities			
After one but within five years	\$ 39,984	\$ 35,902	1.26 %
Total U.S. Treasury securities	\$ 39,984	\$ 35,902	1.26 %
Obligations of state and political subdivisions (municipal securities)			
Within one year	\$ 1,395	\$ 1,394	4.12 %
After one but within five years	622	591	3.05 %
After five years but within ten years	64,728	62,839	3.35 %
After ten years	27,263	26,993	4.34 %
Total obligations of state and political subdivisions (municipal securities)	\$ 94,008	\$ 91,817	3.65 %
Agency residential mortgage-related securities			
Within one year	\$ 268	\$ 268	1.85 %
After one but within five years	2,418,548	2,379,861	4.90 %
After five years but within ten years	837,858	744,907	1.99 %
After ten years	38,619	38,432	5.39 %
Total agency residential mortgage-related securities	\$ 3,295,294	\$ 3,163,468	4.17 %
Agency commercial mortgage-related securities			
Within one year	\$ 3,854	\$ 3,687	2.44 %
After one but within five years	128,721	122,908	3.48 %
After five years but within ten years	48,044	45,134	4.02 %
Total agency commercial mortgage-related securities	\$ 180,619	\$ 171,729	3.60 %
Asset backed securities			
Within one year	\$ 126	\$ 125	5.81 %
After one but within five years	61,648	60,705	6.34 %
After five years but within ten years	75,134	74,195	6.31 %
Total asset backed securities	\$ 136,909	\$ 135,026	6.32 %
Other debt securities			
Within one year	\$ 1,000	\$ 978	1.02 %
After one but within five years	2,000	1,972	3.85 %
Total other debt securities	\$ 3,000	\$ 2,950	2.91 %
Total AFS securities	\$ 3,749,814	\$ 3,600,892	4.17 %

Table 14 Investment Securities Portfolio Maturity Distribution (continued)^(a)

(\$ in thousands)	December 31, 2023		
	Amortized Cost	Fair Value	Weighted Average Yield ^(b)
HTM securities			
U.S. Treasury securities			
After one but within five years	\$ 999	\$ 963	1.20 %
Total U.S. Treasury securities	\$ 999	\$ 963	1.20 %
Obligations of state and political subdivisions (municipal securities)			
Within one year	\$ 6,099	\$ 6,096	3.90 %
After one but within five years	51,392	51,365	3.69 %
After five years but within ten years	157,279	153,795	3.82 %
After ten years	1,467,704	1,342,803	3.73 %
Total obligations of state and political subdivisions (municipal securities)	\$ 1,682,473	\$ 1,554,059	3.74 %
Agency residential mortgage-related securities			
After one but within five years	\$ 22,612	\$ 20,920	3.04 %
After five years but within ten years	56,264	50,932	3.36 %
After ten years	912,076	778,711	2.19 %
Total agency residential mortgage-related securities	\$ 990,952	\$ 850,563	2.27 %
Private-label residential mortgage-related securities			
After five years but within ten years	\$ 345,083	\$ 289,507	2.36 %
Total private-label residential mortgage-related securities	\$ 345,083	\$ 289,507	2.36 %
Agency commercial mortgage-related securities			
Within one year	\$ 4,110	\$ 3,876	2.32 %
After one but within five years	180,830	153,885	1.72 %
After five years but within ten years	508,148	415,770	1.97 %
After ten years	147,640	112,002	2.12 %
Total agency commercial mortgage-related securities	\$ 840,728	\$ 685,532	1.94 %
Total HTM securities	\$ 3,860,235	\$ 3,380,624	2.85 %
Equity securities			
Equity securities with readily determinable fair values	\$ 6,883	\$ 6,883	— %
Equity securities without readily determinable fair values	34,769	34,769	— %
Total equity securities	\$ 41,651	\$ 41,651	— %

(a) Expected maturities will differ from contractual maturities, as borrowers may have the right to call or repay obligations with or without call or prepayment penalties.

(b) Yields on tax-exempt securities are computed on a fully tax-equivalent basis using a tax rate of 21% and are net of the effects of certain disallowed interest deductions.

Analysis of Deposits and Funding

Deposits and Customer Funding

The following table summarizes the composition of our deposits and customer funding:

Table 15 Period End Deposit and Customer Funding Composition

(\$ in thousands)	As of December 31,					
	2023		2022		2021	
	Amount	% of Total	Amount	% of Total	Amount	% of Total
Noninterest-bearing demand	\$ 6,119,956	18 %	\$ 7,760,811	26 %	\$ 8,504,077	30 %
Savings	4,835,701	14 %	4,604,848	16 %	4,410,198	15 %
Interest-bearing demand	8,843,967	26 %	7,100,727	24 %	7,019,782	25 %
Money market	6,330,453	19 %	8,239,610	28 %	7,185,111	25 %
Brokered CDs	4,447,479	13 %	541,916	2 %	—	— %
Other time deposits	2,868,494	9 %	1,388,242	5 %	1,347,262	5 %
Total deposits	33,446,049	100 %	29,636,154	100 %	28,466,430	100 %
Other customer funding ^(a)	106,620		261,767		354,142	
Total deposits and other customer funding	<u>\$ 33,552,669</u>		<u>\$ 29,897,921</u>		<u>\$ 28,820,572</u>	
Network transaction deposits ^(b)	\$ 1,566,139		\$ 979,003		\$ 766,965	
Net deposits and other customer funding ^(c)	\$ 27,539,051		\$ 28,377,001		\$ 28,053,607	

(a) Includes repurchase agreements and commercial paper.

(b) Included above in interest-bearing demand and money market.

(c) Total deposits and other customer funding, excluding brokered CDs and network transaction deposits.

- Total deposits, which are the Corporation's largest source of funds, increased \$3.8 billion, or 13%, from December 31, 2022.
- Time deposits, which include brokered CDs and other time deposits, increased \$5.4 billion from December 31, 2022, primarily due to increases in brokered CDs used to pay down FHLB advances and fund loan growth.
- Included in interest-bearing demand and money market were network deposits, primarily sourced from other financial institutions and intermediaries. These account for 5% of the Corporation's total deposits at December 31, 2023. Network deposits increased \$587 million, or 60%, from December 31, 2022.
- Uninsured deposits were \$14.8 billion and \$16.4 billion at December 31, 2023 and 2022, respectively. Estimated uninsured and uncollateralized deposits, excluding intercompany deposits, were 22.7 % of total deposits at December 31, 2023, compared to 30.1% at December 31, 2022 and 32.8% at December 31, 2021.

Table 16 Maturity Distribution – Time Deposits of \$250,000 or More

(\$ in thousands)	December 31, 2023
Three months or less	\$ 236,580
Over three months through six months	159,141
Over six months through twelve months	98,469
Over twelve months	28,436
Total	<u>\$ 522,626</u>

Selected period end deposit information is detailed in Note 8 Deposits of the notes to consolidated financial statements, including a maturity distribution of all time deposits at December 31, 2023. See Table 1 for additional information on average deposit balances and deposit rates.

Other Funding Sources

Short-Term Funding: Short-term funding is comprised of short-term FHLB advances (with original contractual maturities less than one year), federal funds purchased, securities sold under agreements to repurchase, and historically, commercial paper. Many short-term funding sources are secured with collateral, expected to be reissued, and, therefore, do not represent an immediate need for cash. The organization manages to a multitude of liquidity risk limits which consider availability of short-term funding sources across a spectrum of stress scenarios, among other risk-based assumptions. Short-term funding sources at December 31, 2023 were \$1.1 billion, a decrease of \$2.7 billion, or 71%, from December 31, 2022, driven by a \$2.4 billion, or

76%, decrease in short-term FHLB advances as the Corporation used some of the proceeds of the one-time mortgage portfolio sale, related to the balance sheet repositioning announced in the fourth quarter of 2023, to pay down advances while also issuing brokered CDs to provide greater immediate term availability of funds.

Long-Term Funding: Long-term funding is comprised of long-term FHLB advances (with original contractual maturities greater than one year), subordinated notes, and finance leases. Long-term funding at December 31, 2023 was \$1.7 billion, an increase of \$299 million, or 21%, from December 31, 2022, driven by the issuance of \$300 million in aggregate principal amount of subordinated notes during the first quarter of 2023.

See Note 9 Short and Long-Term Funding of the notes to consolidated financial statements for additional information on short-term and long-term funding. See Table 1 for additional information on average funding and rates.

Liquidity

The objective of liquidity risk management is to ensure that the Corporation has the ability to generate sufficient cash or cash equivalents in a timely and cost effective manner to satisfy the cash flow requirements of depositors and borrowers and to meet its other commitments as they become due. The Corporation's liquidity risk management process is designed to identify, measure, and manage the Corporation's funding and liquidity risk to meet its daily funding needs in the ordinary course of business, as well as to address expected and unexpected changes in its funding requirements. The Corporation engages in various activities to manage its liquidity risk, including diversifying its funding sources, stress testing, and holding readily-marketable assets which can be used as a source of liquidity, if needed.

The Corporation performs dynamic scenario analysis in accordance with industry best practices. Measures have been established to ensure the Corporation has sufficient high quality short-term liquidity to meet cash flow requirements under stressed scenarios. In addition, the Corporation also reviews static measures such as deposit funding as a percent of total assets and liquid asset levels. Strong capital ratios, credit quality, and core earnings are also essential to maintaining cost effective access to wholesale funding markets. At December 31, 2023, the Corporation was in compliance with its internal liquidity objectives and had sufficient asset-based liquidity to meet its obligations even under a stressed scenario.

The Corporation maintains diverse and readily available liquidity sources, including:

- Lines of credit with the Federal Reserve Bank and FHLB, which require eligible loan and investment collateral to be pledged. Based on the amount of collateral pledged, the FHLB established a collateral value from which the Bank may draw advances, and issue letters of credit in favor of public fund depositors, against the collateral. As of December 31, 2023, the Bank had \$6.0 billion available for future funding. The Federal Reserve Bank also establishes a collateral value of assets to support borrowings from the discount window. As of December 31, 2023, the Bank had \$1.4 billion available for discount window borrowings.
- The BTFP, against which the Corporation can borrow with qualifying investment securities as collateral, valued at par as permitted by the terms of the program. As of December 31, 2023, the Bank had \$522 million available for borrowing under the BTFP. The ability to take new advances under this program ends in March 2024.
- A \$200 million Parent Company commercial paper program, of which none was outstanding at December 31, 2023.
- Dividends and service fees from subsidiaries, as well as the proceeds from issuance of capital, which are also funding sources for the Parent Company.
- Acquisition related equity issuances by the Parent Company; the Corporation has filed a shelf registration statement with the SEC under which the Parent Company may, from time to time, offer shares of the Corporation's common stock in connection with acquisitions of businesses, assets, or securities of other companies.
- Other issuances by the Parent Company; the Corporation maintains on file with the SEC a universal shelf registration statement, under which the Parent Company may offer the following securities, either separately or in units: debt securities, preferred stock, depositary shares, common stock, and warrants.
- Bank issuances; the Bank may also issue institutional CDs, network transaction deposits, and brokered CDs.
- Global Bank Note Program issuances; the Bank has implemented a program pursuant to which it may from time to time offer up to \$2.0 billion aggregate principal amount of its unsecured senior and subordinated notes.

The following table presents secured and total available liquidity sources, estimated uninsured and uncollateralized deposits (excluding intercompany deposits), and coverage of estimated uninsured and uncollateralized deposits.

Table 17 Liquidity Sources and Uninsured Deposit Coverage Ratio

(\$ in thousands)	December 31, 2023	September 30, 2023	June 30, 2023	March 31, 2023
Federal Reserve Bank balance	\$ 421,848	\$ 314,287	\$ 178,983	\$ 504,169
Available FHLB Chicago capacity	5,985,385	5,377,628	5,148,360	3,453,813
Available Federal Reserve Bank discount window capacity	1,433,655	1,335,938	1,635,140	1,799,453
Available BTFP capacity	522,465	618,829	633,817	644,915
Funding available within one business day ^(a)	8,363,353	7,646,682	7,596,300	6,402,351
Available federal funds lines	1,550,000	2,518,000	2,623,000	2,773,000
Available brokered deposits capacity ^(b)	138,512	1,240,488	761,301	3,646,393
Unsecured debt capacity ^(c)	1,000,000	1,000,000	1,000,000	1,000,000
Total available liquidity	<u>\$ 11,051,865</u>	<u>\$ 12,405,170</u>	<u>\$ 11,980,601</u>	<u>\$ 13,821,744</u>
Uninsured and uncollateralized deposits	\$ 7,586,047	\$ 7,269,248	\$ 7,081,826	\$ 7,938,690
Coverage ratio of uninsured and uncollateralized deposits with secured funding available within one business day	110 %	105 %	107 %	81 %
Coverage ratio of uninsured and uncollateralized deposits with total funding	146 %	171 %	169 %	174 %

(a) Estimated based on normal course of operations with indicated institution.

(b) Availability based on internal policy limitations. The Corporation includes outstanding deposits that have received a primary purpose exemption in the brokered deposit classification as they have similar funding characteristics and risk as brokered deposits.

(c) Availability based on internal policy limitations.

Based on contractual obligations and ongoing operations, the Corporation's sources of liquidity are sufficient to meet present and future liquidity needs. See Table 20 for information about the Corporation's contractual obligations and other commitments. See section Deposits and Customer Funding for information about uninsured deposits and concentrations.

Credit ratings impact the Corporation's ability to issue debt securities and the cost to borrow money. Adverse changes in credit ratings impact not only the ability to raise funds in the capital markets but also the cost of these funds. For additional information regarding risks related to adverse changes in our credit ratings, see Part I, Item 1A, Risk Factors.

For the year ended December 31, 2023, net cash provided by operating and financing activities was \$443 million and \$1.3 billion, respectively, while investing activities used net cash of \$1.4 billion, for a net increase in cash and cash equivalents of \$302 million since year-end 2022. During 2023, total assets increased to \$41.0 billion, up \$1.6 billion compared to year-end 2022, primarily due to an increase in AFS investment securities, at fair value of \$859 million and loans of \$417 million. On the funding side, deposits increased \$3.8 billion, mainly driven by increases in brokered CDs, interest-bearing demand, and other time deposits of \$3.9 billion, \$1.7 billion, and \$1.5 billion, respectively, partially offset by a decrease in noninterest-bearing demand of \$1.6 billion. Additionally, FHLB advances were down \$2.4 billion as the proceeds from the issuance of brokered CDs and the balance sheet repositioning were used to pay down these advances.

For the year ended December 31, 2022, net cash provided by operating and financing activities was \$847 million and \$4.0 billion, respectively, while investing activities used net cash of \$5.3 billion, for a net decrease in cash and cash equivalents of \$404 million since year-end 2021. During 2022, total assets increased to \$39.4 billion, up \$4.3 billion compared to year-end 2021, primarily due to an increase of \$4.6 billion in loans as a result of the execution of our strategic initiatives. On the funding side, deposits increased \$1.2 billion, mainly driven by increases in money markets and time deposits of \$1.1 billion and \$583 million, respectively. Additionally, FHLB advances were up \$2.7 billion to fund the loan growth that resulted from the execution of the strategic initiatives.

Quantitative and Qualitative Disclosures about Market Risk

Market risk and interest rate risk are managed centrally. Market risk is the potential for loss arising from adverse changes in the fair value of fixed-income securities, equity securities, other earning assets, and derivative financial instruments as a result of changes in interest rates or other factors. Interest rate risk is the potential for reduced net interest income resulting from adverse changes in the level of interest rates. As a financial institution that engages in transactions involving an array of financial products, the Corporation is exposed to both market risk and interest rate risk. In addition to market risk, interest rate risk is measured and managed through a number of methods. The Corporation uses financial modeling simulation techniques that measure the sensitivity of future earnings due to changing rate environments to measure interest rate risk.

Policies established by the Corporation's ALCO and approved by the Board of Directors are intended to limit these risks. The Board has delegated day-to-day responsibility for managing market and interest rate risk to ALCO. The primary objectives of market risk management are to minimize any adverse effect that changes in market risk factors may have on net interest income and to offset the risk of price changes for certain assets recorded at fair value.

Interest Rate Risk

The primary goal of interest rate risk management is to control exposure to interest rate risk within policy limits approved by the Board of Directors. These limits and guidelines reflect the Corporation's risk appetite for interest rate risk over both short-term and long-term horizons.

The major sources of the Corporation's non-trading interest rate risk are timing differences in the maturity and re-pricing characteristics of assets and liabilities, changes in the shape of the yield curve, and the potential exercise of explicit or embedded options. We measure these risks and their impact by identifying and quantifying exposures through the use of sophisticated simulation and valuation models which are employed by management to understand interest rate sensitive EAR and MVE at risk. The Corporation's interest rate risk profile is such that, generally, a higher yield curve adds to income while a lower yield curve has a negative impact on earnings. The Corporation's EAR profile is asset sensitive at December 31, 2023.

MVE and EAR are complementary interest rate risk metrics and should be viewed together. EAR sensitivity captures asset and liability re-pricing mismatches for the first year inclusive of forecast balance sheet changes and is considered a shorter-term measure, while MVE sensitivity captures mismatches within the period end balance sheets through the financial instruments' respective maturities and is considered a longer term measure.

A positive EAR sensitivity in a rising rate environment indicates that over the forecast horizon of one year, asset-based income will increase more quickly than liability based expense due to the balance sheet composition. A negative MVE sensitivity in a rising rate environment indicates that the value of financial assets will decrease more than the value of financial liabilities.

One of the primary methods that we use to quantify and manage interest rate risk is simulation analysis, which we use to model net interest income and rate sensitive noninterest items from the Corporation's balance sheet and derivative positions under various interest rate scenarios. As the future path of interest rates is not known with certainty, we use simulation analysis to project rate sensitive income under many scenarios including implied forward and deliberately extreme and perhaps unlikely scenarios. The analyses may include rapid and gradual ramping of interest rates, rate shocks, basis risk analysis, and yield curve twists. Specific balance sheet management strategies are also analyzed to determine their impact on EAR.

Key assumptions in the simulation analysis (and in the valuation analysis discussed below) relate to the behavior of interest rates and pricing spreads, the changes in product balances, and the behavior of loan and deposit clients in different rate environments. This analysis incorporates several assumptions, the most material of which relate to the re-pricing characteristics and balance fluctuations of deposits with indeterminate or non-contractual maturities, and prepayment of loans and securities.

The sensitivity analysis included below is measured as a percentage change in EAR due to gradual moves in benchmark interest rates from a baseline scenario over 12 months. We evaluate the sensitivity using: 1) a dynamic forecast incorporating expected growth in the balance sheet, and 2) a static forecast where the current balance sheet is held constant.

While a gradual shift in interest rates was used in this analysis to provide an estimate of exposure under a probable scenario, an instantaneous shift in interest rates would have a more significant impact. No EAR breaches occurred during 2023.

Table 18 Estimated % Change in Rate Sensitive EAR Over 12 Months

	Dynamic Forecast December 31, 2023	Static Forecast December 31, 2023	Dynamic Forecast December 31, 2022	Static Forecast December 31, 2022
Gradual Rate Change				
100 bp increase in interest rates	1.9%	2.2%	3.9%	3.4%
200 bp increase in interest rates	3.8%	4.3%	7.8%	6.8%
100 bp decrease in interest rates	(1.3)%	(1.5)%	(3.4)%	(2.9)%
200 bp decrease in interest rates	(2.6)%	(3.1)%	(6.7)%	(5.7)%

We also perform valuation analysis, which we use for discerning levels of risk present in the balance sheet and derivative positions that might not be taken into account in the EAR simulation analysis. Whereas, EAR simulation highlights exposures over a relatively short time horizon, valuation analysis incorporates all cash flows over the estimated remaining life of all balance sheet and derivative positions. The valuation of the balance sheet, at a point in time, is defined as the discounted present value of all asset cash flows and derivative cash flows, minus the discounted present value of all liability cash flows, the net of which is referred to as MVE. The sensitivity of MVE to changes in the level of interest rates is a measure of the longer-term re-pricing risk and options risk embedded in the balance sheet. Unlike the EAR simulation, MVE uses instantaneous changes in rates. Additionally, MVE values only the current balance sheet and does not incorporate the growth assumptions that are used in the EAR simulation. As with EAR simulations, assumptions about the timing and variability of balance sheet cash flows are critical in the MVE analysis. Particularly important are the assumptions driving prepayments and the expected changes in

balances and pricing of the indeterminate deposit portfolios. At December 31, 2023, the MVE profile indicates a decrease in net balance sheet value due to instantaneous upward changes in rates and an increase in net balance sheet value due to instantaneous downward changes in rates.

Table 19 Market Value of Equity Sensitivity

	December 31, 2023	December 31, 2022
Instantaneous Rate Change		
100 bp increase in interest rates	(10.1)%	(4.2)%
200 bp increase in interest rates	(20.1)%	(8.2)%
100 bp decrease in interest rates	9.7 %	4.3 %
200 bp decrease in interest rates	18.5 %	8.0 %

Since MVE measures the discounted present value of cash flows over the estimated lives of instruments, the change in MVE does not directly correlate to the degree that earnings would be impacted over a shorter time horizon (i.e., the current year). Further, MVE does not take into account factors such as future balance sheet growth, changes in product mix, changes in yield curve relationships, and changes in product spreads that could mitigate the adverse impact of changes in interest rates. The MVE measures in the 100 bp and 200 bp increase in interest rates scenarios are both outside of the policy limit, which have been reported to the Corporation's Board.

The above EAR and MVE measures do not include all actions that management may undertake to manage this risk in response to anticipated changes in interest rates.

Contractual Obligations, Commitments, Off-Balance Sheet Arrangements, and Contingent Liabilities

The following table summarizes significant contractual obligations and other commitments at December 31, 2023, at those amounts contractually due to the recipient, including any unamortized premiums or discounts, hedge basis adjustments, or other similar carrying value adjustments.

Table 20 Contractual Obligations and Other Commitments

(\$ in thousands)	Note Reference	One Year or Less	One to Three Years	Three to Five Years	Over Five Years	Total
Time deposits	8	\$ 7,100,729	\$ 196,230	\$ 19,009	\$ 5	\$ 7,315,973
Short-term funding	9	326,780	—	—	—	326,780
FHLB advances	9	740,633	999,336	199,120	1,104	1,940,194
Other long-term funding	9	88	248,431	115	292,635	541,269
Operating leases	7	5,705	9,628	7,262	4,715	27,311
Total		\$ 8,173,935	\$ 1,453,625	\$ 225,506	\$ 298,460	\$ 10,151,526

The Corporation also has obligations under its retirement plans, derivatives, and lending-related commitments as described in Note 12 Retirement Plans, Note 14 Derivative and Hedging Activities, and Note 16 Commitments, Off-Balance Sheet Arrangements, and Legal Proceedings of the notes to consolidated financial statements, respectively. Further discussion of the nature of each obligation is included in the referenced note to the consolidated financial statements.

Capital

Management actively reviews capital strategies for the Corporation and each of its subsidiaries in light of perceived business risks, future growth opportunities, industry standards, and compliance with regulatory requirements. The assessment of overall capital adequacy depends on a variety of factors, including asset quality, liquidity, stability of earnings, changing competitive forces, economic conditions in markets served, and strength of management. At December 31, 2023, the capital ratios of the Corporation and its banking subsidiaries were in excess of regulatory minimum requirements. The Corporation's capital ratios are summarized in the following table.

Compliance with regulatory minimum capital requirements is a tool used in assessing the Corporation's capital adequacy, but not determinative of how the Corporation would fare under extreme stress. Factors that may affect the adequacy of the Corporation's capital include the inherent limitations of fair value estimates and the assumptions thereof, the inherent limitations of the regulatory risk-weights assigned to various asset types, the inherent limitations of accounting classifications of certain investments and the effect on their measurement, external macroeconomic conditions and their effects on capital and the Corporation's ability to raise capital or refinance capital commitments, and the extent of steps taken by state or federal government authorities in periods of extreme stress.

For additional information regarding the potential for additional regulation and supervision, see Part I, Item 1A, Risk Factors.

Table 21 Capital Ratios

(\$ in thousands)	As of December 31,		
	2023	2022	2021
Risk-based capital^(a)			
CET1	\$ 3,074,938	\$ 3,035,578	\$ 2,808,289
Tier 1 capital	3,269,050	3,229,690	3,001,074
Total capital	3,997,205	3,680,227	3,570,026
Total risk-weighted assets	32,732,710	32,469,862	27,242,735
Modified CECL transitional amount	44,851	67,276	89,702
CET1 capital ratio	9.39 %	9.35 %	10.31 %
Tier 1 capital ratio	9.99 %	9.95 %	11.02 %
Total capital ratio	12.21 %	11.33 %	13.10 %
Tier 1 leverage ratio	8.06 %	8.59 %	8.83 %
Selected equity and performance ratios			
Total stockholders' equity / total assets	10.18 %	10.19 %	11.47 %
Dividend payout ratio ^(b)	74.56 %	34.32 %	34.55 %
Return on average assets	0.45 %	1.00 %	1.02 %
Noninterest expense / average assets	2.00 %	2.04 %	2.06 %

(a) The Federal Reserve establishes regulatory capital requirements, including well-capitalized standards for the Corporation. The Corporation follows Basel III, subject to certain transition provisions. These regulatory capital measurements are used by management, regulators, investors, and analysts to assess, monitor, and compare the quality and composition of the Corporation's capital with the capital of other financial services companies.

(b) Ratio is based upon basic earnings per common share.

See Item 5, Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities, for information on the shares repurchased during the fourth quarter of 2023.

See Note 10 Stockholders' Equity and Note 19 Regulatory Matters of the notes to consolidated financial statements for additional capital disclosures.

During the second quarter of 2021, the Corporation redeemed all outstanding Series C Preferred Stock, for \$65 million.

During the third quarter of 2021, the Corporation redeemed all outstanding Series D Preferred Stock, for \$99 million.

Table 22 Non-GAAP Measures

(\$ in thousands)	At or for the Year Ended December 31,				
	2023	2022	2021	2020	2019
Selected equity and performance ratios^{(a)(b)(c)}					
Tangible common equity / tangible assets	7.11 %	6.97 %	7.86 %	7.94 %	7.71 %
Return on average equity	4.45 %	9.21 %	8.60 %	7.78 %	8.44 %
Return on average tangible common equity	6.44 %	13.77 %	12.99 %	12.31 %	13.53 %
Return on average CET1	5.51 %	12.23 %	12.08 %	11.23 %	12.59 %
Return on average tangible assets	0.48 %	1.05 %	1.07 %	0.95 %	1.05 %
Average stockholders' equity / average assets	10.11 %	10.84 %	11.84 %	11.51 %	11.72 %
Tangible common equity reconciliation^(a)					
Common equity	\$ 3,979,861	\$ 3,821,378	\$ 3,831,658	\$ 3,737,421	\$ 3,665,407
Goodwill and other intangible assets, net	(1,145,464)	(1,154,274)	(1,163,085)	(1,177,554)	(1,264,531)
Tangible common equity	\$ 2,834,398	\$ 2,667,104	\$ 2,668,573	\$ 2,559,867	\$ 2,400,876
Tangible assets reconciliation^(a)					
Total assets	\$ 41,015,855	\$ 39,405,727	\$ 35,104,253	\$ 33,419,783	\$ 32,386,478
Goodwill and other intangible assets, net	(1,145,464)	(1,154,274)	(1,163,085)	(1,177,554)	(1,264,531)
Tangible assets	\$ 39,870,392	\$ 38,251,453	\$ 33,941,167	\$ 32,242,230	\$ 31,121,947
Average tangible common equity and average CET1 reconciliation^(a)					
Common equity	\$ 3,917,026	\$ 3,781,658	\$ 3,789,331	\$ 3,633,259	\$ 3,615,153
Goodwill and other intangible assets, net	(1,149,939)	(1,158,829)	(1,168,560)	(1,227,561)	(1,256,668)
Tangible common equity	2,767,087	2,622,829	2,620,771	2,405,698	2,358,485
Modified CECL transitional amount	44,851	67,276	102,307	115,052	N/A
Accumulated other comprehensive loss	274,874	174,208	1,234	2,643	68,946
Deferred tax assets, net	27,532	34,361	40,011	43,789	46,980
Average CET1	\$ 3,114,344	\$ 2,898,675	\$ 2,764,323	\$ 2,567,182	\$ 2,474,411
Average tangible assets reconciliation^(a)					
Total assets	\$ 40,648,923	\$ 36,657,932	\$ 34,464,257	\$ 34,265,207	\$ 33,046,604
Goodwill and other intangible assets, net	(1,149,939)	(1,158,829)	(1,168,560)	(1,227,561)	(1,256,668)
Tangible assets	\$ 39,498,984	\$ 35,499,103	\$ 33,295,697	\$ 33,037,646	\$ 31,789,936
Adjusted net income reconciliation^(b)					
Net income	\$ 182,956	\$ 366,122	\$ 350,994	\$ 306,771	\$ 326,790
Other intangible amortization, net of tax	6,608	6,608	6,633	7,644	7,461
Adjusted net income	\$ 189,564	\$ 372,730	\$ 357,627	\$ 314,415	\$ 334,251
Adjusted net income available to common equity reconciliation^(b)					
Net income available to common equity	\$ 171,456	\$ 354,622	\$ 333,883	\$ 288,413	\$ 311,587
Other intangible amortization, net of tax	6,608	6,608	6,633	7,644	7,461
Adjusted net income available to common equity	\$ 178,064	\$ 361,230	\$ 340,516	\$ 296,057	\$ 319,049
End of period core customer deposits reconciliation					
Total deposits	\$ 33,446,049	\$ 29,636,154	\$ 28,466,430	\$ 26,482,481	\$ 23,779,064
Network transaction deposits	(1,566,139)	(979,003)	(766,965)	(1,197,093)	(1,336,286)
Brokered CDs	(4,447,479)	(541,916)	—	—	(5,964)
Core customer deposits	\$ 27,432,431	\$ 28,115,235	\$ 27,699,464	\$ 25,285,387	\$ 22,436,814
Efficiency ratio reconciliation^(d)					
Federal Reserve efficiency ratio	69.70 %	60.36 %	66.33 %	61.76 %	65.38 %
Fully tax-equivalent adjustment	(1.13)%	(0.92)%	(1.04)%	(0.77)%	(0.85)%
Other intangible amortization	(0.76)%	(0.71)%	(0.84)%	(0.80)%	(0.82)%
Fully tax-equivalent efficiency ratio	67.82 %	58.74 %	64.47 %	60.20 %	63.72 %
FDIC special assessment	(2.32)%	— %	— %	— %	— %
Acquisitions, dispositions, branch sales, and announced initiatives	(7.02)%	(0.10)%	(0.51)%	4.49 %	(0.60)%
Adjusted efficiency ratio	58.48 %	58.65 %	63.96 %	64.70 %	63.12 %

(a) Tangible common equity and tangible assets exclude goodwill and other intangible assets, net.

(b) Adjusted net income and adjusted net income available to common equity, which are used in the calculation of return on average tangible assets and return on average tangible common equity, respectively, add back other intangible amortization, net of tax.

(c) These capital measurements are used by management, regulators, investors, and analysts to assess, monitor, and compare the quality and composition of our capital with the capital of other financial services companies.

(d) The efficiency ratio as defined by the Federal Reserve guidance is noninterest expense (which includes the provision for unfunded commitments) divided by the sum of net interest income plus noninterest income, excluding investment securities gains (losses), net. The fully tax-equivalent efficiency ratio is noninterest expense (which includes the provision for unfunded commitments), excluding other intangible amortization, divided by the sum of fully tax-equivalent net interest income plus noninterest income, excluding investment securities gains (losses), net. The adjusted efficiency ratio is noninterest expense (which includes the provision for unfunded commitments), excluding other intangible amortization, FDIC special assessment costs, acquisition related costs, and announced initiatives, divided by the sum of fully tax-equivalent net interest income plus noninterest income, excluding investment securities gains (losses), net, disposition related net gains, gain on sale of branches, net, and announced initiatives. Management believes the adjusted efficiency ratio is a meaningful measure as it enhances the comparability of net interest income arising from taxable and tax-exempt sources and provides a better measure as to how the Corporation is managing its expenses by adjusting for one-time costs like the FDIC special assessment and announced initiatives.

Segment Review

The Corporation's reportable segments have been determined based upon its internal profitability reporting system, which is organized by strategic business unit. Certain strategic business units have been combined for segment information reporting purposes where the nature of the products and services, the type of customer, and the distribution of those products and services are similar. The reportable segments are Corporate and Commercial Specialty; Community, Consumer and Business; and Risk Management and Shared Services. The financial information of the Corporation's segments was compiled utilizing the accounting policies described in Note 1 Summary of Significant Accounting Policies and Note 21 Segment Reporting of the notes to consolidated financial statements.

FTP is an important tool for managing the Corporation's balance sheet structure and measuring risk-adjusted profitability. By appropriately allocating the cost of funding and contingent liquidity to business units, the FTP process improves product pricing which influences the volume and terms of new business and helps to optimize the risk/reward profile of the balance sheet. This process helps align the Corporation's funding and contingent liquidity risk with its risk appetite and complements broader liquidity and interest rate risk management programs. FTP methodologies are designed to promote more resilient, sustainable business models and centralize the management of funding and contingent liquidity risks. Through FTP, the Corporation transfers these risks to a central management function that can take advantage of natural off-sets, centralized hedging activities, and a broader view of these risks across business units. The net FTP allocation is reflected as net intersegment interest income (expense) shown in Note 21 Segment Reporting of the notes to consolidated financial statements.

Table 23 Selected Segment Financial Data

(\$ in thousands)	Year Ended December 31,			Change From Prior Year	
	2023	2022	2021	% Change 2022	% Change 2021
Corporate and Commercial Specialty					
Total revenue	\$ 703,764	\$ 608,956	\$ 544,980	16 %	12 %
Provision for credit losses	55,801	49,543	60,311	13 %	(18)%
Noninterest expense	248,926	234,234	219,655	6 %	7 %
Income tax expense	71,766	59,000	46,906	22 %	26 %
Net income	327,271	266,179	218,109	23 %	22 %
Average earning assets	17,462,710	15,612,427	14,081,550	12 %	11 %
Average loans	17,450,862	15,605,330	14,080,819	12 %	11 %
Average deposits	9,058,112	9,266,194	8,761,290	(2)%	6 %
Average allocated capital (Average CET1) ^(a)	1,715,855	1,558,356	1,412,016	10 %	10 %
Return on average allocated capital ^(a)	19.07 %	17.08 %	15.45 %	199 bp	163 bp
Community, Consumer, and Business					
Total revenue	\$ 841,133	\$ 617,737	\$ 502,925	36 %	23 %
Provision for credit losses	28,258	20,755	20,622	36 %	1 %
Noninterest expense	435,986	417,042	401,206	5 %	4 %
Income tax expense	79,147	37,787	17,030	109 %	122 %
Net income	297,742	142,152	64,067	109 %	122 %
Average earning assets	11,559,148	10,075,700	9,276,248	15 %	9 %
Average loans	11,559,148	10,075,700	9,276,248	15 %	9 %
Average deposits	18,160,042	18,519,253	17,910,434	(2)%	3 %
Average allocated capital (Average CET1) ^(a)	733,106	610,181	539,815	20 %	13 %
Return on average allocated capital ^(a)	40.61 %	23.30 %	11.87 %	N/M	N/M
Risk Management and Shared Services					
Total revenue	\$ (442,142)	\$ 12,999	\$ 10,314	N/M	26 %
Provision for credit losses	(1,038)	(37,300)	(168,944)	(97)%	(78)%
Noninterest expense	128,770	95,787	89,063	34 %	8 %
Income tax expense (benefit)	(127,816)	(3,279)	21,377	N/M	N/M
Net income (loss)	(442,057)	(42,209)	68,818	N/M	N/M
Average earning assets	8,608,852	7,864,756	7,750,818	9 %	1 %
Average loans	524,283	519,312	700,913	1 %	(26)%
Average deposits	4,124,985	971,738	1,021,690	N/M	(5)%
Average allocated capital (Average CET1) ^(a)	665,383	730,137	812,492	(9)%	(10)%
Return on average allocated capital ^(a)	(68.16)%	(7.36)%	6.36 %	N/M	N/M
Consolidated Total					
Total revenue	\$ 1,102,756	\$ 1,239,691	\$ 1,058,219	(11)%	17 %
Return on average allocated capital ^(a)	5.51 %	12.23 %	12.08 %	N/M	15 bp

N/M = Not Meaningful

(a) The Federal Reserve establishes capital adequacy requirements for the Corporation, including CET1. For segment reporting purposes, the ROCET1 reflects return on average allocated CET1. The ROCET1 for the Risk Management and Shared Services segment and the Consolidated Total is inclusive of the annualized effect of the preferred stock dividends.

Segment Review 2023 Compared to 2022

The Corporate and Commercial Specialty segment consists of lending and deposit solutions to larger businesses, developers, not-for-profits, municipalities, and financial institutions, and the support to deliver, fund, and manage such banking solutions. In addition, this segment provides a variety of investment, fiduciary, and retirement planning products and services to individuals and small to mid-sized businesses.

- Revenue increased \$95 million from the year ended December 31, 2022, primarily driven by increased interest income due to higher loan balances and interest rates, partially offset by a decrease in noninterest income as a result of lower capital markets, net; asset gains, net; and service charges and deposit account fees.
- Average loan balances increased \$1.8 billion from the year ended December 31, 2022, as a result of increased loan balances across all loan portfolios.

- Average deposit balances decreased \$208 million from the year ended December 31, 2022, driven by a reduction in noninterest-bearing demand deposits and savings, partially offset by increases in interest-bearing demand deposits, money market, and time deposits.

The Community, Consumer, and Business segment consists of lending and deposit solutions to individuals and small to mid-sized businesses.

- Revenue increased \$223 million from the year ended December 31, 2022, primarily due to increased interest rates which led to a higher allocation of FTP credits to this segment, partially offset by a decrease in service charges and deposit account fees as a result of the reduction and elimination of many deposit account fees in the third quarter of 2022.
- Average loan balances increased \$1.5 billion from the year ended December 31, 2022, primarily driven by growth within auto finance and residential mortgage lending.
- Average deposit balances decreased \$359 million from the year ended December 31, 2022, largely driven by decreased noninterest-bearing demand deposits and money market, partially offset by increases in time deposits and savings.

The Risk Management and Shared Services segment includes key shared Corporate functions, Parent Company activity, intersegment eliminations, and residual revenues and expenses.

- Revenue decreased \$455 million from the year ended December 31, 2022, primarily due to lower interest income resulting from growth in higher cost funding sources and one-time losses on the previously announced balance sheet repositioning during the fourth quarter of 2023.
- Average earning assets increased \$744 million from the year ended December 31, 2022, primarily due to an increase in AFS investment securities.
- Average deposit balances increased \$3.2 billion from the year ended December 31, 2022, mainly due to increased brokered CDs used to pay down FHLB advances and fund loan growth.
- Provision for credit losses increased \$36 million from the year ended December 31, 2022, due to loan growth during 2023 and nominal credit movement.
- Noninterest expense increased \$33 million from the year ended December 31, 2022, primarily due to an increase in FDIC assessment expense related to the one-time special assessment that was finalized during the fourth quarter of 2023.

Critical Accounting Estimates

In preparing the consolidated financial statements, management is required to make estimates and assumptions that affect the reported amounts of assets and liabilities as of the date of the balance sheet and revenues and expenses for the period. Actual results could differ significantly from those estimates. The determination of the ACLL is particularly susceptible to significant change.

The consolidated financial statements of the Corporation are prepared in conformity with U.S. GAAP and follow general practices within the industries in which it operates. This preparation requires management to make estimates, assumptions, and judgments that affect the amounts reported in the financial statements and accompanying notes. These estimates, assumptions, and judgments are based on information available as of the date of the financial statements; accordingly, as this information changes, actual results could differ from the estimates, assumptions, and judgments reflected in the financial statements. Certain estimates inherently have a greater reliance on the use of assumptions and judgments and, as such, have a greater possibility of producing results that could be materially different than originally reported. Management believes the following estimate is both important to the portrayal of the Corporation's financial condition and results of operations and requires subjective or complex judgments and, therefore, management considers the following to be a critical accounting estimate. This critical accounting estimate is discussed directly with the Audit Committee of the Corporation's Board of Directors.

Allowance for Credit Losses on Loans: Management's evaluation process used to determine the appropriateness of the ACLL is subject to the use of estimates, assumptions, and judgments. The evaluation process combines many factors: management's ongoing review and grading of the loan portfolio using a dual risk rating system leveraging probability of default and loss given default, consideration of historical loan loss and delinquency experience, trends in past due and nonaccrual loans, risk characteristics of the various classifications of loans, concentrations of loans to specific borrowers or industries, existing economic conditions and forecasts, the fair value of underlying collateral, and other qualitative and quantitative factors which

could affect future credit losses. The Corporation uses Moody's baseline economic forecast within its model. Because current economic conditions and forecasts can change and future events are inherently difficult to predict, the anticipated amount of estimated credit losses on loans, and therefore the appropriateness of the ACLL, could change significantly. It is difficult to estimate how potential changes in any one economic factor or input might affect the overall allowance because a wide variety of factors and inputs are considered in estimating the allowance and changes in those factors and inputs considered may not occur at the same rate and may not be consistent across all product types. Additionally, changes in factors and inputs may be directionally inconsistent, such that improvement in one factor may offset deterioration in others. As an integral part of their examination process, various regulatory agencies also review the ACLL. Such agencies may require additions to the ACLL or may require that certain loan balances be charged off or downgraded into criticized loan categories when their credit evaluations differ from those of management, based on their judgments about information available to them at the time of their examination. A large driver to the ACLL is the overall credit quality of the underlying credits. Deterioration or improvement in credit quality could have a significant impact on the overall level of ACLL. At December 31, 2023, a 10% change in loans classified as special mention or worse would result in a +/- 3 bp change in the ACLL to total loans ratio. The Corporation believes the level of the ACLL is appropriate. See Note 1 Summary of Significant Accounting Policies and Note 4 Loans of the notes to consolidated financial statements as well as the Allowance for Credit Losses on Loans section.

ITEM 7A.

Quantitative and Qualitative Disclosures About Market Risk

Information required by this item is set forth in Item 7, Management's Discussion and Analysis of Financial Condition and Results of Operations, under the captions Quantitative and Qualitative Disclosures about Market Risk and Interest Rate Risk.

ITEM 8.

Financial Statements and Supplementary Data

ASSOCIATED BANC-CORP
Consolidated Balance Sheets

(In thousands, except share and per share data)	December 31,	
	2023	2022
Assets		
Cash and due from banks	\$ 484,384	\$ 436,952
Interest-bearing deposits in other financial institutions	425,089	156,693
Federal funds sold and securities purchased under agreements to resell	14,350	27,810
AFS investment securities, at fair value	3,600,892	2,742,025
HTM investment securities, net, at amortized cost	3,860,160	3,960,398
Equity securities	41,651	25,216
FHLB and Federal Reserve Bank stocks, at cost	229,171	295,496
Residential loans held for sale	33,011	20,383
Commercial loans held for sale	90,303	—
Loans	29,216,218	28,799,569
Allowance for loan losses	(351,094)	(312,720)
Loans, net	28,865,124	28,486,849
Tax credit and other investments	258,067	276,773
Premises and equipment, net	372,978	376,906
Bank and corporate owned life insurance	682,649	676,530
Goodwill	1,104,992	1,104,992
Other intangible assets, net	40,471	49,282
Mortgage servicing rights, net	84,390	77,351
Interest receivable	169,569	144,449
Other assets	658,604	547,621
Total assets	\$ 41,015,855	\$ 39,405,727
Liabilities and stockholders' equity		
Noninterest-bearing demand deposits	\$ 6,119,956	\$ 7,760,811
Interest-bearing deposits	27,326,093	21,875,343
Total deposits	33,446,049	29,636,154
Federal funds purchased and securities sold under agreements to repurchase	326,780	585,139
Commercial paper	—	20,798
FHLB advances	1,940,194	4,319,861
Other long-term funding	541,269	248,071
Allowance for unfunded commitments	34,776	38,776
Accrued expenses and other liabilities	552,814	541,438
Total liabilities	\$ 36,841,882	\$ 35,390,237
Stockholders' equity		
Preferred equity	\$ 194,112	\$ 194,112
Common equity		
Common stock	\$ 1,752	\$ 1,752
Surplus	1,714,822	1,712,733
Retained earnings	2,946,805	2,904,882
Accumulated other comprehensive (loss)	(171,096)	(272,799)
Treasury stock, at cost	(512,421)	(525,190)
Total common equity	3,979,861	3,821,378
Total stockholders' equity	4,173,973	4,015,490
Total liabilities and stockholders' equity	\$ 41,015,855	\$ 39,405,727
Preferred shares authorized (par value \$1.00 per share)	750,000	750,000
Preferred shares issued and outstanding	200,000	200,000
Common shares authorized (par value \$0.01 per share)	250,000,000	250,000,000
Common shares issued	175,216,409	175,216,409
Common shares outstanding	151,036,674	150,444,019

Numbers may not sum due to rounding.

See accompanying notes to consolidated financial statements.

ASSOCIATED BANC-CORP
Consolidated Statements of Income

(In thousands, except per share data)	For the Years Ended December 31,		
	2023	2022	2021
Interest income			
Interest and fees on loans	\$ 1,720,406	\$ 992,642	\$ 693,729
Interest and dividends on investment securities			
Taxable	146,006	75,444	37,916
Tax-exempt	63,233	65,691	58,710
Other interest	28,408	11,475	7,833
Total interest income	1,958,052	1,145,252	798,189
Interest expense			
Interest on deposits	673,624	98,309	18,622
Interest on federal funds purchased and securities sold under agreements to repurchase	12,238	3,480	143
Interest on other short-term funding	1	2	22
Interest on FHLB advances	196,535	75,487	36,493
Interest on long-term funding	36,080	10,653	17,053
Total interest expense	918,479	187,931	72,334
Net interest income	1,039,573	957,321	725,855
Provision for credit losses	83,021	32,998	(88,011)
Net interest income after provision for credit losses	956,552	924,323	813,866
Noninterest income			
Wealth management fees	82,502	84,122	89,854
Service charges and deposit account fees	49,045	62,310	64,406
Card-based fees	45,020	44,014	43,014
Other fee-based revenue	17,268	15,903	17,086
Capital markets, net	24,649	29,917	30,602
Mortgage banking, net	19,429	18,873	50,751
Loss on mortgage portfolio sale	(136,239)	—	—
Bank and corporate owned life insurance	10,266	11,431	13,254
Asset gains, net	454	1,338	11,009
Investment securities (losses) gains, net	(58,903)	3,746	(16)
Gains on sale of branches, net ^(a)	—	—	1,038
Other	9,691	10,715	11,366
Total noninterest income	63,182	282,370	332,364
Noninterest expense			
Personnel	468,355	454,101	426,687
Technology	102,018	90,700	81,689
Occupancy	57,204	59,794	63,513
Business development and advertising	28,405	25,525	21,149
Equipment	19,663	19,632	21,104
Legal and professional	19,911	18,250	21,923
Loan and foreclosure costs	5,408	5,925	8,143
FDIC assessment	67,072	22,650	18,150
Other intangible amortization	8,811	8,811	8,844
Other	36,837	41,675	38,721
Total noninterest expense	813,682	747,063	709,924
Income before income taxes	206,052	459,630	436,307
Income tax expense	23,097	93,508	85,313
Net income	182,956	366,122	350,994
Preferred stock dividends	11,500	11,500	17,111
Net income available to common equity	\$ 171,456	\$ 354,622	\$ 333,883
Earnings per common share			
Basic	\$ 1.14	\$ 2.36	\$ 2.20
Diluted	\$ 1.13	\$ 2.34	\$ 2.18
Average common shares outstanding			
Basic	149,968	149,162	150,773
Diluted	150,860	150,496	151,987

Numbers may not sum due to rounding.

(a) Includes the deposit premium on the sale of branches net of miscellaneous costs to sell. See Note 2 Acquisitions and Dispositions for additional details on the branch sales.

See accompanying notes to consolidated financial statements.

ASSOCIATED BANC-CORP
Consolidated Statements of Comprehensive Income

(\$ in thousands)	For the Years Ended December 31,		
	2023	2022	2021
Net income	\$ 182,956	\$ 366,122	\$ 350,994
Other comprehensive income (loss), net of tax			
AFS investment securities			
Net unrealized gains (losses)	41,145	(250,273)	(63,714)
Unrealized (losses) on AFS securities transferred to HTM securities	—	(67,604)	—
Amortization of net unrealized losses on AFS securities transferred to HTM securities	9,025	9,870	1,551
Reclassification adjustment for net losses realized in net income	64,940	1,922	16
Income tax (expense) benefit	(30,560)	78,159	15,557
Other comprehensive income (loss) on AFS investment securities	84,550	(227,926)	(46,591)
Cash flow hedge derivatives			
Net unrealized gains (losses)	(13,254)	3,626	—
Reclassification adjustment for net losses (gains) realized in net income	13,930	(212)	—
Income tax (expense)	(956)	(54)	—
Other comprehensive income (loss) on cash flow hedge derivatives	(280)	3,360	—
Defined benefit pension and postretirement obligations			
Amortization of prior service cost	(326)	(325)	(148)
Plan amendments	—	—	1,494
Net actuarial gain (loss)	24,091	(51,745)	25,519
Amortization of actuarial loss (gain)	(29)	658	4,594
Income tax (expense) benefit	(6,304)	13,495	(7,803)
Other comprehensive income (loss) on defined benefit pension and postretirement obligations	17,432	(37,917)	23,656
Total other comprehensive income (loss)	101,703	(262,483)	(22,935)
Comprehensive income	\$ 284,659	\$ 103,639	\$ 328,059

Numbers may not sum due to rounding.

See accompanying notes to consolidated financial statements.

ASSOCIATED BANC-CORP
Consolidated Statements of Changes in Stockholders' Equity

(In thousands, except per share data)	Preferred Equity		Common Stock				Accumulated Other Comprehensive Income (Loss)	Treasury Stock	Total
	Shares	Amount	Shares	Amount	Surplus	Retained Earnings			
Balance, December 31, 2020	364	\$ 353,512	175,216	\$ 1,752	\$ 1,720,329	\$ 2,458,920	\$ 12,618	\$(456,198)	\$ 4,090,933
Comprehensive income:									
Net income	—	—	—	—	—	350,994	—	—	350,994
Other comprehensive (loss)	—	—	—	—	—	—	(22,935)	—	(22,935)
Comprehensive income	—	—	—	—	—	—	—	—	\$ 328,059
Redemption of preferred stock	(164)	(160,317)	—	—	—	(4,141)	—	—	(164,458)
Common stock issued:									
Stock-based compensation plans, net	—	—	—	—	(22,069)	—	—	47,771	25,702
Purchase of treasury stock, open market purchases	—	—	—	—	—	—	—	(132,955)	(132,955)
Purchase of treasury stock, stock-based compensation plans	—	—	—	—	—	—	—	(4,847)	(4,847)
Cash dividends:									
Common stock, \$0.76 per share	—	—	—	—	—	(116,061)	—	—	(116,061)
Preferred stock ^(a)	—	—	—	—	—	(17,111)	—	—	(17,111)
Stock-based compensation expense, net	—	—	—	—	15,591	—	—	—	15,591
Balance, December 31, 2021	200	\$ 193,195	175,216	\$ 1,752	\$ 1,713,851	\$ 2,672,601	\$ (10,317)	\$(546,229)	\$ 4,024,853
Change in accounting principle ^(b)	—	—	—	—	—	1,713	—	—	1,713
Total shareholder's equity at beginning of period, as adjusted	200	\$ 193,195	175,216	\$ 1,752	\$ 1,713,851	\$ 2,674,314	\$ (10,317)	\$(546,229)	\$ 4,026,566
Comprehensive income:									
Net income	—	—	—	—	—	366,122	—	—	366,122
Other comprehensive (loss)	—	—	—	—	—	—	(262,483)	—	(262,483)
Comprehensive income	—	—	—	—	—	—	—	—	\$ 103,639
Common stock issued:									
Stock-based compensation plans, net	—	—	—	—	(17,397)	—	—	28,458	11,061
Purchase of treasury stock, stock-based compensation plans	—	—	—	—	—	—	—	(6,480)	(6,480)
Cash dividends:									
Common stock, \$0.81 per share	—	—	—	—	—	(123,137)	—	—	(123,137)
Preferred stock ^(c)	—	—	—	—	—	(11,500)	—	—	(11,500)
Stock-based compensation expense, net	—	—	—	—	16,280	—	—	—	16,280
Other	—	916	—	—	—	(916)	—	(938)	(938)
Balance, December 31, 2022	200	\$ 194,112	175,216	\$ 1,752	\$ 1,712,733	\$ 2,904,882	\$ (272,799)	\$(525,190)	\$ 4,015,490
Comprehensive income:									
Net income	—	—	—	—	—	182,956	—	—	\$ 182,956
Other comprehensive income	—	—	—	—	—	—	101,703	—	101,703
Comprehensive income	—	—	—	—	—	—	—	—	\$ 284,659
Common stock issued:									
Stock-based compensation plans, net	—	—	—	—	(15,065)	—	—	19,362	4,297
Purchase of treasury stock, stock-based compensation plans	—	—	—	—	—	—	—	(6,593)	(6,593)
Cash dividends:									
Common stock, \$0.85 per share	—	—	—	—	—	(129,534)	—	—	(129,534)
Preferred stock ^(c)	—	—	—	—	—	(11,500)	—	—	(11,500)
Stock-based compensation expense, net	—	—	—	—	17,155	—	—	—	17,155
Balance, December 31, 2023	200	\$ 194,112	175,216	\$ 1,752	\$ 1,714,822	\$ 2,946,805	\$ (171,096)	\$(512,421)	\$ 4,173,973

Numbers may not sum due to rounding.

(a) Series C, \$0.70252 per share; Series D, \$0.95613 per share; Series E, \$1.46875 per share; and Series F, \$1.40625 per share.

(b) MSRs at December 31, 2021 were carried at LOCOM. On January 1, 2022, the Corporation made the irrevocable election to account for MSRs at fair value.

(c) Series E, \$1.46875 per share; and Series F, \$1.40625 per share.

See accompanying notes to consolidated financial statements.

ASSOCIATED BANC-CORP
Consolidated Statements of Cash Flows

(\$ in thousands)	For the Years Ended December 31,		
	2023	2022	2021
Cash flows from operating activities			
Net income	\$ 182,956	\$ 366,122	\$ 350,994
Adjustments to reconcile net income to net cash provided by operating activities:			
Provision for credit losses	83,021	32,998	(88,011)
Depreciation and amortization	46,989	45,088	46,508
Change in MSRs valuation ^(a)	(10,660)	(22,264)	(16,186)
Amortization of other intangible assets	8,811	8,811	8,844
Amortization and accretion on earning assets, funding, and other, net	38,508	14,980	15,088
Net amortization of tax credit investments	34,246	34,684	34,070
Losses on sales of investment securities, net	64,864	1,674	16
Asset (gains), net	(454)	(1,338)	(11,009)
(Gains) on sale of branches, net	—	—	(1,038)
(Gain) loss on mortgage banking activities, net	2,919	3,654	(39,106)
Loss on mortgage portfolio sale	136,239	—	—
Mortgage loans originated and acquired for sale	(395,834)	(600,114)	(1,749,556)
Proceeds from sales of mortgage loans held for sale	367,707	715,035	1,774,791
Changes in certain assets and liabilities:			
(Increase) decrease in interest receivable	(25,120)	(63,921)	9,735
(Increase) decrease in net tax position	(77,849)	40,611	(6,177)
(Decrease) increase in interest payable	78,539	12,608	(10,675)
(Decrease) increase in expense payable	16,329	(5,297)	24,645
(Decrease) increase in net derivative position	(93,916)	269,774	120,418
Net change in other assets and other liabilities	(14,556)	(6,539)	66,201
Net cash provided by operating activities	442,740	846,566	529,551
Cash flows from investing activities			
Net decrease (increase) in loans	(1,546,391)	(4,579,431)	198,631
Purchases of:			
AFS securities	(1,936,635)	(959,977)	(2,744,244)
HTM securities	(38,677)	(301,052)	(622,485)
FHLB and Federal Reserve Bank stocks and equity securities	(146,308)	(128,620)	(2,760)
Proceeds from:			
Sales of AFS securities	715,066	110,177	158,708
Sales of FHLB and Federal Reserve Bank stocks and equity securities	202,451	528	35
Prepayments, calls, and maturities of AFS securities	397,675	494,197	1,216,657
Prepayments, calls, and maturities of HTM securities	143,001	196,605	299,761
Sales, prepayments, calls and maturities of other assets	21,267	33,795	29,833
Net cash received in business segment sale	—	—	2,415
Sale of mortgage portfolio	844,362	—	—
Premises, equipment, and software, net of disposals	(61,813)	(62,711)	(52,281)
Net change in tax credit and alternative investments	(30,255)	(58,323)	(68,455)
Net cash (used in) investing activities	(1,436,257)	(5,254,811)	(1,584,186)
Cash flows from financing activities			
Net increase in deposits	3,809,948	1,169,983	2,015,423
Net decrease in deposits due to branch sales	—	—	(31,083)
Net increase (decrease) in short-term funding	(279,157)	251,674	101,946
Net increase (decrease) in short-term FHLB advances	(2,385,000)	3,125,000	—
Repayment of long-term FHLB advances	(599)	(413,558)	(18,437)
Proceeds from long-term FHLB advances	1,369	1,775	6,950
Proceeds from issuance of long-term funding	292,740	—	—
(Repayment) proceeds of finance lease principal	(86)	306	(965)
Repayment of senior notes	—	—	(300,000)
Proceeds from issuance of common stock for stock-based compensation plans	4,297	11,061	25,702
Redemption of preferred shares	—	—	(164,458)
Purchase of treasury stock, open market purchases	—	—	(132,955)
Purchase of treasury stock, stock-based compensation plans	(6,593)	(6,480)	(4,847)
Cash dividends on common stock	(129,534)	(123,137)	(116,061)
Cash dividends on preferred stock	(11,500)	(11,500)	(17,111)
Other	—	(938)	—
Net cash provided by financing activities	1,295,885	4,004,185	1,364,102
Net increase (decrease) in cash and cash equivalents	302,368	(404,060)	309,467
Cash and cash equivalents at beginning of period	621,455	1,025,515	716,048
Cash and cash equivalents at end of period ^(b)	\$ 923,823	\$ 621,455	\$ 1,025,515

Numbers may not sum due to rounding.

(a) On January 1, 2022, the Corporation made the irrevocable election to account for MSRs at fair value. For all prior periods, MSRs were carried at LOCOM.

(b) No restricted cash due to the Federal Reserve reducing the required reserve ratio to zero.

ASSOCIATED BANC-CORP
Consolidated Statements of Cash Flows

(\$ in thousands)	For the Years Ended December 31,		
	2023	2022	2021
Supplemental disclosures of cash flow information			
Cash paid for interest	\$ 838,828	\$ 174,675	\$ 81,604
Cash paid for income and franchise taxes	69,417	18,395	57,728
Loans and bank premises transferred to OREO	9,841	5,591	35,553
Capitalized mortgage servicing rights	3,564	7,279	16,151
Loans transferred into held for sale from portfolio, net	1,058,305	18	6,010
Transfer of AFS securities to HTM securities	—	1,621,990	—
Unsettled trades to purchase securities	—	—	4,459
Write-up of equity securities without readily determinable fair values	5,785	5,690	—
Fair value adjustments on hedged long-term FHLB advances and subordinated debt	(5,084)	16,163	—
Fair value adjustments on foreign currency exchange forwards	(1,757)	1,405	482
Fair value adjustment on cash flow hedges	(280)	3,360	—

See accompanying notes to consolidated financial statements.

ASSOCIATED BANC-CORP
Notes to Consolidated Financial Statements
December 31, 2023, 2022, and 2021

Note 1 Summary of Significant Accounting Policies

The accounting and reporting policies of the Corporation conform to U.S. GAAP and to general practice within the financial services industry. The following is a description of the more significant of those policies.

Business

Associated Banc-Corp is a bank holding company headquartered in Wisconsin. The Corporation provides a full range of banking and related financial services to consumer and commercial customers through its network of bank and nonbank subsidiaries. The Corporation is subject to competition from other financial and non-financial institutions that offer similar or competing products and services. The Corporation is regulated by federal and state agencies and is subject to periodic examinations by those agencies.

Basis of Financial Statement Presentation

The consolidated financial statements include the accounts of the Parent Company and its subsidiaries. Investments in unconsolidated entities (none of which are considered to be variable interest entities in which the Corporation is the primary beneficiary) are accounted for using the cost method of accounting when the Corporation has determined that the cost method is appropriate. Investments not meeting the criteria for cost method accounting are accounted for using the equity method of accounting. Investments in unconsolidated entities are included in tax credit and other investments on the consolidated balance sheets, and the Corporation's share of income or loss is recorded in other noninterest income, while distributions in excess of the investment are recorded in asset gains, net.

All significant intercompany balances and transactions have been eliminated in consolidation.

In preparing the consolidated financial statements, management is required to make estimates and assumptions that affect the reported amounts of assets and liabilities as of the date of the balance sheet and revenues and expenses for the period. Actual results could differ significantly from those estimates. The determination of the ACLL is particularly susceptible to significant change. Management has evaluated subsequent events for potential recognition or disclosure. Within the tables presented, certain columns and rows may not sum due to the use of rounded numbers for disclosure purposes.

Investment Securities

Securities are classified as HTM, AFS, or equity investments on the consolidated balance sheets at the time of purchase. Investment securities classified as HTM, which management has the positive intent and ability to hold to maturity, are reported at amortized cost. Investment securities classified as AFS are intended to be held for an indefinite period of time. These securities are carried at fair value and unrealized gains and losses, net of related deferred income taxes, are included in stockholders' equity as a separate component of OCI. Investment securities classified as equity securities are carried at fair value with changes in fair value immediately reflected in the consolidated statements of income. Any decision to sell AFS securities would be based on various factors, including, but not limited to, asset/liability management strategies, changes in interest rates or prepayment risks, liquidity needs, or regulatory capital considerations. Realized gains or losses on investment security sales (using specific identification method) are included in investment securities gains (losses), net, on the consolidated statements of income. Premiums and discounts are amortized or accreted into interest income over the estimated life (earlier of call date, maturity, or estimated life) of the related security, using a prospective method that approximates level yield.

In certain situations, management may elect to transfer certain investment securities from the AFS classification to the HTM classification. In such cases, the investment securities are reclassified at fair value at the time of transfer. Any unrealized gain or loss included in accumulated other comprehensive income (loss) at the time of transfer is retained therein and amortized over the remaining life of the investment security as an adjustment to yield.

Management measures expected credit losses on HTM securities on a collective basis by major security type. Accrued interest receivable on HTM securities is excluded from the estimate of credit losses. The estimate of expected credit losses considers historical credit loss information that is adjusted for current conditions and reasonable and supportable forecasts and is included in HTM investment securities, net, at amortized cost on the consolidated balance sheets.

For AFS securities, the Corporation evaluates whether any decline in fair value has resulted from credit losses or other factors. In making this assessment, management considers the extent to which fair value is less than amortized cost, any changes to the

rating of the security by a rating agency, and adverse conditions specifically related to the security, among other factors. If this assessment indicates that a credit loss exists, the present value of cash flows expected to be collected from the security are compared to the amortized cost basis of the security. If the present value of cash flows expected to be collected is less than the amortized cost basis, a credit loss exists and an allowance for credit losses on investments is recorded for the credit loss, limited by the amount that the fair value is less than the amortized cost basis. Any impairment that has not been recorded through an allowance for credit losses on investments is recognized in OCI.

Changes in the allowance for credit losses on investments are recorded as provision for, or reversal of, credit loss expense. Losses are charged against the allowance when management believes the AFS security is uncollectible or when either of the criteria regarding intent or requirement to sell is met. Accrued interest receivable on AFS securities is excluded from the estimate of credit losses. See Note 3 for additional information on investment securities.

FHLB and Federal Reserve Bank Stocks

The Corporation is required to maintain Federal Reserve Bank stock and FHLB stock as a member of both the Federal Reserve System and the FHLB, and in amounts as required by these institutions. These equity securities are “restricted” in that they can only be sold back to the respective institutions or another member institution at par. Therefore, they are less liquid than other marketable equity securities and their fair value is equal to amortized cost. See Note 3 for additional information on the FHLB and Federal Reserve Bank Stocks.

Loans Held for Sale

Residential Loans Held for Sale: Residential loans held for sale, which consist generally of current production of certain fixed-rate, first-lien residential mortgage loans, are carried at estimated fair value. Management has elected the fair value option to account for all newly originated mortgage loans held for sale, which results in the financial impact of changing market conditions being reflected currently in earnings as opposed to being dependent on the timing of sales. Therefore, the continually adjusted values better reflect the price the Corporation expects to receive from the sale of such loans. The estimated fair value is based on what secondary markets are currently offering for portfolios with similar characteristics.

Commercial Loans Held for Sale: Commercial loans held for sale are carried at LOCOM. The estimated fair value is based on a discounted cash flow analysis.

Loans

Management has the ability and intention to hold certain loans for the foreseeable future, until maturity, or pay-off. These loans are reported at their outstanding principal balances, net of any deferred fees and costs on originated loans. Origination fee income received on loans and amounts representing the estimated direct costs of origination are deferred and amortized to interest income over the life of the loan using the effective interest method. An ACLL is established for estimated credit losses in the loan portfolio. See Allowance for Credit Losses on Loans below for further policy discussion. See Note 4 for additional information on loans.

Nonaccrual Loans: Management considers a loan to be nonaccrual when it believes it will be unable to collect all amounts due according to the original contractual terms of the note agreement, including both principal and interest.

The accrual of interest income for commercial loans is discontinued when there is a clear indication that the borrower’s cash flow may not be sufficient to meet payments as they become due. The accrual of interest income for consumer loans is discontinued when loans reach specific delinquency levels. Loans are considered past due if the required principal and interest payments have not been received as of the date such payments were due. Loans are generally placed on nonaccrual status when contractually past due 90 days or more as to interest or principal payments, unless the loan is well secured and in the process of collection. Additionally, whenever management becomes aware of facts or circumstances that may adversely impact the collectability of principal or interest on loans, it is management’s practice to place such loans on a nonaccrual status immediately, rather than delaying such action until the loans become 90 days past due. When a loan is placed on nonaccrual status, previously accrued and uncollected interest is reversed, amortization of related deferred loan fees or costs is suspended, and income is recorded only to the extent that interest payments are subsequently received in cash and a determination has been made that the principal and interest of the loan is collectible. If collectability of the principal and interest is in doubt, payments received are applied to loan principal.

The determination as to the ultimate collectability of the loan's remaining recorded investment must be supported by a current, well documented credit evaluation of the borrower’s financial condition and prospects for repayment, including consideration of the borrower’s sustained historical repayment performance and other relevant factors. A nonaccrual loan is returned to

accrual status when all delinquent principal and interest payments become current in accordance with the terms of the loan agreement, the borrower has demonstrated a period of sustained repayment performance, and the ultimate collectability of the total contractual principal and interest is no longer in doubt. A sustained period of repayment performance generally would be a minimum of six months. See Note 4 for additional information on nonaccrual loans.

Troubled Debt Restructurings (“Restructured Loans”): Loans are considered restructured loans if concessions have been granted to borrowers that are experiencing financial difficulty. The concessions granted generally involve the modification of terms of the loan, such as changes in payment schedule or interest rate, which generally would not otherwise be considered. As a result of the issuance of ASU 2022-02, any loans restructured prior to January 2023 were considered TDRs, but that designation was eliminated prospectively, resulting in comparable periods no longer being comparable. Restructured loans can involve loans remaining on nonaccrual, moving to nonaccrual, or continuing on accrual status, depending on the individual facts and circumstances of the borrower. Nonaccrual restructured loans are included and treated with all other nonaccrual loans. Generally, restructured loans remain on nonaccrual until the customer has attained a sustained period of repayment performance under the modified loan terms (generally a minimum of six months). However, performance prior to the restructuring, or significant events that coincide with the restructuring, are considered in assessing whether the borrower can meet the new terms and whether the loan should be returned to or maintained on accrual status. If the borrower’s ability to meet the revised payment schedule is not reasonably assured, the loan remains on nonaccrual status. See Note 4 for additional information on restructured loans.

Allowance for Credit Losses on Loans: The allowance for loan losses is a reserve for estimated lifetime credit losses in the loan portfolio at the balance sheet date. The expected lifetime credit losses are the product of multiplying the Corporation's estimate of probability of default, loss given default, and the individual loan level exposure at default on an undiscounted basis. The Corporation estimates the lifetime expected loss using prepayment assumptions over the projected lifetime cash flow of these loans. Actual credit losses, net of recoveries, are deducted from the allowance for loan losses. A provision for credit losses, which is a charge against earnings, is recorded to bring the allowance for loan losses to a level that, in management’s judgment, is appropriate to absorb the expected lifetime losses in the loan portfolio.

The Corporation applies a methodology that is designed to assess the appropriateness of the allowance for loan losses within the Corporation's loan segmentation. The methodology also focuses on the evaluation of several factors, including but not limited to: evaluation of facts and issues related to specific loans, management’s ongoing review and grading of the loan portfolio using a dual risk rating system consisting of probability of default and loss given default models, which are based on loan grades for commercial loans and credit reports for consumer loans applied based on portfolio segmentation leveraging industry breakouts in commercial and industrial and property types in CRE for commercial loans and loan types for consumer loans, consideration of historical loan loss and delinquency experience on each portfolio category, trends in past due and nonaccrual loans, the level of potential problem loans, the risk characteristics of the various classifications of loans, changes in the size and character of the loan portfolio, concentrations of loans to specific borrowers or industries, existing economic conditions and economic forecasts, the fair value of underlying collateral, and other qualitative and quantitative factors which could affect potential credit losses.

The Corporation utilizes the Moody's Baseline economic forecast in the allowance model and applies that forecast over a reasonable and supportable period with reversion to historical losses. For additional detail on the reasonable and supportable period and reversion inputs, see Note 4. The Corporation estimates the lifetime expected loss using prepayment assumptions over the projected lifetime cash flows of the loan. Because each of the criteria used is subject to change, the analysis of the allowance for loan losses is not necessarily indicative of the trend of future loan losses in any particular loan category. The total allowance for loan losses is available to absorb losses from any segment of the loan portfolio.

Management individually analyzes loans that do not share similar risk characteristics to other loans in the portfolio. Management has determined that commercial loan relationships over \$500,000 that have nonaccrual status meet this definition. Probable TDRs are loans the Corporation has reviewed individually to determine whether there is a high likelihood that the loans will default and will require modification in the near future. Probable TDRs are classified as Pass, Special Mention, Potential Problem or Nonaccrual within the Corporation's credit quality analysis depending on the specific circumstances surrounding the individual credits. Accrued interest receivable on loans is excluded from the estimate of credit losses. The ACLL attributable to the loan is allocated based on management’s estimate of the borrower’s ability to repay the loan given the availability of collateral, other sources of cash flows, as well as evaluation of legal options available to the Corporation. The amount of expected loan loss is measured based upon the present value of expected future cash flows discounted at the loan’s effective interest rate, the fair value of the underlying collateral less applicable selling costs, or the observable market price of the loan. If foreclosure is probable or the loan is collateral dependent, impairment is measured using the fair value of the loan’s collateral, less costs to sell. Large groups of homogeneous loans, such as residential mortgage, home equity, auto finance, and other consumer, are collectively evaluated for impairment.

The allowance for unfunded commitments leverages the same methodology utilized to measure the allowance for loan losses. The Corporation estimates expected credit losses over the contractual period in which the Corporation is exposed to credit risk via a contractual obligation to extend credit, unless that obligation is unconditionally cancellable by the Corporation. The estimate includes consideration of the likelihood that funding will occur and an estimate of expected credit losses on commitments expected to be funded over its estimated life. See Note 4 for additional information on the ACLL and Note 16 for additional information on the allowance for unfunded commitments.

A portion of the ACLL is comprised of adjustments for qualitative factors not reflected in the quantitative model.

Management believes that the level of the ACLL is appropriate. While management uses currently available information to recognize losses on loans, future adjustments to the ACLL may be necessary based on newly received appraisals, updated commercial customer financial statements, rapidly deteriorating cash flow, and changes in economic conditions that affect our customers. In addition, various regulatory agencies, as an integral part of their examination process, periodically review the Corporation's ACLL. Such agencies may require additions to the ACLL or may require that certain loan balances be charged off or downgraded into criticized loan categories when their credit evaluations differ from those of management based on their judgments about information available to them at the time of their examinations. See Loans above for further policy discussion and see Note 4 for additional information on the allowance for loan losses.

OREO

OREO is included in other assets on the consolidated balance sheets and is comprised of property acquired through a foreclosure proceeding or acceptance of a deed-in-lieu of foreclosure, and loans classified as in-substance foreclosure. OREO is recorded at the lower of the book value or fair value of the underlying property collateral, less estimated selling costs. This fair value becomes the new cost basis for the foreclosed asset. The initial write-down, if any, will be recorded as a charge off against the allowance for loan losses. Any subsequent write-downs to reflect current fair value, as well as gains and losses on disposition and revenues and expenses incurred in maintaining such properties, are expensed as incurred. OREO also includes bank premises formerly but no longer used for banking, property originally acquired for future expansion but no longer intended to be used for that purpose, and property currently held for sale. Banking premises are transferred at the lower of carrying value or fair value, less estimated selling costs and any write-down is expensed as incurred.

Premises and Equipment and Software

Premises and equipment are stated at cost less accumulated depreciation and amortization. Depreciation and amortization are computed on the straight-line method over the estimated useful lives of the related assets or the lease term. Maintenance and repairs are charged to expense as incurred, while additions or major improvements are capitalized and depreciated over the estimated useful lives. Leasehold improvements are amortized on a straight-line basis over the lesser of the lease terms, including extension options which the Corporation has determined are reasonably certain to be exercised, or the estimated useful lives of the improvements. Software, included in other assets on the consolidated balance sheets, is amortized on a straight-line basis over the contract terms or the estimated useful life of the software. See Note 6 for additional information on premises and equipment.

Goodwill and Intangible Assets

Goodwill and Other Intangible Assets: The excess of the cost of an acquisition over the fair value of the net assets acquired consists primarily of goodwill and CDIs. CDIs have estimated finite lives and are amortized on a straight-line basis to expense over a 10-year period. The Corporation reviews long-lived assets and certain identifiable intangibles for impairment at least annually, or whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable, in which case an impairment charge would be recorded.

Goodwill is evaluated for impairment on an annual basis, or whenever events or changes in circumstances indicate the fair value of a reporting unit is below its carrying amount. The impairment testing process is conducted by assigning net assets and goodwill to each reporting unit. An initial qualitative evaluation is made to assess the likelihood of impairment and determine whether further quantitative testing to calculate the fair value is necessary. When the qualitative evaluation indicates that impairment is more likely than not, quantitative testing is required whereby the fair value of each reporting unit is calculated and compared to the recorded book value, "step one." If the calculated fair value of the reporting unit exceeds its carrying value, goodwill is not considered impaired. If the carrying value of a reporting unit exceeds its calculated fair value, an impairment charge is assessed, limited to the amount of goodwill allocated to that reporting unit. See Note 5 for additional information on goodwill and other intangible assets.

Mortgage Servicing Rights: The Corporation sells residential mortgage loans in the secondary market and typically retains the right to service the loans sold. Upon sale of loans, MSR assets are capitalized and recorded at the current fair value of future

net cash flows expected to be realized for performing servicing activities. The Corporation has made the irrevocable election to account for its MSR asset under the fair value measurement method. Under this methodology, changes in the fair value are recognized in earnings as they occur through mortgage banking, net on the consolidated statements of income.

MSRs are not traded in active markets. A cash flow model is used to determine fair value. Key assumptions and estimates, including projected prepayment speeds, assumed servicing costs, ancillary income, costs to service delinquent loans, costs of foreclosure, and discount rates with option-adjusted spreads, used by this model are based on current market sources. Assumptions used to value MSRs are considered significant unobservable inputs. A separate third-party model is used to estimate prepayment speeds based on interest rates, housing turnover rates, estimated loan curtailment, anticipated defaults and other relevant factors. Fair value estimates from outside sources are received periodically to corroborate the results of the valuation model. See Note 5 for additional information on MSRs.

Prior to January 1, 2022 and the irrevocable election to account for MSRs under fair value, upon sale of loans, MSRs assets were capitalized and recorded at the current fair value of future net cash flows expected to be realized for performing servicing activities. MSRs, when purchased, are initially recorded at fair value. As the Corporation had not elected to subsequently measure any class of servicing assets under the fair value measurement method, the Corporation followed the amortization method. MSRs were amortized in proportion to and over the period of estimated net servicing income, and assessed for impairment at each reporting date. MSRs were carried at the lower of the initial capitalized amount, net of accumulated amortization, or estimated fair value, on the consolidated balance sheets.

The Corporation periodically evaluated its MSR asset for impairment. Impairment was assessed based on fair value at each reporting date using estimated prepayment speeds of the underlying mortgage loans serviced and stratifications based on the risk characteristics of the underlying loans (predominantly loan type and note interest rate). As mortgage interest rates fall, prepayment speeds are usually faster and the value of the MSR asset generally decreases, requiring additional valuation reserve. Conversely, as mortgage interest rates rise, prepayment speeds are usually slower and the value of the MSR asset generally increases, requiring less valuation reserve. A valuation allowance was established, through a charge to earnings, to the extent the amortized cost of the MSR asset exceeded the estimated fair value by stratification. If it was later determined that all or a portion of the temporary impairment no longer existed for a stratification, the valuation was reduced through a recovery to earnings. An other-than-temporary impairment (i.e., recoverability was considered remote when considering interest rates and loan pay off activity) was recognized as a write-down of the MSR asset and the related valuation allowance (to the extent a valuation allowance was available) and then against earnings. A direct write-down permanently reduces the carrying value of the MSR asset and valuation allowance, precluding subsequent recoveries. See Note 5 for additional information on MSRs.

Income Taxes

Amounts provided for income tax expense are based on income reported for financial statement purposes and do not necessarily represent amounts currently payable under tax laws. Deferred income taxes, which arise principally from temporary differences between the amounts reported in the financial statements and the tax bases of assets and liabilities, are included in the amounts provided for income taxes. In assessing the realizability of DTAs, management considers whether it is more likely than not that some portion or all of the DTAs will not be realized. The ultimate realization of DTAs is dependent upon the generation of future taxable income and tax planning strategies which will create taxable income during the periods in which those temporary differences become deductible. Management considers the scheduled reversal of deferred tax liabilities, the amount of taxes paid in available carryback years, projected future taxable income, and, if necessary, tax planning strategies in making this assessment.

The Corporation files a consolidated federal income tax return and separate or combined state income tax returns. Accordingly, amounts equal to tax benefits of those subsidiaries having taxable federal or state losses or credits are offset by other subsidiaries that incur federal or state tax liabilities.

It is the Corporation's policy to provide for uncertainty in income taxes as a part of income tax expense based upon management's assessment of whether a tax benefit is more likely than not to be sustained upon examination by tax authorities. To the extent the Corporation prevails in matters for which a liability for an unrecognized tax benefit was established or is required to pay amounts in excess of the liability established, the Corporation's effective tax rate in a given financial statement period may be impacted. See Note 13 for additional information on income taxes.

Derivative and Hedging Activities

Derivative instruments, including derivative instruments embedded in other contracts, are carried at fair value on the consolidated balance sheets. Changes in the fair value are recorded to earnings or accumulated other comprehensive income, as appropriate. On the date the derivative contract is entered into, the Corporation designates the derivative as a fair value hedge

(i.e., a hedge of the fair value of a recognized asset or liability), a cash flow hedge (i.e., a hedge of the variability of cash flows to be received or paid related to a recognized asset or liability), or a free-standing derivative instrument. For a derivative designated as a fair value hedge, the changes in the fair value of the derivative instrument and the changes in the fair value of the hedged asset or liability are recognized in current period earnings as an increase or decrease to the carrying value of the hedged item on the balance sheet and in the related income statement account. For a derivative designated as a cash flow hedge, amounts within accumulated other comprehensive income are reclassified into earnings in the period the hedged item affects earnings. For a derivative designated as a free-standing derivative instrument, changes in fair value are reported in capital markets, net on the consolidated statements of income. The free-standing derivative instruments included: interest rate risk management, foreign currency exchange solutions, and until early 2022, commodity hedging.

The Corporation is exposed to counterparty credit risk, which is the risk that counterparties to the derivative contracts fail to fulfill contractual obligations. If a counterparty fails to perform, the Corporation's counterparty credit risk is equal to the amount reported as a derivative asset on our balance sheet. The Corporation uses master netting arrangements to mitigate counterparty credit risk in derivative transactions. To the extent the derivatives are subject to master netting arrangements, the Corporation takes into account the impact of master netting arrangements that allow the Corporation to settle all derivative contracts executed with the same counterparty on a net basis, and to offset the net derivative position with the related cash collateral and investment securities.

Federal regulations require the Corporation to clear and compound SOFR interest rate swaps through a clearing house, if possible. For derivatives cleared through central clearing houses, the variation margin payments are legally characterized as daily settlements of the derivative rather than collateral. The Corporation's clearing agent for interest rate derivative contracts that are centrally cleared through the Chicago Mercantile Exchange and the London Clearing House settles the variation margin daily. As a result, the variation margin payment and the related derivative instruments are considered a single unit of account for accounting and financial reporting purposes. Depending on the net position, the fair value is reported in other assets or accrued expenses and other liabilities on the consolidated balance sheets. The daily settlement of the derivative exposure does not change or reset the contractual terms of the instrument.

The Corporation applied the shortcut method of accounting for certain derivatives that are designated as fair value hedges. This method permits the assumption of perfect effectiveness. The gains or losses on the derivative, and the offsetting losses or gains on the hedged item attributable to the hedged risk, are recognized in interest expense. These items, along with the net interest from the derivative, are reported in the same income statement line as the fixed-rate debt expense.

To assess effectiveness of the foreign currency exchange forward contracts that are designated as fair value hedges, the Corporation has elected to utilize the critical terms match method. Under the critical terms match method, if the hedging relationship meets certain criteria, it allows the Corporation to assume that the hedging relationship is perfectly effective, eliminating the quantitative aspect of assessing effectiveness. The gain or loss on the derivative as well as the offsetting loss or gain on the hedged item attributable to the hedged risk are recognized in capital markets, net.

To assess effectiveness of interest rate swaps that are designated as cash flow hedges, the Corporation performs a quantitative analysis using a period by period regression method. When the relationship between the hedged item and hedging instrument is highly effective at achieving offsetting changes in cash flows attributable to the hedged risk, changes in the fair value of these cash flow hedges are recorded in accumulated other comprehensive income (loss) and are subsequently reclassified to interest income as interest payments are made on such variable rate loans. See Note 14 for additional information on derivatives and hedging activities.

Securities Sold Under Agreement to Repurchase

The Corporation enters into agreements under which it sells securities subject to an obligation to repurchase the same or similar securities. Under these arrangements, the Corporation may transfer legal control over the assets but still retain effective control through an agreement that both entitles and obligates the Corporation to repurchase the assets. These repurchase agreements are accounted for as collateralized financing arrangements (i.e., secured borrowings whereby the collateral would be used to settle the fair value of the repurchase agreement should the Corporation be in default (e.g., fails to make an interest payment to the counterparty) and not as a sale and subsequent repurchase of securities (i.e., there is no offsetting or netting of the investment securities assets with the repurchase agreement liabilities). The obligation to repurchase the securities is reflected as a liability within federal funds purchased and securities sold under agreements to repurchase on the Corporation's consolidated balance sheets, while the securities underlying the repurchase agreements remain in the respective investment securities asset accounts. See Note 9 for additional information on repurchase agreements.

Retirement Plans

The funded status of the retirement plans is recognized as an asset or liability on the consolidated balance sheets and changes in that funded status are recognized in the year in which the changes occur through OCI. Plan assets and benefit obligations are measured as of fiscal year end. The measurement of the projected benefit obligation and pension expense involve actuarial valuation methods and the use of various actuarial and economic assumptions. The Corporation monitors the assumptions and updates them periodically. Due to the long-term nature of the pension plan obligation, actual results may differ significantly from estimations. Such differences are adjusted over time as the assumptions are replaced by facts and values are recalculated. See Note 12 for additional information on the Corporation's retirement plans.

Stock-Based Compensation

The fair value of restricted common stock awards is their fair market value on the date of grant. Performance awards are based on performance goals of earnings per share and total shareholder return, with vesting ranging from a minimum of 0% to a maximum of 150% of the target award. Performance awards are valued utilizing a Monte Carlo simulation model to estimate fair value of the awards at the grant date. The fair values of stock options and restricted stock awards are amortized as compensation expense on a straight-line basis over the vesting period of the grants. Expenses related to stock options and restricted stock awards are fully recognized on the date the colleague meets the definition of normal or early retirement. Compensation expense recognized is included in personnel expense on the consolidated statements of income. See Note 11 for additional information on stock-based compensation.

Comprehensive Income

Comprehensive income includes all changes in stockholders' equity during a period, except those resulting from transactions with stockholders. In addition to net income, other components of the Corporation's comprehensive income include the after tax effect of changes in net unrealized gain/loss on AFS securities, changes in unrealized gain/loss on cash flow hedge derivatives, and changes in net actuarial gain/loss on defined benefit pension and postretirement plans. Comprehensive income is reported on the accompanying consolidated statements of changes in stockholder's equity and consolidated statements of comprehensive income. See Note 22 for additional information on accumulated other comprehensive income (loss).

Fair Value Measurements

Fair value represents the estimated price at which an orderly transaction to sell an asset or to transfer a liability would take place between market participants at the measurement date under current market conditions (i.e., an exit price concept). As there is no active market for many of the Corporation's financial instruments, estimates are made using discounted cash flow or other valuation techniques. Inputs into the valuation methods are subjective in nature, involve uncertainties, and require significant judgment and therefore cannot be determined with precision. Accordingly, the derived fair value estimates presented herein are not necessarily indicative of the amounts the Corporation could realize in a current market exchange. Assets and liabilities are categorized into three levels based on the markets in which the assets and liabilities are traded and the reliability of the assumptions used to determine fair value. In instances where the determination of the fair value measurement is based on inputs from different levels of the fair value hierarchy, the level in the fair value hierarchy in which the entire fair value measurement falls is based on the lowest level input that is significant to the fair value measurement in its entirety. The Corporation's assessment of the significance of a particular input to the fair value measurement in its entirety requires judgment, and considers factors specific to the asset or liability. See Note 18 for additional information on fair value measurements. Below is a brief description of each fair value level.

Level 1 — Level 1 inputs utilize quoted prices (unadjusted) in active markets for identical assets or liabilities that the Corporation has the ability to access.

Level 2 — Level 2 inputs are inputs other than quoted prices included in Level 1 that are observable for the asset or liability, either directly or indirectly. Level 2 inputs may include quoted prices for similar assets and liabilities in active markets, as well as inputs that are observable for the asset or liability (other than quoted prices), such as interest rates, foreign exchange rates, and yield curves that are observable at commonly quoted intervals.

Level 3 — Level 3 inputs are unobservable inputs for the asset or liability, which are typically based on an entity's own assumptions, as there is little, if any, related market activity.

Cash and Cash Equivalents

For purposes of the consolidated statements of cash flows, cash and cash equivalents are considered to include cash and due from banks, interest-bearing deposits in other financial institutions, and federal funds sold and securities purchased under agreements to resell.

Earnings Per Common Share

Earnings per common share are calculated utilizing the two-class method. Basic earnings per common share are calculated by dividing the sum of distributed earnings to common shareholders and undistributed earnings allocated to common shareholders by the weighted average number of common shares outstanding. Diluted earnings per common share are calculated by dividing the sum of distributed earnings to common shareholders and undistributed earnings allocated to common shareholders by the weighted average number of common shares outstanding adjusted for the dilutive effect of common stock awards (outstanding stock options and unvested restricted stock awards) and common stock warrants. See Note 20 for additional information on earnings per common share.

New Accounting Pronouncements Adopted

Standard	Description	Date of adoption	Effect on financial statements
ASU 2022-02 Financial Instruments-Credit Losses (Topic 326): Troubled Debt Restructurings and Vintage Disclosures	The FASB issued these amendments to eliminate accounting guidance for TDRs by creditors in Subtopic 310-40, Receivables-Troubled Debt Restructurings by Creditors, while enhancing disclosure requirements for certain loan refinancings and restructurings by creditors when a borrower is experiencing financial difficulty, and to require that an entity disclose current-period gross writeoffs by year of origination for financing receivables and net investments in leases within the scope of Subtopic 326-20, Financial Instruments-Credit Losses-Measured at Amortized Cost. The amendments in this Update are effective for fiscal years beginning after December 15, 2022, including interim periods within those fiscal years, and should be applied prospectively, except as provided in the next sentence. For the transition method related to the recognition and measurement of TDRs, an entity has the option to apply a modified retrospective transition method, resulting in a cumulative-effect adjustment to retained earnings in the period of adoption. Early adoption is permitted if an entity has adopted the amendments in Update 2016-03, including adoption in an interim period.	1st Quarter 2023	Adoption of this amendment did not have a material impact on the Corporation's results of operation, financial position or liquidity, but resulted in additional disclosure requirements related to gross charge offs by vintage year and the removal of TDR disclosures, replaced by additional disclosures on the types of modifications of loans to borrowers experiencing financial difficulties. The Corporation has adopted this update prospectively.

Future Accounting Pronouncements

The expected impact of applicable material accounting pronouncements recently issued or proposed but not yet required to be adopted are discussed in the table below. To the extent that the adoption of new accounting standards materially affects the Corporation's financial condition, results of operations, liquidity or disclosures, the impacts are discussed in the applicable sections of this financial review.

Standard	Description	Date of adoption	Effect on financial statements
ASU 2023-02 Investments-Equity Method and Joint Ventures (Topic 323): Accounting for Investments in Tax Credit Structures Using the Proportional Amortization Method	The amendments in this update permit reporting entities to elect to account for their tax equity investments, regardless of the tax credit program from which the income tax credits are received, using the proportional amortization method if certain conditions are met. A reporting entity may make an accounting policy election to apply the proportional amortization method on a tax-credit-program-by-tax-credit-program basis rather than electing to apply the proportional amortization method at the reporting entity level or to individual investments. The amendments in this update also remove certain guidance for Qualified Affordable Housing Project investments and require the application of the delayed equity contribution guidance to all tax equity investments. The amendments in this update are effective for fiscal years beginning after December 15, 2023, and must be applied on either a modified retrospective or a retrospective basis. Early adoption is permitted in any interim period, however if adopted in an interim period the entity shall adopt the amendments in this update as of the beginning of the fiscal year that includes the interim period.	1st Quarter 2024	Adoption of this amendment is not expected to have a material impact on the Corporation's current results of operation, financial position, liquidity or disclosures.
ASU 2023-07 Segment Reporting (Topic 280): Improvements to Reportable Segment Disclosures	The amendments in this update improve financial reporting by requiring disclosure of incremental segment information on an annual and interim basis for all public entities to enable investors to develop more decision-useful financial analyses. The amendments in this update also do not change how a public entity identifies its operating segments, aggregates those operating segments, or applies the quantitative thresholds to determine its reportable segments. The amendments in this update are effective for fiscal years beginning after December 15, 2023, and interim periods within fiscal years beginning after December 15, 2024. Early adoption is permitted.	Fiscal year 2024 and interim periods beginning in 1st quarter 2025	The Corporation is currently evaluating the impact on its results of operation, financial position, liquidity, and disclosures.
ASU 2023-09 Income Taxes (Topic 740): Improvements to Income Tax Disclosures	The amendments in this update address investor requests for more transparency about income tax information through improvements to income tax disclosures primarily related to the rate reconciliation and income taxes paid information. This update also includes certain other amendments to improve the effectiveness of income tax disclosures. The amendments in this update are effective for fiscal years beginning after December 15, 2024 and are to be applied on a prospective basis. Early adoption is permitted.	1st Quarter 2025	The Corporation is currently evaluating the impact on its disclosures.

Note 2 Acquisitions and Dispositions

Acquisitions:

The Corporation did not have any business acquisitions during 2021, 2022 or 2023.

Dispositions:

The Corporation did not have any business dispositions during 2022 or 2023.

2021:

On March 1, 2021, the Corporation completed the sale of its wealth management subsidiary, Whitnell, to Rockefeller for a purchase price of \$8 million. The Corporation reported a first quarter 2021 pre-tax gain of \$2 million, included in asset gains, net on the consolidated statements of income, in conjunction with the sale.

On February 26, 2021, the Bank completed the sale of one branch located in Monroe, Wisconsin to Summit Credit Union. Under the terms of the transaction, the Bank sold \$31 million in total deposits and no loans. The Bank received an approximately 4% purchase premium on deposits transferred.

Note 3 Investment Securities

Investment securities are classified as AFS, HTM, or equity on the consolidated balance sheets at the time of purchase. The amortized cost and fair values of AFS and HTM securities at December 31, 2023 were as follows:

(\$ in thousands)	Amortized Cost	Gross Unrealized Gains	Gross Unrealized (Losses)	Fair Value
AFS investment securities				
U.S. Treasury securities	\$ 39,984	\$ —	\$ (4,083)	\$ 35,902
Obligations of state and political subdivisions (municipal securities)	94,008	23	(2,214)	91,817
Residential mortgage-related securities:				
FNMA/FHLMC	1,274,052	294	(153,552)	1,120,794
GNMA	2,021,242	24,254	(2,822)	2,042,675
Commercial mortgage-related securities:				
FNMA/FHLMC	18,691	—	(1,755)	16,937
GNMA	161,928	—	(7,135)	154,793
Asset backed securities:				
FFELP	135,832	5	(1,862)	133,975
SBA	1,077	2	(28)	1,051
Other debt securities	3,000	—	(50)	2,950
Total AFS investment securities	<u>\$ 3,749,814</u>	<u>\$ 24,579</u>	<u>\$ (173,501)</u>	<u>\$ 3,600,892</u>
HTM investment securities				
U.S. Treasury securities	\$ 999	\$ —	\$ (36)	\$ 963
Obligations of state and political subdivisions (municipal securities)	1,682,473	5,638	(134,053)	1,554,059
Residential mortgage-related securities:				
FNMA/FHLMC	941,973	27,007	(164,587)	804,393
GNMA	48,979	92	(2,901)	46,170
Private-label	345,083	9,796	(65,372)	289,507
Commercial mortgage-related securities:				
FNMA/FHLMC	780,995	12,699	(160,781)	632,914
GNMA	59,733	386	(7,500)	52,619
Total HTM investment securities	<u>\$ 3,860,235</u>	<u>\$ 55,619</u>	<u>\$ (535,230)</u>	<u>\$ 3,380,624</u>

The amortized cost and fair values of AFS and HTM securities at December 31, 2022 were as follows:

(\$ in thousands)	Amortized Cost	Gross Unrealized Gains	Gross Unrealized (Losses)	Fair Value
AFS investment securities				
U.S. Treasury securities	\$ 124,441	\$ —	\$ (15,063)	\$ 109,378
Agency securities	15,000	—	(1,468)	13,532
Obligations of state and political subdivisions (municipal securities)	235,693	96	(5,074)	230,714
Residential mortgage-related securities:				
FNMA/FHLMC	1,820,642	404	(216,436)	1,604,610
GNMA	502,537	314	(5,255)	497,596
Commercial mortgage-related securities:				
FNMA/FHLMC	19,038	—	(1,896)	17,142
GNMA	115,031	—	(4,569)	110,462
Asset backed securities:				
FFELP	157,138	—	(5,947)	151,191
SBA	4,512	15	(51)	4,477
Other debt securities	3,000	—	(78)	2,922
Total AFS investment securities	<u>\$ 2,997,032</u>	<u>\$ 830</u>	<u>\$ (255,837)</u>	<u>\$ 2,742,025</u>
HTM investment securities				
U.S. Treasury securities	\$ 999	\$ —	\$ (62)	\$ 936
Obligations of state and political subdivisions (municipal securities)	1,732,351	1,994	(182,697)	1,551,647
Residential mortgage-related securities:				
FNMA/FHLMC	961,231	31,301	(175,760)	816,771
GNMA	52,979	85	(3,436)	49,628
Private-label	364,728	11,697	(72,920)	303,505
Commercial mortgage-related securities:				
FNMA/FHLMC	778,796	15,324	(178,281)	615,839
GNMA	69,369	577	(7,254)	62,691
Total HTM investment securities	<u>\$ 3,960,451</u>	<u>\$ 60,978</u>	<u>\$ (620,411)</u>	<u>\$ 3,401,018</u>

Expected maturities may differ from contractual maturities because borrowers may have the right to call or prepay obligations with or without call or prepayment penalties. The expected maturities of AFS and HTM securities at December 31, 2023, are shown below:

(\$ in thousands)	AFS		HTM	
	Amortized Cost	Fair Value	Amortized Cost	Fair Value
Due in one year or less	\$ 2,395	\$ 2,372	\$ 6,099	\$ 6,096
Due after one year through five years	42,606	38,464	52,391	52,328
Due after five years through ten years	64,728	62,839	157,279	153,795
Due after ten years	27,263	26,993	1,467,704	1,342,803
Total debt securities	<u>136,992</u>	<u>130,669</u>	<u>1,683,472</u>	<u>1,555,022</u>
Residential mortgage-related securities:				
FNMA/FHLMC	1,274,052	1,120,794	941,973	804,393
GNMA	2,021,242	2,042,675	48,979	46,170
Private-label	—	—	345,083	289,507
Commercial mortgage-related securities:				
FNMA/FHLMC	18,691	16,937	780,995	632,914
GNMA	161,928	154,793	59,733	52,619
Asset backed securities:				
FFELP	135,832	133,975	—	—
SBA	1,077	1,051	—	—
Total investment securities	<u>\$ 3,749,814</u>	<u>\$ 3,600,892</u>	<u>\$ 3,860,235</u>	<u>\$ 3,380,624</u>
Ratio of fair value to amortized cost		96.0 %		87.6 %

On a quarterly basis, the Corporation refreshes the credit quality of each HTM security. The following table summarizes the credit quality indicators of HTM securities at amortized cost at December 31, 2023:

(\$ in thousands)	AAA	AA	A	Not Rated	Total
U.S. Treasury securities	\$ 999	\$ —	\$ —	\$ —	\$ 999
Obligations of state and political subdivisions (municipal securities)	760,329	915,303	5,687	1,155	1,682,473
Residential mortgage-related securities:					
FNMA/FHLMC	941,973	—	—	—	941,973
GNMA	48,979	—	—	—	48,979
Private-label	345,083	—	—	—	345,083
Commercial mortgage-related securities:					
FNMA/FHLMC	780,995	—	—	—	780,995
GNMA	59,733	—	—	—	59,733
Total HTM securities	\$ 2,938,090	\$ 915,303	\$ 5,687	\$ 1,155	\$ 3,860,235

The following table summarizes the credit quality indicators of HTM securities at amortized cost at December 31, 2022:

(\$ in thousands)	AAA	AA	A	Not Rated	Total
U.S. Treasury securities	\$ 999	\$ —	\$ —	\$ —	\$ 999
Obligations of state and political subdivisions (municipal securities)	806,529	917,059	7,604	1,158	1,732,351
Residential mortgage-related securities:					
FNMA/FHLMC	961,231	—	—	—	961,231
GNMA	52,979	—	—	—	52,979
Private-label	364,728	—	—	—	364,728
Commercial mortgage-related securities:					
FNMA/FHLMC	778,796	—	—	—	778,796
GNMA	69,369	—	—	—	69,369
Total HTM securities	\$ 3,034,630	\$ 917,059	\$ 7,604	\$ 1,158	\$ 3,960,451

The following table summarizes gross realized gains and losses on AFS securities, the gain on sale and net write-up of equity securities, and proceeds from the sale of AFS investment securities for each of the three years ended December 31 shown below:

(\$ in thousands)	2023	2022	2021
Gross realized gains on AFS securities	\$ 83	\$ 21	\$ 421
Gross realized (losses) on AFS securities	(65,022)	(1,943)	(437)
Gain on sale and net write-up of equity securities	6,037	5,668	—
Investment securities gains (losses), net	\$ (58,903)	\$ 3,746	\$ (16)
Proceeds from sales of AFS investment securities	\$ 715,066	\$ 110,177	\$ 158,708

During the fourth quarter of 2023, the Corporation sold lower yielding AFS securities with a carrying value of \$715 million at a net loss of \$65 million and reinvested the proceeds in higher yielding and lower risk-weighted GNMA securities. Additionally, during the fourth quarter of 2023, the Corporation sold 1,000 shares of its Visa Class B restricted shares and wrote up its remaining shares based on that market price, resulting in a gain of \$6 million.

During the fourth quarter of 2022, the Corporation sold \$110 million of lower yielding municipal securities at a loss of \$2 million and reinvested the proceeds into higher yielding and lower risk-weighted GNMA securities. During the third quarter of 2022, the Corporation sold its Visa Class B restricted shares obtained in the acquisition of First Staunton, which were carried at a zero-cost basis. The remaining shares of Visa Class B restricted shares held by the Corporation, which are carried at fair value, were subsequently written up to reflect the new observable price resulting from that sale.

During the second quarter of 2021, the Corporation sold \$107 million of lower yielding FFELP student loan asset backed securities at an immaterial gain and reinvested the proceeds into higher yielding MBS. During the first quarter of 2021, the Corporation sold \$51 million of lower yielding U.S. Treasury and Agency securities at an immaterial loss to take advantage of the steeper yield curve by reinvesting the proceeds into similar but higher yielding, longer duration securities.

Investment securities with a carrying value of \$1.6 billion at December 31, 2023 and \$2.3 billion at December 31, 2022 were pledged as required to secure certain deposits or for other purposes.

Accrued interest receivable on HTM securities totaled \$18 million and \$19 million at December 31, 2023 and 2022, respectively. Accrued interest receivable on AFS securities totaled \$15 million and \$9 million at December 31, 2023 and 2022, respectively. Accrued interest receivable on both HTM and AFS securities is included in interest receivable on the consolidated balance sheets. There was no interest income reversed for investments going into nonaccrual for the years ended December 31, 2023 and 2022.

A security is considered past due once it is 30 days past due under the terms of the agreement. At both December 31, 2023 and 2022, the Corporation had no past due HTM securities.

The allowance for credit losses on HTM securities was approximately \$75,000 and \$54,000 at December 31, 2023 and 2022, respectively, attributable entirely to the Corporation's municipal securities, included in HTM investment securities, net, at amortized cost on the consolidated balance sheets. The Corporation also holds U.S. Treasury, municipal, and mortgage-related securities issued by the U.S. government or a GSE which are backed by the full faith and credit of the U.S. government and private-label residential mortgage-related securities that have credit enhancement which covers the first 15% of losses and, as a result, no allowance for credit losses has been recorded related to these securities.

The following represents gross unrealized losses and the related fair value of AFS and HTM securities, aggregated by investment category and length of time individual securities have been in a continuous unrealized loss position, at December 31, 2023:

(\$ in thousands)	Less than 12 months			12 months or more			Total	
	Number of Securities	Unrealized (Losses)	Fair Value	Number of Securities	Unrealized (Losses)	Fair Value	Unrealized (Losses)	Fair Value
AFS investment securities								
U.S. Treasury securities	—	\$ —	\$ —	1	\$ (4,083)	\$ 35,902	\$ (4,083)	\$ 35,902
Obligations of state and political subdivisions (municipal securities)	41	(347)	23,762	92	(1,867)	53,022	(2,214)	76,784
Residential mortgage-related securities:								
FNMA/FHLMC	18	(333)	22,870	71	(153,219)	1,080,337	(153,552)	1,103,207
GNMA	13	(924)	156,847	5	(1,898)	26,643	(2,822)	183,490
Commercial mortgage-related securities:								
FNMA/FHLMC	—	—	—	1	(1,755)	16,937	(1,755)	16,937
GNMA	9	(3,160)	103,055	22	(3,975)	51,738	(7,135)	154,793
Asset backed securities:								
FFELP	—	—	—	14	(1,862)	125,339	(1,862)	125,339
SBA	—	—	—	5	(28)	761	(28)	761
Other debt securities	1	(9)	991	2	(42)	1,958	(50)	2,950
Total	82	\$ (4,773)	\$ 307,527	213	\$ (168,728)	\$ 1,392,635	\$ (173,501)	\$ 1,700,162
HTM investment securities								
U.S. Treasury securities	—	\$ —	\$ —	1	\$ (36)	\$ 963	\$ (36)	\$ 963
Obligations of state and political subdivisions (municipal securities)	182	(1,535)	180,270	537	(132,518)	792,940	(134,053)	973,210
Residential mortgage-related securities:								
FNMA/FHLMC	20	(511)	30,323	94	(164,076)	771,042	(164,587)	801,365
GNMA	2	(17)	2,128	78	(2,884)	34,626	(2,901)	36,754
Private-label	—	—	—	18	(65,372)	289,507	(65,372)	289,507
Commercial mortgage-related securities:								
FNMA/FHLMC	1	(121)	8,144	44	(160,660)	624,770	(160,781)	632,914
GNMA	—	—	—	13	(7,500)	52,619	(7,500)	52,619
Total	205	\$ (2,184)	\$ 220,865	785	\$ (533,046)	\$ 2,566,468	\$ (535,230)	\$ 2,787,333

For comparative purposes, the following represents gross unrealized losses and the related fair value of AFS and HTM securities, aggregated by investment category and length of time that individual securities have been in a continuous unrealized loss position, at December 31, 2022:

(\$ in thousands)	Less than 12 months			12 months or more			Total	
	Number of Securities	Unrealized (Losses)	Fair Value	Number of Securities	Unrealized (Losses)	Fair Value	Unrealized (Losses)	Fair Value
AFS investment securities								
U.S. Treasury securities	—	\$ —	\$ —	7	\$ (15,063)	\$ 109,378	\$ (15,063)	\$ 109,378
Agency securities	—	—	—	1	(1,468)	13,532	(1,468)	13,532
Obligations of state and political subdivisions (municipal securities)	358	(5,066)	201,260	4	(8)	1,916	(5,074)	203,176
Residential mortgage-related securities:								
FNMA/FHLMC	24	(31,266)	260,986	84	(185,170)	1,321,420	(216,436)	1,582,406
GNMA	23	(4,415)	220,276	2	(840)	11,096	(5,255)	231,372
Commercial mortgage-related securities:								
FNMA/FHLMC	1	(1,896)	17,142	—	—	—	(1,896)	17,142
GNMA	33	(3,920)	101,036	4	(649)	9,426	(4,569)	110,462
Asset backed securities:								
FFELP	3	(1,668)	44,304	12	(4,278)	106,887	(5,947)	151,191
SBA	2	(1)	417	6	(50)	2,057	(51)	2,474
Other debt securities	2	(30)	1,970	1	(49)	951	(78)	2,922
Total	446	\$ (48,263)	\$ 847,391	121	\$ (207,575)	\$ 1,576,665	\$ (255,837)	\$ 2,424,055
HTM investment securities								
U.S. Treasury securities	1	\$ (62)	\$ 936	—	\$ —	\$ —	\$ (62)	\$ 936
Obligations of state and political subdivisions (municipal securities)	771	(96,282)	1,079,216	156	(86,415)	231,022	(182,697)	1,310,238
Residential mortgage-related securities:								
FNMA/FHLMC	79	(18,925)	143,201	22	(156,836)	671,570	(175,760)	814,770
GNMA	81	(3,436)	44,476	—	—	—	(3,436)	44,476
Private-label	3	(9,509)	58,733	15	(63,411)	244,772	(72,920)	303,505
Commercial mortgage-related securities:								
FNMA/FHLMC	4	(3,814)	20,338	39	(174,467)	576,911	(178,281)	597,249
GNMA	8	(2,528)	34,612	6	(4,726)	28,080	(7,254)	62,691
Total	947	\$ (134,556)	\$ 1,381,511	238	\$ (485,855)	\$ 1,752,354	\$ (620,411)	\$ 3,133,865

The Corporation reviews the AFS investment securities portfolio on a quarterly basis to monitor its credit exposure. A determination as to whether a security's decline in fair value is the result of credit risk takes into consideration numerous factors and the relative significance of any single factor can vary by security. Some factors the Corporation may consider in this impairment analysis include the extent to which the security has been in an unrealized loss position, the change in security rating, financial condition and near-term prospects of the issuer, as well as security and industry specific economic conditions.

Based on the Corporation's evaluation, management does not believe any unrealized losses at December 31, 2023 represent credit deterioration as these unrealized losses are primarily attributable to changes in interest rates and the current market conditions. The Corporation does not intend to sell, nor does it believe that it will be required to sell, the securities in an unrealized loss position before recovery of their amortized cost basis.

FHLB and Federal Reserve Bank stocks: The Corporation is required to maintain Federal Reserve Bank stock and FHLB stock as a member bank of both the Federal Reserve System and the FHLB, and in amounts as required by these institutions. These equity securities are "restricted" in that they can only be sold back to the respective institutions or another member institution at par. Therefore, they are less liquid than other marketable equity securities and their fair value is equal to amortized cost. The Corporation had FHLB stock of \$143 million and \$209 million at December 31, 2023 and 2022, respectively. The Corporation had Federal Reserve Bank stock of \$87 million at both December 31, 2023 and 2022. Accrued interest receivable on FHLB stock totaled \$4 million and \$3 million at December 31, 2023 and 2022, respectively. There was no accrued interest receivable on Federal Reserve Bank stock at both December 31, 2023 and December 31, 2022. Accrued interest receivable on both FHLB stock and Federal Reserve Bank stock is included in interest receivable on the consolidated balance sheets.

Equity Securities

Equity securities with readily determinable fair values: The Corporation's portfolio of equity securities with readily determinable fair values is primarily comprised of CRA Qualified Investment mutual funds and other mutual funds. At December 31, 2023 and 2022, the Corporation had equity securities with readily determinable fair values of \$7 million and \$6 million, respectively.

Equity securities without readily determinable fair values: The Corporation's portfolio of equity securities without readily determinable fair values, which primarily consists of Visa Class B restricted shares and an investment in a private SBA loan fund, was carried at \$35 million and \$19 million at December 31, 2023 and 2022, respectively.

Note 4 Loans

The period end loan composition was as follows:

(\$ in thousands)	Dec 31, 2023	Dec 31, 2022
Commercial and industrial	\$ 9,731,555	\$ 9,759,454
Commercial real estate - owner occupied	1,061,700	991,722
Commercial and business lending	10,793,255	10,751,176
Commercial real estate - investor	5,124,245	5,080,344
Real estate construction	2,271,398	2,155,222
Commercial real estate lending	7,395,644	7,235,565
Total commercial	18,188,898	17,986,742
Residential mortgage	7,864,891	8,511,550
Auto finance	2,256,162	1,382,073
Home equity	628,526	624,353
Other consumer	277,740	294,851
Total consumer	11,027,319	10,812,828
Total loans	\$ 29,216,218	\$ 28,799,569

Accrued interest receivable on loans totaled \$132 million at December 31, 2023, and \$113 million at December 31, 2022, and is included in interest receivable on the consolidated balance sheets. Interest accrued but not received is reversed against interest income when a loan is placed on nonaccrual. The amount of accrued interest reversed totaled \$2 million for the year ended December 31, 2023, approximately \$491,000 for the year ended December 31, 2022, and approximately \$574,000 for the year ended December 31, 2021.

The Corporation has granted loans to its directors, executive officers, or their related interests. These loans were made on substantially the same terms, including rates and collateral, as those prevailing at the time for comparable transactions with other unrelated customers, and do not involve more than a normal risk of collection. These loans to related parties are summarized below:

(\$ in thousands)	2023	2022
Balance at beginning of year	\$ 3,376	\$ 45,245
New loans	2,564	2,656
Repayments	(253)	(1,416)
Change due to status of executive officers and directors	(280)	(43,110)
Balance at end of year	\$ 5,406	\$ 3,376

The following table presents loans by credit quality indicator by origination year at December 31, 2023:

(\$ in thousands)	Rev Loans Converted to Term ^(a)	Rev Loans Amortized Cost Basis	Term Loans Amortized Cost Basis by Origination Year ^(a)						
			2023	2022	2021	2020	2019	Prior	Total
Commercial and industrial:									
Risk rating:									
Pass	\$ 1,380	\$ 1,693,629	\$ 1,736,617	\$ 2,877,173	\$ 1,824,362	\$ 398,046	\$ 383,695	\$ 449,006	\$ 9,362,529
Special mention	—	21,779	4,017	46,610	8,525	3,529	—	25,341	109,801
Potential problem	804	81,543	10,515	39,748	47,279	17,732	94	291	197,202
Nonaccrual	6,414	—	13,317	14,188	33,891	627	—	—	62,022
Commercial and industrial	<u>\$ 8,598</u>	<u>\$ 1,796,951</u>	<u>\$ 1,764,466</u>	<u>\$ 2,977,719</u>	<u>\$ 1,914,057</u>	<u>\$ 419,934</u>	<u>\$ 383,789</u>	<u>\$ 474,638</u>	<u>\$ 9,731,555</u>
Commercial real estate - owner occupied:									
Risk rating:									
Pass	\$ —	\$ 15,393	\$ 204,039	\$ 188,003	\$ 239,218	\$ 136,535	\$ 135,730	\$ 92,339	\$ 1,011,259
Special mention	—	271	—	—	6,150	2,635	—	1,293	10,349
Potential problem	—	292	14,735	2,791	6,416	8,537	3,086	2,841	38,699
Nonaccrual	—	—	1,394	—	—	—	—	—	1,394
Commercial real estate - owner occupied	<u>\$ —</u>	<u>\$ 15,957</u>	<u>\$ 220,168</u>	<u>\$ 190,794</u>	<u>\$ 251,783</u>	<u>\$ 147,708</u>	<u>\$ 138,816</u>	<u>\$ 96,473</u>	<u>\$ 1,061,700</u>
Commercial and business lending:									
Risk rating:									
Pass	\$ 1,380	\$ 1,709,023	\$ 1,940,657	\$ 3,065,177	\$ 2,063,580	\$ 534,581	\$ 519,426	\$ 541,345	\$ 10,373,788
Special mention	—	22,050	4,017	46,610	14,675	6,164	—	26,634	120,150
Potential problem	804	81,836	25,250	42,539	53,695	26,269	3,180	3,132	235,900
Nonaccrual	6,414	—	14,710	14,188	33,891	627	—	—	63,416
Commercial and business lending	<u>\$ 8,598</u>	<u>\$ 1,812,909</u>	<u>\$ 1,984,635</u>	<u>\$ 3,168,514</u>	<u>\$ 2,165,840</u>	<u>\$ 567,642</u>	<u>\$ 522,606</u>	<u>\$ 571,111</u>	<u>\$ 10,793,255</u>
Commercial real estate - investor:									
Risk rating:									
Pass	\$ —	\$ 155,109	\$ 1,263,866	\$ 1,266,866	\$ 1,080,425	\$ 471,371	\$ 358,996	\$ 239,230	\$ 4,835,865
Special mention	—	502	4,248	25,474	26,208	—	29,772	6,014	92,218
Potential problem	—	—	106,002	50,152	15,000	983	—	24,025	196,163
Commercial real estate - investor	<u>\$ —</u>	<u>\$ 155,611</u>	<u>\$ 1,374,116</u>	<u>\$ 1,342,492</u>	<u>\$ 1,121,633</u>	<u>\$ 472,355</u>	<u>\$ 388,768</u>	<u>\$ 269,269</u>	<u>\$ 5,124,245</u>
Real estate construction:									
Risk rating:									
Pass	\$ —	\$ 23,307	\$ 422,277	\$ 1,176,608	\$ 547,825	\$ 87,680	\$ 5,740	\$ 7,954	\$ 2,271,392
Nonaccrual	—	—	—	—	—	—	—	6	6
Real estate construction	<u>\$ —</u>	<u>\$ 23,307</u>	<u>\$ 422,277</u>	<u>\$ 1,176,608</u>	<u>\$ 547,825</u>	<u>\$ 87,680</u>	<u>\$ 5,740</u>	<u>\$ 7,960</u>	<u>\$ 2,271,398</u>
Commercial real estate lending:									
Risk rating:									
Pass	\$ —	\$ 178,416	\$ 1,686,143	\$ 2,443,474	\$ 1,628,250	\$ 559,052	\$ 364,737	\$ 247,184	\$ 7,107,256
Special mention	—	502	4,248	25,474	26,208	—	29,772	6,014	92,218
Potential problem	—	—	106,002	50,152	15,000	983	—	24,025	196,163
Nonaccrual	—	—	—	—	—	—	—	6	6
Commercial real estate lending	<u>\$ —</u>	<u>\$ 178,918</u>	<u>\$ 1,796,393</u>	<u>\$ 2,519,100</u>	<u>\$ 1,669,458</u>	<u>\$ 560,035</u>	<u>\$ 394,508</u>	<u>\$ 277,230</u>	<u>\$ 7,395,644</u>
Total commercial:									
Risk rating:									
Pass	\$ 1,380	\$ 1,887,439	\$ 3,626,800	\$ 5,508,651	\$ 3,691,830	\$ 1,093,633	\$ 884,162	\$ 788,529	\$ 17,481,044
Special mention	—	22,552	8,265	72,084	40,882	6,164	29,772	32,648	212,368
Potential problem	804	81,836	131,253	92,691	68,695	27,253	3,180	27,157	432,063
Nonaccrual	6,414	—	14,710	14,188	33,891	627	—	6	63,422
Total commercial	<u>\$ 8,598</u>	<u>\$ 1,991,827</u>	<u>\$ 3,781,028</u>	<u>\$ 5,687,614</u>	<u>\$ 3,835,298</u>	<u>\$ 1,127,677</u>	<u>\$ 917,114</u>	<u>\$ 848,341</u>	<u>\$ 18,188,898</u>
Residential mortgage:									
Risk rating:									
Pass	\$ —	\$ —	\$ 352,321	\$ 1,617,409	\$ 2,110,577	\$ 1,414,186	\$ 647,778	\$ 1,650,542	\$ 7,792,813
Special mention	—	—	—	—	—	—	95	57	152
Potential problem	—	—	490	93	—	—	174	26	784
Nonaccrual	—	—	1,425	9,567	9,259	10,397	6,628	33,865	71,142
Residential mortgage	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 354,236</u>	<u>\$ 1,627,070</u>	<u>\$ 2,119,836</u>	<u>\$ 1,424,583</u>	<u>\$ 654,675</u>	<u>\$ 1,684,490</u>	<u>\$ 7,864,891</u>

(\$ in thousands)	Term Loans Amortized Cost Basis by Origination Year ^(a)								
	Rev Loans Converted to Term ^(a)	Rev Loans Amortized Cost Basis	2023	2022	2021	2020	2019	Prior	Total
Auto finance:									
Risk rating:									
Pass	\$ —	\$ —	\$1,218,820	\$ 952,912	\$ 75,209	\$ 163	\$ 456	\$ 132	\$ 2,247,691
Special mention	—	—	619	1,850	205	—	—	—	2,674
Nonaccrual	—	—	1,032	4,332	430	—	3	—	5,797
Auto finance	\$ —	\$ —	\$1,220,471	\$ 959,094	\$ 75,844	\$ 163	\$ 458	\$ 132	\$ 2,256,162
Home equity:									
Risk rating:									
Pass	\$ 8,703	\$ 521,000	\$ 1,678	\$ 29,863	\$ 6,084	\$ 2,327	\$ 4,891	\$ 53,350	\$ 619,192
Special mention	179	200	—	87	—	29	15	378	708
Potential problem	10	75	10	—	—	—	33	—	118
Nonaccrual	1,302	160	29	495	132	144	368	7,180	8,508
Home equity	\$ 10,195	\$ 521,434	\$ 1,717	\$ 30,445	\$ 6,217	\$ 2,500	\$ 5,308	\$ 60,907	\$ 628,526
Other consumer:									
Risk rating:									
Pass	\$ 121	\$ 198,214	\$ 6,419	\$ 3,732	\$ 2,658	\$ 1,127	\$ 460	\$ 64,121	\$ 276,731
Special mention	26	843	9	—	3	20	—	6	881
Nonaccrual	27	71	10	1	6	2	8	29	128
Other consumer	\$ 174	\$ 199,129	\$ 6,438	\$ 3,733	\$ 2,668	\$ 1,149	\$ 468	\$ 64,156	\$ 277,740
Total consumer:									
Risk rating:									
Pass	\$ 8,824	\$ 719,213	\$1,579,238	\$2,603,916	\$2,194,529	\$1,417,802	\$ 653,584	\$1,768,145	\$10,936,428
Special mention	205	1,043	628	1,936	208	49	110	441	4,416
Potential problem	10	75	500	93	—	—	207	26	901
Nonaccrual	1,330	231	2,496	14,396	9,827	10,544	7,007	41,073	85,574
Total consumer	\$ 10,369	\$ 720,563	\$1,582,862	\$2,620,341	\$2,204,564	\$1,428,395	\$ 660,909	\$1,809,685	\$11,027,319
Total loans:									
Risk rating:									
Pass	\$ 10,204	\$ 2,606,652	\$5,206,038	\$8,112,567	\$5,886,359	\$2,511,435	\$1,537,747	\$2,556,674	\$28,417,472
Special mention	205	23,595	8,893	74,020	41,091	6,213	29,882	33,089	216,784
Potential problem	814	81,910	131,753	92,784	68,695	27,253	3,387	27,183	432,965
Nonaccrual	7,744	231	17,206	28,584	43,718	11,170	7,007	41,080	148,997
Total loans	\$ 18,966	\$ 2,712,389	\$5,363,890	\$8,307,956	\$6,039,862	\$2,556,071	\$1,578,023	\$2,658,026	\$29,216,218

(a) Revolving loans converted to term loans are those converted during the reporting period and are also reported in their year of origination.

The following table presents loans by credit quality indicator by origination year at December 31, 2022:

(\$ in thousands)	Rev Loans Converted to Term ^(a)	Rev Loans Amortized Cost Basis	Term Loans Amortized Cost Basis by Origination Year ^(a)						
			2022	2021	2020	2019	2018	Prior	Total
Commercial and industrial:									
Risk rating:									
Pass	\$ 1,423	\$ 1,938,777	\$3,245,546	\$2,367,008	\$ 567,833	\$ 573,120	\$ 330,642	\$ 432,906	\$ 9,455,833
Special mention	—	93,209	3,411	23,607	—	—	19	32,497	152,744
Potential problem	447	24,549	41,400	4,193	21,887	38,169	218	6,133	136,549
Nonaccrual	3,926	—	5,210	—	9,119	—	—	—	14,329
Commercial and industrial	\$ 5,796	\$ 2,056,535	\$3,295,567	\$2,394,809	\$ 598,839	\$ 611,289	\$ 330,879	\$ 471,535	\$ 9,759,454
Commercial real estate - owner occupied:									
Risk rating:									
Pass	\$ —	\$ 12,447	\$ 211,645	\$ 225,627	\$ 163,965	\$ 160,370	\$ 73,487	\$ 97,420	\$ 944,961
Special mention	—	—	—	—	1,136	1,491	9,713	—	12,339
Potential problem	—	1,325	1,238	11,141	5,523	10,769	370	4,055	34,422
Commercial real estate - owner occupied	\$ —	\$ 13,772	\$ 212,883	\$ 236,769	\$ 170,624	\$ 172,630	\$ 83,570	\$ 101,475	\$ 991,722
Commercial and business lending:									
Risk rating:									
Pass	\$ 1,423	\$ 1,951,224	\$3,457,191	\$2,592,636	\$ 731,798	\$ 733,490	\$ 404,129	\$ 530,326	\$10,400,794
Special mention	—	93,209	3,411	23,607	1,136	1,491	9,732	32,497	165,083
Potential problem	447	25,874	42,638	15,335	27,410	48,938	589	10,188	170,971
Nonaccrual	3,926	—	5,210	—	9,119	—	—	—	14,329
Commercial and business lending	\$ 5,796	\$ 2,070,307	\$3,508,450	\$2,631,578	\$ 769,463	\$ 783,919	\$ 414,449	\$ 573,010	\$10,751,176
Commercial real estate - investor:									
Risk rating:									
Pass	\$ 38,412	\$ 106,280	\$1,633,094	\$1,419,000	\$ 683,121	\$ 530,444	\$ 262,858	\$ 210,299	\$ 4,845,096
Special mention	—	—	61,968	24,149	7,361	9,400	—	10,455	113,333
Potential problem	—	—	16,147	21,303	27,635	1,333	19,017	7,099	92,535
Nonaccrual	—	—	2,177	25,668	—	—	—	1,535	29,380
Commercial real estate - investor	\$ 38,412	\$ 106,280	\$1,713,387	\$1,490,120	\$ 718,117	\$ 541,177	\$ 281,875	\$ 229,387	\$ 5,080,344
Real estate construction:									
Risk rating:									
Pass	\$ —	\$ 29,892	\$ 900,593	\$ 913,107	\$ 241,230	\$ 12,062	\$ 2,226	\$ 9,775	\$ 2,108,885
Special mention	—	—	—	—	12,174	33,087	—	—	45,261
Potential problem	—	—	—	—	970	—	—	—	970
Nonaccrual	—	—	—	—	—	—	—	105	105
Real estate construction	\$ —	\$ 29,892	\$ 900,593	\$ 913,107	\$ 254,374	\$ 45,149	\$ 2,226	\$ 9,880	\$ 2,155,222
Commercial real estate lending:									
Risk rating:									
Pass	\$ 38,412	\$ 136,173	\$2,533,687	\$2,332,107	\$ 924,351	\$ 542,505	\$ 265,083	\$ 220,073	\$ 6,953,981
Special mention	—	—	61,968	24,149	19,535	42,487	—	10,455	158,595
Potential problem	—	—	16,147	21,303	28,605	1,333	19,017	7,099	93,505
Nonaccrual	—	—	2,177	25,668	—	—	—	1,640	29,485
Commercial real estate lending	\$ 38,412	\$ 136,173	\$2,613,980	\$2,403,227	\$ 972,492	\$ 586,326	\$ 284,101	\$ 239,267	\$ 7,235,565
Total commercial:									
Risk rating:									
Pass	\$ 39,835	\$ 2,087,396	\$5,990,879	\$4,924,743	\$1,656,149	\$1,275,996	\$ 669,213	\$ 750,399	\$17,354,774
Special mention	—	93,209	65,379	47,756	20,671	43,978	9,732	42,952	323,677
Potential problem	447	25,874	58,785	36,638	56,016	50,271	19,606	17,287	264,476
Nonaccrual	3,926	—	7,387	25,668	9,119	—	—	1,640	43,814
Total commercial	\$ 44,208	\$ 2,206,480	\$6,122,430	\$5,034,805	\$1,741,955	\$1,370,245	\$ 698,550	\$ 812,278	\$17,986,742

(\$ in thousands)	Rev Loans Converted to Term ^(a)	Rev Loans Amortized Cost Basis	Term Loans Amortized Cost Basis by Origination Year ^(a)							Total
			2022	2021	2020	2019	2018	Prior		
Residential mortgage:										
Risk rating:										
Pass	\$ —	\$ —	\$ 1,410,566	\$ 2,184,125	\$ 1,716,663	\$ 817,164	\$ 370,724	\$ 1,951,406	\$ 8,450,648	
Special mention	—	—	—	284	96	—	—	63	444	
Potential problem	—	—	455	71	—	738	29	685	1,978	
Nonaccrual	—	—	8,506	3,851	6,219	3,744	5,014	31,145	58,480	
Residential mortgage	\$ —	\$ —	\$ 1,419,527	\$ 2,188,332	\$ 1,722,979	\$ 821,645	\$ 375,768	\$ 1,983,299	\$ 8,511,550	
Auto finance:										
Risk rating:										
Pass	\$ —	\$ —	\$ 1,271,205	\$ 106,102	\$ 333	\$ 1,267	\$ 446	\$ 61	\$ 1,379,414	
Special mention	—	—	1,052	118	—	—	—	—	1,170	
Nonaccrual	—	—	1,149	331	—	9	—	—	1,490	
Auto finance	\$ —	\$ —	\$ 1,273,406	\$ 106,551	\$ 333	\$ 1,276	\$ 446	\$ 61	\$ 1,382,073	
Home equity:										
Risk rating:										
Pass	\$ 7,254	\$ 508,212	\$ 31,389	\$ 6,508	\$ 2,112	\$ 6,197	\$ 6,966	\$ 54,827	\$ 616,211	
Special mention	47	102	—	—	—	—	47	310	458	
Potential problem	—	15	—	—	—	34	2	146	197	
Nonaccrual	1,590	—	306	102	131	307	319	6,322	7,487	
Home equity	\$ 8,891	\$ 508,329	\$ 31,695	\$ 6,610	\$ 2,243	\$ 6,538	\$ 7,333	\$ 61,605	\$ 624,353	
Other consumer:										
Risk rating:										
Pass	\$ 64	\$ 199,942	\$ 7,429	\$ 5,256	\$ 2,468	\$ 1,238	\$ 174	\$ 77,611	\$ 294,117	
Special mention	6	490	11	—	5	5	—	25	537	
Nonaccrual	78	56	11	21	10	56	10	34	197	
Other consumer	\$ 147	\$ 200,488	\$ 7,452	\$ 5,276	\$ 2,482	\$ 1,300	\$ 184	\$ 77,670	\$ 294,851	
Total consumer:										
Risk rating:										
Pass	\$ 7,318	\$ 708,154	\$ 2,720,589	\$ 2,301,991	\$ 1,721,576	\$ 825,866	\$ 378,310	\$ 2,083,904	\$ 10,740,390	
Special mention	52	592	1,063	403	101	5	47	398	2,609	
Potential problem	—	15	455	71	—	772	31	831	2,175	
Nonaccrual	1,668	56	9,973	4,304	6,360	4,116	5,343	37,501	67,654	
Total consumer	\$ 9,038	\$ 708,817	\$ 2,732,080	\$ 2,306,769	\$ 1,728,037	\$ 830,759	\$ 383,731	\$ 2,122,635	\$ 10,812,828	
Total loans:										
Risk rating:										
Pass	\$ 47,152	\$ 2,795,551	\$ 8,711,468	\$ 7,226,734	\$ 3,377,725	\$ 2,101,861	\$ 1,047,522	\$ 2,834,303	\$ 28,095,164	
Special mention	52	93,801	66,443	48,159	20,772	43,983	9,778	43,350	326,286	
Potential problem	447	25,889	59,240	36,709	56,016	51,043	19,637	18,118	266,651	
Nonaccrual	5,595	56	17,360	29,972	15,479	4,116	5,343	39,141	111,467	
Total loans	\$ 53,246	\$ 2,915,297	\$ 8,854,510	\$ 7,341,574	\$ 3,469,992	\$ 2,201,004	\$ 1,082,280	\$ 2,934,912	\$ 28,799,569	

(a) Revolving loans converted to term loans are those reported during the reporting period and are also reported in their year of origination.

The following table presents gross charge offs by origination year at December 31, 2023:

(\$ in thousands)	Rev Loans Amortized Cost Basis	Gross Charge Offs by Origination Year							Total
		2023	2022	2021	2020	2019	Prior		
Commercial and industrial	\$ 4,130	\$ 717	\$ 9,594	\$ 25,270	\$ 5,958	\$ —	\$ 18	\$ 45,687	
Commercial real estate-owner occupied	—	—	—	—	—	25	—	25	
Commercial and business lending	4,130	717	9,594	25,270	5,958	25	18	45,713	
Commercial real estate-investor	—	—	—	—	—	—	252	252	
Real estate construction	—	—	—	—	—	—	25	25	
Commercial real estate lending	—	—	—	—	—	—	277	277	
Total commercial	4,130	717	9,594	25,270	5,958	25	295	45,989	
Residential mortgage	—	2	32	42	148	5	723	952	
Auto finance	—	795	4,524	626	—	5	—	5,950	
Home equity	53	21	3	31	—	22	294	424	
Other consumer	4,884	—	72	124	131	72	170	5,453	
Total consumer	4,937	818	4,630	823	279	105	1,187	12,779	
Total gross charge offs	\$ 9,068	\$ 1,535	\$ 14,224	\$ 26,093	\$ 6,237	\$ 130	\$ 1,482	\$ 58,768	

Factors that are important to managing overall credit quality are sound loan underwriting and administration, systematic monitoring of existing loans and commitments, effective loan review on an ongoing basis, early identification of potential problems, and appropriate policies for ACLL, nonaccrual loans, and charge offs. See Note 1 for the Corporation's accounting policy for loans.

For commercial loans, management has determined the pass credit quality indicator to include credits exhibiting acceptable financial statements, cash flow, and leverage. If any risk exists, it is mitigated by the loan structure, collateral, monitoring, or control. For consumer loans, performing loans include credits performing in accordance with the original contractual terms.

Loans are considered past due if the required principal and interest payments have not been received as of the date such payments were due. Special mention credits have potential weaknesses that warrant specific attention from management. If left uncorrected, these potential weaknesses may result in deterioration of the repayment prospects for the credit. Accruing loan modifications could be pass or special mention, depending on the risk rating on the loan. Potential problem loans are considered inadequately protected by the current net worth and paying capacity of the obligor or the collateral pledged. These loans generally have a well-defined weakness, or weaknesses, which may jeopardize liquidation of the debt, and are characterized by the distinct possibility the Corporation will sustain some loss if the deficiencies are not corrected. Management has determined commercial loan relationships in nonaccrual status, and commercial and consumer loan relationships with their terms restructured in a loan modification, meet the criteria to be individually evaluated. Commercial loans classified as special mention, potential problem, and nonaccrual are reviewed at a minimum on a quarterly basis, while pass credits, which are performing rated credits, are generally reviewed on an annual basis or more frequently if the loan renewal is less than one year or if otherwise warranted.

The following table presents loans by past due status at December 31, 2023:

(\$ in thousands)	Accruing					Nonaccrual ^{(a)(b)}	Total
	Current	30-59 Days Past Due	60-89 Days Past Due	90+ Days Past Due			
Commercial and industrial	\$ 9,663,587	\$ 5,374	\$ 191	\$ 380	\$ 62,022	\$ 9,731,555	
Commercial real estate - owner occupied	1,059,948	—	358	—	1,394	1,061,700	
Commercial and business lending	10,723,536	5,374	549	380	63,416	10,793,255	
Commercial real estate - investor	5,086,117	—	18,697	19,432	—	5,124,245	
Real estate construction	2,271,392	—	—	—	6	2,271,398	
Commercial real estate lending	7,357,509	—	18,697	19,432	6	7,395,644	
Total commercial	18,081,044	5,374	19,246	19,812	63,422	18,188,898	
Residential mortgage	7,780,304	13,294	152	—	71,142	7,864,891	
Auto finance	2,232,906	14,712	2,674	73	5,797	2,256,162	
Home equity	615,810	3,500	708	—	8,508	628,526	
Other consumer	273,644	1,233	932	1,803	128	277,740	
Total consumer	10,902,664	32,739	4,467	1,876	85,574	11,027,319	
Total loans	\$ 28,983,708	\$ 38,113	\$ 23,712	\$ 21,689	\$ 148,997	\$ 29,216,218	

(a) Of the total nonaccrual loans, \$80 million, or 53%, were current with respect to payment at December 31, 2023.

(b) No interest income was recognized on nonaccrual loans for the year ended December 31, 2023. In addition, there were \$23 million of nonaccrual loans for which there was no related ACLL at December 31, 2023.

The following table presents loans by past due status at December 31, 2022:

(\$ in thousands)	Accruing					Nonaccrual ^{(a)(b)}	Total
	Current	30-59 Days Past Due	60-89 Days Past Due	90+ Days Past Due			
Commercial and industrial	\$ 9,738,561	\$ 716	\$ 5,566	\$ 282	\$ 14,329	\$ 9,759,454	
Commercial real estate - owner occupied	991,493	218	12	—	—	991,722	
Commercial and business lending	10,730,053	934	5,578	282	14,329	10,751,176	
Commercial real estate - investor	5,049,897	1,067	—	—	29,380	5,080,344	
Real estate construction	2,155,077	39	—	—	105	2,155,222	
Commercial real estate lending	7,204,975	1,105	—	—	29,485	7,235,565	
Total commercial	17,935,028	2,040	5,578	282	43,814	17,986,742	
Residential mortgage	8,443,072	9,811	63	124	58,480	8,511,550	
Auto finance	1,371,176	8,238	1,170	—	1,490	1,382,073	
Home equity	611,259	5,149	458	—	7,487	624,353	
Other consumer	291,722	1,018	592	1,322	197	294,851	
Total consumer	10,717,229	24,216	2,283	1,446	67,654	10,812,828	
Total loans	\$ 28,652,257	\$ 26,256	\$ 7,861	\$ 1,728	\$ 111,467	\$ 28,799,569	

(a) Of the total nonaccrual loans, \$64 million, or 58%, were current with respect to payment at December 31, 2022.

(b) No interest income was recognized on nonaccrual loans for the year ended December 31, 2022. In addition, there were \$11 million of nonaccrual loans for which there was no related ACLL at December 31, 2022.

Loan Modifications and Troubled Debt Restructurings

Under ASU 2022-02, effective January 1, 2023, loan modifications are reported if concessions have been granted to borrowers that are experiencing financial difficulty. Information on these loan modifications originated after the effective date is presented according to the new accounting guidance. Reporting periods prior to the adoption of ASU 2022-02 present information on TDRs under the previous disclosure requirements. See Note 1 for the Corporation's accounting policy for loan modifications and TDRs.

The following tables show the composition of loan modifications made to borrowers experiencing financial difficulty by the loan portfolio and type of concessions granted during the twelve months ended December 31, 2023. Each of the types of concessions granted comprised less than 1% of their respective classes of loan portfolios at December 31, 2023.

(\$ in thousands)	Interest Rate Concession	
		Amortized Cost
Commercial and industrial	\$	306
Auto		255
Home equity		77
Other consumer		1,449
Total loans modified	\$	2,087

(\$ in thousands)	Term Extension	
	Amortized Cost	
Residential mortgage	\$	208
Home equity		25
Total loans modified	\$	233

(\$ in thousands)	Combination - Interest Rate Concession and Term Extension	
	Amortized Cost	
Residential mortgage	\$	865
Home equity		339
Total loans modified	\$	1,204

The following tables summarize, by loan portfolio, the financial effect of the Corporation's loan modifications on the modified loans as of December 31, 2023:

Interest Rate Concession	
Loan Type	Financial Effect, Weighted Average Contractual Interest Rate (Decrease) Increase ^(a)
Commercial and industrial	(19)%
Residential mortgage	1 %
Auto	(9)%
Home equity	— %
Other consumer	(21)%
Weighted average of total loans modified	(11)%

(a) Due to market conditions, some interest rate concessions on floating rate loans may involve an increase in rate that was lower in comparison to the rate of increase for floating rate loans not modified.

Term Extension	
Loan Type	Financial Effect, Weighted Average Term Increase ^(a)
Residential mortgage	65 months
Home equity	85 months
Weighted average of total loans modified	71 months

(a) During the twelve months ended December 31, 2023, term extensions changed the weighted average term on modified loans from 175 to 245 months.

The Corporation closely monitors the performance of loans that are modified to borrowers experiencing financial difficulty to understand the effectiveness of its modification efforts. The following table depicts the performance of loans that have been modified in the twelve months ended December 31, 2023:

(\$ in thousands)	Payment Status (Amortized Cost Basis)			
	Current	30-89 Days Past Due	90+ Days Past Due	Nonaccrual
Commercial and industrial	\$ 306	\$ —	\$ —	\$ —
Residential mortgage	405	—	—	668
Auto	218	36	—	—
Home equity	258	47	—	137
Other consumer	1,449	—	—	—
Total loans modified	\$ 2,636	\$ 83	\$ —	\$ 805

The following table provides the amortized cost of loan modifications by loan portfolio and type of concession that were modified in the previous twelve months and subsequently had a payment default, as of December 31, 2023:

(\$ in thousands)	Amortized Cost of Loan Modifications that Subsequently Defaulted		
	Interest Rate Concession	Term Extension	Combination Interest Rate Reduction and Term Extension
Residential mortgage	\$ —	\$ 208	\$ 248
Home equity	—	—	27
Total loans modified	\$ —	\$ 208	\$ 275

The following table presents nonaccrual and performing restructured loans by loan portfolio at December 31, 2022, prior to the adoption of ASU 2022-02:

(\$ in thousands)	December 31, 2022	
	Performing Restructured Loans	Nonaccrual Restructured Loans ^(a)
Commercial and industrial	\$ 12,453	\$ —
Commercial real estate - owner occupied	316	—
Commercial real estate - investor	128	2,074
Real estate construction	195	9
Residential mortgage	16,829	17,117
Home equity	2,148	927
Other consumer	798	—
Total restructured loans	\$ 32,868	\$ 20,127

(a) Nonaccrual restructured loans have been included within nonaccrual loans.

The following table provides the number of loans modified in a TDR by loan portfolio, the recorded investment, and unpaid principal balance at December 31, 2022:

(\$ in thousands)	December 31, 2022		
	Number of Loans	Recorded Investment ^(a)	Unpaid Principal Balance ^(b)
Commercial and industrial	2	\$ 281	\$ 281
Residential mortgage	55	10,557	10,777
Home equity	15	531	557
Total loans modified	72	\$ 11,370	\$ 11,616

(a) Represents post-modification outstanding recorded investment.

(b) Represents pre-modification outstanding recorded investment.

For the year ended December 31, 2022, restructured loan modifications of commercial loans primarily included maturity date extensions and payment schedule modifications. Restructured loan modifications of consumer loans for the year ended December 31, 2022 primarily included maturity date extensions, interest rate concessions, non-reaffirmed Chapter 7 bankruptcies, or a combination of these concessions.

The following table provides the number of loans modified during the previous twelve months which subsequently defaulted during the year ended December 31, 2022, and the recorded investment in these restructured loans at the time of default as of December 31, 2022:

(\$ in thousands)	December 31, 2022	
	Number of Loans	Recorded Investment
Residential mortgage	4	\$ 1,178

The nature and extent of the impairment of modified loans, including those which have experienced a subsequent payment default, are considered in the determination of an appropriate level of the ACLL.

Allowance for Credit Losses on Loans

The ACLL is comprised of the allowance for loan losses and the allowance for unfunded commitments. The level of the ACLL represents management's estimate of an amount appropriate to provide for expected lifetime credit losses in the loan portfolio at the balance sheet date. The expected lifetime credit losses are the product of multiplying the Corporation's estimates of probability of default, loss given default, and the individual loan level exposure at default on an undiscounted basis. A main factor in the determination of the ACLL is the economic forecast. The forecast the Corporation used for December 31, 2023 was the Moody's baseline scenario from November 2023, which was reviewed against the December 31, 2023 baseline scenario with no material updates made, over a 2 year reasonable and supportable period with straight-line reversion to historical losses over the second year of the period. See Note 1 for the Corporation's accounting policy on the ACLL. The allowance for unfunded commitments is maintained at a level believed by management to be sufficient to absorb expected lifetime losses related to unfunded credit facilities (including unfunded loan commitments and letters of credit). See Note 16 for additional information on the change in the allowance for unfunded commitments.

The following table presents a summary of the changes in the ACLL by portfolio segment for the year ended December 31, 2023:

(\$ in thousands)	Dec 31, 2022	Charge Offs	Recoveries	Net Charge Offs	Provision for Credit Losses	Dec 31, 2023	ACLL / Loans
Allowance for loan losses							
Commercial and industrial	\$ 119,076	\$ (45,687)	\$ 3,015	\$ (42,672)	\$ 51,859	\$ 128,263	
Commercial real estate — owner occupied	9,475	(25)	11	(15)	1,150	10,610	
Commercial and business lending	128,551	(45,713)	3,026	(42,687)	53,009	138,873	
Commercial real estate — investor	54,398	(252)	3,016	2,763	10,697	67,858	
Real estate construction	45,589	(25)	80	55	7,910	53,554	
Commercial real estate lending	99,986	(277)	3,095	2,819	18,607	121,412	
Total commercial	228,538	(45,989)	6,121	(39,868)	71,616	260,285	
Residential mortgage	38,298	(952)	541	(411)	(79)	37,808	
Auto finance	19,619	(5,950)	1,241	(4,709)	10,051	24,961	
Home equity	14,875	(424)	1,262	837	(310)	15,403	
Other consumer	11,390	(5,453)	978	(4,475)	5,723	12,638	
Total consumer	84,182	(12,779)	4,021	(8,758)	15,384	90,809	
Total loans	\$ 312,720	\$ (58,768)	\$ 10,142	\$ (48,626)	\$ 87,000	\$ 351,094	
Allowance for unfunded commitments							
Commercial and industrial	\$ 12,997	\$ —	\$ —	\$ —	\$ 321	\$ 13,319	
Commercial real estate — owner occupied	103	—	—	—	46	149	
Commercial and business lending	13,101	—	—	—	367	13,468	
Commercial real estate — investor	710	—	—	—	(230)	480	
Real estate construction	20,583	—	—	—	(3,558)	17,024	
Commercial real estate lending	21,292	—	—	—	(3,788)	17,504	
Total commercial	34,393	—	—	—	(3,421)	30,972	
Home equity	2,699	—	—	—	(70)	2,629	
Other consumer	1,683	—	—	—	(509)	1,174	
Total consumer	4,382	—	—	—	(579)	3,803	
Total loans	\$ 38,776	\$ —	\$ —	\$ —	\$ (4,000)	\$ 34,776	
Allowance for credit losses on loans							
Commercial and industrial	\$ 132,073	\$ (45,687)	\$ 3,015	\$ (42,672)	\$ 52,181	\$ 141,582	1.45 %
Commercial real estate — owner occupied	9,579	(25)	11	(15)	1,195	10,759	1.01 %
Commercial and business lending	141,652	(45,713)	3,026	(42,687)	53,376	152,341	1.41 %
Commercial real estate — investor	55,108	(252)	3,016	2,763	10,467	68,338	1.33 %
Real estate construction	66,171	(25)	80	55	4,351	70,578	3.11 %
Commercial real estate lending	121,279	(277)	3,095	2,819	14,819	138,916	1.88 %
Total commercial	262,931	(45,989)	6,121	(39,868)	68,195	291,257	1.60 %
Residential mortgage	38,298	(952)	541	(411)	(79)	37,808	0.48 %
Auto finance	19,619	(5,950)	1,241	(4,709)	10,051	24,961	1.11 %
Home equity	17,574	(424)	1,262	837	(380)	18,032	2.87 %
Other consumer	13,073	(5,453)	978	(4,475)	5,214	13,812	4.97 %
Total consumer	88,565	(12,779)	4,021	(8,758)	14,805	94,613	0.86 %
Total loans	\$ 351,496	\$ (58,768)	\$ 10,142	\$ (48,626)	\$ 83,000	\$ 385,870	1.32 %

The following table presents a summary of the changes in the ACLL by portfolio segment for the year ended December 31, 2022:

(\$ in thousands)	Dec 31, 2021	Charge Offs	Recoveries	Net Charge Offs	Provision for Credit Losses	Dec 31, 2022	ACLL / Loans
Allowance for loan losses							
Commercial and industrial	\$ 89,857	\$ (4,491)	\$ 5,282	\$ 791	\$ 28,428	\$ 119,076	
Commercial real estate — owner occupied	11,473	—	13	13	(2,011)	9,475	
Commercial and business lending	101,330	(4,491)	5,295	804	26,418	128,551	
Commercial real estate — investor	72,803	(50)	50	—	(18,405)	54,398	
Real estate construction	37,643	(48)	106	58	7,887	45,589	
Commercial real estate lending	110,446	(98)	156	58	(10,518)	99,986	
Total commercial	211,776	(4,588)	5,451	862	15,900	228,538	
Residential mortgage	40,787	(567)	908	341	(2,830)	38,298	
Auto finance	1,999	(1,041)	98	(943)	18,563	19,619	
Home equity	14,011	(587)	1,385	798	66	14,875	
Other consumer	11,441	(3,363)	1,010	(2,353)	2,301	11,390	
Total consumer	68,239	(5,558)	3,401	(2,157)	18,100	84,182	
Total loans	\$ 280,015	\$ (10,146)	\$ 8,852	\$ (1,294)	\$ 34,000	\$ 312,720	
Allowance for unfunded commitments							
Commercial and industrial	\$ 18,459	\$ —	\$ —	\$ —	\$ (5,462)	\$ 12,997	
Commercial real estate — owner occupied	208	—	—	—	(105)	103	
Commercial and business lending	18,667	—	—	—	(5,566)	13,101	
Commercial real estate — investor	936	—	—	—	(226)	710	
Real estate construction	15,586	—	—	—	4,997	20,583	
Commercial real estate lending	16,522	—	—	—	4,770	21,292	
Total commercial	35,189	—	—	—	(796)	34,393	
Home equity	2,592	—	—	—	107	2,699	
Other consumer	1,995	—	—	—	(311)	1,683	
Total consumer	4,587	—	—	—	(204)	4,382	
Total loans	\$ 39,776	\$ —	\$ —	\$ —	\$ (1,000)	\$ 38,776	
Allowance for credit losses on loans							
Commercial and industrial	\$ 108,316	\$ (4,491)	\$ 5,282	\$ 791	\$ 22,967	\$ 132,073	1.35 %
Commercial real estate — owner occupied	11,681	—	13	13	(2,115)	9,579	0.97 %
Commercial and business lending	119,997	(4,491)	5,295	804	20,852	141,652	1.32 %
Commercial real estate — investor	73,739	(50)	50	—	(18,631)	55,108	1.08 %
Real estate construction	53,229	(48)	106	58	12,884	66,171	3.07 %
Commercial real estate lending	126,968	(98)	156	58	(5,748)	121,279	1.68 %
Total commercial	246,965	(4,588)	5,451	862	15,104	262,931	1.46 %
Residential mortgage	40,787	(567)	908	341	(2,830)	38,298	0.45 %
Auto finance	1,999	(1,041)	98	(943)	18,563	19,619	1.42 %
Home equity	16,603	(587)	1,385	798	173	17,574	2.81 %
Other consumer	13,436	(3,363)	1,010	(2,353)	1,990	13,073	4.43 %
Total consumer	72,825	(5,558)	3,401	(2,157)	17,896	88,565	0.82 %
Total loans	\$ 319,791	\$ (10,146)	\$ 8,852	\$ (1,294)	\$ 33,000	\$ 351,496	1.22 %

Note 5 Goodwill and Other Intangible Assets

Goodwill

Goodwill is not amortized but is instead subject to impairment tests on at least an annual basis, and more frequently if an event occurs or circumstances change that would more likely than not reduce the fair value of a reporting unit below its carrying amount. See Note 1 for the Corporation's accounting policy for goodwill and other intangible assets.

The Corporation conducted its most recent annual impairment testing in May 2023, utilizing a qualitative assessment. Factors that management considered in this assessment included macroeconomic conditions, industry and market considerations,

overall financial performance of the Corporation and each reporting unit (both current and projected), changes in management strategy, and changes in the composition or carrying amount of net assets. In addition, management considered the changes in both the Corporation's common stock price and in the KBW Nasdaq Regional Banking Index (KRX), as well as the Corporation's earnings per common share trend over the past year. Based on these assessments, management concluded that it is more likely than not that the estimated fair value exceeded the carrying value (including goodwill) for each reporting unit. Therefore, a step one quantitative analysis was not required. There have been no events since the May 2023 impairment test that have changed the Corporation's impairment assessment conclusion. There were no impairment charges recorded in 2023, 2022, or 2021.

The Corporation had goodwill of \$1.1 billion at both December 31, 2023 and 2022.

Other Intangible Assets

The Corporation has CDIs and historically had other intangible assets, both of which are amortized. For CDIs and other intangibles, changes in the gross carrying amount, accumulated amortization, and net book value were as follows:

(\$ in thousands)	2023		2022		2021	
Core deposit intangibles						
Gross carrying amount at the beginning of the year	\$	88,109	\$	88,109	\$	88,109
Accumulated amortization		(47,638)		(38,827)		(30,016)
Net book value	\$	40,471	\$	49,282	\$	58,093
Amortization during the year	\$	8,811	\$	8,811	\$	8,811
Other intangibles						
Gross carrying amount at the beginning of the year	\$	—	\$	—	\$	2,000
Reductions due to sale		—		—		(1,317)
Accumulated amortization		—		—		(683)
Net book value	\$	—	\$	—	\$	—
Amortization during the year	\$	—	\$	—	\$	33

Mortgage Servicing Rights

The Corporation sells residential mortgage loans in the secondary market and typically retains the right to service the loans sold. On January 1, 2022, the Corporation made the irrevocable election to account for its MSR's under the fair value measurement method, with any change in fair value being recognized through earnings in mortgage banking, net on the consolidated statements of income. See Note 1 for the Corporation's accounting policy for MSR's. See Note 16 for a discussion of the recourse provisions on sold residential mortgage loans. See Note 18 which further discusses fair value measurement relative to the MSR's asset.

A summary of changes in the balance of the MSR's asset under the fair value measurement method for the years ended December 31, 2023 and 2022 is as follows:

(\$ in thousands)	2023		2022	
Mortgage servicing rights				
Mortgage servicing rights at beginning of period	\$	77,351	\$	54,862
Cumulative effect of accounting methodology change		N/A		2,296
Balance at beginning of period, adjusted	\$	77,351	\$	57,158
Additions		3,564		7,279
Paydowns		(7,185)		(9,350)
Valuation:				
Change in fair value model assumptions		8,881		5,715
Changes in fair value of asset		1,778		16,549
Mortgage servicing rights at end of period	\$	84,390	\$	77,351
Portfolio of residential mortgage loans serviced for others ("servicing portfolio") ^(a)	\$	7,364,492	\$	6,711,820
Mortgage servicing rights to servicing portfolio ^(a)		1.15 %		1.15 %

(a) During the fourth quarter of 2023, the Corporation transferred \$969 million of residential mortgages into held for sale and subsequently sold them for \$844 million. After sale, the servicing has been retained for a short period until full servicing can be transferred to the purchaser.

Prior to January 1, 2022, the Corporation accounted for its MSR's under the amortization methodology. See Note 1 for the Corporation's accounting policy for MSR's when they were still under the amortization methodology.

A summary of changes in the balance of the MSRs asset and the MSRs valuation allowance under the amortization methodology for the year ended December 31, 2021 is as follows:

(\$ in thousands)	2021
Mortgage servicing rights	
Mortgage servicing rights at beginning of year	\$ 59,967
Additions	16,151
Amortization	(19,436)
Mortgage servicing rights at end of year	<u>\$ 56,682</u>
Valuation allowance at beginning of year	(18,006)
(Additions) recoveries, net	16,186
Valuation allowance at end of year	<u>(1,820)</u>
Mortgage servicing rights, net	<u>\$ 54,862</u>
Fair value of mortgage servicing rights	\$ 57,259
Portfolio of residential mortgage loans serviced for others (“servicing portfolio”)	6,994,834
Mortgage servicing rights, net to servicing portfolio	0.78 %
Mortgage servicing rights expense ^(a)	\$ 3,250

(a) Includes the amortization of mortgage servicing rights and additions / recoveries to the valuation allowance of mortgage servicing rights, and is a component of mortgage banking, net on the consolidated statements of income.

The projections of amortization expense for CDIs and decay for MSRs are based on existing asset balances, the current interest rate environment, and prepayment speeds as of December 31, 2023. The actual expense the Corporation recognizes in any given period may be significantly different depending upon acquisition or sale activities, changes in interest rates, prepayment speeds, market conditions, regulatory requirements, and events or circumstances that indicate the carrying amount of an asset may not be recoverable. The following table shows the estimated future amortization expense for CDIs and decay for MSRs:

(\$ in thousands)	Core Deposit Intangibles	Mortgage Servicing Rights
Year ending December 31,		
2024	\$ 8,811	\$ 10,555
2025	8,811	11,404
2026	8,811	10,710
2027	8,811	9,922
2028	3,485	9,005
Beyond 2028	1,742	32,794
Total estimated amortization expense and MSRs decay ^(a)	<u>\$ 40,471</u>	<u>\$ 84,390</u>

(a) Represents the decrease in value due to passage of time, including the impact from both regularly scheduled principal payments and partial loan paydowns.

Note 6 Premises and Equipment

See Note 1 for the Corporation’s accounting policy for premises and equipment. A summary of premises and equipment at December 31, 2023 and 2022 is as follows:

(\$ in thousands)	Estimated Useful Lives	2023		2022	
		Cost	Accumulated Depreciation	Net Book Value	Net Book Value
Land	—	\$ 63,984	\$ —	\$ 63,984	\$ 65,516
Land improvements	3 – 20 years	21,659	10,409	11,250	10,074
Buildings and improvements	5 – 40 years	399,575	187,572	212,004	213,496
Computers and related equipment	4 – 8 years	57,265	46,420	10,845	12,606
Furniture, fixtures and other equipment	3 – 20 years	124,108	88,481	35,627	33,110
Operating leases	—	43,782	19,070	24,712	25,617
Leasehold improvements	2 – 20 years	39,607	25,051	14,556	16,487
Total premises and equipment		<u>\$ 749,981</u>	<u>\$ 377,003</u>	<u>\$ 372,978</u>	<u>\$ 376,906</u>

Depreciation and amortization of premises and equipment totaled \$30 million for 2023, \$31 million for 2022, and \$33 million for 2021.

Note 7 Leases

The Corporation has operating leases for retail and corporate offices, land, and equipment. The Corporation also has a finance lease for retail and corporate offices.

These leases have original terms of 1 year or longer with remaining maturities up to 39 years, some of which include options to extend the lease term. An analysis of the lease options has been completed and any purchase options or optional periods that the Corporation is reasonably likely to extend have been included in the capitalization.

The discount rate used to capitalize the operating leases is the Corporation's FHLB borrowing rate on the date of lease commencement. When determining the rate to discount specific lease obligations, the repayment period and term are considered.

Operating and finance lease costs and cash flows resulting from these leases are presented below:

(\$ in thousands)	Twelve Months Ended December 31,		
	2023	2022	2021
Operating lease costs	\$ 6,281	\$ 6,812	\$ 8,712
Finance lease costs	92	119	107
Operating lease cash flows	7,171	8,440	11,183
Finance lease cash flows	92	125	137

The lease classifications on the consolidated balance sheets were as follows:

(\$ in thousands)	Consolidated Balance Sheets Category	December 31, 2023		December 31, 2022	
Operating lease right-of-use asset	Premises and equipment	\$ 24,712	\$ 25,617		
Finance lease right-of-use asset	Other assets	368	455		
Operating lease liability	Accrued expenses and other liabilities	27,311	28,357		
Finance lease liability	Other long-term funding	383	469		

The lease payment obligations, weighted-average remaining lease term, and weighted-average original discount rate were as follows:

(\$ in thousands)	December 31, 2023			December 31, 2022		
	Lease payments	Weighted-average lease term (in years)	Weighted-average discount rate	Lease payments	Weighted-average lease term (in years)	Weighted-average discount rate
Operating leases						
Retail and corporate offices	\$ 25,729	5.76	3.12 %	\$ 26,140	5.92	2.62 %
Land	4,050	6.98	3.48 %	4,766	7.59	3.14 %
Equipment	408	2.50	4.62 %	—	0.00	— %
Total operating leases	\$ 30,187	5.88	3.19 %	\$ 30,906	6.17	2.70 %
Finance leases						
Retail and corporate offices	\$ 394	4.25	1.32 %	\$ 485	5.25	1.32 %
Total finance leases	\$ 394	4.25	1.32 %	\$ 485	5.25	1.32 %

Contractual lease payment obligations for each of the next five years and thereafter, in addition to a reconciliation to the Corporation's lease liability, were as follows:

(\$ in thousands)	Operating Leases		Finance Leases		Total Leases	
Twelve months ending December 31, 2024	\$	6,459	\$	93	\$	6,552
2025		5,628		93		5,721
2026		5,043		93		5,135
2027		4,373		93		4,465
2028		3,428		23		3,451
Beyond 2028		5,257		—		5,257
Total lease payments	\$	30,187	\$	394	\$	30,581
Less: interest		2,877		11		2,887
Present value of lease payments	\$	27,311	\$	383	\$	27,694

At December 31, 2023 and 2022, additional operating leases, primarily retail and corporate offices, that had not yet commenced totaled \$3 million and \$13 million, respectively. The leases that had not yet commenced as of December 31, 2023 will commence between January 2024 and April 2025 with lease terms of 1 year to 7 years.

The Corporation conducts a portion of its business through certain facilities and equipment under non-cancelable operating leases. The Corporation also leases a subdivision of some of its facilities and receives rental income from such lease agreements. The approximate minimum annual rental payments and rental receipts under non-cancelable agreements and leases are as follows:

(\$ in thousands)	Payments		Receipts	
2024	\$	6,352	\$	3,522
2025		5,436		3,854
2026		5,117		3,539
2027		4,447		3,146
2028		3,448		2,338
Beyond 2028		5,447		12,446
Total	\$	30,247	\$	28,843

Total rental expense from leases, net of lease income, totaled \$2 million in 2023, \$3 million in 2022, and \$5 million in 2021.

Note 8 Deposits

The distribution of deposits at December 31, 2023 and 2022 are as follows:

(\$ in thousands)	2023		2022	
Noninterest-bearing demand	\$	6,119,956	\$	7,760,811
Savings		4,835,701		4,604,848
Interest-bearing demand		8,843,967		7,100,727
Money market		6,330,453		8,239,610
Brokered CDs		4,447,479		541,916
Other time deposits		2,868,494		1,388,242
Total deposits	\$	33,446,049	\$	29,636,154

Time deposits in excess of \$250,000 were \$523 million and \$282 million at December 31, 2023 and 2022, respectively.

Aggregate annual maturities of all time deposits at December 31, 2023, are as follows:

Maturities During Year Ending December 31,	(\$ in thousands)	
2024	\$	7,100,729
2025		175,549
2026		20,680
2027		11,694
2028		7,315
Thereafter		5
Total	\$	7,315,973

Note 9 Short and Long-Term Funding

The following table presents the components of short-term funding (funding with original contractual maturities of one year or less), and long-term funding (funding with original contractual maturities greater than one year):

(\$ in thousands)	December 31, 2023		December 31, 2022	
Short-term funding				
Federal funds purchased	\$	220,160	\$	344,170
Securities sold under agreements to repurchase		106,620		240,969
Federal funds purchased and securities sold under agreements to repurchase		326,780		585,139
Commercial paper		—		20,798
Total short-term funding	\$	326,780	\$	605,937
Long-term funding				
Corporation subordinated notes, at par	\$	550,000	\$	250,000
Discount and capitalized costs		(7,748)		(544)
Subordinated debt fair value hedge ^(a)		(1,366)		(1,855)
Finance leases		383		469
Total long-term funding	\$	541,269	\$	248,071
Total short and long-term funding, excluding FHLB advances	\$	868,049	\$	854,007
FHLB advances				
Short-term FHLB advances	\$	740,000	\$	3,125,000
Long-term FHLB advances		1,209,907		1,209,170
FHLB advances fair value hedge ^(a)		(9,713)		(14,308)
Total FHLB advances	\$	1,940,194	\$	4,319,861
Total short and long-term funding	\$	2,808,243	\$	5,173,869

(a) For additional information on the fair value hedges, see Note 14.

Securities Sold Under Agreement to Repurchase

The Corporation enters into agreements under which it sells securities subject to an obligation to repurchase the same or similar securities. Under these arrangements, the Corporation may transfer legal control over the assets but still retain effective control through an agreement that both entitles and obligates the Corporation to repurchase the assets. The obligation to repurchase the securities is reflected as a liability on the Corporation's consolidated balance sheets, while the securities underlying the repurchase agreements remain in the respective investment securities asset accounts (i.e., there is no offsetting or netting of the investment securities assets with the repurchase agreement liabilities).

The Corporation utilizes repurchase agreements to facilitate the needs of its customers. The fair value of securities pledged to secure repurchase agreements may decline. At December 31, 2023, the Corporation had pledged securities valued at 191% of the gross outstanding balance of repurchase agreements to manage this risk.

The remaining contractual maturity of the securities sold under agreements to repurchase on the consolidated balance sheets as of December 31, 2023 and 2022 are presented in the following table:

(\$ in thousands)	Overnight and Continuous			
	December 31, 2023	December 31, 2022		
Repurchase agreements				
Agency mortgage-related securities	\$	106,620	\$	240,969

Long-Term Funding

Subordinated Notes

In November 2014, the Corporation issued \$250 million of 10-year subordinated notes, due January 2025, and callable October 2024. The subordinated notes have a fixed coupon interest rate of 4.25% and were issued at a discount.

In February 2023, the Corporation issued \$300 million of 10-year subordinated notes, due March 1, 2033 and redeemable (i) on the reset date of March 1, 2028 and any interest payment date thereafter, (ii) at any time on or after the three month period prior to the maturity date, and (iii) upon the occurrence of a Regulatory Capital Treatment Event (as defined in the Global Note). The subordinated notes have a fixed coupon interest rate of 6.625% until the reset date, after which the rate will be equal to the Five-Year U.S. Treasury Rate as of the reset date plus 2.812% per annum. The notes were issued at a discount.

Finance Leases

Finance leases are used in conjunction with branch operations. See Note 7 for additional disclosure regarding the Corporation's leases.

FHLB Advances

Under agreements with the FHLB of Chicago, FHLB advances are secured by pledging qualifying collateral of the subsidiary bank (such as residential mortgage, residential mortgage loans held for sale, home equity, CRE and investment securities). At December 31, 2023, the Corporation had \$10.5 billion of total collateral capacity, primarily supported by pledged consumer and CRE loans and investment securities. At December 31, 2023, the FHLB advances had maturity or call dates ranging from 2024 through 2029, and had a weighted average interest rate of 4.93%, compared to 4.06% at December 31, 2022. The Corporation prepaid \$400 million in long-term FHLB advances during the first quarter of 2022 with no prepayment fee.

The table below summarizes the expected maturities of the Corporation's long-term funding at December 31, 2023:

(\$ in thousands)	Long Term Funding
Year	
2024	\$ 248,884
2025	394,797
2026	604,540
2027	671
2028	198,966
Beyond 2028	293,605
Total long-term funding	\$ 1,741,463

Note 10 Stockholders' Equity

Preferred Equity: In June 2015, the Corporation issued 2.6 million depositary shares, each representing a 1/40th interest in a share of the Corporation's 6.125% Non-Cumulative Perpetual Preferred Stock, Series C, liquidation preference \$1,000 per share. On June 15, 2021, the Corporation redeemed all remaining Series C depositary shares for \$65 million.

In September 2016, the Corporation issued 4.0 million depositary shares, each representing a 1/40th interest in a share of the Corporation's 5.375% Non-Cumulative Perpetual Preferred Stock, Series D, liquidation preference \$1,000 per share. On July 25, 2017, the Board of Directors authorized the repurchase of up to \$15 million of depositary shares of the Corporation's Series D Preferred Stock. During 2018, the Corporation repurchased approximately 22,000 depositary shares for \$1 million. On September 15, 2021, the Corporation redeemed all remaining Series D depositary shares for \$99 million.

In September 2018, the Corporation issued 4.0 million depositary shares, each representing a 1/40th interest in a share of the Corporation's 5.875% Non-Cumulative Perpetual Preferred Stock, Series E, liquidation preference \$1,000 per share. Dividends on the Series E Preferred Stock are payable quarterly in arrears only when, as and if declared by the Board of Directors at a rate per annum equal to 5.875%. Shares of the Series E Preferred Stock have priority over the Corporation's common stock with regard to the payment of dividends and distributions upon liquidation, dissolution or winding up. As such, the Corporation may not pay dividends on or repurchase, redeem, or otherwise acquire for consideration shares of its common stock unless dividends for the Series E Preferred Stock have been declared for that period, and sufficient funds have been set aside to make payment. The Series E Preferred Stock may be redeemed by the Corporation at its option (i) either in whole or in part, from time to time, on any dividend payment date on or after the dividend payment date occurring on December 15, 2023, or (ii) in whole but not in part, at any time within 90 days following certain regulatory capital treatment events, in each case at a redemption price of \$1,000 per share (equivalent to \$25 per depositary share), plus any applicable dividends. Except in certain limited circumstances, the Series E Preferred Stock does not have any voting rights.

In June 2020, the Corporation issued 4.0 million depositary shares, each representing a 1/40th interest in a share of the Corporation's 5.625% Non-Cumulative Perpetual Preferred Stock, Series F, liquidation preference \$1,000 per share. Dividends on the Series F Preferred Stock are payable quarterly in arrears only when, as and if declared by the Board of Directors at a rate per annum equal to 5.625%. Shares of the Series F Preferred Stock have priority over the Corporation's common stock with regard to the payment of dividends and distributions upon liquidation, dissolution or winding up. As such, the Corporation may not pay dividends on or repurchase, redeem, or otherwise acquire for consideration shares of its common stock unless dividends for the Series F Preferred Stock have been declared for that period, and sufficient funds have been set aside to make payment. The Series F Preferred Stock may be redeemed by the Corporation at its option (i) either in whole or in part, from time to time, on any dividend payment date on or after the dividend payment date occurring on September 15, 2025, or (ii) in whole but not

in part, at any time within 90 days following certain regulatory capital treatment events, in each case at a redemption price of \$1,000 per share (equivalent to \$25 per depositary share), plus any applicable dividends. Except in certain limited circumstances, the Series F Preferred Stock does not have any voting rights.

Subsidiary Equity: At December 31, 2023, subsidiary equity equaled \$4.1 billion. See Note 19 for additional information on regulatory requirements for the Bank.

Common Stock Repurchases: In 2023, the Board of Directors did not approve any additional authorizations for the repurchase of the Corporation's common stock. In 2021, the Board of Directors approved additional authorizations for the repurchase of up to \$100 million of the Corporation's common stock. During both 2023 and 2022, the Corporation did not repurchase any shares under the share repurchase program.

As of December 31, 2023, \$80 million remained available to repurchase shares of common stock under previously approved Board of Director authorizations. Any repurchase of shares under this authorization will be based on market and investment opportunities, capital levels, growth prospects, and any necessary regulatory approvals and other regulatory constraints. Such repurchases may occur from time to time in open market purchases, block transactions, private transactions, accelerated share repurchase programs, or similar facilities.

The Corporation also repurchased shares in satisfaction of minimum tax withholding obligations in connection with settlements of equity compensation totaling \$7 million (297,564 shares at an average cost per common share of \$22.16) during 2023, compared to \$6 million (267,605 shares at an average cost per common share of \$24.22) during 2022.

Other Comprehensive Income (Loss): See the Consolidated Statements of Comprehensive Income for a summary of activity in other comprehensive income (loss) and see Note 22 for a summary of the components of accumulated other comprehensive income (loss).

Note 11 Stock-Based Compensation

Stock-Based Compensation Plan

In February 2020, the Board of Directors, with subsequent approval of the Corporation's shareholders, approved the adoption of the 2020 Incentive Compensation Plan. All remaining shares available for grant under the 2017 Incentive Compensation Plan were rolled into the 2020 Plan. As of December 31, 2023, approximately 7.2 million shares remained available for grant under the 2020 Plan.

Under the 2020 Plan, options are generally exercisable up to ten years from the date of grant, have an exercise price that is equal to the closing price of the Corporation's stock on the grant date, and vest ratably over 4 years.

The Corporation also issues restricted stock awards under the 2020 Plan. The shares of restricted stock are restricted as to transfer, but are not restricted as to dividend payment or voting rights. Restricted stock units receive dividend equivalents but do not have voting rights. The transfer restrictions lapse over three years or four years, depending upon whether the awards are performance-based or service-based. Performance-based awards are based on total shareholder return, return on capital metrics, and continued employment or meeting the requirements for retirement, and service-based awards are contingent upon continued employment or meeting the requirements for retirement. Performance-based restricted stock awards granted during 2022 and 2023 will cliff-vest after the three year performance period has ended. Service-based restricted stock awards granted during 2022 and 2023 will generally vest ratably over a period of four years.

The 2020 Plan provides that restricted stock awards and stock options will immediately become fully vested upon retirement from the Corporation of retirement eligible colleagues. See Note 1 for the Corporation's accounting policy for stock based compensation.

Accounting for Stock-Based Compensation

The fair values of stock options and restricted stock awards are amortized as compensation expense on a straight-line basis over the vesting period of the grants. For colleagues who meet the definition of retirement eligible under the 2017 Plan and the 2020 Plan, expenses related to stock options and restricted stock awards are fully recognized on the date the colleague meets the definition of normal or early retirement. Compensation expense recognized is included in personnel expense on the consolidated statements of income.

A summary of the Corporation's stock option activity for the year ended December 31, 2023 is presented below:

Stock Options	Shares ^(a)	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term	Aggregate Intrinsic Value ^(a)
Outstanding at December 31, 2022	3,994	\$ 21.06	5.11 years	\$ 10,525
Exercised	178	17.26		
Forfeited or expired	24	19.54		
Outstanding at December 31, 2023	<u>3,792</u>	\$ 21.25	4.26 years	\$ 5,834
Options exercisable at December 31, 2023	<u>3,583</u>	\$ 21.44	4.15 years	\$ 5,139

(a) In thousands

Intrinsic value represents the amount by which the fair market value of the underlying stock exceeds the exercise price of the stock option. For the years ended December 31, 2023, 2022, and 2021, the intrinsic value of stock options exercised was approximately \$518,000, \$4 million, and \$9 million, respectively. The total fair value of stock options that vested was approximately \$943,000 for the year ended December 31, 2023, \$2 million for the year ended December 31, 2022, and \$4 million for the year ended December 31, 2021.

For the years ended December 31, 2023, 2022, and 2021, the Corporation recognized compensation expense of approximately \$333,000, approximately \$710,000, and \$1 million, respectively, for the vesting of stock options. Compensation expense for 2023 related to the accelerated vesting of stock options granted to retirement eligible colleagues was immaterial. At December 31, 2023, the Corporation had approximately \$32,000 of unrecognized compensation expense related to stock options that is expected to be recognized over the remaining requisite service periods that extend predominantly through the first quarter of 2024.

The following table summarizes information about the Corporation's restricted stock activity for the year ended December 31, 2023:

Restricted Stock	Shares ^(a)	Weighted Average Grant Date Fair Value
Outstanding at December 31, 2022	2,303	\$ 20.81
Granted	880	22.10
Vested	778	21.02
Forfeited	55	21.90
Outstanding at December 31, 2023	<u>2,349</u>	\$ 21.20

(a) In thousands

The Corporation amortizes the expense related to restricted stock awards as compensation expense over the vesting period specified in the grant's award agreement. Expense for restricted stock awards of \$17 million was recorded for the year ended December 31, 2023, \$16 million for the year ended December 31, 2022 and \$15 million for the year ended December 31, 2021. Included in compensation expense for 2023 was \$3 million of expense for the accelerated vesting of restricted stock awards granted to retirement eligible colleagues. The Corporation had \$20 million of unrecognized compensation costs related to restricted stock awards at December 31, 2023 that are expected to be recognized over the remaining requisite service periods that extend predominantly through the first quarter of 2027.

The Corporation has the ability to issue shares from treasury or new shares upon the exercise of stock options or the granting of restricted stock awards. As described in Note 10, the Board of Directors has authorized management to repurchase shares of the Corporation's common stock in the market, to be made available for issuance in connection with the Corporation's employee incentive plans and for other corporate purposes. The repurchase of shares, if any, will be based on market and investment opportunities, capital levels, growth prospects, and regulatory constraints. Such repurchases may occur from time to time in open market purchases, block transactions, private transactions, accelerated share repurchase programs, or similar facilities.

Note 12 Retirement Plans

The Corporation has a noncontributory defined benefit RAP, covering substantially all employees who meet participation requirements. The benefits are based primarily on years of service and the employee's compensation paid. Employees of acquired entities generally participate in the RAP after consummation of the business combinations. Any retirement plans of acquired entities are typically merged into the RAP after completion of the mergers, and credit is usually given to employees for years of service at the acquired institution for vesting and eligibility purposes.

The Corporation also provides legacy healthcare access to a limited group of retired employees from a previous acquisition in the Postretirement Plan. There are no other active retiree healthcare plans.

The funded status and amounts recognized on the 2023 and 2022 consolidated balance sheets, as measured on December 31, 2023 and 2022, respectively, for the RAP and Postretirement Plan were as follows:

(\$ in thousands)	RAP 2023	Postretirement Plan 2023	RAP 2022	Postretirement Plan 2022
Change in fair value of plan assets				
Fair value of plan assets at beginning of year	\$ 407,405	\$ —	\$ 497,796	\$ —
Actual return on plan assets	60,565	—	(74,140)	—
Employer contributions	—	171	—	193
Gross benefits paid	(14,513)	(171)	(16,252)	(193)
Fair value of plan assets at end of year ^(a)	<u>\$ 453,457</u>	<u>\$ —</u>	<u>\$ 407,405</u>	<u>\$ —</u>
Change in benefit obligation				
Net benefit obligation at beginning of year	\$ 208,315	\$ 1,530	\$ 261,321	\$ 1,975
Service cost	3,189	—	3,670	—
Interest cost	10,887	78	7,152	53
Actuarial (gain) loss	3,475	(12)	(47,577)	(305)
Gross benefits paid	(14,513)	(171)	(16,252)	(193)
Net benefit obligation at end of year ^(a)	<u>\$ 211,353</u>	<u>\$ 1,425</u>	<u>\$ 208,315</u>	<u>\$ 1,530</u>
Funded (unfunded) status	<u>\$ 242,104</u>	<u>\$ (1,425)</u>	<u>\$ 199,089</u>	<u>\$ (1,530)</u>
Noncurrent assets	\$ 242,104	\$ —	\$ 199,089	\$ —
Current liabilities	—	(158)	—	(164)
Noncurrent liabilities	—	(1,267)	—	(1,366)
Asset (liability) recognized on the consolidated balance sheets	<u>\$ 242,104</u>	<u>\$ (1,425)</u>	<u>\$ 199,089</u>	<u>\$ (1,530)</u>

(a) The fair value of the plan assets represented 215% and 196% of the net benefit obligation of the pension plan at December 31, 2023 and 2022, respectively.

Amounts recognized in accumulated other comprehensive (income) loss, net of tax, as of December 31, 2023 and 2022 were as follows:

(\$ in thousands)	RAP 2023	Postretirement Plan 2023	RAP 2022	Postretirement Plan 2022
Prior service cost	\$ (884)	\$ (308)	\$ (1,064)	\$ (362)
Net actuarial loss (gain)	27,089	(301)	44,919	(316)
Amount not yet recognized in net periodic benefit cost, but recognized in accumulated other comprehensive (income) loss	<u>\$ 26,204</u>	<u>\$ (609)</u>	<u>\$ 43,855</u>	<u>\$ (678)</u>

Other changes in plan assets and benefit obligations recognized in OCI, net of tax, in 2023 and 2022 were as follows:

(\$ in thousands)	RAP 2023	Postretirement Plan 2023	RAP 2022	Postretirement Plan 2022
Net actuarial gain (loss)	\$ 24,228	\$ 12	\$ (53,466)	\$ 305
Amortization of prior service cost	(250)	(75)	(250)	(75)
Amortization of actuarial loss (gain)	—	(29)	658	—
Income tax benefit (expense)	(6,327)	23	13,553	(58)
Total recognized in OCI	<u>\$ 17,650</u>	<u>\$ (68)</u>	<u>\$ (39,504)</u>	<u>\$ 171</u>

The components of net periodic pension cost for the RAP for 2023, 2022, and 2021 were as follows:

(\$ in thousands)	2023		2022		2021	
Service cost	\$	3,189	\$	3,670	\$	7,779
Interest cost		10,887		7,152		6,570
Expected return on plan assets		(32,862)		(26,903)		(25,675)
Amortization of prior service cost		(250)		(250)		(73)
Amortization of actuarial loss		—		658		4,594
Recognized settlement loss		—		—		434
Total net periodic pension (income)	\$	(19,037)	\$	(15,673)	\$	(6,370)

The components of net periodic benefit cost for the Postretirement Plan for 2023, 2022, and 2021 were as follows:

(\$ in thousands)	2023		2022		2021	
Interest cost	\$	78	\$	53	\$	52
Amortization of prior service cost		(75)		(75)		(75)
Amortization of actuarial (gain)		(29)		—		—
Total net periodic benefit (income)	\$	(26)	\$	(22)	\$	(24)

The components of net periodic pension cost and net periodic benefit cost, other than the service cost component, are included in the line item other of noninterest expense on the consolidated statements of income. The service cost components are included in personnel on the consolidated statements of income.

	RAP 2023	Postretirement Plan 2023	RAP 2022	Postretirement Plan 2022
Weighted average assumptions used to determine benefit obligations				
Discount rate	5.40 %	5.40 %	5.40 %	5.40 %
Rate of increase in compensation levels	2.50 %	N/A	2.50 %	N/A
Interest crediting rate	3.77 %	N/A	3.46 %	N/A
Weighted average assumptions used to determine net periodic benefit costs				
Discount rate	5.40 %	5.40 %	2.80 %	2.80 %
Rate of increase in compensation levels	2.50 %	N/A	2.50 %	N/A
Expected long-term rate of return on plan assets	7.30 %	N/A	6.00 %	N/A

The expected long-term (more than 20 years) rate of return was estimated using market benchmarks for equities and bonds applied to the RAP's anticipated asset allocations. The expected return on equities was computed utilizing a valuation framework, which projected future returns based on current equity valuations rather than historical returns. The actual rates of return for the RAP assets were 15.80% and (15.03)% for 2023 and 2022, respectively.

The RAP's investments are exposed to various risks, such as interest rate, market, and credit risks. Due to the level of risks associated with certain investments and the level of uncertainty related to changes in the value of the investments, it is at least reasonably possible that changes in risks in the near term could materially affect the amounts reported. The investment objective for the RAP is to ensure there are sufficient assets to pay pension obligations when they come due while mitigating risks and providing prudent governance. The RAP has a diversified portfolio designed to provide liquidity, current income, and growth of income and principal, with anticipated asset allocation ranges of: equity securities 50 to 70%, fixed-income securities 30 to 50%, alternative securities 0 to 15%, and other cash equivalents 0 to 10%. Based on changes in economic and market conditions, the Corporation could be outside of the allocation ranges for brief periods of time. The asset allocation for the RAP as of the December 31, 2023 and 2022 measurement dates, respectively, by asset category were as follows:

Asset Category	2023	2022
Equity securities	54 %	53 %
Fixed-income securities	34 %	35 %
Group annuity contracts	10 %	10 %
Other	2 %	2 %
Total	100 %	100 %

The RAP assets include cash equivalents, such as money market accounts, mutual funds, common / collective trust funds (which include investments in equity and bond securities), and a group annuity contract. Money market accounts are stated at cost plus accrued interest, mutual funds are valued at quoted market prices, investments in common / collective trust funds are

valued at the amount at which units in the funds can be withdrawn, and the group annuity contract is valued at fair value by discounting the related cash flows based on current yields of similar instruments with comparable durations and considering the credit worthiness of the issuer.

Based on these inputs, the following table summarizes the fair value of the RAP's investments as of December 31, 2023 and 2022:

(\$ in thousands)	December 31, 2023	Fair Value Measurements Using		
		Level 1	Level 2	Level 3
RAP investments				
Money market account	\$ 10,040	\$ 10,040	\$ —	\$ —
Common /collective trust funds	164,891	164,891	—	—
Mutual funds	234,840	234,840	—	—
Group annuity contracts	43,687	—	—	43,687
Total RAP investments	\$ 453,457	\$ 409,771	\$ —	\$ 43,687

(\$ in thousands)	December 31, 2022	Fair Value Measurements Using		
		Level 1	Level 2	Level 3
RAP investments				
Money market account	\$ 6,628	\$ 6,628	\$ —	\$ —
Common /collective trust funds	155,654	155,654	—	—
Mutual funds	204,184	204,184	—	—
Group annuity contracts	40,939	—	—	40,939
Total RAP investments	\$ 407,405	\$ 366,466	\$ —	\$ 40,939

The following presents a summary of the changes in the fair value of the RAP's Level 3 asset during the periods indicated.

Fair Value Reconciliation of Level 3 RAP Investments	2023	2022
Fair value of group annuity contract at beginning of period	\$ 40,939	\$ 49,213
Return on plan assets	5,313	(5,671)
Benefits paid	(2,565)	(2,604)
Fair value of group annuity contract at end of period	\$ 43,687	\$ 40,939

The Corporation's funding policy is to pay at least the minimum amount required by federal law and regulations, with consideration given to the maximum funding amounts allowed. The Corporation regularly reviews the funding of its RAP. There were no contributions to the RAP during 2023 and 2022.

The projected benefit payments were calculated using the same assumptions as those used to calculate the benefit obligations listed above. The projected benefit payments for the RAP and Postretirement Plan at December 31, 2023, reflecting expected future services, were as follows:

(\$ in thousands)	RAP	Postretirement Plan
Estimated future benefit payments		
2024	\$ 20,198	\$ 163
2025	22,320	158
2026	21,163	152
2027	19,804	146
2028	19,842	140
2029-2033	83,328	595

The health care trend rate is an assumption as to how much the Postretirement Plan's medical costs will change each year in the future. There are no remaining participants under age 65 in the Postretirement Plan. The actual change in 2023 health care premium rates for post-65 coverage was an increase of 4.00%. The health care trend rate assumption for post-65 coverage assumes a 5.00% rate of increase for 2024 and future years.

The Corporation also has a 401(k) and Employee Stock Ownership Plan (the “401(k) plan”). The Corporation’s contribution is determined by the Compensation and Benefits Committee of the Board of Directors. Total expenses related to contributions to the 401(k) plan were \$16 million, \$15 million, and \$13 million for 2023, 2022, and 2021, respectively.

Note 13 Income Taxes

The current and deferred amounts of income tax expense (benefit) were as follows:

(\$ in thousands)	Years Ended December 31,		
	2023	2022	2021
Current			
Federal	\$ 29,319	\$ 58,982	\$ 57,916
State	5,283	22,092	12,035
Total current	34,602	81,074	69,951
Deferred			
Federal	(8,371)	12,531	9,115
State	(3,135)	(97)	6,247
Total deferred	(11,506)	12,434	15,362
Total income tax expense	\$ 23,097	\$ 93,508	\$ 85,313

Temporary differences between the amounts reported on the financial statements and the tax bases of assets and liabilities resulted in deferred taxes. DTAs and liabilities at December 31, 2023 and 2022, included in other assets and accrued expenses and other liabilities on the consolidated balance sheets, respectively, were as follows:

(\$ in thousands)	2023	2022
Deferred tax assets		
Allowance for loan losses	\$ 83,378	\$ 79,142
Allowance for other losses	8,933	10,558
Accrued liabilities	14,089	2,842
Deferred compensation	28,429	30,246
Federal tax credits carryforward	8,849	—
Benefit of state tax losses and credit carryforwards	9,068	7,476
Nonaccrual interest	901	891
Partnerships	2,365	—
Lease liability	6,785	7,390
Net unrealized losses on AFS securities	48,632	80,148
Net unrealized losses on pension and postretirement benefits	8,506	14,803
Other	9,403	4,545
Total deferred tax assets	\$ 229,338	\$ 238,041
Deferred tax liabilities		
Prepaid expenses	\$ 66,381	\$ 64,480
Goodwill	22,161	23,119
Mortgage banking activities	20,799	20,145
Deferred loan fee income	8,097	4,269
State deferred taxes	1,387	1,389
Lease financing	15,297	3,145
Bank premises and equipment	20,389	20,860
Purchase accounting	7,898	10,381
Basis difference from equity securities and other investments	7,593	5,582
Other	1,207	821
Total deferred tax liabilities	\$ 171,209	\$ 154,191
Net deferred tax assets	\$ 58,129	\$ 83,850

At December 31, 2023, the Corporation had state net operating loss carryforwards of \$126 million (of which \$2 million was acquired from various acquisitions) that will begin expiring in 2024.

The effective income tax rate differs from the statutory federal tax rate. The major reasons for this difference were as follows:

	2023	2022	2021
Federal income tax rate at statutory rate	21.0 %	21.0 %	21.0 %
Increases (decreases) resulting from:			
Tax-exempt interest and dividends	(7.4)%	(3.4)%	(3.0)%
State income taxes (net of federal benefit)	0.3 %	4.2 %	3.8 %
Bank owned life insurance	(1.1)%	(0.5)%	(0.6)%
Tax effect of tax credits and benefits, net of related expenses	(4.7)%	(1.6)%	(1.8)%
Net tax (benefit) from stock-based compensation	— %	(0.2)%	— %
Restructuring in conjunction with ABRC sale	— %	— %	(0.1)%
FDIC premium	3.0 %	0.7 %	0.5 %
Other	0.1 %	0.1 %	(0.2)%
Effective income tax rate	11.2 %	20.3 %	19.6 %

Savings banks acquired by the Corporation in 1997 and 2004 qualified under provisions of the Internal Revenue Code that permitted them to deduct from taxable income an allowance for bad debts that differed from the provision for such losses charged to income for financial reporting purposes. Accordingly, no provision for income taxes has been made for \$100 million of retained income at December 31, 2023. If income taxes had been provided, the deferred tax liability would have been approximately \$25 million. Management does not expect this amount to become taxable in the future; therefore, no provision for income taxes has been made.

The Corporation and its subsidiaries file income tax returns in the U.S. federal jurisdiction and various state jurisdictions. The Corporation's federal income tax returns are open and subject to examination from the 2020 tax return year and forward. The years open to examination by state and local government authorities varies by jurisdiction.

A reconciliation of the beginning and ending amount of unrecognized tax benefits that, if recognized, would affect the effective tax rate was as follows:

(\$ in thousands)	2023	2022
Balance at beginning of year	\$ 2,233	\$ 2,324
Subtractions for tax positions related to prior years	(441)	(486)
Additions for tax positions related to current year	435	395
Balance at end of year	\$ 2,227	\$ 2,233

The Corporation recognizes interest and penalties accrued related to unrecognized tax benefits in the income tax expense line on the consolidated statements of income. Interest and penalty benefits, as well as accrued interest and penalties, were immaterial at both December 31, 2023 and 2022. At December 31, 2023 and 2022, the Corporation believes it has appropriately accounted for any unrecognized tax benefits. Management does not anticipate significant adjustments to the total amount of unrecognized tax benefits within the next twelve months.

Note 14 Derivative and Hedging Activities

The Corporation is exposed to certain risk arising from both its business operations and economic conditions. The Corporation principally manages its exposures to a wide variety of business and operational risks through management of its core business activities. The Corporation manages economic risks, including interest rate, liquidity, foreign currency, and credit risk, primarily by managing the amount, sources, and duration of its assets and liabilities and the use of derivative financial instruments. Specifically, the Corporation enters into derivative financial instruments to manage exposures that arise from business activities that result in the receipt or payment of future known and uncertain cash amounts, the values of which are determined by interest rates and/or foreign currency exchange rates. The Corporation's derivative financial instruments are used to manage differences in the amount, timing, and duration of the Corporation's known or expected cash receipts and its known or expected cash payments principally related to the Corporation's assets.

The contract or notional amount of a derivative is used to determine, along with the other terms of the derivative, the amounts to be exchanged between the counterparties. The Corporation is exposed to credit risk in the event of nonperformance by counterparties to financial instruments. To mitigate the counterparty risk, contracts generally contain language outlining collateral pledging requirements for each counterparty. For non-centrally cleared derivatives, collateral must be posted when the market value exceeds certain mutually agreed upon threshold limits. Securities and cash are often pledged as collateral. The Corporation pledged \$93 million and \$92 million of investment securities as collateral at December 31, 2023, and 2022, respectively. Cash is often pledged as collateral for derivatives that are not centrally cleared. The Corporation's required cash

collateral was \$5 million at December 31, 2023, compared to \$3 million at December 31, 2022. See Note 18 for fair value information and disclosures and see Note 1 for the Corporation's accounting policy for derivative and hedging activities.

To qualify for hedge accounting, a hedging relationship must be highly effective at mitigating the risk associated with the exposure being hedged. The Corporation performs effectiveness assessments of its derivative financial instruments prospectively at inception and both prospectively and retrospectively quarterly thereafter. The initial prospective assessment is performed on a quantitative basis unless the hedging relationship meets certain conditions, and subsequent assessments are performed on a quantitative basis unless certain conditions are met where a qualitative basis may be used. If it is determined that a derivative financial instrument is not highly effective at hedging the designated exposure, hedge accounting is discontinued.

Fair Value Hedges of Interest Rate Risk

The Corporation is exposed to changes in the fair value of its fixed-rate debt due to changes in benchmark interest rates. The Corporation uses interest rate swaps to manage its exposure to changes in fair value on these instruments attributable to changes in the designated benchmark interest rates. Interest rate swaps designated as fair value hedges involve receiving payment of fixed-rate amounts from a counterparty in exchange for the Corporation paying variable-rate payments over the life of the agreements without the exchange of the underlying notional amount.

Fair Value Hedges of Foreign Currency Exchange Rate Risk

The Corporation is exposed to changes in the fair value of its foreign currency denominated loans due to changes in foreign currency exchange rates. The Corporation uses foreign currency exchange forward contracts to manage its exposure to changes in fair value on these foreign currency denominated loans.

Cash Flow Hedges of Interest Rate Risk

The Corporation is exposed to variability in cash flows on its floating rate assets due to changes in benchmark interest rates. The Corporation uses interest rate swaps to hedge certain forecasted transactions for the variability in cash flows attributable to the contractually specified interest rate in order to add stability to net interest income and to manage its exposure to interest rate movements. Interest rate swaps designated as cash flow hedges involve receiving fixed-rate amounts from a counterparty in exchange for the Corporation making variable-rate payments over the life of the agreements without the exchange of the underlying notional amount. These items, along with the net interest from the derivative, are reported in the same income statement line as the interest income from the floating-rate assets.

Derivatives to Accommodate Customer Needs

The Corporation facilitates customer borrowing activity by entering into various derivative contracts which are designated as free standing derivative contracts. Free standing derivative products are entered into primarily for the benefit of commercial customers seeking to manage their exposures to interest rate risk, foreign currency, and until early 2022, commodity prices. As of the end of the first quarter of 2022, the Corporation no longer had any outstanding commodity contracts. These derivative contracts are not designated against specific assets and liabilities on the consolidated balance sheets or forecasted transactions and, therefore, do not qualify for hedge accounting treatment. Such derivative contracts are carried at fair value in other assets and accrued expenses and other liabilities on the consolidated balance sheets with changes in the fair value recorded as a component of capital markets, net, and typically include interest rate-related instruments (swaps and caps), foreign currency exchange forwards, and until the end of the first quarter of 2022, commodity contracts. See Note 15 for additional information and disclosures on balance sheet offsetting.

Interest rate-related and other instruments: The Corporation provides interest rate risk management services to commercial customers, primarily interest rate swaps and caps. The Corporation's market risk from unfavorable movements in interest rates related to these derivative contracts is generally economically hedged by concurrently entering into offsetting derivative contracts. The offsetting derivative contracts have identical notional values, terms, and indices, except in rare circumstances where the indices are not identical which creates a negligible basis mismatch. The Corporation also enters into credit risk participation agreements with financial institution counterparties for interest rate swaps related to loans as either a participant or a lead bank. The risk participation agreements entered into by the Corporation as a participant bank provide credit protection to the financial institution counterparty should the borrower fail to perform on its interest rate derivative contract with that financial institution.

Foreign currency exchange forwards: The Corporation provides foreign currency exchange services to customers, primarily forward contracts. The Corporation's customers enter into a foreign currency exchange forward with the Corporation as a means

for them to mitigate exchange rate risk. The Corporation mitigates its risk by then entering into an offsetting foreign currency exchange derivative contract.

Commodity contracts: As of the end of the first quarter of 2022, the Corporation no longer had any outstanding commodity contracts. Historically, commodity contracts were entered into primarily for the benefit of commercial customers seeking to manage their exposure to fluctuating commodity prices. The Corporation mitigated its risk by then entering into an offsetting commodity derivative contract.

Mortgage Derivatives

Interest rate lock commitments to originate residential mortgage loans held for sale and forward commitments to sell residential mortgage loans are considered derivative instruments, and the fair values of these commitments are recorded in other assets and accrued expenses and other liabilities on the consolidated balance sheets with the changes in fair value recorded as a component of mortgage banking, net on the consolidated statements of income.

Interest rate-related instruments for MSRs hedge: The fair value of the Corporation's MSRs asset changes in response to changes in primary mortgage loan rates and other assumptions. To mitigate the earnings volatility caused by changes in the fair value of MSRs, the Corporation designates certain financial instruments as an economic hedge. Changes in the fair value of these instruments are generally expected to partially offset changes in the fair value of MSRs and are recorded in other assets and accrued expenses and other liabilities on the consolidated balance sheets with the changes in fair value recorded as a component of mortgage banking, net on the consolidated statements of income.

The following table presents the total notional amounts and gross fair values of the Corporation's derivatives, as well as the balance sheet netting adjustments as of December 31, 2023 and December 31, 2022. The derivative assets and liabilities are presented on a gross basis prior to the application of bilateral collateral and master netting agreements, but after the variation margin payments with central clearing organizations have been applied as settlement, as applicable. Total derivative assets and liabilities are adjusted to take into consideration the effects of legally enforceable master netting agreements and cash collateral received or paid as of December 31, 2023 and December 31, 2022. The resulting net derivative asset and liability fair values are included in other assets and accrued expenses and other liabilities, respectively, on the consolidated balance sheets.

(\$ in thousands)	December 31, 2023				December 31, 2022			
	Asset		Liability		Asset		Liability	
	Notional Amount	Fair Value	Notional Amount	Fair Value	Notional Amount	Fair Value	Notional Amount	Fair Value
Designated as hedging instruments:								
Interest rate-related instruments	\$2,300,000	\$ 8,075	\$ 550,000	\$ 930	\$ 900,000	\$ 4,349	\$ 1,150,000	\$ 1,260
Foreign currency exchange forwards	231,566	632	189,212	2,946	261,595	416	167,088	972
Total designated as hedging instruments		8,707		3,876		4,765		2,233
Not designated as hedging instruments:								
Interest rate-related and other instruments	3,603,513	111,623	6,528,471	195,662	4,246,823	62,401	4,599,391	251,398
Foreign currency exchange forwards	87,526	2,954	135,654	2,746	68,570	437	34,240	402
Mortgage banking ^(a)	29,490	439	51,500	673	21,265	86	33,000	46
Total not designated as hedging instruments		115,016		199,082		62,925		251,847
Gross derivatives before netting		123,723		202,958		67,690		254,079
Less: Legally enforceable master netting agreements		18,234		18,234		2,788		2,788
Less: Cash collateral pledged/received		35,855		—		26,898		217
Total derivative instruments, after netting		\$ 69,634		\$ 184,724		\$ 38,003		\$ 251,073

(a) The notional amount of the mortgage derivative asset includes interest rate lock commitments, while the notional amount of the mortgage derivative liability includes forward commitments.

The following table presents amounts that were recorded on the consolidated balance sheets related to cumulative basis adjustments for fair value hedges:

(\$ in thousands)	Line Item in the Consolidated Balance Sheets in Which the Hedged Item is Included			
	Carrying Amount of the Hedged Assets/(Liabilities) ^(a)	Cumulative Amount of Fair Value Hedging Adjustment Included in the Carrying Amount of the Hedged Assets/(Liabilities)	Carrying Amount of the Hedged Assets/(Liabilities) ^(a)	Cumulative Amount of Fair Value Hedging Adjustment Included in the Carrying Amount of the Hedged Assets/(Liabilities)
	December 31, 2023		December 31, 2022	
Other long-term funding	\$ (548,634)	\$ 1,366	\$ (248,145)	\$ 1,855
FHLB Advances	(590,287)	9,713	(585,692)	14,308
Total	\$ (1,138,921)	\$ 11,079	\$ (833,837)	\$ 16,163

(a) Excludes hedged items where only foreign currency risk is the designated hedged risk. At December 31, 2023 and 2022, the carrying amount excluded for foreign currency denominated loans was \$421 million and \$429 million, respectively.

The Corporation terminated its \$500 million fair value hedge during the fourth quarter of 2019. At December 31, 2023, the amortized cost basis of the closed portfolios which had previously been used in the terminated hedging relationship was \$267 million and is included in loans on the consolidated balance sheets. This amount includes \$1 million of hedging adjustments on the discontinued hedging relationships, which are not presented in the table above.

The tables below identify the effect of fair value and cash flow hedge accounting on the Corporation's consolidated statements of income during the twelve months ended December 31, 2023, 2022, and 2021:

(\$ in thousands)	Location and Amount Recognized on the Consolidated Statements of Income in Fair Value Hedging Relationships					
	For the Years Ended December 31,					
	2023		2022		2021	
	Interest Income	Interest Expense	Loss on Mortgage Portfolio Sale	Interest Income	Interest Expense	Interest Income
Total amounts of income/expense presented on the consolidated statements of income in which the effects of the fair value or cash flow hedges are recorded ^(a)	\$ (14,176)	\$ 17,536	\$ (125)	\$ (263)	\$ 334	\$ (1,376)
The effects of fair value and cash flow hedging: Impact on fair value hedging relationships in Subtopic 815-20						
Interest contracts:						
Hedged items	(245)	5,084	(125)	(529)	(16,163)	(1,376)
Derivatives designated as hedging instruments ^(a)	(13,930)	12,451	—	266	16,497	—

(a) Includes net settlements on the derivatives.

(\$ in thousands)	Location and Amount Recognized on the Consolidated Statements of Income in Fair Value Hedging Relationships		
	For the Years Ended December 31,		
	2023	2022	2021
	Capital Markets, Net	Capital Markets, Net	Capital Markets, Net
Total amounts of income/expense presented on the consolidated statements of income in which the effects of fair value hedges are recorded	\$ —	\$ (9)	\$ 55
The effects of fair value hedging: Impact on fair value hedging relationships in Subtopic 815-20			
Foreign currency contracts:			
Hedged items	9,322	(26,686)	1,012
Derivatives designated as hedging instruments	(9,322)	26,677	(957)

The following table presents the effect of cash flow hedge accounting on accumulated other comprehensive income (loss) for the twelve months ended December 31, 2023, 2022, and 2021:

(\$ in thousands)	For the Years Ended December 31,		
	2023	2022	2021
Interest rate-related instruments designated as cash flow hedging instruments			
Amount of gain (loss) recognized in OCI on cash flow hedge derivative ^(a)	\$ (13,254)	\$ 3,626	\$ —
Amount of (gain) loss reclassified from accumulated other comprehensive income (loss) into interest income ^(a)	13,930	(266)	—

(a) The entirety of gains (losses) recognized in OCI as well as those reclassified from accumulated other comprehensive income (loss) into interest income were included components in the assessment of hedge effectiveness.

Amounts reported in accumulated other comprehensive income (loss) related to cash flow hedge derivatives are reclassified to interest income as interest payments are made on the hedged variable interest rate assets. The Corporation estimates that \$7 million will be reclassified as a decrease to interest income over the next 12 months. This amount could differ from amounts actually recognized due to changes in interest rates, hedge de-designations, or the addition of other hedges subsequent to December 31, 2023. The maximum length of time over which the Corporation is hedging its exposure to the variability in future cash flows is 35 months as of December 31, 2023.

The table below identifies the effect of derivatives not designated as hedging instruments on the Corporation's consolidated statements of income during the twelve months ended December 31, 2023, 2022, and 2021:

(\$ in thousands)	Consolidated Statements of Income Category of Gain / (Loss) Recognized in Income	For the Years Ended December 31,		
		2023	2022	2021
Derivative Instruments				
Interest rate-related and other instruments — customer and mirror, net	Capital markets, net	\$ 392	\$ 515	\$ 2,432
Interest rate-related instruments — MSR hedge	Mortgage banking, net	(1,096)	(12,622)	—
Foreign currency exchange forwards	Capital markets, net	1,670	203	730
Commodity contracts	Capital markets, net	—	(16)	(1,316)
Interest rate lock commitments (mortgage)	Mortgage banking, net	353	(2,531)	(7,007)
Forward commitments (mortgage)	Mortgage banking, net	(627)	(123)	2,075

Note 15 Balance Sheet Offsetting

Interest Rate-Related Instruments and Foreign Exchange Forwards (“Interest and Foreign Exchange Agreements”)

The Corporation enters into interest rate-related instruments to facilitate the interest rate risk management strategies of commercial customers and foreign exchange forwards to manage customers' exposure to fluctuating foreign exchange rates. The Corporation typically mitigates these risks by entering into equal and offsetting agreements with highly rated third-party financial institutions, though in rare circumstances the agreements are not perfectly equal and offsetting, which creates a negligible basis mismatch. The Corporation is party to master netting arrangements with some of its financial institution counterparties that create single net settlements of all legal claims or obligations to pay or receive the net amount of settlement of the individual interest and foreign exchange agreements. Collateral, usually in the form of investment securities and cash, is posted by the counterparty with net liability positions in accordance with contract thresholds. Derivatives subject to a legally enforceable master netting agreement are reported with assets and liabilities offset resulting in a net position which is further offset by any cash collateral, and is reported in other assets and accrued expenses and other liabilities on the face of the consolidated balance sheets. For disclosure purposes, the net position on the consolidated balance sheets can be further netted down by investment securities collateral received or pledged. See Note 14 for additional information on the Corporation's derivative and hedging activities.

The following table presents the interest rate and foreign exchange assets and liabilities subject to an enforceable master netting arrangement as of December 31, 2023 and 2022. The interest rate and foreign exchange agreements the Corporation has with its commercial customers are not subject to an enforceable master netting arrangement and are therefore excluded from this table:

(\$ in thousands)	Gross Amounts Recognized	Gross Amounts Subject to Master Netting Arrangements Offset on the Consolidated Balance Sheets		Net Amounts Presented on the Consolidated Balance Sheets	Gross Amounts Not Offset on the Consolidated Balance Sheets		Net Amount
		Derivative Liabilities Offset	Cash Collateral Received		Security Collateral Received		
Derivative assets							
December 31, 2023	\$ 87,075	\$ (18,234)	\$ (35,855)	\$ 32,985	\$ (32,985)		\$ —
December 31, 2022	63,029	(2,788)	(26,898)	33,342	(30,753)		2,589

(\$ in thousands)	Gross Amounts Recognized	Gross Amounts Subject to Master Netting Arrangements Offset on the Consolidated Balance Sheets		Net Amounts Presented on the Consolidated Balance Sheets	Gross Amounts Not Offset on the Consolidated Balance Sheets		Net Amount
		Derivative Assets Offset	Cash Collateral Pledged		Security Collateral Pledged		
Derivative liabilities							
December 31, 2023	\$ 18,767	\$ (18,234)	\$ —	\$ 533	\$ —		\$ 533
December 31, 2022	3,096	(2,788)	(217)	91	—		91

Note 16 Commitments, Off-Balance Sheet Arrangements, and Legal Proceedings

The Corporation utilizes a variety of financial instruments in the normal course of business to meet the financial needs of its customers and to manage its own exposure to fluctuations in interest rates. These financial instruments include lending-related and other commitments (see below) as well as derivative instruments (see Note 14). The following is a summary of lending-related commitments:

(\$ in thousands)	December 31, 2023	December 31, 2022
Commitments to extend credit, excluding commitments to originate residential mortgage loans held for sale ^{(a)(b)}	\$ 11,170,147	\$ 12,444,275
Commercial letters of credit ^(a)	3,697	3,188
Standby letters of credit ^(c)	212,029	270,692

(a) These off-balance sheet financial instruments are exercisable at the market rate prevailing at the date the underlying transaction will be completed and, thus, are deemed to have no current fair value, or the fair value is based on fees currently charged to enter into similar agreements and was not material at December 31, 2023 or 2022.

(b) Interest rate lock commitments to originate residential mortgage loans held for sale are considered derivative instruments and are disclosed in Note 14.

(c) Standby letters of credit are presented excluding participations. The Corporation has established a liability of \$2 million and \$3 million at December 31, 2023 and 2022, respectively, as an estimate of the fair value of these financial instruments.

Lending-related Commitments

As a financial services provider, the Corporation routinely enters into commitments to extend credit. Such commitments are subject to the same credit policies and approval process accorded to loans made by the Corporation, with each customer's creditworthiness evaluated on a case-by-case basis. The commitments generally have fixed expiration dates or other termination clauses and may require the payment of a fee. The Corporation's exposure to credit loss in the event of nonperformance by the other party to these financial instruments is represented by the contractual amount of those instruments. The amount of collateral obtained, if deemed necessary by the Corporation upon extension of credit, is based on management's credit evaluation of the customer. Since a significant portion of commitments to extend credit are subject to specific restrictive loan covenants or may expire without being drawn upon, the total commitment amounts do not necessarily represent future cash flow requirements. An allowance for unfunded commitments is maintained at a level believed by management to be sufficient to absorb expected lifetime losses related to unfunded commitments (including unfunded loan commitments and letters of credit).

The following table presents a summary of the changes in the allowance for unfunded commitments:

(\$ in thousands)	Year Ended December 31, 2023	Year Ended December 31, 2022
Allowance for unfunded commitments		
Balance at beginning of period	\$ 38,776	\$ 39,776
Provision for unfunded commitments	(4,000)	(1,000)
Balance at end of period	\$ 34,776	\$ 38,776

Lending-related commitments include commitments to extend credit, commitments to originate residential mortgage loans held for sale, commercial letters of credit, and standby letters of credit. Commitments to extend credit are legally binding agreements to lend to customers at predetermined interest rates, as long as there is no violation of any condition established in the contracts. Interest rate lock commitments to originate residential mortgage loans held for sale and forward commitments to sell residential

mortgage loans are considered derivative instruments, and the fair value of these commitments is recorded in other assets and accrued expenses and other liabilities on the consolidated balance sheets. The Corporation's derivative and hedging activity is further described in Note 14. Commercial and standby letters of credit are conditional commitments issued to guarantee the performance of a customer to a third party. Commercial letters of credit are issued specifically to facilitate commerce and typically result in the commitment being drawn on when the underlying transaction is consummated between the customer and the third party, while standby letters of credit generally are contingent upon the failure of the customer to perform according to the terms of the underlying contract with the third party.

Other Commitments

The Corporation invests in qualified affordable housing projects, historic projects, new market projects, and opportunity zone funds for the purpose of community reinvestment and obtaining tax credits and other tax benefits. Return on the Corporation's investment in these projects and funds comes in the form of the tax credits and tax losses that pass through to the Corporation, and deferral or elimination of capital gain recognition for tax purposes. The aggregate carrying value of these investments at December 31, 2023, was \$219 million, compared to \$250 million at December 31, 2022, included in tax credit and other investments on the consolidated balance sheets. The Corporation utilizes the proportional amortization method to account for investments in qualified affordable housing projects.

Under the proportional amortization method, the Corporation amortizes the initial cost of the investment in proportion to the tax credits and other tax benefits. The Corporation recognized additional income tax expense attributable to the amortization of investments in qualified affordable housing projects of \$34 million, \$34 million, and \$33 million during the years ended December 31, 2023, 2022, and 2021, respectively. The Corporation's remaining investment in qualified affordable housing projects accounted for under the proportional amortization method totaled \$215 million at December 31, 2023 and \$246 million at December 31, 2022.

The Corporation's unfunded equity contributions relating to investments in qualified affordable housing and historic projects are recorded in accrued expenses and other liabilities on the consolidated balance sheets. The Corporation's remaining unfunded equity contributions totaled \$27 million and \$40 million at December 31, 2023 and 2022, respectively.

During the years ended December 31, 2023, 2022 and 2021, the Corporation did not record any impairment related to qualified affordable housing investments.

The Corporation has principal investment commitments to provide capital-based financing to private companies through either direct investment in specific companies or through investment funds and partnerships. The timing of future cash requirements to fund such principal investment commitments is generally dependent on the investment cycle, whereby privately held companies are funded by private equity investors and ultimately sold, merged, or taken public through an initial offering, which can vary based on overall market conditions, as well as the nature and type of industry in which the companies operate. The Corporation also invests in loan pools that support CRA loans. The timing of future cash requirements to fund these pools is dependent upon loan demand, which can vary over time. The aggregate carrying value of these investments was \$40 million and \$27 million at December 31, 2023 and 2022, respectively, included in tax credit and other investments on the consolidated balance sheets.

Legal Proceedings

The Corporation is party to various pending and threatened claims and legal proceedings arising in the normal course of business activities, some of which involve claims for substantial amounts. Although there can be no assurance as to the ultimate outcomes, the Corporation believes it has meritorious defenses to the claims asserted against it in its currently outstanding matters and intends to continue to defend itself vigorously with respect to such legal proceedings. The Corporation will consider settlement of cases when, in management's judgment, it is in the best interests of the Corporation and its shareholders.

On at least a quarterly basis, the Corporation assesses its liabilities and contingencies in connection with all pending or threatened claims and litigation, utilizing the most recent information available. On a matter by matter basis, an accrual for loss is established for those matters which the Corporation believes it is probable that a loss may be incurred and that the amount of such loss can be reasonably estimated. Once established, each accrual is adjusted as appropriate to reflect any subsequent developments. Accordingly, management's estimate will change from time to time, and actual losses may be more or less than the current estimate. For matters where a loss is not probable, or the amount of the loss cannot be estimated, no accrual is established.

Resolution of legal claims is inherently unpredictable, and in many legal proceedings various factors exacerbate this inherent unpredictability, including where the damages sought are unsubstantiated or indeterminate, it is unclear whether a case brought as a class action will be allowed to proceed on that basis, discovery is not complete, the proceeding is not yet in its final stages,

the matters present legal uncertainties, there are significant facts in dispute, there are a large number of parties (including where it is uncertain how liability, if any, will be shared among multiple defendants), or there is a wide range of potential results.

Management believes that the legal proceedings currently pending against it should not have a material adverse effect on the Corporation's consolidated financial condition. However, in light of the uncertainties involved in such proceedings, there is no assurance that the ultimate resolution of these matters will not significantly exceed the reserves the Corporation has currently accrued or that a matter will not have material reputational or other qualitative consequences. As a result, the outcome of a particular matter may be material to the Corporation's operating results for a particular period, depending on, among other factors, the size of the loss or liability imposed and the level of the Corporation's income for that period.

Regulatory Matters

A variety of consumer products, including mortgage and deposit products, and certain fees and charges related to such products, have come under increased regulatory scrutiny. It is possible that regulatory authorities could bring enforcement actions, including civil money penalties, or take other actions against the Corporation in regard to these consumer products. The Bank could also determine of its own accord, or be required by regulators, to refund or otherwise make remediation payments to customers in connection with these products, fees and charges. It is not possible at this time for management to assess the probability of a material adverse outcome or reasonably estimate the amount of any potential loss related to such matters.

In recent consent orders with financial institutions, the CFPB has asserted that certain overdraft charges constitute "unfair and abusive acts and practices." In certain instances, these financial institutions have agreed to make restitution to customers and to pay civil money penalties. Included in the practices that the CFPB has asserted are "unfair and abusive" are (1) overdraft fees on transactions that had a sufficient balance at the time authorized but then later settled with an insufficient balance ("APSN Fees"), and (2) repeat insufficient funds fees on transactions resubmitted for payment after they were initially declined ("Representment Fees"). In light of these orders, the Corporation has undertaken a review of its current and past practices regarding APSN Fees and Representment Fees. Such review could result in changes to our overdraft fee policies, which would reduce our fee income in future periods and which could also result in a decision to make remediation payments to current and past customers who incurred such fees. The Corporation's financial results may be materially impacted in any period in which the Corporation determines to make any such remediation payments. In addition to the review described above, the Corporation received an arbitration request in July 2023 which, among other things, sought to recover APSN Fees and Representment Fees on behalf of certain current and former deposit customers of the Corporation (the "arbitration request"). After mediation of the arbitration request, a settlement in principle of \$2.1 million including attorneys' fees was reached in the fourth quarter of 2023.

Mortgage Repurchase Reserve

The Corporation sells residential mortgage loans to investors in the normal course of business. Residential mortgage loans sold to others are predominantly conventional residential first lien mortgages originated under the Corporation's usual underwriting procedures, and are most often sold on a nonrecourse basis, primarily to the GSEs. The Corporation's agreements to sell residential mortgage loans in the normal course of business usually require certain representations and warranties on the underlying loans sold, related to credit information, loan documentation, collateral, and insurability. Subsequent to being sold, if a material underwriting deficiency or documentation defect is discovered, the Corporation may be obligated to repurchase the loan or reimburse the GSEs for losses incurred (collectively, "make whole requests"). The make whole requests and any related risk of loss under the representations and warranties are largely driven by borrower performance. The Corporation also sells qualifying residential mortgage loans guaranteed by U.S. government agencies into GNMA pools.

As a result of make whole requests, the Corporation has repurchased loans with aggregate principal balances of \$5 million and \$6 million for the years ended December 31, 2023 and 2022, respectively. There were no loss reimbursement and settlement claims paid for the years ended December 31, 2023, or 2022. Make whole requests since January 1, 2022 generally arose from loans originated since January 1, 2021 with such balances totaling \$3.8 billion at the time of sale, consisting primarily of loans sold to GSEs. As of December 31, 2023, \$3.5 billion of those loans originated since January 1, 2021 remain outstanding.

The balance in the mortgage repurchase reserve at the balance sheet date reflects the estimated amount of potential loss the Corporation could incur from repurchasing a loan, as well as loss reimbursements, indemnifications, and other settlement resolutions. The mortgage repurchase reserve, included in accrued expenses and other liabilities on the consolidated balance sheets, was approximately \$835,000 at December 31, 2023 and \$1 million at December 31, 2022.

The Corporation may also sell residential mortgage loans with limited recourse (limited in that the recourse period ends prior to the loan's maturity, usually after certain time and/or loan paydown criteria have been met), whereby repurchase could be required if the loan had defined delinquency issues during the limited recourse periods. At December 31, 2023 and December 31, 2022, there were \$15 million and \$7 million, respectively, of residential mortgage loans sold with such recourse

risk. There have been limited instances and immaterial historical losses on repurchases for recourse under the limited recourse criteria.

The Corporation has a subordinate position to the FHLB in the credit risk on residential mortgage loans it sold to the FHLB in exchange for a monthly credit enhancement fee. The Corporation has not sold loans to the FHLB with such credit risk retention since February 2005. At December 31, 2023 and December 31, 2022, there were \$16 million and \$19 million, respectively, of such residential mortgage loans with credit risk recourse, upon which there have been immaterial historical losses to the Corporation.

Note 17 Parent Company Only Financial Information

Presented below are condensed financial statements for the Parent Company:

Balance Sheets

(\$ in thousands)	December 31,	
	2023	2022
Assets		
Cash and due from banks	\$ 22,473	\$ 14,899
Interest-bearing deposits in other financial institutions	20,428	29,856
Notes and interest receivable from subsidiaries	562,640	172,066
Investments in and receivable due from subsidiaries	4,080,536	4,036,273
Other assets	48,589	48,097
Total assets	<u>\$ 4,734,666</u>	<u>\$ 4,301,191</u>
Liabilities and Stockholders' Equity		
Commercial paper	\$ —	\$ 20,798
Subordinated notes, at par	550,000	250,000
Long-term funding capitalized costs and fair value hedge liability	(9,114)	(2,399)
Total long-term funding	540,886	247,601
Accrued expenses and other liabilities	19,807	17,301
Total liabilities	560,693	285,701
Preferred equity	194,112	194,112
Common equity	3,979,861	3,821,378
Total stockholders' equity	<u>4,173,973</u>	<u>4,015,490</u>
Total liabilities and stockholders' equity	<u>\$ 4,734,666</u>	<u>\$ 4,301,191</u>

Statements of Income

(\$ in thousands)	For the Years Ended December 31,		
	2023	2022	2021
Income			
Income from subsidiaries	\$ 192,559	\$ 373,581	\$ 361,198
Interest income on notes receivable from subsidiaries	30,363	5,632	3,247
Other income	1,175	1,262	682
Total income	<u>224,097</u>	<u>380,475</u>	<u>365,127</u>
Expense			
Interest expense on short and long-term funding	36,081	10,655	10,942
Other expense	7,352	6,118	7,330
Total expense	<u>43,434</u>	<u>16,772</u>	<u>18,272</u>
Income before income tax expense	180,663	363,702	346,856
Income tax (benefit)	(2,292)	(2,420)	(4,138)
Net income	182,956	366,122	350,994
Preferred stock dividends	11,500	11,500	17,111
Net income available to common equity	<u>\$ 171,456</u>	<u>\$ 354,622</u>	<u>\$ 333,883</u>

Statements of Cash Flows

(\$ in thousands)	For the Years Ended December 31,		
	2023	2022	2021
Cash Flows from Operating Activities			
Net income	\$ 182,956	\$ 366,122	\$ 350,994
Adjustments to reconcile net income to net cash provided by operating activities:			
(Increase) decrease in equity in undistributed net income (loss) of subsidiaries	107,441	(343,582)	28,802
Net change in other assets and accrued expenses and other liabilities	(35,863)	14,159	17,102
Net cash provided by operating activities	254,534	36,699	396,898
Cash Flows from Investing Activities			
Net (increase) decrease in notes receivable from subsidiaries	(385,000)	115,000	20,000
Net cash provided by (used in) investing activities	(385,000)	115,000	20,000
Cash Flows from Financing Activities			
Net (decrease) in commercial paper	(20,798)	(13,932)	(24,616)
Proceeds from issuance of long-term funding	292,740	—	—
Proceeds from issuance of common stock for stock-based compensation plans	4,297	11,061	25,702
Redemption of preferred stock	—	—	(164,458)
Purchase of treasury stock, open market purchases	—	—	(132,955)
Purchase of treasury stock, stock-based compensation plans	(6,593)	(6,480)	(4,847)
Cash dividends on common stock	(129,534)	(123,137)	(116,061)
Cash dividends on preferred stock	(11,500)	(11,500)	(17,111)
Other	—	(938)	—
Net cash used in financing activities	128,612	(144,928)	(434,346)
Net increase (decrease) in cash and cash equivalents	(1,854)	6,771	(17,448)
Cash and cash equivalents at beginning of year	44,755	37,984	55,432
Cash and cash equivalents at end of year	\$ 42,901	\$ 44,755	\$ 37,984

Note 18 Fair Value Measurements

Fair value represents the estimated price at which an orderly transaction to sell an asset or to transfer a liability would take place between market participants at the measurement date under current market conditions (i.e., an exit price concept). See Note 1 for the Corporation's accounting policy for fair value measurements.

Following is a description of the valuation methodologies used for the Corporation's more significant instruments measured on a recurring basis at fair value, including the general classification of such instruments pursuant to the valuation hierarchy.

Assets and Liabilities Measured at Fair Value on a Recurring Basis

AFS Investment Securities: Where quoted prices are available in an active market, investment securities are classified in Level 1 of the fair value hierarchy. If quoted market prices are not available for the specific security, then fair values are estimated by using pricing models, quoted prices of securities with similar characteristics, or discounted cash flows, with consideration given to the nature of the quote and the relationship of recently evidenced market activity to the fair value estimate, and are classified in Level 2 of the fair value hierarchy. Lastly, in certain cases where there is limited activity or less transparency around inputs to the estimated fair value, securities are classified within Level 3 of the fair value hierarchy. To validate the fair value estimates, assumptions, and controls, the Corporation looks to transactions for similar instruments and utilizes independent pricing provided by third party vendors or brokers and relevant market indices. While none of these sources are solely indicative of fair value, they serve as directional indicators for the appropriateness of the Corporation's fair value estimates. The Corporation has determined that the fair value measures of its AFS investment securities are classified predominantly within Level 2 of the fair value hierarchy. See Note 3 for additional disclosure regarding the Corporation's AFS investment securities.

Equity Securities with Readily Determinable Fair Values: The Corporation's portfolio of equity securities with readily determinable fair values is primarily comprised of CRA Qualified Investment mutual funds and other mutual funds. Since quoted prices for the Corporation's equity securities are readily available in an active market, they are classified within Level 1 of the fair value hierarchy. See Note 3 for additional disclosure regarding the Corporation's equity securities.

Residential Loans Held For Sale: Residential loans held for sale, which consist generally of current production of certain fixed-rate, first-lien residential mortgage loans, are carried at estimated fair value. Management has elected the fair value option

to account for all newly originated mortgage loans held for sale, which results in the financial impact of changing market conditions being reflected currently in earnings as opposed to being dependent upon the timing of sales. Therefore, the continually adjusted values better reflect the price the Corporation expects to receive from the sale of such loans. The estimated fair value is based on what secondary markets are currently offering for portfolios with similar characteristics, which the Corporation classifies as a Level 2 fair value measurement.

Derivative Financial Instruments (Interest Rate-Related Instruments - Both Designated and Not Designated as Hedging Instruments): The Corporation uses interest rate-related instruments (swaps and caps) to hedge its exposure to changes in fair value of its fixed-rate debt as well as to hedge its exposure to variability in cash flows on its floating rate assets, both due to changes in benchmark interest rates. Additionally, the Corporation also offers interest rate-related instruments (swaps and caps) to service its customers' needs, for which the Corporation simultaneously enters into offsetting derivative financial instruments (i.e., mirror interest rate-related instruments) with third parties to manage its interest rate risk associated with these financial instruments. The valuation of the Corporation's derivative financial instruments is determined using discounted cash flow analysis on the expected cash flows of each derivative and also includes a nonperformance/credit risk component (credit valuation adjustment). See Note 14 for additional disclosure regarding the Corporation's interest rate-related instruments.

The discounted cash flow analysis component in the fair value measurement reflects the contractual terms of the derivative financial instruments, including the period to maturity, and uses observable market-based inputs, including interest rate curves and implied volatilities. More specifically, the fair values of interest rate swaps are determined using the market standard methodology of netting the discounted future fixed cash receipts (or payments) with the variable cash payments (or receipts) based on an expectation of future interest rates (forward curves) derived from observable market interest rate curves. Likewise, the fair values of interest rate options (i.e., interest rate caps) are determined using the market standard methodology of discounting the future expected cash receipts that would occur if variable interest rates fall below (or rise above) the strike rate of the floors (or caps), with the variable interest rates used in the calculation of projected receipts on the floor (or cap) based on an expectation of future interest rates derived from observable market interest rate curves and volatilities.

The Corporation also incorporates credit valuation adjustments to appropriately reflect both its own nonperformance risk and the respective counterparty's nonperformance risk in the fair value measurements. In adjusting the fair value of its derivative financial instruments for the effect of nonperformance risk, the Corporation has considered the impact of netting and any applicable credit enhancements, such as collateral postings, thresholds, mutual puts, and guarantees.

While the Corporation has determined that the majority of the inputs used to value its interest rate-related derivative financial instruments fall within Level 2 of the fair value hierarchy, the credit valuation adjustments utilize Level 3 inputs, such as estimates of current credit spreads to evaluate the likelihood of default by itself and its counterparties. The Corporation has assessed the significance of the impact of the credit valuation adjustments on the overall valuation of its derivative positions as of December 31, 2023 and 2022, and has determined that the credit valuation adjustments are not significant to the overall valuation of its derivative financial instruments for interest rate-related instruments. Therefore, the Corporation has determined that the fair value measures of its derivative financial instruments for interest rate-related instruments in their entirety are classified within Level 2 of the fair value hierarchy.

Derivative Financial Instruments (Foreign Currency Exchange Forwards - Both Designated and Not Designated as Hedging Instruments): The Corporation provides foreign currency exchange services to customers. In addition, the Corporation may enter into a foreign currency exchange forward to mitigate the exchange rate risk attached to the cash flows of a loan or as an offsetting contract to a forward entered into as a service to its customer. The valuation of the Corporation's foreign currency exchange forwards is determined using quoted prices of foreign currency exchange forwards with similar characteristics, with consideration given to the nature of the quote and the relationship of recently evidenced market activity to the fair value estimate, and is classified within Level 2 of the fair value hierarchy. See Note 14 for additional disclosures regarding the Corporation's foreign currency exchange forwards.

For Level 3 assets and liabilities measured at fair value on a recurring basis as of December 31, 2023, the Corporation utilized the following valuation techniques and significant unobservable inputs:

Mortgage Servicing Rights: The Corporation sells residential mortgage loans in the secondary market and typically retains the rights to service the loans sold. Upon sale, an MSR asset is capitalized, which represents the then current fair value of future net cash flows expected to be realized for performing servicing activities. The Corporation has made the irrevocable election to account for its MSR asset under the fair value measurement method. Under this methodology, changes in the fair value are recognized in earnings as they occur through mortgage banking, net on the consolidated statements of income.

MSRs are not traded in active markets. A cash flow model is used to determine fair value. Key assumptions and estimates, including projected prepayment speeds, assumed servicing costs, ancillary income, costs to service delinquent loans, costs of

foreclosure, and discount rates with option-adjusted spreads, used by this model are based on current market sources. Assumptions used to value MSR's are considered significant unobservable inputs. A separate third-party model is used to estimate prepayment speeds based on interest rates, housing turnover rates, estimated loan curtailment, anticipated defaults, and other relevant factors. Fair value estimates from outside sources are received periodically to corroborate the results of the valuation model. Due to the nature of the valuation inputs, MSR's are classified within Level 3 of the fair value hierarchy. See Note 5 for additional disclosure regarding the Corporation's MSR's.

Derivative Financial Instruments (Mortgage Derivative — Interest Rate Lock Commitments to Originate Residential Mortgage Loans Held For Sale): The fair value is determined by the change in value from each loan's rate lock date to the expected rate lock expiration date based on the underlying loan attributes, estimated closing ratios, and investor price matrix determined to be reasonably applicable to each loan commitment. The closing ratio calculation takes into consideration historical experience and loan-level attributes, particularly the change in the current interest rates from the time of initial rate lock. The closing ratio is periodically reviewed for reasonableness and reported to the Associated Mortgage Risk Management Committee.

Derivative Financial Instruments (Mortgage Derivative—Forward Commitments to Sell Mortgage Loans): Mortgage derivatives include forward commitments to deliver closed-end residential mortgage loans into conforming Agency MBS or conforming Cash Forward sales. The fair value of such instruments is determined by the difference of current market prices for such traded instruments or available from forward cash delivery commitments and the original traded price for such commitments.

The Corporation also relies on an internal valuation model to estimate the fair value of its forward commitments to sell residential mortgage loans (i.e., an estimate of what the Corporation would receive or pay to terminate the forward delivery contract based on market prices for similar financial instruments), which includes matching specific terms and maturities of the forward commitments against applicable investor pricing available. While there are Level 2 and 3 inputs used in the valuation models, the Corporation has determined that the majority of the inputs significant in the valuation of both of the mortgage derivatives fall within Level 3 of the fair value hierarchy. See Note 14 for additional disclosure regarding the Corporation's mortgage derivatives.

The table below presents the Corporation's financial instruments measured at fair value on a recurring basis as of December 31, 2023 and 2022, aggregated by the level in the fair value hierarchy within which those measurements fall:

(\$ in thousands)	Fair Value Hierarchy	December 31, 2023	December 31, 2022
Assets			
AFS investment securities:			
U.S. Treasury securities	Level 1	\$ 35,902	\$ 109,378
Agency securities	Level 2	—	13,532
Obligations of state and political subdivisions (municipal securities)	Level 2	91,817	230,714
Residential mortgage-related securities:			
FNMA/FHLMC	Level 2	1,120,794	1,604,610
GNMA	Level 2	2,042,675	497,596
Commercial mortgage-related securities:			
FNMA/FHLMC	Level 2	16,937	17,142
GNMA	Level 2	154,793	110,462
Asset backed securities:			
FFELP	Level 2	133,975	151,191
SBA	Level 2	1,051	4,477
Other debt securities	Level 2	2,950	2,922
Total AFS investment securities	Level 1	\$ 35,902	\$ 109,378
Total AFS investment securities	Level 2	3,564,990	2,632,647
Equity securities with readily determinable fair values	Level 1	6,883	5,991
Residential loans held for sale	Level 2	33,011	20,383
Mortgage servicing rights, net	Level 3	84,390	77,351
Interest rate-related instruments designated as hedging instruments ^(a)	Level 2	8,075	4,349
Foreign currency exchange forwards designated as hedging instruments ^(a)	Level 2	632	416
Interest rate-related and other instruments not designated as hedging instruments ^(a)	Level 2	111,623	62,401
Foreign currency exchange forwards not designated as hedging instruments ^(a)	Level 2	2,954	437
Interest rate lock commitments to originate residential mortgage loans held for sale	Level 3	439	86
Liabilities			
Interest rate-related instruments designated as hedging instruments ^(a)	Level 2	\$ 930	\$ 1,260
Foreign currency exchange forwards designated as hedging instruments ^(a)	Level 2	2,946	972
Interest rate-related and other instruments not designated as hedging instruments ^(a)	Level 2	195,662	251,398
Foreign currency exchange forwards not designated as hedging instruments ^(a)	Level 2	2,746	402
Forward commitments to sell residential mortgage loans	Level 3	673	46

(a) Figures are presented gross before netting. See Note 14 and Note 15 for information relating to the impact of offsetting derivative assets and liabilities and cash collateral with the same counterparty where there is a legally enforceable master netting agreement in place.

The table below presents a rollforward of the consolidated balance sheets amounts for the years ended December 31, 2023 and 2022, for the Corporation's mortgage derivatives measured on a recurring basis and classified within Level 3 of the fair value hierarchy:

(\$ in thousands)	Interest rate lock commitments to originate residential mortgage loans held for sale	Forward commitments to sell residential mortgage loans	Total
Balance December 31, 2021	\$ 2,617	\$ (30)	\$ 2,647
New production	10,442	(2,028)	12,470
Closed loans / settlements	(913)	24,766	(25,679)
Other	(12,060)	(22,662)	10,603
Change in mortgage derivative	(2,531)	76	(2,607)
Balance December 31, 2022	\$ 86	\$ 46	\$ 40
New production	\$ 6,557	\$ (1,816)	\$ 8,373
Closed loans / settlements	(4,171)	2,494	(6,665)
Other	(2,033)	(51)	(1,982)
Change in mortgage derivative	352	627	(274)
Balance December 31, 2023	\$ 439	\$ 673	\$ (234)

Assets and Liabilities Measured at Fair Value on a Nonrecurring Basis

Following is a description of the valuation methodologies used for the Corporation's more significant instruments measured on a nonrecurring basis at LOCOM, including the general classification of such instruments pursuant to the valuation hierarchy.

Commercial Loans Held For Sale: The estimated fair value is based on a discounted cash flow analysis, which the Corporation classifies as a Level 2 nonrecurring fair value measurement.

OREO: Certain OREO, upon initial recognition, was re-measured and reported at fair value through a charge off to the allowance for loan losses based upon the estimated fair value of the OREO, less estimated selling costs. The fair value of OREO, upon initial recognition or subsequent impairment, was estimated using appraised values, which the Corporation classifies as a Level 2 nonrecurring fair value measurement.

For Level 3 assets and liabilities measured at fair value on a nonrecurring basis as of December 31, 2023, the Corporation utilized the following valuation techniques and significant unobservable inputs:

Individually Evaluated Loans: The Corporation individually evaluates loans when a commercial loan relationship over \$500,000 is in nonaccrual status or, prior to 2023, when a commercial or consumer loan relationship had its terms restructured in a TDR or when a loan met the Corporation's definition of a probable TDR. On January 1, 2023, the Corporation adopted ASU 2022-02 prospectively. As a result, loans that were restructured prior to adoption are no longer considered TDRs and are not individually evaluated. See Note 4 for additional information regarding the Corporation's individually evaluated loans.

Equity Securities Without Readily Determinable Fair Values: The Corporation measures equity securities without readily determinable fair values at cost less impairment (if any), plus or minus observable price changes from an identical or similar investment of the same issuer, with such changes recognized in earnings. Included in equity securities without readily determinable fair values are 76,000 Visa Class B restricted shares carried at fair value. These shares are currently subject to certain transfer restrictions and will be convertible into Visa Class A shares upon final resolution of certain litigation matters involving Visa. Based on the current conversion factor, the Corporation expects 76,000 shares of Visa Class B to convert to 120,650 shares of Visa Class A upon the litigation resolution.

In its determination of the new carrying values upon observable price changes, the Corporation will adjust the prices if deemed necessary to arrive at the Corporation's estimated fair values. Such adjustments may include adjustments to reflect the different rights and obligations of similar securities and other adjustments. See Note 3 for additional disclosure regarding the Corporation's equity securities without readily determinable fair values.

The following table presents the carrying value of equity securities without readily determinable fair values still held as of December 31, 2023 that are measured under the measurement alternative and the related adjustments recorded during the periods presented for those securities with observable price changes. These securities are included in the nonrecurring fair value tables when applicable price changes are observable. Also shown are the cumulative upward and downward adjustments for the Corporation's equity securities without readily determinable fair values as of December 31, 2023:

(\$ in thousands)		
Equity securities without readily determinable fair values		
Carrying value as of December 31, 2022	\$	19,225
Carrying value changes		5,785
Purchases		10,011
Sales		(252)
Carrying value as of December 31, 2023	\$	34,769
Cumulative upward carrying value changes between January 1, 2018 and December 31, 2023	\$	24,671
Cumulative downward carrying value changes between January 1, 2018 and December 31, 2023	\$	—

The table below presents the Corporation's assets measured at fair value on a nonrecurring basis, aggregated by the level in the fair value hierarchy within which those measurements fall:

(\$ in thousands)	Fair Value Hierarchy	Fair Value	Consolidated Statements of Income Category of Adjustment Recognized in Income	Adjustment Recognized on the Consolidated Statements of Income ^(a)
December 31, 2023				
Assets				
Individually evaluated loans ^(b)	Level 3	\$ 47,221	Provision for credit losses	\$ 45,709
OREO ^(c)	Level 2	3,139	Other noninterest expense / provision for credit losses ^(d)	2,532
Equity securities without readily determinable fair values	Level 3	24,671	Investment securities gains (losses), net	5,785
December 31, 2022				
Assets				
Individually evaluated loans ^(b)	Level 3	\$ 23,584	Provision for credit losses	\$ 4,405
OREO ^(c)	Level 2	2,196	Other noninterest expense / provision for credit losses ^(d)	971
Equity securities without readily determinable fair values	Level 3	19,134	Investment securities gains (losses), net	5,690

(a) Includes the full year impact on the consolidated statements of income.

(b) On January 1, 2023, the Corporation adopted ASU 2022-02. Under this update, TDRs were eliminated and replaced with a modified loan classification which were no longer individually evaluated. As a result, amounts reported for 2023 and forward will not be comparable to prior period reported amounts.

(c) If the fair value of the collateral exceeds the carrying amount of the asset, no charge off or adjustment is necessary, the asset is not considered to be carried at fair value, and is therefore not included in the table.

(d) When a property's value is written down at the time it is transferred to OREO, the charge off is booked to the provision for credit losses. When a property is already in OREO and subsequently written down, the charge off is booked to other noninterest expense.

Certain nonfinancial assets and nonfinancial liabilities measured at fair value on a nonrecurring basis include the fair value analysis in the goodwill impairment test as well as intangible assets and other nonfinancial long-lived assets measured at fair value for the purpose of impairment assessment.

The table below presents the unobservable inputs that are readily quantifiable pertaining to Level 3 measurements:

December 31, 2023	Valuation Technique	Significant Unobservable Input	Range of Inputs	Weighted Average Input Applied
Mortgage servicing rights	Discounted cash flow	Option adjusted spread	6% - 8%	6%
Mortgage servicing rights	Discounted cash flow	Constant prepayment rate	1% - 100%	4%
Individually evaluated loans	Appraisals / Discounted cash flow	Collateral / Discount factor	18% - 53%	53%
Interest rate lock commitments to originate residential mortgage loans held for sale	Discounted cash flow	Closing ratio	31% - 100%	89%

Fair Value of Financial Instruments

The Corporation is required to disclose estimated fair values for its financial instruments.

Fair value estimates are set forth below for the Corporation's financial instruments:

(\$ in thousands)	Fair Value Hierarchy Level	December 31, 2023		December 31, 2022	
		Carrying Amount	Fair Value	Carrying Amount	Fair Value
Financial assets					
Cash and due from banks	Level 1	\$ 484,384	\$ 484,384	\$ 436,952	\$ 436,952
Interest-bearing deposits in other financial institutions	Level 1	425,089	425,089	156,693	156,693
Federal funds sold and securities purchased under agreements to resell	Level 1	14,350	14,350	27,810	27,810
AFS investment securities	Level 1	35,902	35,902	109,378	109,378
AFS investment securities	Level 2	3,564,990	3,564,990	2,632,647	2,632,647
HTM investment securities, net	Level 1	999	963	999	936
HTM investment securities, net	Level 2	3,859,161	3,379,586	3,959,399	3,400,028
Equity securities with readily determinable fair values	Level 1	6,883	6,883	5,991	5,991
Equity securities without readily determinable fair values	(d)	10,000	10,000	—	—
Equity securities without readily determinable fair values	Level 3	24,769	24,769	19,225	19,225
FHLB and Federal Reserve Bank stocks	Level 2	229,171	229,171	295,496	295,496
Residential loans held for sale	Level 2	33,011	33,011	20,383	20,383
Commercial loans held for sale	Level 2	90,303	90,303	—	—
Loans, net	Level 3	28,865,124	27,371,086	28,486,849	27,481,426
Bank and corporate owned life insurance	Level 2	682,649	682,649	676,530	676,530
Mortgage servicing rights, net	Level 3	84,390	84,390	77,351	77,351
Derivatives (other assets) ^(a)	Level 2	123,284	123,284	67,603	67,603
Interest rate lock commitments to originate residential mortgage loans held for sale (other assets)	Level 3	439	439	86	86
Financial liabilities					
Noninterest-bearing demand, savings, interest-bearing demand, and money market accounts	Level 3	\$ 26,130,076	\$ 26,130,076	\$ 27,705,996	\$ 27,705,996
Brokered CDs and other time deposits ^(b)	Level 2	7,315,973	7,315,973	1,930,158	1,930,158
Short-term funding	Level 2	326,780	326,757	605,937	605,205
FHLB advances	Level 2	1,940,194	1,944,600	4,319,861	4,322,264
Other long-term funding	Level 2	541,269	534,983	248,071	242,151
Standby letters of credit ^(c)	Level 2	2,157	2,157	2,881	2,881
Derivatives (accrued expenses and other liabilities) ^(a)	Level 2	202,285	202,285	254,033	254,033
Forward commitments to sell residential mortgage loans (accrued expenses and other liabilities)	Level 3	673	673	46	46

(a) Figures are presented gross before netting. See Note 14 and Note 15 for information relating to the impact of offsetting derivative assets and liabilities and cash collateral with the same counterparty where there is a legally enforceable master netting agreement in place.

(b) When the estimated fair value is less than the carrying value, the carrying value is reported as the fair value.

(c) The commitment on standby letters of credit was \$212 million and \$271 million at December 31, 2023 and 2022, respectively. See Note 16 for additional information on the standby letters of credit and for information on the fair value of lending-related commitments.

(d) These securities are measured at fair value using Net Asset Value per share (or its equivalent) as a practical expedient.

Note 19 Regulatory Matters

Regulatory Capital Requirements

The Corporation and its subsidiary bank are subject to various regulatory capital requirements administered by the federal banking agencies. Failure to meet minimum capital requirements can initiate certain mandatory and possible additional discretionary actions by regulators that, if undertaken, could have a direct material effect on the Corporation's financial statements. Under capital adequacy guidelines and the regulatory framework for prompt corrective action, the Corporation must meet specific capital guidelines that involve quantitative measures of the Corporation's assets, liabilities, and certain off-balance sheet items as calculated under regulatory accounting practices. The Corporation's capital amounts and classification are also subject to qualitative judgments by the regulators about components, risk weightings, and other factors.

Quantitative measures established by regulation to ensure capital adequacy require the Corporation to maintain minimum amounts and ratios (set forth in the table below) of total and CET1 capital to risk-weighted assets, and of tier 1 capital to

average assets. Management believes, as of December 31, 2023 and 2022, that the Corporation meets all capital adequacy requirements to which it is subject.

For additional information on the capital requirements applicable for the Corporation and the Bank, please see Part I, Item 1.

As of December 31, 2023 and 2022, the most recent notifications from the OCC and the FDIC categorized the subsidiary bank as well capitalized under the regulatory framework for prompt corrective action. To be categorized as well capitalized, the subsidiary bank must maintain minimum ratios as set forth in the table. There are no conditions or events since that notification that management believes have changed the institution's category. The actual capital amounts and ratios of the Corporation and its significant subsidiary are presented below. No deductions from capital were made for interest rate risk in 2023 or 2022.

(\$ in thousands)	Actual		For Capital Adequacy Purposes		To Be Well Capitalized Under Prompt Corrective Action Provisions ^(a)	
	Amount	Ratio	Amount	Ratio	Amount	Ratio
As of December 31, 2023						
Associated Banc-Corp						
Total capital	\$ 3,997,205	12.21 %	\$ 2,618,596	≥	8.00 %	
Tier 1 capital	3,269,050	9.99 %	1,963,947	≥	6.00 %	
CET1	3,074,938	9.39 %	1,472,960	≥	4.50 %	
Leverage	3,269,050	8.06 %	1,622,053	≥	4.00 %	
Associated Bank, N.A.						
Total capital	\$ 3,803,052	11.64 %	\$ 2,614,469	≥	8.00 %	\$ 3,268,086 ≥ 10.00 %
Tier 1 capital	3,167,182	9.69 %	1,960,852	≥	6.00 %	2,614,469 ≥ 8.00 %
CET1	3,167,182	9.69 %	1,470,639	≥	4.50 %	2,124,256 ≥ 6.50 %
Leverage	3,167,182	7.82 %	1,620,970	≥	4.00 %	2,026,212 ≥ 5.00 %
As of December 31, 2022						
Associated Banc-Corp						
Total capital	\$ 3,680,227	11.33 %	\$ 2,597,589	≥	8.00 %	
Tier 1 capital	3,229,690	9.95 %	1,948,192	≥	6.00 %	
CET1	3,035,578	9.35 %	1,461,144	≥	4.50 %	
Leverage	3,229,690	8.59 %	1,504,035	≥	4.00 %	
Associated Bank, N.A.						
Total capital	\$ 3,594,845	11.09 %	\$ 2,593,728	≥	8.00 %	\$ 3,242,160 ≥ 10.00 %
Tier 1 capital	3,243,349	10.00 %	1,945,296	≥	6.00 %	2,593,728 ≥ 8.00 %
CET1	3,243,349	10.00 %	1,458,972	≥	4.50 %	2,107,404 ≥ 6.50 %
Leverage	3,243,349	8.63 %	1,503,666	≥	4.00 %	1,879,583 ≥ 5.00 %

(a) Prompt corrective action provisions are not applicable at the bank holding company level.

Note 20 Earnings Per Common Share

See Note 1 for the Corporation's accounting policy on earnings per common share. Presented below are the calculations for basic and diluted earnings per common share:

(\$ in thousands, except per share data)	For the Years Ended December 31,		
	2023	2022	2021
Net income	\$ 182,956	\$ 366,122	\$ 350,994
Preferred stock dividends	(11,500)	(11,500)	(17,111)
Net income available to common equity	\$ 171,456	\$ 354,622	\$ 333,883
Common shareholder dividends	\$ (128,748)	\$ (122,417)	\$ (115,212)
Unvested share-based payment awards	(785)	(720)	(849)
Undistributed earnings	\$ 41,922	\$ 231,485	\$ 217,822
Undistributed earnings allocated to common shareholders	\$ 41,675	\$ 229,995	\$ 216,299
Undistributed earnings allocated to unvested share-based payment awards	247	1,490	1,523
Undistributed earnings	\$ 41,922	\$ 231,485	\$ 217,822
Basic			
Distributed earnings to common shareholders	\$ 128,748	\$ 122,417	\$ 115,212
Undistributed earnings allocated to common shareholders	41,675	229,995	216,299
Total common shareholders earnings, basic	\$ 170,424	\$ 352,412	\$ 331,510
Diluted			
Distributed earnings to common shareholders	\$ 128,748	\$ 122,417	\$ 115,212
Undistributed earnings allocated to common shareholders	41,675	229,995	216,299
Total common shareholders earnings, diluted	\$ 170,424	\$ 352,412	\$ 331,510
Weighted average common shares outstanding	149,968	149,162	150,773
Effect of dilutive common stock awards	892	1,334	1,214
Diluted weighted average common shares outstanding	150,860	150,496	151,987
Basic earnings per common share	\$ 1.14	\$ 2.36	\$ 2.20
Diluted earnings per common share	\$ 1.13	\$ 2.34	\$ 2.18

Approximately 3 million anti-dilutive common stock options were excluded from the earnings per share calculation at December 31, 2023, 2 million at December 31, 2022, and 3 million at December 31, 2021.

Note 21 Segment Reporting

The Corporation utilizes a risk-based internal profitability measurement system to provide strategic business unit reporting. The profitability measurement system is based on internal management methodologies designed to produce consistent results and reflect the underlying economics of the units. Certain strategic business units have been combined for segment information reporting purposes where the nature of the products and services, the type of customer, and the distribution of those products and services are similar. The three reportable segments are Corporate and Commercial Specialty; Community, Consumer, and Business; and Risk Management and Shared Services. The financial information of the Corporation's segments has been compiled utilizing the accounting policies described in Note 1, with certain exceptions. The more significant of these exceptions are described herein.

The reportable segment results are presented based on the Corporation's internal management accounting process. The management accounting policies and processes utilized in compiling segment financial information are highly subjective and, unlike financial accounting, are not based on authoritative guidance similar to U.S. GAAP. As a result, reported segments and the financial information of the reported segments are not necessarily comparable with similar information reported by other financial institutions. Furthermore, changes in management structure or allocation methodologies and procedures may result in changes in previously reported segment financial data. Additionally, the information presented is not indicative of how the segments would perform if they operated as independent entities.

To determine financial performance of each segment, the Corporation allocates FTP assignments, the provision for credit losses, certain noninterest expenses, income taxes, and equity to each segment. Allocation methodologies are subject to periodic adjustment as the internal management accounting system is revised, the interest rate environment evolves, and business or

product lines within the segments change. Also, because the development and application of these methodologies is a dynamic process, the financial results presented may be periodically reviewed.

The Corporation allocates net interest income using an internal FTP methodology that charges users of funds (assets, primarily loans) and credits providers of funds (liabilities, primarily deposits) based on the maturity, prepayment, and/or re-pricing characteristics of the assets and liabilities. The net effect of this allocation is offset in the Risk Management and Shared Services segment to ensure consolidated totals reflect the Corporation's net interest income. The net FTP allocation is reflected as net intersegment interest income (expense) in the accompanying tables.

The provision for credit losses is allocated to segments based on the expected long-term annual net charge off rates attributable to the credit risk of loans managed by the segment during the period. In contrast, the level of the consolidated provision for credit losses is determined based on an ACLL model using methodologies described in Note 1. The net effect of the credit provision is recorded in Risk Management and Shared Services. Indirect expenses incurred by certain centralized support areas are allocated to segments based on actual usage (for example, volume measurements) and other criteria. Certain types of administrative expense and bank-wide expense accruals (including, when applicable, amortization of CDIs and other intangible assets associated with acquisitions, acquisition-related costs, and asset gains on disposed business units) are generally not allocated to segments. Income taxes are allocated to segments based on the Corporation's estimated effective tax rate, with certain segments adjusted for any tax-exempt income or non-deductible expenses. Equity is allocated to the segments based on regulatory capital requirements and in proportion to an assessment of the inherent risks associated with the business of the segment (including interest, credit and operating risk).

A description of each business segment is presented below.

Corporate and Commercial Specialty: The Corporate and Commercial Specialty segment serves a wide range of customers including private clients, larger businesses, developers, not-for-profits, municipalities, and financial institutions by providing lending and deposit solutions as well as the support to deliver, fund, and manage such banking solutions. In addition, this segment provides a variety of investment, fiduciary, and retirement planning products and services to individuals, private clients, and small to mid-sized businesses. In serving this segment, we compete based on an in-depth understanding of our customers' financial needs, the ability to match market competitive solutions to those needs, and the highest standards of relationship and service excellence in the delivery of these services. Delivery of services is provided through our corporate and commercial units, our CRE unit, as well as our specialized industries and commercial financial services units. Within this segment we provide the following products and services: (1) lending solutions, such as commercial loans and lines of credit, CRE financing, construction loans, letters of credit, leasing, ABL & equipment finance, and, for our larger clients, loan syndications; (2) deposit and cash management solutions such as commercial checking and interest-bearing deposit products, cash vault and night depository services, liquidity solutions, payables and receivables solutions, and information services; (3) specialized financial services such as interest rate risk management, and foreign exchange solutions; (4) fiduciary services such as administration of pension, profit-sharing and other employee benefit plans, fiduciary and corporate agency services, and institutional asset management; and (5) investable funds solutions such as savings, money market deposit accounts, IRA accounts, CDs, fixed and variable annuities, full-service, discount and online investment brokerage; investment advisory services; and trust and investment management accounts. During the first quarter of 2021, the Corporation sold its wealth management subsidiary, Whitnell.

Community, Consumer, and Business: The Community, Consumer, and Business segment serves individuals, as well as small and mid-sized businesses, by providing lending and deposit solutions. In serving this segment, we compete based on providing a broad range of solutions to meet the needs of our customers in their entire financial lifecycle, convenient access to our services through multiple channels such as branches, phone based services, online and mobile banking, and a relationship based business model which assists our customers in navigating any changes and challenges in their financial circumstances. Delivery of services is provided through our various consumer banking and community banking units. Within this segment we provide the following products and services: (1) lending solutions such as residential mortgages, home equity loans and lines of credit, personal and installment loans, auto finance loans, business loans, and business lines of credit, and (2) deposit and transactional solutions such as checking, credit and debit cards, online banking and bill pay, and money transfer services.

Risk Management and Shared Services: The Risk Management and Shared Services segment includes key shared operational functions and also includes residual revenue and expenses, representing the difference between actual amounts incurred and the amounts allocated to operating segments, including interest rate risk residuals (FTP mismatches) and credit risk and provision residuals (long-term credit charge mismatches).

Effective during the third quarter of 2022, the product and marketing functions were moved to the Risk Management and Shared Services segment from the Community, Consumer, and Business and Corporate and Commercial Specialty segments in order to centralize these functions under common leadership.

Effective during the first quarter of 2022, certain support functions and a select group of banking regions were realigned into the Community, Consumer, and Business segment from the Corporate and Commercial Specialty segment.

Effective during 2021, select back office support functions that specifically support Community, Consumer and Business were reorganized under that segment from the Risk Management and Shared Services segment.

Information about the Corporation's segments is presented below:

(\$ in thousands)	Corporate and Commercial Specialty		
	For the Years Ended December 31,		
	2023	2022	2021
Net interest income	\$ 958,046	\$ 566,566	\$ 361,634
Net intersegment interest income (expense)	(391,276)	(103,360)	18,001
Segment net interest income	566,769	463,205	379,636
Noninterest income	136,995	145,751	165,345
Total revenue	703,764	608,956	544,980
Provision for credit losses	55,801	49,543	60,311
Noninterest expense	248,926	234,234	219,655
Income before income taxes	399,037	325,179	265,015
Income tax expense	71,766	59,000	46,906
Net income	\$ 327,271	\$ 266,179	\$ 218,109
Allocated goodwill	\$ 525,836	\$ 525,836	\$ 525,836

(\$ in thousands)	Community, Consumer, and Business		
	For the Years Ended December 31,		
	2023	2022	2021
Net interest income	\$ 285,175	\$ 322,725	\$ 289,075
Net intersegment interest income	447,100	176,164	62,376
Segment net interest income	732,276	498,889	351,451
Noninterest income	108,858	118,848	151,474
Total revenue	841,133	617,737	502,925
Provision for credit losses	28,258	20,755	20,622
Noninterest expense	435,986	417,042	401,206
Income before income taxes	376,889	179,939	81,097
Income tax expense	79,147	37,787	17,030
Net income	\$ 297,742	\$ 142,152	\$ 64,067
Allocated goodwill	\$ 579,156	\$ 579,156	\$ 579,156

(\$ in thousands)	Risk Management and Shared Services		
	For the Years Ended December 31,		
	2023	2022	2021
Net interest income	\$ (203,647)	\$ 68,031	\$ 75,146
Net intersegment (expense)	(55,824)	(72,803)	(80,378)
Segment net interest income	(259,471)	(4,772)	(5,232)
Noninterest income	(182,671)	17,772	15,546
Total revenue	(442,142)	12,999	10,314
Provision for credit losses	(1,038)	(37,300)	(168,944)
Noninterest expense	128,770	95,787	89,063
Income (loss) before income taxes	(569,873)	(45,488)	90,195
Income tax expense (benefit)	(127,816)	(3,279)	21,377
Net income (loss)	\$ (442,057)	\$ (42,209)	\$ 68,818
Allocated goodwill	\$ —	\$ —	\$ —

(\$ in thousands)	Consolidated Total		
	For the Years Ended December 31,		
	2023	2022	2021
Net interest income	\$ 1,039,573	\$ 957,321	\$ 725,855
Net intersegment interest income	—	—	—
Segment net interest income	1,039,573	957,321	725,855
Noninterest income	63,182	282,370	332,364
Total revenue	1,102,756	1,239,691	1,058,219
Provision for credit losses	83,021	32,998	(88,011)
Noninterest expense	813,682	747,063	709,924
Income before income taxes	206,052	459,630	436,307
Income tax expense	23,097	93,508	85,313
Net income	\$ 182,956	\$ 366,122	\$ 350,994
Allocated goodwill	\$ 1,104,992	\$ 1,104,992	\$ 1,104,992

Note 22 Accumulated Other Comprehensive Income (Loss)

The following table summarizes the components of accumulated other comprehensive income (loss) at December 31, 2023, 2022, and 2021, respectively, including changes during the years then ended as well as any reclassifications out of accumulated other comprehensive income (loss):

(\$ in thousands)	AFS Investment Securities	Cash Flow Hedge Derivatives	Defined Benefit Pension and Postretirement Obligations	Accumulated Other Comprehensive Income (Loss)
Balance, December 31, 2020	\$ 41,325	\$ —	\$ (28,707)	\$ 12,618
Other comprehensive income (loss) before reclassifications	(63,714)	—	25,519	(38,195)
Amounts reclassified from accumulated other comprehensive income (loss):				
Investment securities losses, net	16	—	—	16
HTM investment securities, net, at amortized cost ^(a)	1,551	—	—	1,551
Personnel expense	—	—	1,346	1,346
Other expense	—	—	4,594	4,594
Income tax (expense) benefit	15,557	—	(7,803)	7,754
Net other comprehensive income (loss) during period	(46,591)	—	23,656	(22,935)
Balance, December 31, 2021	<u>\$ (5,266)</u>	<u>\$ —</u>	<u>\$ (5,051)</u>	<u>\$ (10,317)</u>
Other comprehensive (loss) before reclassifications	\$ (250,273)	\$ —	\$ (51,745)	\$ (302,018)
Unrealized (losses) on AFS securities transferred to HTM securities	(67,604)	—	—	(67,604)
Amounts reclassified from accumulated other comprehensive income (loss):				
Investment securities losses, net	1,922	—	—	1,922
HTM investment securities, net, at amortized cost ^(a)	9,870	—	—	9,870
Other assets / accrued expenses and other liabilities	—	3,626	—	3,626
Interest income	—	(212)	—	(212)
Personnel expense	—	—	(325)	(325)
Other expense	—	—	658	658
Income tax (expense) benefit	78,159	(54)	13,495	91,601
Net other comprehensive income (loss) during period	(227,926)	3,360	(37,917)	(262,483)
Balance, December 31, 2022	<u>\$ (233,192)</u>	<u>\$ 3,360</u>	<u>\$ (42,968)</u>	<u>\$ (272,799)</u>
Other comprehensive income before reclassifications	\$ 41,145	\$ —	\$ 24,091	\$ 65,236
Amounts reclassified from accumulated other comprehensive income (loss):				
Investment securities losses, net	64,940	—	—	64,940
HTM investment securities, net, at amortized cost ^(a)	9,025	—	—	9,025
Other assets / accrued expenses and other liabilities	—	(13,254)	—	(13,254)
Interest income	—	13,930	—	13,930
Personnel expense	—	—	(326)	(326)
Other expense	—	—	(29)	(29)
Income tax (expense)	(30,560)	(956)	(6,304)	(37,820)
Net other comprehensive income (loss) during period	84,550	(280)	17,432	101,703
Balance, December 31, 2023	<u>\$ (148,641)</u>	<u>\$ 3,080</u>	<u>\$ (25,535)</u>	<u>\$ (171,096)</u>

(a) Amortization of net unrealized losses on AFS securities transferred to HTM securities.

Note 23 Revenue from Contracts with Customers

Revenue from contracts with customers is recognized when obligations under the terms of a contract with the Corporation's customer are satisfied. Revenue is measured as the amount of consideration we expect to receive in exchange for transferring goods or providing services. We do not have any material significant payment terms as payment is received at or shortly after the satisfaction of the performance obligation.

The Corporation's disaggregated revenue by major source is presented below:

	Corporate and Commercial Specialty		
	For the Years Ended December 31,		
(\$ in thousands)	2023	2022	2021
Wealth management fees	\$ 82,502	\$ 84,122	\$ 89,854
Service charges and deposit account fees	10,907	13,240	15,880
Card-based fees ^(a)	1,808	1,547	1,397
Other revenue	2,044	2,964	3,208
Noninterest income (in-scope of Topic 606)	\$ 97,261	\$ 101,873	\$ 110,340
Noninterest income (out-of-scope of Topic 606)	39,734	43,878	55,004
Total noninterest income	\$ 136,995	\$ 145,751	\$ 165,345

	Community, Consumer, and Business		
	For the Years Ended December 31,		
(\$ in thousands)	2023	2022	2021
Service charges and deposit account fees	\$ 38,115	\$ 49,052	\$ 48,493
Card-based fees ^(a)	43,286	42,474	41,730
Other revenue	7,082	7,069	10,719
Noninterest income (in-scope of Topic 606)	\$ 88,483	\$ 98,595	\$ 100,942
Noninterest income (out-of-scope of Topic 606)	20,375	20,253	50,532
Total noninterest income	\$ 108,858	\$ 118,848	\$ 151,474

	Risk Management and Shared Services		
	For the Years Ended December 31,		
(\$ in thousands)	2023	2022	2021
Service charges and deposit account fees	\$ 23	\$ 18	\$ 32
Card-based fees ^(a)	28	111	(3)
Other revenue	764	1,356	967
Noninterest income (in-scope of Topic 606)	\$ 815	\$ 1,485	\$ 996
Noninterest income (out-of-scope of Topic 606)	(183,486)	16,286	14,550
Total noninterest income	\$ (182,671)	\$ 17,772	\$ 15,546

	Consolidated Total		
	For the Years Ended December 31,		
(\$ in thousands)	2023	2022	2021
Wealth management fees	\$ 82,502	\$ 84,122	\$ 89,854
Service charges and deposit account fees	49,045	62,310	64,406
Card-based fees ^(a)	45,121	44,132	43,124
Other revenue	9,891	11,389	14,894
Noninterest income (in-scope of Topic 606)	\$ 186,560	\$ 201,953	\$ 212,278
Noninterest income (out-of-scope of Topic 606)	(123,377)	80,417	120,086
Total noninterest income	\$ 63,182	\$ 282,370	\$ 332,364

(a) Certain card-based fees are out-of-scope of Topic 606.

Below is a listing of performance obligations for the Corporation's main revenue streams:

Revenue Stream	Noninterest Income In-Scope of Topic 606
Service charges and deposit account fees	Service charges and deposit account fees consist of monthly service fees (i.e. business analyzed fees and consumer service charges) and other deposit account related fees. The Corporation's performance obligation for monthly service fees is generally satisfied, and the related revenue recognized, over the period in which the service is provided. Other deposit account related fees are largely transactional based, and therefore, the Corporation's performance obligation is satisfied, and related revenue recognized, at a point in time. Payment for service charges and deposit account fees is primarily received immediately or in the following month through a direct charge to customers' accounts.
Card-based fees ^(a)	Card-based fees are primarily comprised of debit and credit card income, ATM fees, and merchant services income. Debit and credit card income is primarily comprised of interchange fees earned whenever the Corporation's debit and credit cards are processed through card payment networks. ATM and merchant fees are largely transactional based, and therefore, the Corporation's performance obligation is satisfied, and related revenue recognized, at a point in time. Payment is typically received immediately or in the following month.
Trust and asset management fees ^(b)	Trust and asset management income is primarily comprised of fees earned from the management and administration of trusts and other customer assets. The Corporation's performance obligation is generally satisfied over time and the resulting fees are recognized monthly, based upon the month-end market value of the assets under management and the applicable fee rate. Payment is generally received a few days after month end through a direct charge to the customers' accounts. The Corporation's performance obligation for these transactional-based services is generally satisfied, and related revenue recognized, at a point in time (i.e., as incurred). Payment is received shortly after services are rendered.
Brokerage and advisory fees ^(b)	Brokerage and advisory fees primarily consist of investment advisory, brokerage, retirement services, and annuities. The Corporation's performance obligation for investment advisory services and retirement services is generally satisfied, and the related revenue recognized, over the period in which the services are provided. The performance obligation for annuities is satisfied upon sale of the annuity, and therefore, the related revenue is primarily recognized at the time of sale. Payment for these services is typically received immediately or in advance of the service.

(a) Certain card-based fees are out-of-scope of Topic 606.

(b) Trust and asset management fees and brokerage and advisory fees are included in wealth management fees.

Note 24 Recent Developments

On January 30, 2024, the Corporation's Board of Directors declared a regular quarterly cash dividend of \$0.22 per common share, payable on March 15, 2024 to shareholders of record at the close of business on March 1, 2024. The Board of Directors also declared a regular quarterly cash dividend of \$0.3671875 per depositary share on Associated's 5.875% Series E Perpetual Preferred Stock, payable on March 15, 2024 to shareholders of record at the close of business on March 1, 2024. The Board of Directors also declared a regular quarterly cash dividend of \$0.3515625 per depositary share on Associated's 5.625% Series F Perpetual Preferred Stock, payable on March 15, 2024 to shareholders of record at the close of business on March 1, 2024.



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Report of Independent Registered Public Accounting Firm

To the Stockholders and Board of Directors
Associated Banc-Corp:

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated balance sheets of Associated Banc-Corp and subsidiaries (the Company) as of December 31, 2023 and 2022, the related consolidated statements of income, comprehensive income, changes in stockholders' equity, and cash flows for each of the years in the three-year period ended December 31, 2023, and the related notes (collectively, the consolidated financial statements). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2023 and 2022, and the results of its operations and its cash flows for each of the years in the three-year period ended December 31, 2023, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2023, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission, and our report dated February 8, 2024 expressed an unqualified opinion on the effectiveness of the Company's internal control over financial reporting.

Basis for Opinion

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

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matter

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

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Assessment of the allowance for credit losses related to loans, excluding individually analyzed loans

As discussed in Notes 1 and 4 to the consolidated financial statements, the Company's allowance for credit losses related to loans, excluding loans individually analyzed, is comprised of the allowance for loan losses and the allowance for unfunded commitments (collective ACLL) and was \$370.4 million of a total allowance for credit losses of \$385.9 million as of December 31, 2023 (the December 31, 2023 collective ACLL). The level of the December 31, 2023 collective ACLL represents management's estimate of an amount appropriate to provide for expected lifetime credit losses. The expected lifetime credit losses are the product of multiplying the Company's estimates of probability of default (PD), loss given default (LGD), and the individual loan level exposure at default (EAD) on an undiscounted basis. The Company estimates the lifetime expected loss using prepayment assumptions over the projected lifetime cash flow of the loans. The Company uses PD and LGD models, which are based on loan grades for commercial loans and credit reports for consumer loans, which are applied based on portfolio segmentation leveraging industry breakouts in Commercial and Industrial and property types in Commercial Real Estate for commercial loans and loan types for consumer loans, and incorporate a single economic forecast scenario over a reasonable and supportable forecast period. After the reasonable and supportable forecast period, the Company reverts, on a straight-line basis over one year, to its historical loss rates for the remaining life of the loans. A portion of the December 31, 2023 collective ACLL is comprised of adjustments for qualitative factors not reflected in the quantitative model.

We identified the assessment of the December 31, 2023 collective ACLL as a critical audit matter. A high degree of audit effort, including specialized skills and knowledge, and subjective and complex auditor judgment was involved in the assessment of the December 31, 2023 collective ACLL. Specifically, the assessment encompassed the evaluation of the December 31, 2023 collective ACLL methodology, including the methods and models used to estimate (1) PD and LGD and their significant assumptions, including the loan grades for commercial loans, credit reports for consumer loans, historical loan losses and delinquency experience, the economic forecast scenario, and how loans with similar risk characteristics are segmented, (2) the method used to calculate the prepayment assumptions, (3) the determination of the reasonable and supportable forecast period and reversion to historical losses and (4) the qualitative factors. The assessment also included an evaluation of the conceptual soundness and performance of the PD and LGD models and of the mathematical accuracy of certain December 31, 2023 collective ACLL calculations.

The following are the primary procedures we performed to address this critical audit matter. We evaluated the design and tested the operating effectiveness of certain internal controls related to the critical audit matter. This included controls related to the:

- development and approval of the collective ACLL methodology
- continued use and appropriateness of changes made to PD and LGD models
- identification and determination of the significant assumptions used in the PD and LGD models, including the loan grades for commercial loans, credit reports for consumer loans, historical loan losses and delinquency experience, and how loans with similar risk characteristics are segmented
- identification and determination of the prepayment assumptions used in the collective ACLL methodology
- development of the qualitative factors
- performance monitoring of the PD and LGD models for the December 31, 2023 collective ACL
- analysis of the collective ACLL results, trends and ratios and
- calculation of the collective ACLL.



We evaluated the Company's process to develop the December 31, 2023 collective ACLL estimate by testing certain sources of data, factors, and assumptions that the Company used, and considered the relevance and reliability of such data, factors, and assumptions, and tested the mathematical accuracy of certain calculations of the December 31, 2023 collective ACLL. In addition, we involved credit risk professionals with specialized skills and knowledge, who assisted in:

- evaluating the Company's collective ACLL methodology for compliance with U.S. generally accepted accounting principles
- evaluating judgments made by the Company relative to the assessment and performance testing of the PD and LGD models by comparing them to relevant Company-specific metrics and trends and the applicable industry and regulatory practices
- evaluating the conceptual soundness of the methodology used to develop the key assumptions for the PD and LGD including loan grades for commercial loans, credit reports for consumer loans, and the historical loan losses and delinquency experience by inspecting the model documentation to determine whether the models are suitable for their intended use
- evaluating the appropriateness of the model methodology utilized to incorporate a reasonable and supportable forecast and reversion methodology by inspecting the model documentation and by comparing it to relevant industry practices
- evaluating the selection of the economic forecast scenario through comparison to publicly available forecasts
- determining whether the loan portfolio is segmented by similar risk characteristics by comparing to the Company's business environment and relevant industry practices
- evaluating the methodology used to develop the qualitative factors and the effect of those factors on the collective ACLL compared with relevant credit risk factors and consistency with credit trends and identified limitations of the underlying quantitative models and
- evaluating individual loan grades for a selection of commercial loan relationships by evaluating the financial performance of the borrower, sources of repayment, and any relevant guarantees or underlying collateral values.

KPMG LLP

We have served as the Company's auditor since 1983.

Chicago, Illinois
February 8, 2024

ITEM 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

None.

ITEM 9A. Controls and Procedures

The Corporation maintains disclosure controls and procedures as required under Rule 13a-15(e) and Rule 15d-15(e) promulgated under the Securities Exchange Act of 1934, as amended, that are designed to ensure that information required to be disclosed in our Exchange Act reports is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms, and that such information is accumulated and communicated to the Corporation's management, including its Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure.

As of December 31, 2023, the Corporation's management carried out an evaluation, under the supervision and with the participation of the Corporation's Chief Executive Officer and Chief Financial Officer, of the effectiveness of its disclosure controls and procedures. Based on the foregoing, its Chief Executive Officer and Chief Financial Officer concluded that the Corporation's disclosure controls and procedures were effective as of December 31, 2023. No changes were made to the Corporation's internal control over financial reporting (as defined Rule 13a-15(f) and Rule 15d-15(f) promulgated under the Exchange Act) during the last fiscal quarter that have materially affected, or are reasonably likely to materially affect, the Corporation's internal control over financial reporting.

Management's Annual Report on Internal Control Over Financial Reporting

Management of Associated Banc-Corp is responsible for establishing and maintaining adequate internal control over financial reporting. The Corporation's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of the Corporation's financial statements for external purposes in accordance with GAAP. Internal control over financial reporting is defined in Rules 13a-15(f) and 15d-15(f) promulgated under the Exchange Act.

As of December 31, 2023, management assessed the effectiveness of the Corporation's internal control over financial reporting based on criteria for effective internal control over financial reporting established in Internal Control — Integrated Framework (2013), issued by the Committee of Sponsoring Organization of the Treadway Commission (COSO). Based on this assessment, management has determined that the Corporation's internal control over financial reporting as of December 31, 2023, was effective.

KPMG LLP, the independent registered public accounting firm that audited the consolidated financial statements of the Corporation included in this Annual Report on Form 10-K, has issued an attestation report on the effectiveness of the Corporation's internal control over financial reporting as of December 31, 2023. The report, which expresses an unqualified opinion on the effectiveness of the Corporation's internal control over financial reporting as of December 31, 2023, is included below under the heading Report of Independent Registered Public Accounting Firm.



KPMG LLP
Aon Center
Suite 5500
200 E. Randolph Street
Chicago, IL 60601-6436

Report of Independent Registered Public Accounting Firm

To the Stockholders and Board of Directors
Associated Banc-Corp:

Opinion on Internal Control Over Financial Reporting

We have audited Associated Banc-Corp and subsidiaries' (the Company) internal control over financial reporting as of December 31, 2023, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission. In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2023, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of the Company as of December 31, 2023 and 2022, the related consolidated statements of income, comprehensive income, changes in stockholders' equity, and cash flows for each of the years in the three-year period ended December 31, 2023, and the related notes (collectively, the consolidated financial statements), and our report dated February 8, 2024 expressed an unqualified opinion on those consolidated financial statements.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Annual Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audit also included performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control Over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company;

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and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

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

KPMG LLP

Chicago, Illinois
February 8, 2024

ITEM 9B. Other Information

During the three months ended December 31, 2023, no director or "officer" of the Corporation adopted or terminated a "Rule 10b5-1 trading arrangement" or a "non-Rule 10b5-1 trading arrangement," as each term is defined in Item 408(a) of Regulation S-K.

ITEM 9C. Disclosure Regarding Foreign Jurisdictions that Prevent Inspections

Not applicable.

PART III

ITEM 10. Directors, Executive Officers and Corporate Governance

The information in the Corporation's definitive Proxy Statement, prepared for the 2024 Annual Meeting of Shareholders, which contains information concerning this item under the captions Election of Directors and Information About the Board of Directors; and information concerning Section 16(a) compliance under the caption Delinquent Section 16(a) Reports is incorporated herein by reference. Information relating to the Corporation's executive officers is set forth in Part I of this report.

Our Code of Business Conduct and Ethics, Corporate Governance Guidelines, committee charters for standing committees of the Board and other governance documents are all available on our website, www.associatedbank.com, "Investor Relations," "Governance Documents." We will disclose on our website amendments to or waivers from our Code of Ethics in accordance with all applicable laws and regulations. Information contained on any of our websites is not deemed to be a part of this Annual Report.

ITEM 11. Executive Compensation

The information in the Corporation's definitive Proxy Statement, prepared for the 2024 Annual Meeting of Shareholders, which contains information concerning this item, under the captions Executive Compensation — Compensation Discussion and Analysis, Executive Compensation Tables, Director Compensation, Compensation and Benefits Committee Interlocks and Insider Participation, and Compensation and Benefits Committee Report is incorporated herein by reference.

ITEM 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

The information in the Corporation's definitive Proxy Statement, prepared for the 2024 Annual Meeting of Shareholders, which contains information concerning this item, under the caption Stock Ownership, is incorporated herein by reference. The following table sets forth information as of December 31, 2023 about shares of Common Stock outstanding and available for issuance under Associated's existing equity compensation plans.

Equity Compensation Plan Information

December 31, 2023	(a) Number of Securities to be Issued Upon Exercise of Outstanding Options, Warrants, and Rights	(b) Weighted-Average Exercise Price of Outstanding Options, Warrants, and Rights	(c) Number of Securities Remaining Available for Future Issuance Under Equity Compensation Plans (excluding securities reflected in column (a))
Plan Category			
Equity compensation plan approved by security holders	3,791,747	\$ 21.25	7,222,317

ITEM 13. Certain Relationships and Related Transactions, and Director Independence

The information in the Corporation's definitive Proxy Statement, prepared for the 2024 Annual Meeting of Shareholders, which contains information concerning this item under the captions Related Party Transactions, and Information about the Board of Directors, is incorporated herein by reference.

ITEM 14. Principal Accounting Fees and Services

The information in the Corporation's definitive Proxy Statement, prepared for the 2024 Annual Meeting of Shareholders, which contains information concerning this item under the caption Fees Paid to Independent Registered Public Accounting Firm, is incorporated herein by reference.

PART IV

ITEM 15. Exhibits and Financial Statement Schedules

(a) 1 and 2 Financial Statements and Financial Statement Schedules

The following financial statements and financial statement schedules are included under a separate caption Financial Statements and Supplementary Data in Part II, Item 8 hereof and are incorporated herein by reference.

Consolidated Balance Sheets — December 31, 2023 and 2022

Consolidated Statements of Income — For the Years Ended December 31, 2023, 2022, and 2021

Consolidated Statements of Comprehensive Income — For the Years Ended December 31, 2023, 2022, and 2021

Consolidated Statements of Changes in Stockholders' Equity — For the Years Ended December 31, 2023, 2022, and 2021

Consolidated Statements of Cash Flows — For the Years Ended December 31, 2023, 2022, and 2021

Notes to Consolidated Financial Statements

Report of Independent Registered Public Accounting Firm

(a) 3 Exhibits Required by Item 601 of Regulation S-K

Exhibit Number	Description	
(2)	Membership Interest Purchase Agreement, dated May 4, 2020, by and between Associated Bank, N.A. and USI Insurance Services LLC	Exhibit (2) to Report on Form 10-Q filed on May 11, 2020
(3)(a)	Amended and Restated Articles of Incorporation	Exhibit (3) to Report on Form 10-Q filed on May 8, 2006
(3)(b)	Articles of Amendment to the Amended and Restated Articles of Incorporation of Associated Banc-Corp regarding the rights and preferences of preferred stock, effective April 25, 2012	Exhibit (3.1 and 4.1) to Report on Form 8-K filed on April 25, 2012
(3)(c)	Articles of Amendment to the Amended and Restated Articles of Incorporation of Associated Banc-Corp with respect to its 5.875% Non-Cumulative Perpetual Preferred Stock, Series E, dated September 21, 2018	Exhibit (3.1.4.1) to Report on Form 8-K filed on September 26, 2018
(3)(d)	Amended and Restated Bylaws of Associated Banc-Corp, as amended through February 2, 2021	Exhibit (3.1(l)) to Report on Form 10-K filed on February 9, 2021
(3)(e)	Articles of Amendment to the Amended and Restated Articles of Incorporation of Associated Banc-Corp with respect to its 5.625% Non-Cumulative Perpetual Preferred Stock, Series F, dated June 10, 2020	Exhibit (3.1.4.1) to Report on Form 8-K filed on June 15, 2020
(4)(a)	Instruments Defining the Rights of Security Holders, Including Indentures The Parent Company, by signing this report, agrees to furnish the SEC, upon its request, a copy of any instrument that defines the rights of holders of long-term debt of the Corporation and its consolidated and unconsolidated subsidiaries for which consolidated or unconsolidated financial statements are required to be filed and that authorizes a total amount of securities not in excess of 10% of the total assets of the Corporation on a consolidated basis	
(4)(b)	Indenture, dated as of March 14, 2011, between Associated Banc-Corp and The Bank of New York Mellon Trust Company, N.A.	Exhibit (4.1) to Report on Form 8-K filed on March 28, 2011
(4)(c)	Subordinated Indenture, dated as of November 13, 2014, between Associated Banc-Corp and The Bank of New York Mellon Trust Company, N.A., as trustee	Exhibit (4.1) to Report on Form 8-K filed on November 18, 2014
(4)(d)	Global Note dated as of November 13, 2014 representing \$250,000,000 4.250% Subordinated Note due 2025	Exhibit (4.3) to Report on Form 8-K filed on November 18, 2014
(4)(e)	Deposit Agreement, dated September 26, 2018, among Associated Banc-Corp, Equiniti Trust Company and the holders from time to time of the Depositary Receipts described therein, and form of Depositary Receipt	Exhibit (4.2) to Report on Form 8-K filed on September 26, 2018
(4)(f)	Description of Associated Banc-Corp's Securities	Filed herewith
(4)(g)	Deposit Agreement, dated June 15, 2020, among Associated Banc-Corp, Equiniti Trust Company and the holders from time to time of the Depositary Receipts, and form of Depositary Receipts	Exhibit 4.2 to Report on Form 8-K filed on June 15, 2020

(4)(h)	Form of Global Note dated as of February 10, 2023 representing \$300,000,000 6.625% Fixed-Rate Reset Subordinated Notes Due 2033	Exhibit 4.1 to Report on Form 8-K filed on February 10, 2023
*(10)(a)	Associated Banc-Corp 1987 Long-Term Incentive Stock Plan, Amended and Restated Effective January 1, 2008	Exhibit (10)(a) to Report on Form 10-K filed on February 26, 2009
*(10)(b)	Associated Banc-Corp 1999 Long-Term Incentive Stock Plan, Amended and Restated Effective January 1, 2008	Exhibit (10)(b) to Report on Form 10-K filed on February 26, 2009
*(10)(c)	Associated Banc-Corp 2003 Long-Term Incentive Stock Plan, Amended and Restated Effective January 1, 2008	Exhibit (10)(c) to Report on Form 10-K filed on February 26, 2009
*(10)(d)	Separation and General Release Letter between Associated Banc-Corp and Christopher Piotrowski, dated January 22, 2020	Exhibit (10) to Report on Form 10-Q filed on May 11, 2020
*(10)(e)	Associated Banc-Corp 2020 Incentive Compensation Plan	Appendix A to the Proxy Statement on Schedule 14A filed on March 13, 2020, as supplemented, in connection with the 2020 Annual Meeting of Shareholders of Associated Banc-Corp
*(10)(f)	Retirement Agreement, dated as of January 19, 2021, by and between Associated Banc-Corp and Philip B. Flynn	Exhibit 10.1 to Report on Form 8-K filed January 21, 2021
*(10)(g)	Associated Banc-Corp Deferred Compensation Plan	Exhibit (10)(h) to Report on Form 10-K filed on February 26, 2009
*(10)(h)	Associated Banc-Corp Directors' Deferred Compensation Plan, Restated Effective December 4, 2018	Exhibit (10)(e) to Report on Form 10-K filed on February 19, 2019
*(10)(i)	Associated Banc-Corp Deferred Compensation Plan, Restated Effective November 1, 2015	Exhibit (10)(f) to Report on Form 10-K filed on February 5, 2016
*(10)(j)	Amendment to Associated Banc-Corp 2003 Long-Term Incentive Stock Plan effective November 15, 2009	Exhibit (99.2) to Report on Form 8-K filed on November 16, 2009
*(10)(k)	Associated Banc-Corp 2010 Incentive Compensation Plan	Exhibit (99.1) to Report on Form 8-K filed on April 29, 2010
*(10)(l)	Associated Banc-Corp 2013 Incentive Compensation Plan	Appendix A to Definitive Proxy Statement filed on March 14, 2013
*(10)(m)	Associated Banc-Corp 2017 Incentive Compensation Plan	Appendix A to Definitive Proxy Statement filed on March 14, 2017
*(10)(n)	Form of Non-Qualified Stock Option Agreement	Exhibit (99.3) to Report on Form 8-K filed on January 27, 2012
*(10)(o)	Associated Banc-Corp Change of Control Plan, Restated Effective September 28, 2011	Exhibit (10.1) to Report on Form 8-K filed on September 30, 2011
*(10)(p)	Form of Performance-Based Restricted Stock Unit Agreement	Exhibit (10.2) to Report on Form 10-Q filed on August 4, 2014
*(10)(q)	Supplemental Executive Retirement Plan, Restated Effective January 22, 2013	Exhibit (99.1) to Report on Form 8-K filed on January 22, 2013
*(10)(r)	Supplemental Executive Retirement Plan, Restated Effective November 16, 2015	Exhibit (10)(p) to Report on Form 10-K filed on February 5, 2016
*(10)(s)	Form of 2013 Incentive Compensation Plan Restricted Unit Agreement	Exhibit (10.1) to Report on Form 10-Q filed on July 28, 2017
*(10)(t)	Form of Amendment to 2013 Incentive Compensation Plan Restricted Unit Agreement	Exhibit (10.2) to Report on Form 10-Q filed on July 28, 2017
*(10)(u)	Form of Change of Control Agreement, by and among Associated Banc-Corp and the executive officers of Associated Banc-Corp.	Exhibit (10.1) to Report on Form 8-K filed on December 6, 2017
*(10)(v)	Form of Associated Banc-Corp 2017 Incentive Compensation Plan Restricted Stock Agreement	Exhibit 10.1 to Report on Form 10-Q filed July 26, 2018
*(10)(w)	Offer Letter, dated March 4, 2021, by and between Associated Banc-Corp, and Andrew J. Harmening	Exhibit (10.1) to Report on Form 8-K filed March 10, 2021
*(10)(x)	Retirement Agreement, dated as of January 19, 2022, by and between Associated Banc-Corp and Christopher J. Del Moral-Niles	Exhibit (10.1) to Report on Form 8-k filed January 21, 2022
(21)	Subsidiaries of Associated Banc-Corp	Filed herewith
(23)	Consent of Independent Registered Public Accounting Firm	Filed herewith
(24)	Powers of Attorney	Filed herewith
(31.1)	Certification Under Section 302 of Sarbanes-Oxley by Andrew J. Harmening, Chief Executive Officer	Filed herewith
(31.2)	Certification Under Section 302 of Sarbanes-Oxley by Derek S. Meyer, Chief Financial Officer	Filed herewith
(32)	Certification by the Chief Executive Officer and Chief Financial Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of Sarbanes-Oxley.	Filed herewith

- (97) Clawback Policy, Effective December 1, 2023 [Filed herewith](#)
- (101) Interactive data files pursuant to Rule 405 of Regulation S-T: (i) Consolidated Balance Sheets, (ii) Consolidated Statements of Income, (iii) Consolidated Statements of Comprehensive Income, (iv) Consolidated Statements of Changes in Stockholders' Equity, (v) Consolidated Statements of Cash Flows, and (vi) Notes to Consolidated Financial Statements. Filed herewith
- (104) Cover page interactive data file (formatted as inline XBRL and contained in Exhibit 101) Filed herewith
- * Management contracts and arrangements.

Schedules and exhibits other than those listed are omitted for the reasons that they are not required, are not applicable or that equivalent information has been included on the financial statements and notes thereto or elsewhere within.

Not applicable.

Signatures

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

ASSOCIATED BANC-CORP

Date: February 8, 2024

By: /s/ Andrew J. Harmening
 Andrew J. Harmening
President and Chief Executive Officer

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Andrew J. Harmening</u> Andrew J. Harmening	President and Chief Executive Officer (Principal Executive Officer)	February 8, 2024
<u>/s/ Derek S. Meyer</u> Derek S. Meyer	Chief Financial Officer (Principal Financial Officer)	February 8, 2024
<u>/s/ Tammy C. Stadler</u> Tammy C. Stadler	Corporate Controller and Chief Accounting Officer (Principal Accounting Officer)	February 8, 2024

Directors: R. Jay Gerken, Judith P. Greffin, Michael J. Haddad, Andrew J. Harmening, Robert A. Jeffe, Eileen A. Kamerick, Gale E. Klappa, Cory L. Nettles, Karen T. van Lith and John (Jay) B. Williams

By: /s/ Randall J. Erickson
 Randall J. Erickson
 As Attorney-In-Fact*

* Pursuant to authority granted by powers of attorney, copies of which are filed herewith.

ASSOCIATED BANC-CORP**DESCRIPTION OF SECURITIES REGISTERED PURSUANT TO SECTION 12 OF THE SECURITIES EXCHANGE ACT OF 1934****Description of Common Stock**

Associated Banc-Corp (“we,” “our,” “us”) has one class of common stock, the Associated Banc-Corp common stock. Of the 250,000,000 shares of our common stock with a par value of \$0.01 per share authorized, 151,036,674 shares were outstanding as of December 31, 2023, exclusive of shares held in treasury.

The following summary of the material terms and rights of our common stock is not complete. You should refer to the applicable provision of our Amended and Restated Articles of Incorporation, as amended, for a complete statement of the terms and rights of our common stock.

Dividend Rights

Holders of our common stock are entitled to receive dividends when, as, and if declared by our board of directors out of our assets legally available for payment, subject to the rights of holders of our Series E and Series F Preferred Stock and any other Series of preferred stock that may be designated, issued and outstanding from time to time, if and to the extent so provided under the terms of such series. No share of our common stock is entitled to any preferential treatment with respect to dividends.

Voting Rights

Each holder of our common stock will be entitled at each shareholders’ meeting, with regard to each matter to be voted on, to cast one vote, in person or by proxy, for each share of our common stock registered in his or her name on our stock transfer books. Subject to the rights, if any, of the holders of any Series of preferred stock under their respective certificates of designations and applicable law, all voting rights are vested in the holders of shares of our common stock. Voting rights are not cumulative, which means that holders of more than 50% of the shares voting for the election of directors can elect 100% of the directors, and the holders of the remaining shares will not be able to elect any directors.

Rights Upon Liquidation

Subject to and to the extent of the rights of holders of any of our preferred stock which may be designated, issued and outstanding from time to time, in the event of our liquidation, dissolution or winding up, whether voluntary or involuntary, the holders of our common stock will be entitled to receive all of our assets remaining for distribution to our shareholders, on a pro rata basis.

Miscellaneous

Shares of our common stock are not convertible into shares of any other class of capital stock. Shares of our common stock are not and will not be entitled to any preemptive or subscription rights. The issued and outstanding shares of our common stock are fully paid and nonassessable. The transfer agent, registrar, and dividend disbursement agent for our common stock shall be named in the applicable prospectus supplement.

Description of Preferred Stock

Under our Amended and Restated Articles of Incorporation, as amended, our board of directors is authorized, without further shareholder action, to issue up to 750,000 shares of preferred stock, \$1.00 par value per share, in one or more series, and to determine the preferences, limitations and relative rights of each series. As of December 31, 2023, there were authorized (i) 100,000 shares of our 5.875% Non-Cumulative Perpetual Preferred Stock, Series E, with a liquidation preference of \$1,000 per share, all of which were outstanding and (ii) 100,000 shares of our 5.625% Non-Cumulative Perpetual Preferred

Stock, Series F, with a liquidation preference of \$1,000 per share, all of which were outstanding. We may amend our Amended and Restated Articles of Incorporation, as amended, to increase the number of authorized shares of preferred stock in a manner permitted by our Amended and Restated Articles of Incorporation and the Wisconsin Business Corporation Law.

All of our outstanding shares of preferred stock are represented by depositary shares registered pursuant to Section 12(b) of the Securities Exchange Act of 1934, as amended (the “Exchange Act”). Each Series of depositary shares is described under “Description of Depositary Shares,” below.

Under regulations adopted by the Federal Reserve Board, if the holders of any Series of our preferred stock become entitled to vote for the election of directors because dividends on that Series are in arrears, that Series may then be deemed a “class of voting securities.” In such a case, a holder of 25% or more of the series, or a holder of 5% or more if that holder would also be considered to exercise a “controlling influence” over Associated Banc-Corp, may then be subject to regulation as a bank holding company in accordance with the Bank Holding Company Act of 1956. In addition, (1) any other bank holding company may be required to obtain the prior approval of the Federal Reserve Board to acquire or retain 5% or more of that series, and (2) any person other than a bank holding company may be required to obtain the approval of the Federal Reserve Board to acquire or retain 10% or more of that series.

The following summary is not complete. You should also refer to our Amended and Restated Articles of Incorporation, as amended, and to our Articles of Amendment relating to the Series of the preferred stock being offered for the complete terms of that Series of preferred stock.

5.875% Non-Cumulative Perpetual Preferred Stock, Series E

As of December 31, 2023, there were 100,000 shares of our 5.875% Non-Cumulative Perpetual Preferred Stock, Series E, par value of \$1.00 per share, with a liquidation preference of \$1,000 per share (the “Series E Preferred Stock” or the “Series E Shares”) issued and outstanding. The depositary is the sole holder of the Series E Preferred Stock, as described under “Depositary Shares Representing the Series E and Series F Shares” below, and all references to the holders of the Series E Shares shall mean the depositary. However, the holders of the depositary shares representing the Series E Shares are entitled, through the depositary, to exercise the rights and preferences of the holders of the Series E Shares, as described under “Depositary Shares Representing the Series E and Series F Shares.” This summary of the Series E Preferred Stock does not purport to be complete in all respects. This summary is subject to and qualified in its entirety by reference to our Amended and Restated Articles of Incorporation, as amended, including the Articles of Amendment with respect to the designation of the Series E Preferred Stock.

Each holder of Series E Shares is entitled to receive cash dividends when, as and if declared out of assets legally available for payment in respect of the Series E Shares by our Board of Directors or a duly authorized committee of the Board in their sole discretion. Dividends will be non-cumulative. If we do not declare dividends or do not pay dividends in full on the Series E Shares on any date on which dividends are due, then these undeclared and unpaid dividends will not cumulate, accrue or be payable.

The Series E Shares have a fixed liquidation preference of \$1,000 per share (equivalent to \$25 per depositary share). If we liquidate, dissolve or wind up our business and affairs, holders of Series E Shares will be entitled to receive, out of our assets that are available for distribution to shareholders, an amount per Series E Share equal to the liquidation preference per Share plus an amount with respect to dividends as and to the extent described below under “—Liquidation Rights.”

The Series E Shares are not convertible into, or exchangeable for, shares of our common stock or any other class or Series of our stock or other securities. The Series E Shares are not subject to any sinking fund or any other obligation of us to redeem or repurchase the Series E Shares.

Ranking

The Series E Shares rank, as to the payment of dividends and the amounts to be paid upon liquidation, dissolution or winding up, senior to our common stock and any other class or Series of shares ranking junior to the Series E Shares. The Series E Shares rank equally with our 5.625% Non-Cumulative

Perpetual Preferred Stock, Series F, and at least equally with any other Series of preferred stock ranking equal to the Series E Shares as to payment of dividends or the amounts to be paid upon liquidation, dissolution or winding up, as applicable.

During any Dividend Period (as defined below), so long as any Series E Shares remain outstanding, unless (a) the full dividends for the then-current Dividend Period on all outstanding Series E Shares have been paid, or declared and funds set aside therefor and (b) we are not in default on our obligation to redeem any Series E Shares that have been called for redemption as described below under “—Redemption”:

- no dividend whatsoever may be paid or declared on our common stock or other junior stock, other than a dividend payable solely in junior stock; and
- no common stock or other junior stock may be purchased, redeemed or otherwise acquired for consideration by us.

On any Dividend Payment Date (as defined below) for which full dividends are not paid, or declared and funds set aside therefor, upon the Series E Shares and other equity securities designated as ranking on parity with the Series E Shares as to payment of dividends (“dividend parity stock”), all dividends paid or declared for payment on that Dividend Payment Date with respect to the Series E Shares and the dividend parity stock shall be shared:

- first, ratably by the holders of any such shares, if any, who have the right to receive dividends with respect to Dividend Periods prior to the then-current Dividend Period, in proportion to the respective amounts of the declared and unpaid dividends and the undeclared and unpaid dividends relating to prior Dividend Periods; and
- thereafter by the holders of the Series E Shares and dividend parity stock on a pro rata basis.

We have agreed, in the articles of amendment to our amended and restated articles of incorporation establishing the terms of the Series E Shares, not to issue preferred stock having dividend payment dates that are not also Dividend Payment Dates for the Series E Shares.

Subject to the foregoing, such dividends (payable in cash, stock or otherwise) as may be determined by our board of directors (or a duly authorized committee of the board) may be declared and paid on our common stock and any other stock ranking equally with or junior to the Series E Shares from time to time out of any funds legally available for such payment, and the Series E Shares shall not be entitled to participate in any such dividend.

Dividends

General

Dividends on the Series E Shares are not mandatory. Holders of Series E Shares, in preference to the holders of our common stock and of any other shares of our stock ranking junior to the Series E Shares as to payment of dividends, will be entitled to receive, only when, as and if declared by our board of directors or a duly authorized committee of the board, and only out of assets legally available for the payment of dividends under Wisconsin law, non-cumulative cash dividends at a rate per annum equal to 5.875%, applied to the stated liquidation preference of \$1,000 per share (equivalent to \$25 per depository share). Dividends on the Series E Shares are payable quarterly in arrears on the 15th day of March, June, September and December of each year, (each, a “Dividend Payment Date”), with respect to the Dividend Period, or portion thereof, ending on the day preceding the respective Dividend Payment Date. A “Dividend Period” means each period commencing on (and including) a Dividend Payment Date and continuing to (but not including) the next succeeding Dividend Payment Date, except that the first Dividend Period for the initial issuance of Series E Shares commenced upon (and included) the date of original issuance of the Series E Shares. If additional Series E Shares are issued at a future date, the first Dividend Period for such Series E Shares will commence upon (and include) (i) the date of issue, if issued on a Dividend Payment Date, or (ii) otherwise, the most recent Dividend Payment Date preceding the date of issue of such share.

Dividends will be paid to holders of record on the 15th calendar date (whether or not a Business Day) before such Dividend Payment Date or such other record date not more than 60 days nor less than 10 days preceding such Dividend Payment Date and fixed for that purpose by our board of directors or a committee thereof in advance of payment of each particular dividend. The corresponding record dates for the depositary shares are the same as the record dates for the Series E Shares. As used in this section, “Business Day” means each weekday on which banking institutions in the City of New York are not authorized or obligated by law, regulation or executive order to close.

The dividend payable per Series E Share for any Dividend Period is computed on the basis of a 360-day year consisting of twelve 30-day months. If a Dividend Payment Date is not a Business Day, the applicable dividend will be paid on the first Business Day following that day without adjustment.

Dividends on shares of the Series E Preferred Stock are not cumulative and are not mandatory. If our board of directors (or a duly authorized committee of the board) does not declare a dividend on the Series E Preferred Stock in respect of a Dividend Period, then no dividend will be deemed to have accrued for such Dividend Period, be payable on the related Dividend Payment Date, or accumulate, and we will have no obligation to pay any dividend accrued for such Dividend Period, whether or not our board of directors (or a duly authorized committee of the board) declares a dividend on the Series E Preferred Stock or any other Series of our preferred stock or on our common stock for any future Dividend Period. References to the “accrual” (or similar terms) of dividends herein refer only to the determination of the amount of such dividend and do not imply that any right to a dividend arises prior to the date on which a dividend is declared.

We are subject to various general regulatory policies and requirements relating to the payment of dividends, including requirements to maintain adequate capital above regulatory minimums, and dividends on the Series E Shares will not be declared, paid or set aside for payment to the extent such act would cause us to fail to comply with laws or regulations applicable thereto, including applicable capital adequacy rules and regulations. The Federal Reserve (including any successor bank regulatory authority that may become our Appropriate Federal Banking Agency), as defined below, is authorized to determine, under certain circumstances relating to the financial condition of a bank holding company, such as us, that the payment of dividends would be an unsafe or unsound practice and to prohibit payment thereof. In addition, we are subject to Wisconsin state laws relating to the payment of dividends.

Redemption

Optional Redemption

The Series E Shares are not subject to any mandatory redemption, sinking fund or other similar provisions. However, the Series E Shares may be redeemed on or after December 15, 2023 (“Optional Redemption”). On that date or on any Dividend Payment Date thereafter, the Series E Shares may be redeemed from time to time, in whole or in part, at our option, subject to the approval of the Appropriate Federal Banking Agency, at the cash redemption price provided below. Dividends will not accrue on those Series E Shares on and after the redemption date. Neither the holders of Series E Shares nor the holders of the related depositary shares have the right to require the redemption or repurchase of the Series E Shares.

Redemption Following a Regulatory Capital Event

We may redeem the Series E Shares at any time within 90 days following a regulatory capital treatment event, in whole but not in part, at our option, subject to the approval of the Federal Reserve or other Appropriate Federal Banking Agency, at the cash redemption price provided below (“Regulatory Event Redemption”). A “regulatory capital treatment event” means our good faith determination that, as a result of (i) any amendment to, or change in, the laws or regulations of the United States (including, for the avoidance of doubt, any agency or instrumentality of the United States, including the Federal Reserve and other federal bank regulatory agencies) or any political subdivision of or in the United States that is enacted or becomes effective after the initial issuance of the Series E Shares (the “Issue Date”); (ii) any proposed change in those laws or regulations that is announced after the Issue Date; or (iii) any official administrative decision or judicial decision or administrative action or other official pronouncement

interpreting or applying those laws or regulations that is announced after the Issue Date, there is more than an insubstantial risk that we will not be entitled to treat the stated liquidation preference value of the Series E Shares then outstanding as “Tier 1 Capital” (or its equivalent) for purposes of the capital adequacy rules or regulations of the Federal Reserve (or, as and if applicable, the capital adequacy rules or regulations of any successor Appropriate Federal Banking Agency), as then in effect and applicable, for as long as any Series E Shares is outstanding. Dividends will not accrue on those Series E Shares on and after the redemption date. “Appropriate Federal Banking Agency” means the “appropriate federal banking agency” with respect to us as defined in Section (3)(q) of the Federal Deposit Insurance Act.

Redemption Price

The redemption price for any redemption of Series E Shares, whether an Optional Redemption or Regulatory Event Redemption, will be equal to \$1,000 per Series E Share (equivalent to \$25 per depositary share) plus (a) in the case of an Optional Redemption, the sum of any declared and unpaid dividends for any prior Dividend Periods to the redemption date, without accumulation of any undeclared dividends, or (b) in the case of a Regulatory Event Redemption, the sum of any declared and unpaid dividends for any prior Dividend Periods and accrued but unpaid and undeclared dividends for the then-current Dividend Period to but excluding the date of redemption. Any declared but unpaid dividends payable on a redemption date that occurs subsequent to the dividend record date for a Dividend Period will not be paid to the holder entitled to receive the redemption price on the redemption date, but rather will be paid to the holder of record of the redeemed shares on such dividend record date relating to the Dividend Payment Date.

Redemption Procedures

If Series E Shares are to be redeemed, we will provide notice by first class mail, postage prepaid, addressed to the holders of record of the Series E Shares to be redeemed, mailed not less than 30 days and not more than 60 days before the date fixed for redemption thereof (provided, however, that if the Series E Shares or the depositary shares representing the Series E Shares are held in book-entry form through The Depository Trust Company, or “DTC,” we may give this notice in any manner permitted by DTC). Any notice mailed or otherwise given as provided in this paragraph will be conclusively presumed to have been duly given, whether or not the holder receives this notice, and failure duly to give this notice by mail or otherwise, or any defect in this notice or in the mailing or provision of this notice, to any holder of Series E Shares designated for redemption will not affect the redemption of any other Series E Shares. Each notice of redemption will include a statement setting forth:

- the redemption date;
- the number of Series E Shares to be redeemed and, if less than all the Series E Shares held by the holder are to be redeemed, the number of Series E Shares to be redeemed from the holder;
- the redemption price; and
- the place or places where the Series E Shares are to be surrendered for payment of the redemption price.

If notice of redemption of any Series E Shares has been duly given and if the funds necessary for the redemption have been set aside by us for the benefit of the holders of any Series E Shares so called for redemption, then, on and after the redemption date, those Series E Shares will no longer be deemed outstanding and all rights of the holders of those Series E Shares (including the right to receive any dividends) will terminate, except the right to receive the redemption price.

In the case of any redemption of only part of the Series E Shares at the time outstanding, the Series E Shares to be redeemed will be selected either *pro rata* or by lot. Subject to the provisions described in this section, the board of directors will have the full power and authority to prescribe the terms and conditions upon which Series E Shares shall be redeemed from time to time.

Under the Federal Reserve’s current risk-based capital rules applicable to bank holding companies, any redemption of the Series E Shares is subject to prior approval by the Federal Reserve.

Any redemption of the Series E Shares is subject to our receipt of any required prior approval by the Federal Reserve and to the satisfaction of any conditions set forth in the capital rules or regulations of the Federal Reserve applicable to the redemption of the Series E Shares.

Neither the holders of the Series E Shares nor the holders of the related depository shares have the right to require the redemption or repurchase of the Series E Shares.

Liquidation Rights

In the event that we liquidate, dissolve or wind up our business and affairs, either voluntarily or involuntarily, holders of Series E Shares will be entitled to receive an amount per Share (the “Series E Total Liquidation Amount”) equal to a stated amount of \$1,000 per Series E Share (equivalent to \$25 per depository share) plus (i) the sum of any declared and unpaid dividends for Dividend Periods prior to the dividend period in which the liquidation distribution is made and declared and, (ii) if applicable, a portion of any declared and unpaid dividends for the then-current Dividend Period in which the liquidation distribution is made, pro-rated for the number of days in such Dividend Period prior to the date of such liquidation distribution. Holders of the Series E Shares will be entitled to receive the Series E Total Liquidation Amount out of our assets that are available for distribution to shareholders, after payment or provision for payment of our debts and other liabilities but before any distribution of assets is made to holders of our common stock or any other class or Series of shares ranking junior to the Series E Shares with respect to that distribution.

If our assets are not sufficient to pay the Series E Total Liquidation Amount in full to all holders of Series E Shares and all holders of any shares of our stock having the same rank as the Series E Shares with respect to any such distribution, the amounts paid to the holders of Series E Shares and such other shares will be paid *pro rata* in accordance with the respective Series E Total Liquidation Amount to which those holders are entitled. If the Series E Total Liquidation Amount per Series E Share has been paid in full to all holders of Series E Shares and the liquidation preference of any other shares having the same rank as the Series E Shares has been paid in full, the holders of our common stock or any other shares ranking, as to such distribution, junior to the Series E Shares will be entitled to receive all of our remaining assets according to their respective rights and preferences.

For purposes of the liquidation rights, neither the sale, conveyance, lease, exchange or transfer (for cash, shares of stock, securities or other consideration) of all or substantially all of our property and assets, nor the consolidation or merger by us with or into any other entity or by another entity with or into us will constitute a liquidation, dissolution or winding up of our business or affairs.

Because we are a holding company, our rights and the rights of our creditors and our shareholders, including the holders of the Series E Shares, to participate in the assets of any of our subsidiaries upon that subsidiary’s liquidation or recapitalization may be subject to the prior claims of that subsidiary’s creditors, except to the extent that we are a creditor with recognized claims against the subsidiary.

Voting Rights

The holders of Series E Shares will not have any voting rights and will not be entitled to elect any directors, except as indicated below or otherwise specifically required by law. Each holder of Series E Shares will have one vote per Series E Share (or one vote per 40 depository shares) on any matter on which holders of Series E Shares are entitled to vote, including any action by written consent.

Under regulations adopted by the Federal Reserve, if the holders of shares of any Series of our preferred stock, including the Series E Shares, become entitled to vote for the election of directors, such Series may then be deemed a “class of voting securities” and a holder of 25% or more of such Series (or a holder of 5% or more if the holder otherwise exercises a “controlling influence”) may then be subject to regulation as a bank holding company in accordance with the Bank Holding Company Act. In addition, at such time as such Series is deemed a class of voting securities, (i) any other bank holding company may be required to obtain the approval of the Federal Reserve to acquire or retain 5% or more of such series,

and (ii) any person other than a bank holding company may be required to file with the Federal Reserve under the Change in Bank Control Act, a federal law, to acquire or retain 10% or more of such series.

Right to Elect Two Directors Upon Non-Payment of Dividends

If and whenever the dividends on the Series E Shares and any other class or Series of our stock that ranks on parity with Series E Shares as to payment of dividends and that has voting rights equivalent to those described in this paragraph (“voting parity stock”) have not been declared and paid (i) in the case of the Series E Shares and any voting parity stock bearing non-cumulative dividends, in full for at least six quarterly dividend periods or their equivalent (whether or not consecutive) or (ii) in the case of voting parity stock bearing cumulative dividends, in an aggregate amount equal to full dividends for at least six quarterly dividend periods or their equivalent (whether or not consecutive), the authorized number of our directors then constituting our board of directors will automatically be increased by two. Holders of Series E Shares, together with the holders of all other affected classes and Series of voting parity stock, voting as a single class, will be entitled to elect the two additional members of our board of directors (the “Preferred Stock Directors”) at any annual meeting of shareholders or any special meeting of the holders of Series E Shares and any voting parity stock for which dividends have not been paid, called as provided below, but only if the election of any Preferred Stock Directors would not cause us to violate the corporate governance requirement of the New York Stock Exchange (or any other exchange on which our securities may be listed) that listed companies must have a majority of independent directors. In addition, our board of directors shall at no time have more than two Preferred Stock Directors.

At any time after this voting power has vested as described above, our Secretary may, and upon the written request of holders of record of at least 20% of the outstanding Series E Shares and voting parity stock (addressed to the Secretary at our principal office) must, call a special meeting of the holders of Series E Shares and voting parity stock for the election of the Preferred Stock Directors. Notice for a special meeting will be given in a similar manner to that provided in our by-laws for a special meeting of the shareholders, which we will provide upon request, or as required by law. If our Secretary is required to call a meeting but does not do so within 20 days after receipt of any such request, then any holder of Series E Shares may (at our expense) call such meeting, upon notice as provided in this section, and for that purpose will have access to our stock books.

The Preferred Stock Directors elected at any such special meeting will hold office until the next annual meeting of our shareholders unless they have been previously terminated as described below. In case any vacancy occurs among the Preferred Stock Directors, a successor will be elected by our board of directors to serve until the next annual meeting of the shareholders upon the nomination of the then remaining Preferred Stock Director or, if no Preferred Stock Director remains in office, by the vote of the holders of record of a majority of the outstanding Series E Shares and voting parity stock, voting as a single class. The Preferred Stock Directors shall each be entitled to one vote per director on any matter.

Whenever full dividends have been paid on the Series E Shares and any non-cumulative voting parity stock for at least one year and all dividends on any cumulative voting parity stock have been paid in full, then the right of the holders of Series E Shares to elect the Preferred Stock Directors will cease (but subject always to the same provisions for the vesting of these voting rights in the case of any similar non-payment of dividends in respect of future Dividend Periods), the terms of office of all Preferred Stock Directors will immediately terminate and the number of directors constituting our board of directors will be reduced accordingly.

Other Voting Rights

So long as any Series E Shares remain outstanding, the affirmative vote of the holders of at least two-thirds of the Series E Shares outstanding at the time, given in person or by proxy, either in writing or at a meeting (voting separately as a class), will be required to:

- authorize or create, or increase the authorized or issued amount of, any class or Series of capital stock ranking senior to the Series E Shares with respect to payment of dividends or the distribution of assets upon liquidation, dissolution or winding up, or reclassify any authorized shares of capital stock into Series E Shares; or

- amend, alter or repeal the provisions of our amended and restated articles of incorporation, whether by merger, consolidation or otherwise, so as to materially and adversely affect any right, preference, privilege or voting power of the Series E Shares or the holders thereof;

provided, however, that with respect to the occurrence of any event set forth in the second bullet point above, so long as any Series E Shares remain outstanding with the terms thereof materially unchanged or new shares of the surviving corporation or entity are issued with the same terms as the Series E Shares, in each case taking into account that upon the occurrence of this event we may not be the surviving entity, the occurrence of any such event shall not be deemed to materially and adversely affect any right, preference, privilege or voting power of the Series E Shares or the holders thereof, and provided, further, that any increase in the amount of our authorized common stock or preferred stock or the creation or issuance of any other Series of common stock or other equity securities ranking on a parity with or junior to the Series E Shares with respect to payment of dividends (whether such dividends are cumulative or non-cumulative) or the distribution of assets upon liquidation, dissolution or winding up and any change to the number of directors or number of classes of directors shall not be deemed to materially and adversely affect such rights, preferences, privileges or voting powers.

Under the Wisconsin Business Corporation Law, the vote of the holders of a majority of the outstanding Series E Shares, voting as a separate voting group, is required for:

- certain amendments to the articles of incorporation impacting the Series E Shares;
- the approval of any dividend payable in Series E Shares to holders of shares of another class or Series of our stock;
- the approval of any proposed share exchange that includes Series E Shares; or
- the approval of any plan of merger if the plan of merger contains a provision that, if contained in a proposed amendment to the articles of incorporation, would require shareholder action on the proposed amendment.

Further, in the case of any merger where we are the surviving corporation, the right of holders of the Series E Shares to vote separately as a group on a plan of merger does not apply if:

- the articles of incorporation of the surviving corporation will not differ, with certain exceptions, from our articles of incorporation as in effect prior to the merger;
- each shareholder of the surviving corporation whose shares were outstanding immediately before the effective date of the merger will hold the same number of shares, with identical designations, preferences, limitation, and relative rights, immediately after the merger; and
- the number of voting shares outstanding immediately after the merger, plus the number of voting shares issuable as a result of the merger, either by the conversion of securities issued pursuant to the merger or the exercise of rights or warrants issued pursuant to the merger, will not exceed by more than 20% the total number of voting shares of the surviving corporation outstanding immediately after the merger.

The foregoing voting provisions will not apply if, at or prior to the time when the act with respect to which the vote would otherwise be required, all outstanding Series E Shares shall have been redeemed or called for redemption upon proper notice and sufficient funds shall have been set aside by us for the benefit of the holders of Series E Shares to effect the redemption.

Depository, Transfer Agent, Registrar and Paying Agent

Equiniti Trust Company is the depository, transfer agent, registrar and paying agent for the Series E Shares.

5.625% Non-Cumulative Perpetual Preferred Stock, Series F

As of December 31, 2023, there were 100,000 shares of our 5.625% Non-Cumulative Perpetual Preferred Stock, Series F, par value of \$1.00 per share, with a liquidation preference of \$1,000 per share

(the “Series F Preferred Stock” or the “Series F Shares”) issued and outstanding. The depositary is the sole holder of the Series E Preferred Stock, as described under “Depositary Shares Representing the Series E and Series F Shares” below, and all references to the holders of the Series F Shares shall mean the depositary. However, the holders of the depositary shares representing the Series F Shares are entitled, through the depositary, to exercise the rights and preferences of the holders of the Series F Shares, as described under “Depositary Shares Representing the Series E and Series F Shares.” This summary of the Series F Preferred Stock does not purport to be complete in all respects. This summary is subject to and qualified in its entirety by reference to our Amended and Restated Articles of Incorporation, as amended, including the Articles of Amendment with respect to the designation of the Series F Preferred Stock.

Each holder of Series F Shares is entitled to receive cash dividends when, as and if declared out of assets legally available for payment in respect of the Series F Shares by our Board of Directors or a duly authorized committee of the Board in their sole discretion. Dividends will be non-cumulative. If we do not declare dividends or do not pay dividends in full on the Series F Shares on any date on which dividends are due, then these undeclared and unpaid dividends will not cumulate, accrue or be payable.

The Series F Shares have a fixed liquidation preference of \$1,000 per share (equivalent to \$25 per depositary share). If we liquidate, dissolve or wind up our business and affairs, holders of Series F Shares will be entitled to receive, out of our assets that are available for distribution to shareholders, an amount per Series F Share equal to the liquidation preference per Share plus an amount with respect to dividends as and to the extent described below under “—Liquidation Rights.”

The Series F Shares are not convertible into, or exchangeable for, shares of our common stock or any other class or Series of our stock or other securities. The Series F Shares are not subject to any sinking fund or any other obligation of us to redeem or repurchase the Series F Shares.

Ranking

The Series F Shares rank, as to the payment of dividends and the amounts to be paid upon liquidation, dissolution or winding up, senior to our common stock and any other class or Series of shares ranking junior to the Series F Shares. The Series F Shares rank equally with our 5.875% Non-Cumulative Perpetual Preferred Stock, Series E, and at least equally with any other Series of preferred stock ranking equal to the Series E Shares as to payment of dividends or the amounts to be paid upon liquidation, dissolution or winding up, as applicable.

During any Dividend Period (as defined below), so long as any Series F Shares remain outstanding, unless (a) the full dividends for the then-current Dividend Period on all outstanding Shares have been paid, or declared and funds set aside therefor and (b) we are not in default on our obligation to redeem any Series F Shares that have been called for redemption as described below under “—Redemption”:

- no dividend whatsoever may be paid or declared on our common stock or other junior stock, other than a dividend payable solely in junior stock; and
- no common stock or other junior stock may be purchased, redeemed or otherwise acquired for consideration by us.

On any Dividend Payment Date (as defined below) for which full dividends are not paid, or declared and funds set aside therefor, upon the Series F Shares and other equity securities designated as ranking on parity with the Series F Shares as to payment of dividends (“dividend parity stock”), all dividends paid or declared for payment on that Dividend Payment Date with respect to the Series F Shares and the dividend parity stock shall be shared:

- first, ratably by the holders of any such shares, if any, who have the right to receive dividends with respect to Dividend Periods prior to the then-current Dividend Period, in proportion to the respective amounts of the declared and unpaid dividends and the undeclared and unpaid dividends relating to prior Dividend Periods; and

- thereafter by the holders of the Series F Shares and dividend parity stock on a pro rata basis.

We have agreed, in the articles of amendment to our amended and restated articles of incorporation establishing the terms of the Series F Shares, not to issue preferred stock having dividend payment dates that are not also Dividend Payment Dates for the Series F Shares.

Subject to the foregoing, such dividends (payable in cash, stock or otherwise) as may be determined by our board of directors (or a duly authorized committee of the board) may be declared and paid on our common stock and any other stock ranking equally with or junior to the Series F Shares from time to time out of any funds legally available for such payment, and the Series F Shares shall not be entitled to participate in any such dividend.

Dividends

General

Dividends on the Series F Shares are not mandatory. Holders of Series F Shares, in preference to the holders of our common stock and of any other shares of our stock ranking junior to the Series F Shares as to payment of dividends, will be entitled to receive, only when, as and if declared by our board of directors or a duly authorized committee of the board, and only out of assets legally available for the payment of dividends under Wisconsin law, non-cumulative cash dividends at a rate per annum equal to 5.625%, applied to the stated liquidation preference of \$1,000 per share (equivalent to \$25 per depository share). Dividends on the Series F Shares are payable quarterly in arrears on the 15th day of March, June, September and December of each year (each, a “Dividend Payment Date”), with respect to the Dividend Period, or portion thereof, ending on the day preceding the respective Dividend Payment Date. A “Dividend Period” means each period commencing on (and including) a Dividend Payment Date and continuing to (but not including) the next succeeding Dividend Payment Date, except that the first Dividend Period for the initial issuance of Series F Shares commenced upon (and included) the date of original issuance of the Series F Shares. If additional Series F Shares are issued at a future date, the first Dividend Period for such Series F Shares will commence upon (and include) (i) the date of issue, if issued on a Dividend Payment Date, or (ii) otherwise, the most recent Dividend Payment Date preceding the date of issue of such share. We will not issue such additional depository shares unless such shares are fungible for U.S. federal income tax purposes with the Series F Shares.

Dividends will be paid to holders of record on the 15th calendar date (whether or not a Business Day) before such Dividend Payment Date or such other record date not more than 60 days nor less than 10 days preceding such Dividend Payment Date and fixed for that purpose by our board of directors or a committee thereof in advance of payment of each particular dividend. The corresponding record dates for the depository shares are the same as the record dates for the Series F Shares.

The dividend payable per Series F Share for any Dividend Period are computed on the basis of a 360-day year consisting of twelve 30-day months. If a Dividend Payment Date is not a Business Day, the applicable dividend will be paid on the first Business Day following that day without adjustment. As used in this section, “Business Day” means each weekday on which banking institutions in the City of New York are not authorized or obligated by law, regulation or executive order to close.

Dividends on shares of the Series F Preferred Stock are not cumulative and are not mandatory. If our board of directors (or a duly authorized committee of the board) does not declare a dividend on the Series F Preferred Stock in respect of a Dividend Period, then no dividend will be deemed to have accrued for such Dividend Period, be payable on the related Dividend Payment Date, or accumulate, and we will have no obligation to pay any dividend accrued for such Dividend Period, whether or not our board of directors (or a duly authorized committee of the board) declares a dividend on the Series F Preferred Stock or any other Series of our preferred stock or on our common stock for any future Dividend Period. References to the “accrual” (or similar terms) of dividends herein refer only to the determination of the amount of such dividend and do not imply that any right to a dividend arises prior to the date on which a dividend is declared.

We are subject to various general regulatory policies and requirements relating to the payment of dividends, including requirements to maintain adequate capital above regulatory minimums, and dividends on the Series F Shares will not be declared, paid or set aside for payment to the extent such act would cause us to fail to comply with laws or regulations applicable thereto, including applicable capital adequacy rules and regulations. The Federal Reserve (including any successor bank regulatory authority that may become our Appropriate Federal Banking Agency), as defined below, is authorized to determine, under certain circumstances relating to the financial condition of a bank holding company, such as us, that the payment of dividends would be an unsafe or unsound practice and to prohibit payment thereof. In addition, we are subject to Wisconsin state laws relating to the payment of dividends.

Redemption

Optional Redemption

The Series F Shares are not subject to any mandatory redemption, sinking fund or other similar provisions. However, the Series F Shares may be redeemed on or after September 15, 2025 (“Optional Redemption”). On that date or on any Dividend Payment Date thereafter, the Series F Shares may be redeemed from time to time, in whole or in part, at our option, subject to the approval of the Appropriate Federal Banking Agency, at the cash redemption price provided below. Dividends will not accrue on those Series F Shares on and after the redemption date. Neither the holders of Series F Shares nor the holders of the related depositary shares have the right to require the redemption or repurchase of the Series F Shares.

Redemption Following a Regulatory Capital Event

We may redeem the Series F Shares at any time within 90 days following a regulatory capital treatment event, in whole but not in part, at our option, subject to the approval of the Federal Reserve or other Appropriate Federal Banking Agency, at the cash redemption price provided below (“Regulatory Event Redemption”). A “regulatory capital treatment event” means our good faith determination that, as a result of (i) any amendment to, or change in, the laws or regulations of the United States (including, for the avoidance of doubt, any agency or instrumentality of the United States, including the Federal Reserve and other federal bank regulatory agencies) or any political subdivision of or in the United States that is enacted or becomes effective after the initial issuance of the Series F Shares (the “Issue Date”); (ii) any proposed change in those laws or regulations that is announced after the Issue Date; or (iii) any official administrative decision or judicial decision or administrative action or other official pronouncement interpreting or applying those laws or regulations that is announced after the Issue Date, there is more than an insubstantial risk that we will not be entitled to treat the stated liquidation preference value of the Series F Shares then outstanding as “Tier 1 Capital” (or its equivalent) for purposes of the capital adequacy rules or regulations of the Federal Reserve (or, as and if applicable, the capital adequacy rules or regulations of any successor Appropriate Federal Banking Agency), as then in effect and applicable, for as long as any Series F Share is outstanding. Dividends will not accrue on those Series F Shares on and after the redemption date. “Appropriate Federal Banking Agency” means the “appropriate federal banking agency” with respect to us as defined in Section (3)(q) of the Federal Deposit Insurance Act.

Redemption Price

The redemption price for any redemption of Series F Shares, whether an Optional Redemption or Regulatory Event Redemption, will be equal to \$1,000 per Series F Share (equivalent to \$25 per depositary share) plus (a) in the case of an Optional Redemption, the sum of any declared and unpaid dividends for any prior Dividend Periods to the redemption date, without accumulation of any undeclared dividends, or (b) in the case of a Regulatory Event Redemption, the sum of any declared and unpaid dividends for any prior Dividend Periods and accrued but unpaid and undeclared dividends for the then-current Dividend Period to but excluding the date of redemption. Any declared but unpaid dividends payable on a redemption date that occurs subsequent to the dividend record date for a Dividend Period will not be paid to the holder entitled to receive the redemption price on the redemption date, but rather will be paid to the holder of record of the redeemed shares on such dividend record date relating to the Dividend Payment Date.

Redemption Procedures

If Series F Shares are to be redeemed, we will provide notice by first class mail, postage prepaid, addressed to the holders of record of the Series F Shares to be redeemed, mailed not less than 30 days and not more than 60 days before the date fixed for redemption thereof (provided, however, that if the Series F Shares or the depository shares representing the Series F Shares are held in book-entry form through The Depository Trust Company, or “DTC,” we may give this notice in any manner permitted by DTC). Any notice mailed or otherwise given as provided in this paragraph will be conclusively presumed to have been duly given, whether or not the holder receives this notice, and failure duly to give this notice by mail or otherwise, or any defect in this notice or in the mailing or provision of this notice, to any holder of Series F Shares designated for redemption will not affect the redemption of any other Series F Shares. Each notice of redemption will include a statement setting forth:

- the redemption date;
- the number of Series F Shares to be redeemed and, if less than all the Series F Shares held by the holder are to be redeemed, the number of Series F Shares to be redeemed from the holder;
- the redemption price; and
- the place or places where the Series F Shares are to be surrendered for payment of the redemption price.

If notice of redemption of any Series F Shares has been duly given and if the funds necessary for the redemption have been set aside by us for the benefit of the holders of any Series F Shares so called for redemption, then, on and after the redemption date, those Series F Shares will no longer be deemed outstanding and all rights of the holders of those Series F Shares (including the right to receive any dividends) will terminate, except the right to receive the redemption price.

In the case of any redemption of only part of the Series F Shares at the time outstanding, the Series F Shares to be redeemed will be selected either *pro rata* or by lot. Subject to the provisions described in this section, the board of directors will have the full power and authority to prescribe the terms and conditions upon which Series F Shares shall be redeemed from time to time.

Under the Federal Reserve’s current risk-based capital rules applicable to bank holding companies, any redemption of the Series F Shares is subject to prior approval by the Federal Reserve. Any redemption of the Series F Shares is subject to our receipt of any required prior approval by the Federal Reserve and to the satisfaction of any conditions set forth in the capital rules or regulations of the Federal Reserve applicable to the redemption of the Series F Shares.

Neither the holders of the Series F Shares nor the holders of the related depository shares have the right to require the redemption or repurchase of the Series F Shares.

Liquidation Rights

In the event that we liquidate, dissolve or wind up our business and affairs, either voluntarily or involuntarily, holders of Series F Shares will be entitled to receive an amount per Share (the “Series F Total Liquidation Amount”) equal to a stated amount of \$1,000 per Series F Share (equivalent to \$25 per depository share) plus (i) the sum of any declared and unpaid dividends for Dividend Periods prior to the dividend period in which the liquidation distribution is made and declared and, (ii) if applicable, a portion of any declared and unpaid dividends for the then-current Dividend Period in which the liquidation distribution is made, pro-rated for the number of days in such Dividend Period prior to the date of such liquidation distribution. Holders of the Series F Shares will be entitled to receive the Series F Total Liquidation Amount out of our assets that are available for distribution to shareholders, after payment or provision for payment of our debts and other liabilities but before any distribution of assets is made to holders of our common stock or any other class or Series of shares ranking junior to the Series F Shares with respect to that distribution.

If our assets are not sufficient to pay the Series F Total Liquidation Amount in full to all holders of Series F Shares and all holders of any shares of our stock having the same rank as the Series F Shares with respect to any such distribution, the amounts paid to the holders of Series F Shares and such other shares will be paid *pro rata* in accordance with the respective Series Total Liquidation Amount to which those holders are entitled. If the Series F Total Liquidation Amount per Series F Share has been paid in full to all holders of Series F Shares and the liquidation preference of any other shares having the same rank as the Series F Shares has been paid in full, the holders of our common stock or any other shares ranking, as to such distribution, junior to the Series F Shares will be entitled to receive all of our remaining assets according to their respective rights and preferences.

For purposes of the liquidation rights, neither the sale, conveyance, lease, exchange or transfer (for cash, shares of stock, securities or other consideration) of all or substantially all of our property and assets, nor the consolidation or merger by us with or into any other entity or by another entity with or into us will constitute a liquidation, dissolution or winding up of our business or affairs.

Because we are a holding company, our rights and the rights of our creditors and our shareholders, including the holders of the Series F Shares, to participate in the assets of any of our subsidiaries upon that subsidiary's liquidation or recapitalization may be subject to the prior claims of that subsidiary's creditors, except to the extent that we are a creditor with recognized claims against the subsidiary.

Voting Rights

The holders of Series F Shares will not have any voting rights and will not be entitled to elect any directors, except as indicated below or otherwise specifically required by law. Each holder of Series F Shares will have one vote per Series F Share (or one vote per 40 depository shares) on any matter on which holders of Series F Shares are entitled to vote, including any action by written consent.

Under regulations adopted by the Federal Reserve, if the holders of shares of any Series of our preferred stock, including the Series F Shares, become entitled to vote for the election of directors, such Series may then be deemed a "class of voting securities" and a holder of 25% or more of such Series (or a holder of 5% or more if the holder otherwise exercises a "controlling influence") may then be subject to regulation as a bank holding company in accordance with the Bank Holding Company Act. In addition, at such time as such Series is deemed a class of voting securities, (i) any other bank holding company may be required to obtain the approval of the Federal Reserve to acquire or retain 5% or more of such series, and (ii) any person other than a bank holding company may be required to file with the Federal Reserve under the Change in Bank Control Act, a federal law, to acquire or retain 10% or more of such series.

Right to Elect Two Directors Upon Non-Payment of Dividends

If and whenever the dividends on the Series F Shares and any other class or Series of our stock that ranks on parity with Series F Shares as to payment of dividends and that has voting rights equivalent to those described in this paragraph ("voting parity stock") have not been declared and paid (i) in the case of the Series F Shares and any voting parity stock bearing non-cumulative dividends, in full for at least six quarterly dividend periods or their equivalent (whether or not consecutive) or (ii) in the case of voting parity stock bearing cumulative dividends, in an aggregate amount equal to full dividends for at least six quarterly dividend periods or their equivalent (whether or not consecutive), the authorized number of our directors then constituting our board of directors will automatically be increased by two. Holders of Series F Shares, together with the holders of all other affected classes and Series of voting parity stock, voting as a single class, will be entitled to elect the two additional members of our board of directors (the "Preferred Stock Directors") at any annual meeting of shareholders or any special meeting of the holders of Series F Shares and any voting parity stock for which dividends have not been paid, called as provided below, but only if the election of any Preferred Stock Directors would not cause us to violate the corporate governance requirement of the New York Stock Exchange (or any other exchange on which our securities may be listed) that listed companies must have a majority of independent directors. In addition, our board of directors shall at no time have more than two Preferred Stock Directors.

At any time after this voting power has vested as described above, our Secretary may, and upon the written request of holders of record of at least 20% of the outstanding Series F Shares and voting parity stock (addressed to the Secretary at our principal office) must, call a special meeting of the holders of Series F Shares and voting parity stock for the election of the Preferred Stock Directors. Notice for a special meeting will be given in a similar manner to that provided in our by-laws for a special meeting of the shareholders, which we will provide upon request, or as required by law. If our Secretary is required to call a meeting but does not do so within 20 days after receipt of any such request, then any holder of Series F Shares may (at our expense) call such meeting, upon notice as provided in this section, and for that purpose will have access to our stock books.

The Preferred Stock Directors elected at any such special meeting will hold office until the next annual meeting of our shareholders unless they have been previously terminated as described below. In case any vacancy occurs among the Preferred Stock Directors, a successor will be elected by our board of directors to serve until the next annual meeting of the shareholders upon the nomination of the then remaining Preferred Stock Director or, if no Preferred Stock Director remains in office, by the vote of the holders of record of a majority of the outstanding Series F Shares and voting parity stock, voting as a single class. The Preferred Stock Directors shall each be entitled to one vote per director on any matter.

Whenever full dividends have been paid on the Series F Shares and any non-cumulative voting parity stock for at least one year and all dividends on any cumulative voting parity stock have been paid in full, then the right of the holders of Series F Shares to elect the Preferred Stock Directors will cease (but subject always to the same provisions for the vesting of these voting rights in the case of any similar non-payment of dividends in respect of future Dividend Periods), the terms of office of all Preferred Stock Directors will immediately terminate and the number of directors constituting our board of directors will be reduced accordingly.

Other Voting Rights

So long as any Series F Shares remain outstanding, the affirmative vote of the holders of at least two-thirds of the Series F Shares outstanding at the time, given in person or by proxy, either in writing or at a meeting (voting separately as a class), will be required to:

- authorize or create, or increase the authorized or issued amount of, any class or Series of capital stock ranking senior to the Series F Shares with respect to payment of dividends or the distribution of assets upon liquidation, dissolution or winding up, or reclassify any authorized shares of capital stock into Series F Shares; or
- amend, alter or repeal the provisions of our amended and restated articles of incorporation, whether by merger, consolidation or otherwise, so as to materially and adversely affect any right, preference, privilege or voting power of the Series F Shares or the holders thereof;

provided, however, that with respect to the occurrence of any event set forth in the second bullet point above, so long as any Series F Shares remain outstanding with the terms thereof materially unchanged or new shares of the surviving corporation or entity are issued with the same terms as the Series F Shares, in each case taking into account that upon the occurrence of this event we may not be the surviving entity, the occurrence of any such event shall not be deemed to materially and adversely affect any right, preference, privilege or voting power of the Series F Shares or the holders thereof, and provided, further, that any increase in the amount of our authorized common stock or preferred stock or the creation or issuance of any other Series of common stock or other equity securities ranking on a parity with or junior to the Series F Shares with respect to payment of dividends (whether such dividends are cumulative or non-cumulative) or the distribution of assets upon liquidation, dissolution or winding up and any change to the number of directors or number of classes of directors shall not be deemed to materially and adversely affect such rights, preferences, privileges or voting powers.

Under the Wisconsin Business Corporation Law, the vote of the holders of a majority of the outstanding Series F Shares, voting as a separate voting group, is required for:

- certain amendments to the articles of incorporation impacting the Series F Shares;
- the approval of any dividend payable in Series F Shares to holders of shares of another class or Series of our stock;
- the approval of any proposed share exchange that includes Series F Shares; or
- the approval of any plan of merger if the plan of merger contains a provision that, if contained in a proposed amendment to the articles of incorporation, would require shareholder action on the proposed amendment.

Further, in the case of any merger where we are the surviving corporation, the right of holders of the Series F Shares to vote separately as a group on a plan of merger does not apply if:

- the articles of incorporation of the surviving corporation will not differ, with certain exceptions, from our articles of incorporation as in effect prior to the merger;
- each shareholder of the surviving corporation whose shares were outstanding immediately before the effective date of the merger will hold the same number of shares, with identical designations, preferences, limitation, and relative rights, immediately after the merger; and
- the number of voting shares outstanding immediately after the merger, plus the number of voting shares issuable as a result of the merger, either by the conversion of securities issued pursuant to the merger or the exercise of rights or warrants issued pursuant to the merger, will not exceed by more than 20% the total number of voting shares of the surviving corporation outstanding immediately after the merger.

The foregoing voting provisions will not apply if, at or prior to the time when the act with respect to which the vote would otherwise be required, all outstanding Series F Shares shall have been redeemed or called for redemption upon proper notice and sufficient funds shall have been set aside by us for the benefit of the holders of Series F Shares to effect the redemption.

Depository, Transfer Agent, Registrar and Paying Agent

Equiniti Trust Company is the depository, transfer agent, registrar and paying agent for the Series F Shares.

Description of Depository Shares

This section describes the general terms and provisions of the depository shares, which are registered pursuant to Section 12(b) of the Exchange Act. The following summary is not complete. You should read the forms of deposit agreement and depository receipt relating to a Series of preferred stock for additional information.

Depository Shares Representing the Series E and Series F Shares

As of December 31, 2023, there were 4,000,000 depository shares, each representing a 1/40th ownership interest in a Series E Share, issued and outstanding, and 4,000,000 depository shares, each representing a 1/40th ownership interest in a Series F Share, issued and outstanding. We deposited the underlying Series E Shares and Series F Shares with a depository, in each case pursuant to a deposit agreement among us, Equiniti Trust Company, acting as depository, and the holders from time to time of the depository receipts evidencing the respective depository shares.

Subject to the terms of the respective deposit agreements, each holder of a depository share is entitled, through the depository, in proportion to the applicable fraction of a Series E Share, or Series F Share as the case may be, represented by that depository share, to all the rights and preferences of the

Series E Shares, or Series F Shares, represented thereby (including dividend, voting, redemption and liquidation rights). This description is subject to and qualified in its entirety by reference to our Amended and Restated Articles of Incorporation, including our Articles of Amendment with respect to the Series E Shares, and Series F Shares, which have been filed as exhibits to our SEC filings.

Dividends and Other Distributions

The depositary will distribute all cash dividends or other cash distributions received with respect to the preferred stock to the record holders of depositary shares representing the shares of preferred stock. These distributions will be in proportion to the number of depositary shares owned by the holders on the relevant record date. The depositary will not distribute amounts less than one cent. The depositary will distribute any balance with the next sum received for distribution to record holders of depositary shares.

If there is a distribution other than in cash, the depositary will distribute property to the holders of depositary shares, unless the depositary determines that it is not feasible to make the distribution. If this occurs, the depositary may, with our approval, sell the property and distribute the net proceeds from the sale to the holders of depositary shares.

Redemption of Depositary Shares

If the Series of the preferred stock underlying the depositary shares is subject to redemption, all or a part of the depositary shares will be redeemed from the redemption proceeds of that Series of the preferred stock held by the depositary. The depositary will mail notice of redemption between 30 to 60 days prior to the date fixed for redemption to the record holders of the depositary shares to be redeemed at their addresses appearing in the depositary's records. The redemption price per depositary share will bear the same relationship to the redemption price per share of preferred stock that the depositary share bears to the underlying preferred stock. Whenever we redeem preferred stock held by the depositary, the depositary will redeem, as of the same redemption date, the number of depositary shares representing the preferred stock redeemed. If less than all the depositary shares are to be redeemed, the depositary shares to be redeemed will be selected by lot or pro rata as determined by the depositary.

After the date fixed for redemption, the depositary shares called for redemption will no longer be outstanding. When the depositary shares are no longer outstanding, all rights of the holders will cease, except the right to receive money or other property that the holders of the depositary shares were entitled to receive upon the redemption. Payments will be made when holders surrender their depositary receipts to the depositary.

Voting Preferred Stock

When the depositary receives notice of any meeting at which the holders of the preferred stock may vote, the depositary will mail information about the meeting contained in the notice, and any accompanying proxy materials, to the record holders of the depositary shares relating to the preferred stock. Each record holder of such depositary shares on the record date, which will be the same date as the record date for the preferred stock, will be entitled to instruct the depositary with regard to how the preferred stock underlying the holder's depositary shares should be voted.

The depositary will try, if practical, to vote the number of shares of preferred stock underlying the depositary shares according to the instructions received. We will agree to take all action requested by and deemed necessary by the depositary to enable the depositary to vote the preferred stock in that manner. The depositary will not vote any preferred stock for which it does not receive specific instructions from the holders of the depositary shares relating to such preferred stock, unless otherwise indicated in the applicable prospectus supplement.

Amendment and Termination of the Deposit Agreement

The form of depositary receipt evidencing the depositary shares and any provision of the deposit agreement may be amended by agreement between us and the depositary at any time. Any amendment that materially and adversely alters the rights of the existing holders of depositary shares, however, will

be effective only if approved by the record holders of at least a majority of the depositary shares then outstanding. A deposit agreement may be terminated by us or the depositary only if:

- all outstanding depositary shares relating to the deposit agreement have been redeemed or reacquired by us;
- all preferred stock of the relevant Series has been withdrawn; or
- there has been a final distribution on the preferred stock of the relevant Series in connection with our liquidation, dissolution, or winding-up of our business and the distribution has been distributed to the holders of the related depositary shares.

Charges of Depositary

We will pay all transfer and other taxes and governmental charges arising solely from the existence of the depositary arrangements. We will pay associated charges of the depositary for the initial deposit of the preferred stock and any redemption of the preferred stock. Holders of depositary shares will pay transfer and other taxes and governmental charges and any other charges that are stated to be their responsibility under the deposit agreement.

Miscellaneous

We will forward to the depositary, for distribution to the holders of depositary shares, all reports and communications that we must furnish to the holders of the preferred stock.

If the depositary is prevented or delayed by law or any circumstance beyond its control in performing its obligations under the deposit agreement, neither the depositary nor we will be liable. Our obligations and the depositary's obligations under the deposit agreement will be limited to performance in good faith of duties set forth in the deposit agreement. Neither the depositary nor we will be obligated to prosecute or defend any legal proceeding connected with any depositary shares or preferred stock unless satisfactory indemnity is furnished to us and/or the depositary. We and the depositary may rely upon documents believed to be genuine, written advice of counsel or accountants, or information provided by persons presenting preferred stock for deposit, holders of depositary shares or other persons believed to be competent.

Resignation and Removal of Depositary

The depositary may resign at any time by delivering notice to us. We may also remove the depositary at any time. Resignations or removals will take effect when a successor depositary is appointed and it accepts the appointment. The successor depositary must be appointed within 60 days after delivery of the notice of resignation or removal and must be a bank or trust company having its principal office in the U.S., and it must have a combined capital and surplus of at least \$50 million.

Description of 6.625% Fixed-Rate Reset Subordinated Note Due 2033

As of December 31, 2023, there was an aggregate principal amount of \$300,000,000 of our 6.625% Fixed-Rate Reset Subordinated Note Due 2033 (the "Subordinate Notes") issued and outstanding. The Subordinated Notes are a series of our subordinated debt securities issued under our subordinated debt securities indenture dated as of November 13, 2014 between Associated Banc-Corp and The Bank of New York Mellon Trust Company, N.A., as trustee (the "Indenture"). The following summary of the material terms of the Subordinated Notes is not complete. You should also refer to the Indenture for the complete terms of the Subordinated Note.

General

The Subordinated Notes are limited to an aggregate principal amount of \$300,000,000. The Subordinated Notes are not convertible into or exchangeable for shares of our common stock, our preferred stock or any other securities.

The Subordinated Notes are unsecured and subordinate and junior in right of payment to all senior indebtedness, and in certain events of insolvency, to other general obligations, as described below. The Subordinated Notes are effectively subordinated to any secured debt of ours to the extent of the value of the collateral securing such indebtedness. As of December 31, 2031, we had no outstanding secured indebtedness. The Subordinated Notes are not guaranteed by any of our subsidiaries. As of December 31, 2023, we also had outstanding \$250,000,000 in the aggregate principal amount of 10-year subordinated notes, due January 2025, and callable October 2024.

We are a bank holding company that conducts substantially all of our operations through subsidiaries. As a result, claims of the holders of the Subordinated Notes are structurally subordinated in right of payment to claims of creditors of our subsidiaries, except to the extent that we may be recognized, and receive payment, as a creditor of those subsidiaries. Claims of our subsidiaries' creditors, other than Associated Banc-Corp, include substantial amounts of long-term debt, deposit liabilities, federal funds purchased, securities sold under repurchase agreements, commercial paper and other short-term borrowings. As of December 31, 2023, our subsidiaries had, in the aggregate, outstanding debt and other liabilities, including deposits, of approximately \$35.7 billion (excluding intercompany liabilities). All of such debt and other liabilities would rank structurally senior to the Subordinated Notes in case of liquidation or otherwise.

We may, from time to time, without notice or consent from the holders of the Subordinated Notes, incur additional indebtedness that ranks senior to, equally or subordinate in right of payment to the Subordinated Notes.

The Subordinated Notes are not deposits or other obligations of a bank or savings association and are not insured or guaranteed by the FDIC or any other governmental agency.

The Subordinated Notes are issued in registered book-entry form without coupons in denominations of \$25 and integral multiples of \$25 in excess thereof.

As of December 31, 2023, the Subordinated Notes are listed and traded on the New York Stock Exchange under the ticker symbol "ASBA".

Payment of Principal and Interest

Payment of the full principal amount of the Subordinated Notes is due on March 1, 2033.

The Subordinated Notes bear interest (i) during the period from and including February 10, 2023 (the "Issue Date), to, but excluding, March 1, 2028 (the "Reset Date"), or to, but excluding, the date of earlier redemption, at a fixed rate of 6.625% per annum (the "Initial Fixed Rate") and (ii) during the period from and including the Reset Date to, but excluding, the maturity date, or to, but excluding, the date of earlier redemption, at a rate per annum that will be the Five-year U.S. Treasury Rate as of the day falling two business days prior to the Reset Date (the "Reset Determination Date"), plus 2.812% per annum (the "Spread"). The Reset Date will not be adjusted for business days. The interest rate on the Subordinated Notes is in no event higher than the maximum rate permitted by New York law as the same may be modified by United States law of general application.

Interest on the Subordinated Notes began to accrue on February 10, 2023. We pay interest on the Subordinated Notes quarterly in arrears on March 1, June 1, September 1 and December 1 of each year, beginning June 1, 2023 and ending on the maturity date. Interest is paid to the person in whose name such note is registered at the close of business on the fifteenth day of February, May, August and November (whether or not a business day) of each year; *provided* that that interest payable on the maturity of the

principal of the Subordinated Notes or (subject to the exceptions described under the heading “— Optional Redemption by Us”) any redemption date is paid to the person to whom principal is paid. Interest on the Subordinated Notes is paid on the basis of a 360-day year comprised of twelve 30-day months.

If any interest payment date, redemption date or any maturity date for the Subordinated Notes falls on a day which is not a business day, the related payment of principal or interest on the Subordinated Notes is made on the next day that is a business day with the same force and effect as if made on the date such payment was due, and no interest will accrue on the amount payable for the period from and after such interest payment date or maturity date, as the case may be. A “business day” means any day that is not a Saturday or Sunday, and that is not a day on which banking institutions in the State of New York are authorized or obligated by law or executive order to close.

The “Five-year U.S. Treasury Rate” means, as of the Reset Determination Date, (i) an interest rate (expressed as a decimal) determined to be the per annum rate equal to the arithmetic mean of the five most recent daily yields to maturity (or, if fewer than five daily yields appear, such number of daily yields to maturity appearing) for U.S. Treasury securities adjusted to constant maturity, for five-year maturities, and trading in the public securities markets as published under the caption “Treasury Constant Maturities — Nominal” (or any successor caption or heading) in the most recent H.15 (the “Initial Base Rate”) or (ii) if there are no such published yields on actively traded U.S. Treasury securities adjusted to constant maturity, for five-year maturities, and trading in the public securities markets, then the rate will be determined by interpolation between the arithmetic mean of the five most recent daily yields to maturity (or, if fewer than five daily yields appear, such number of daily yields to maturity appearing), adjusted for constant maturity, for each of the two series of U.S. Treasury securities trading in the public securities market as published under the caption “Treasury Constant Maturities — Nominal” (or any successor caption or heading), (a) one maturing as close as possible to, but earlier than, the maturity date for the Subordinated Notes, and (b) the other maturing as close as possible to, but later than, the maturity date for the Subordinated Notes, in each case as published in the most recent H.15.

Notwithstanding the foregoing, if we, in our sole discretion, determine on or prior to the Reset Determination Date that the Five-Year U.S. Treasury Rate cannot be determined in the manner described in the immediately preceding paragraph (a “Benchmark Substitution Event”), we may, in our sole discretion, designate an unaffiliated agent or advisor, which may include an unaffiliated underwriter for the offering of the Subordinated Notes or any affiliate of any such underwriter (the “Designee”), to determine whether there is an industry-accepted successor rate to the Initial Base Rate. If the Designee determines that there is such an industry-accepted successor rate, then the “Five-Year U.S. Treasury Rate” shall be such successor rate and, in that case, the Designee may then determine and adjust the business day convention, the definition of business day and the Reset Determination Date to be used and any other relevant methodology for determining or otherwise calculating such successor rate, including any adjustment factor needed to make such successor rate comparable to the Initial Base Rate in each case, in a manner that is consistent with industry-accepted practices for the use of such successor rate (the “Adjustments”). If we, in our sole discretion, determine that the Five-Year U.S. Treasury Rate cannot be determined in the manner described in the immediately preceding paragraph and we, in our sole discretion, do not designate a Designee or if the Designee determines that there is no industry-accepted successor rate to the Initial Base Rate, then the Five-year U.S. Treasury Rate on the Reset Determination Date will be 3.813%, which is the Initial Fixed Rate minus the Spread.

For the avoidance of doubt, any determination by us or a Designee pursuant to the preceding paragraph (including, without limitation, with respect to any Benchmark Substitution Event or any Adjustments) will not be subject to, and will become effective without, the consent of the holders of the Subordinated Notes or any other party.

“H.15” means the daily statistical release designated as such, or any successor publication, published by the Federal Reserve System (the “FRB”), and “most recent H.15” means the H.15 published closest in time but prior to the close of business on the Reset Determination Date.

Unless we have delivered notice of redemption of all outstanding notes, with such redemption to occur on the Reset Date, we will appoint a calculation agent with respect to the Subordinated Notes prior to the Reset Determination Date. The Five-year U.S. Treasury Rate will be determined by the calculation

agent on the Reset Determination Date. Promptly upon such determination, the calculation agent will notify Associated Banc-Corp of the interest rate from and after the Reset Date. Associated Banc-Corp shall then promptly notify the trustee in writing of such interest rate. We or an affiliate of ours may assume the duties of the calculation agent. Any determination, decision or election that may be made by the calculation agent pursuant to the terms of the Subordinated Notes, including any determination with respect to a rate, will be conclusive and binding absent manifest error, may be made in the calculation agent's sole discretion, and, notwithstanding anything to the contrary in the documentation relating to the Subordinated Notes, shall become effective without consent from any other party. The calculation agent's determination of any interest rate will be on file at our principal offices, will be made available to any holder of the Subordinated Notes upon request and will be final and binding in the absence of manifest error. The trustee or any paying agent will have no obligation to be named as calculation agent nor for making any determinations to be made by the calculation agent as described above or for determining whether manifest error has occurred.

Optional Redemption by Us

We have the option to redeem the Subordinated Notes (i) in whole or in part on the Reset Date, and on any interest payment date thereafter, (ii) in whole or in part, at any time and from time to time, on or after December 1, 2032 (three months prior to the maturity date), or (iii) in whole, but not in part, upon the occurrence of a Regulatory Capital Treatment Event (as defined herein), in each case at a redemption price equal to 100% of the principal amount of the Subordinated Notes being redeemed, plus accrued and unpaid interest thereon, if any, to, but excluding, the redemption date.

If we redeem the Subordinated Notes at our option, notwithstanding the foregoing, installments of interest on the Subordinated Notes that are due and payable on any interest payment date falling on or prior to a redemption date for the Subordinated Notes will be payable on that interest payment date to the registered holders thereof as of the close of business on the relevant record date according to the terms of the Subordinated Notes and the Indenture.

A "Regulatory Capital Treatment Event" means the good faith determination by us that, as a result of (i) any amendment to, or change in, the laws, rules or regulations of the United States (including, for the avoidance of doubt, any agency or instrumentality of the United States, including the FRB and other appropriate federal bank regulatory agencies) or any political subdivision of or in the United States that is enacted or becomes effective after the initial issuance of the Subordinated Notes, (ii) any proposed change in those laws, rules or regulations that is announced or becomes effective after the initial issuance of the Subordinated Notes, or (iii) any official administrative decision or judicial decision or administrative action or other official pronouncement interpreting or applying those laws, rules or regulations or policies with respect thereto that is announced after the initial issuance of the Subordinated Notes, there is more than an insubstantial risk that we will not be entitled to treat the Subordinated Notes then outstanding as "tier 2 capital" (or its equivalent) for purposes of the capital adequacy rules of the FRB (or, as and if applicable, the capital adequacy rules or regulations of any successor appropriate federal banking agency) as then in effect and applicable, for so long as any note is outstanding, to at least the same extent as of the date of original issuance of the Subordinated Notes. "Appropriate federal banking agency" means the "appropriate federal banking agency" with respect to us as that term is defined in Section 3(q) of the Federal Deposit Insurance Act or any successor provision.

We must give the holders of the Subordinated Notes to be redeemed notice of the redemption not less than 10 days or more than 60 days before the redemption date. If we elect to redeem fewer than all the Subordinated Notes, the trustee will select the particular notes to be redeemed on a pro rata basis, by-lot or by such other method of selection, if any, that the trustee deems fair and appropriate.

Any exercise by us of our redemption rights described above is subject to our having first received approval of the FRB for such redemption.

The Subordinated Notes are not subject to any sinking fund. The Subordinated Notes are not mandatorily redeemable at the option of the holders.

Subordination

The Subordinated Notes are subordinate and junior in right of payment to all senior indebtedness and effectively subordinated to all existing and future debt and other liabilities of our subsidiaries and, upon the occurrence of certain events of insolvency, will be subordinated to the prior payment in full of our general obligations.

The Indenture defines “senior indebtedness” as:

1. the principal of (and premium, if any) and interest in respect of indebtedness of the Company for purchased or borrowed money, whether or not evidenced by securities, notes, debentures, bonds or other similar instruments issued by the Company;
2. all capital lease obligations of the Company;
3. all obligations of the Company issued or assumed as the deferred purchase price of property, all conditional sale obligations of the Company and all obligations of the Company under any conditional sale or title retention agreement, but excluding trade accounts payable in the ordinary course of business;
4. all obligations of the Company in respect of any letters of credit, bankers acceptances, security purchase facilities and similar credit transactions;
5. all obligations of the Company in respect of interest rate swap, cap or other agreements, interest rate future or options contracts, currency swap agreements, currency future or option contracts and other similar agreements;
6. all obligations of the type referred to in the preceding five clauses of other persons for the payment of which the Company is responsible or liable as obligor, guarantor or otherwise;
7. all obligations of the type referred to in the preceding six clauses of other persons secured by any lien on any property or asset of the Company whether or not such obligation is assumed by the Company; and
8. any deferrals, renewals or extensions of any such senior indebtedness;

provided, however, that senior indebtedness does not include:

1. any notes issued under the Indenture, including the Subordinated Notes (collectively, “Subordinated Securities”);
2. any indebtedness that by its terms is subordinated to, or ranks on an equal basis with, Subordinated Securities; and
3. any indebtedness between or among the Company and its affiliates, including all other debt securities and guarantees in respect of debt securities issued to any trust, or a trustee of such trust, partnership or other entity affiliated with the Company which is a financing vehicle of the Company in connection with the issuance by such financing vehicle of capital securities or other securities guaranteed by the Company pursuant to an instrument that ranks on an equal basis with or junior in respect of payment to Subordinated Securities.

The Indenture defines “general obligations” as all obligations of the Company to make payment on account of claims of general creditors, other than (A) obligations on account of senior indebtedness and (B) obligations on account of Subordinated Securities issued under the Indenture and indebtedness for money borrowed ranking *pari passu* with or subordinate to Subordinated Securities issued under the Indenture.

If the FRB (or other Federal banking supervisor that is at the time of determination the Company’s primary Federal banking supervisor) shall promulgate any rule or issue any interpretation defining or describing the term “general creditor” or “general creditors” or “senior indebtedness” for purposes of its criteria for the inclusion of subordinated debt of a bank holding company (including a financial holding company, if applicable) in capital, or otherwise defining or describing the obligations to which subordinated debt of a bank holding company (including a financial holding company, if applicable) must be subordinated to be included in capital, to include any obligations not included in the definition of “senior indebtedness” under the Indenture, the term “general obligations” will mean such

obligations as defined or described in the first such rule or interpretation, other than obligations described in clauses (A) and (B) above.

If the maturity of any Subordinated Securities, including the Subordinated Notes, is accelerated, the holders of all senior indebtedness outstanding at the time of such acceleration will first be entitled to receive payment in full of all amounts due thereon before the holders of Subordinated Securities, including the Subordinated Notes, will be entitled to receive any payment upon the principal of (or premium, if any) or interest, if any, on the Subordinated Securities.

No payments on account of principal (or premium, if any) or interest, if any, in respect of the Subordinated Notes may be made if there shall have occurred and be continuing:

1. a default in the payment of principal of (or premium, if any) or interest on senior indebtedness;
2. an event of default with respect to any senior indebtedness resulting in the acceleration of the maturity thereof; or
3. if any judicial proceeding shall be pending with respect to any such default.

In addition, upon our dissolution, winding-up, liquidation, or reorganization:

1. we must pay to the holders of senior indebtedness the full amounts of principal of, premium, if any, and interest, if any, on the senior indebtedness before any payment or distribution is made on the Subordinated Notes, and
2. if, after we have made those payments on the senior indebtedness, amounts are available for payment on the Subordinated Notes and creditors who hold general obligations have not received their full payments,

then we will first use amounts available for payment on the Subordinated Notes to pay in full all other general obligations before we may make any payment on the Subordinated Notes.

Events of Default

An event of default under the Indenture, as applied to the Subordinated Notes, occurs only upon certain events in bankruptcy, insolvency or reorganization involving us. If an event of default with respect to the Subordinated Notes occurs and is continuing, either the trustee or the holders of not less than 25% in principal amount of the outstanding notes may declare the principal amount of the Subordinated Notes to be due and payable immediately. Subject to certain conditions, the holders of a majority in principal amount of the outstanding notes may rescind and annul the declaration. Holders of the Subordinated Notes may not accelerate the maturity of the Subordinated Notes, except upon an event of default.

In addition, the Indenture also provides for defaults. A “default” under the Indenture, as applied to the Subordinated Notes includes:

1. our failure to pay principal of, or any premium on, any Subordinated Security when the payment is due;
2. our failure to pay any interest on any Subordinated Security when the interest payment is due, and continuance of this default for 30 days;
3. our default in the performance, or breach, of any of our covenants or warranties in the Indenture, other than a covenant or warranty included in the Indenture solely for the benefit of a different series of subordinated debt securities, which has continued for 60 days after we have been given written notice of the default as provided in the Indenture;
4. any event of default under the Indenture; and
5. any other default regarding the Subordinated Notes.

Neither the trustee nor holders of the Subordinated Notes have any right to accelerate the payment of the principal amount of the Subordinated Notes upon the occurrence of a default. However, if there is a default in payment of principal or interest (not cured within 30 days) under the Subordinated Notes and upon demand of the trustee, we will be required to pay the principal amount and interest, if

any, then due and payable on the Subordinated Notes to the trustee for the benefit of the holders of the outstanding notes.

Defeasance and Covenant Defeasance

The Indenture contains a provision that permits us to elect:

1. defeasance, which would discharge us from all of our obligations (subject to limited exceptions) with respect to the Subordinated Notes; and/or
2. covenant defeasance, which would release us from our obligations under specified covenants and the consequences of the occurrence of an event of default resulting from a breach of these covenants.

To make either of the above elections, we must deposit in trust with the trustee money and/or U.S. government obligations which, through the payment of principal and interest in accordance with their terms, will provide sufficient money, without reinvestment, to repay in full the Subordinated Notes.

In the Indenture, “U.S. government obligations” are:

1. direct obligations of the U.S. or of an agency or instrumentality of the U.S., in either case that is guaranteed as a full faith and credit obligation of the U.S. and that is not callable or redeemable by us; and
2. certain depositary receipts with respect to an obligation referred to immediately above.

As a condition to defeasance or covenant defeasance, we must deliver to the trustee an opinion of counsel that the holders of the Subordinated Notes will not recognize income, gain, or loss for federal income tax purposes as a result of the defeasance or covenant defeasance and will be subject to federal income tax on the same amount, in the same manner and at the same times as would have been the case if defeasance or covenant defeasance had not occurred. That opinion, in the case of defeasance, but not covenant defeasance, must refer to and be based upon a ruling received by us from the Internal Revenue Service or published as a revenue ruling or upon a change in applicable federal income tax law.

If we exercise our covenant defeasance option with respect to the Subordinated Notes, then even if there were a default under the related covenant, payment of the Subordinated Notes could not be accelerated. We may exercise our defeasance option with respect to the Subordinated Notes even if we previously had exercised our covenant defeasance option. If we exercise our defeasance option, payment of the Subordinated Notes may not be accelerated because of any event of default. If we exercise our covenant defeasance option and acceleration were to occur, the realizable value at the acceleration date of the money and U.S. government obligations in the defeasance trust could be less than the principal and interest then due on the Subordinated Notes. This is because the required deposit of money and/or U.S. government obligations in the defeasance trust is based upon scheduled cash flows rather than market value, which will vary depending upon interest rates and other factors.

Modification and Waiver

The Indenture provides that we, together with the trustee, may enter into supplemental indentures without the consent of any holders of the Subordinated Notes to, among other things:

1. evidence the assumption by another person of our obligations;
2. add covenants for the benefit of the holders;
3. add any additional events of default;
4. add to or change the Indenture to permit or facilitate the issuance of Subordinated Securities in bearer form or to permit or facilitate the issue of Subordinated Securities in uncertificated form;
5. secure the Subordinated Securities;
6. evidence the acceptance of appointment by a successor trustee;
7. cure any ambiguity or correct any inconsistency in the Indenture; or
8. make other changes, provided that any such action does not adversely affect the interests of the holders in any material respect.

Other amendments and modifications of the Indenture may be made with the consent of the holders of not less than a majority of the aggregate principal amount of outstanding Subordinated Securities of each series affected by the supplemental indenture. No modification or amendment may, however, without the consent of each holder of outstanding Subordinated Securities of each series affected by the supplemental indenture:

1. change the stated maturity of the principal of, or any installment of principal or interest on the Subordinated Notes;
2. reduce the principal amount of (or premium, if any) or the interest rate on the Subordinated Notes or the principal amount due upon acceleration of a note;
3. change the place or currency of payment of principal of (or premium, if any), or the interest on the Subordinated Notes;
4. impair the right to sue for the enforcement of any such payment on or with respect to the Subordinated Notes;
5. reduce the percentage of holders of the Subordinated Notes necessary to modify or amend the Indenture; or
6. modify the foregoing requirements or reduce the percentage of outstanding Subordinated Securities necessary to waive compliance with certain covenants in the Indenture or for waiver of certain defaults.

The Indenture provides that in determining whether the holders of the requisite principal amount of the outstanding Subordinated Securities have given, made or taken any request, demand, authorization, direction, notice, consent or waiver under the Indenture, Subordinated Securities owned by Associated Banc-Corp or any affiliate of Associated Banc-Corp shall be disregarded and deemed not to be outstanding. Additionally, no modification or amendment to the Indenture may, without the consent of the holder of each outstanding subordinated note affected:

1. modify the subordination provisions of the Subordinated Securities of any series in a manner adverse to the holders of the Subordinated Notes; or
2. adversely affect the right to convert any Subordinated Security.

Consolidation, Merger, and Sale of Assets

We may, without the consent of the holders of any Subordinated Securities, including the Subordinated Notes, consolidate or merge with any other person or transfer or lease all or substantially all of our assets to another person or permit another corporation to merge into Associated Banc-Corp, as long as:

1. the successor is a corporation, banking association, partnership or trust organized and validly existing under the laws of the United States, any state or the District of Columbia;
2. the successor (if not Associated Banc-Corp) expressly assumes, by supplemental indenture, all of our obligations on the Subordinated Securities, including the Subordinated Notes, and under the Indenture;
3. immediately after giving effect to the transaction, no event of default, and no event which, after notice or lapse of time or both, would become an event of default, shall have occurred and be continuing; and
4. we deliver to the trustee an officer's certificate and an opinion of counsel, each stating that such consolidation, merger, conveyance, transfer or lease of our properties and assets complies with the Indenture and that all conditions precedent to such transaction have been complied with.

Governing Law

The Indenture and the Subordinated Notes are governed by, and construed in accordance with, the laws of the State of New York.

The Trustee

The Bank of New York Mellon Trust Company, N.A. is the trustee under the Indenture relating to the Subordinated Notes. The trustee has all of the duties and responsibilities specified under the Trust Indenture Act of 1939, as amended. The trustee is not obligated to exercise any of its rights or powers

under the Indenture at the request or direction of any holders of the Subordinated Notes unless the holders have offered to the trustee security or indemnity reasonably satisfactory to the trustee. We and some of our subsidiaries maintain deposits and conduct other banking transactions with the trustee in the ordinary course of business.

The Bank of New York Mellon Trust Company, N.A., serves as trustee under the Indenture and under our senior debt securities indenture, dated as of March 14, 2011, between Associated Banc-Corp and The Bank of New York Mellon Trust Company, N.A., as trustee, relating to our senior notes. If an event of default occurs, the trustee may be considered to have a conflicting interest with respect to the Subordinated Notes for purposes of the Trust Indenture Act of 1939, as amended. In that case, the trustee may be required to resign as trustee under the Indenture relating to the Subordinated Notes and we would be required to appoint a successor trustee.

Exhibit 21

**Subsidiaries of the Parent Company
As of December 31, 2023**

The following bank subsidiaries are national banks and are organized under the laws of the United States:

Associated Bank, National Association

Associated Trust Company, National Association

The following nonbank subsidiaries are organized under the laws of the State of Wisconsin:

ABNA Investment Partners LLC

ABNA Portfolio Investments

ABNA SPH, LLC

ACD Germania, LLC

Associated Community Development, LLC

Associated Investments Inc.

Associated Investment Services, Inc.

Associated Wisconsin Real Estate Corp.

Kellogg Asset Management, LLC

Milwaukee Center Management, LLC

The following nonbank subsidiaries are organized under the laws of the State of Delaware:

SUBI-AB-24 Portfolio

SUBI-35 Portfolio

Exhibit 23

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the registration statement (Nos. 2-77435, 2-99096, 33-16952, 33-24822, 33-55560, 33-54658, 33-63545, 33-67436, 33-86790, 333-46467, 333-74307, 333-121012, 333-121011, 333-121010, 333-120711, 333-120713, 333-120714, 333-120710, 333-166392, 333-188233, 333-208104, 333-217689, 333-223099, 333-238552, 333-273047 and 333-273865) on Form S-8, (Nos. 2-98922, 33-28081, 33-63557, 33-67434, 333-202836, 333-208103, 333-224096, and 333-256902) on Form S-3 and (Nos. 333-195049, and 333-220067) on Form S-4 of our reports dated February 8, 2024, with respect to the consolidated financial statements of Associated Banc-Corp and the effectiveness of internal control over financial reporting.

/s/ KPMG LLP

Chicago, Illinois
February 8, 2024

POWER OF ATTORNEY FOR ANNUAL REPORT ON FORM 10-K

Each of the undersigned directors of Associated Banc-Corp (the “Corporation”) hereby designates and appoints Randall J. Erickson and Nadia Musallam, and each of them, the undersigned’s true and lawful attorney-in-fact and agent, with full power of substitution and resubstitution, for the undersigned and in the undersigned’s name, place and stead to sign for the undersigned and in the undersigned’s name in the capacity as a director of the Corporation the Corporation’s Annual Report on Form 10-K for the year ended December 31, 2023, and to file the same, with all exhibits thereto, other documents in connection therewith, and any amendments to any of the foregoing, with the Securities and Exchange Commission and any other regulatory authority, granting unto said attorney-in-fact and agent full power and authority to do and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully and to all intents and purposes as the undersigned might or could do in person, hereby ratifying and confirming all that said attorney-in-fact and agent, or the undersigned’s substitute, may lawfully do or cause to be done by virtue hereof.

IN WITNESS WHEREOF, the undersigned have each executed this Power of Attorney for Annual Report on Form 10-K, on one or more counterparts, as of the 30th day of January, 2024.

/s/ R. Jay Gerken
R. Jay Gerken

/s/ Eileen A. Kamerick
Eileen A. Kamerick

/s/ Judith P. Greffin
Judith P. Greffin

/s/ Gale E. Klappa
Gale E. Klappa

/s/ Michael J. Haddad
Michael J. Haddad

/s/ Cory L. Nettles
Cory L. Nettles

/s/ Andrew J. Harmening
Andrew J. Harmening

/s/ Karen T. van Lith
Karen T. van Lith

/s/ Robert A. Jeffe
Robert A. Jeffe

/s/ John (Jay) B. Williams
John (Jay) B. Williams

Exhibit 31.1

**CERTIFICATION UNDER SECTION 302 OF THE
SARBANES-OXLEY ACT OF 2002**

CERTIFICATIONS

I, Andrew J. Harmening, certify that:

1. I have reviewed this annual report on Form 10-K of Associated Banc-Corp;

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: February 8, 2024

/s/ Andrew J. Harmening

Andrew J. Harmening

President and Chief Executive Officer

Exhibit 31.2

**CERTIFICATION UNDER SECTION 302 OF THE
SARBANES-OXLEY ACT OF 2002**

CERTIFICATIONS

I, Derek S. Meyer, certify that:

1. I have reviewed this annual report on Form 10-K of Associated Banc-Corp;

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: February 8, 2024

/s/ Derek S. Meyer

Derek S. Meyer

Chief Financial Officer

Exhibit 32

Certification by the Chief Executive Officer and Chief Financial Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002

Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, each of the undersigned officers of Associated Banc-Corp, a Wisconsin corporation (the “Company”), does hereby certify that:

1. The accompanying Annual Report of the Company on Form 10-K for the year ended December 31, 2023 (the “Report”), fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
2. Information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ Andrew J. Harmening

Andrew J. Harmening
Chief Executive Officer
February 8, 2024

/s/ Derek S. Meyer

Derek S. Meyer
Chief Financial Officer
February 8, 2024



Clawback Policy

Effective December 1, 2023

This policy has been established by the Compensation and Benefits Committee (the “Committee”) of the Board of Directors of Associated Banc-Corp (the “Company”) to provide for the recovery of Erroneously Awarded Compensation in the event of a restatement of the Company’s financial statements. This Policy is designed to comply with Section 303A.14 of the Listed Company Manual of the NYSE that was adopted to implement Rule 10D-1 under the Securities Exchange Act of 1934. The Committee has therefore adopted this policy, effective as of December 1, 2023 (the “Effective Date”). For purposes of this Policy, capitalized terms not otherwise defined shall have the meanings set forth below in the definitions paragraphs.

Statement of Policy

In the event of an Accounting Restatement, the Committee shall recover reasonably promptly the amount of any Erroneously Awarded Compensation, determined in accordance with this Policy and applicable laws and regulations.

The Committee shall have discretion to determine the appropriate means and methods of recovery of Erroneously Awarded Compensation based on all applicable facts and circumstances and taking into account the time value of money and the cost to shareholders of delaying recovery. Such means and methods of recovery may include, without limitation, (i) seeking reimbursement of all or part of any cash or equity-based award, (ii) cancelling prior cash or equity-based awards, whether vested or unvested or paid or unpaid, (iii) cancelling or offsetting against any planned future cash or equity-based awards, (iv) forfeiture of deferred compensation, subject to compliance with Section 409A of the Internal Revenue Code and the regulations promulgated thereunder and (v) any other method authorized by applicable law or contract. Subject to compliance with any applicable law, the Committee may effect recovery under this Policy from any amount otherwise payable to the Executive Officer, including amounts payable to such individual under any otherwise applicable Company plan or program, including base salary, bonuses or compensation previously deferred. For the avoidance of doubt, except as set forth in the succeeding paragraph below, in no event may the Company Group accept an amount that is less than the amount of Erroneously Awarded Compensation in satisfaction of an Executive Officer’s obligations hereunder.

Notwithstanding anything herein to the contrary, the Company shall not be required to take the actions contemplated by second preceding paragraph above if the following conditions are met and the Committee determines that recovery would be impracticable:

- (i) The direct expenses paid to a third party to assist in enforcing the Policy against an Executive Officer would exceed the amount to be recovered, after the Company has made a reasonable attempt to recover the applicable Erroneously Awarded Compensation, documented such attempts and provided such documentation to NYSE;
- (ii) Recovery would violate home country law where that law was adopted prior to November 28, 2022, provided that, before determining that it would be impracticable to recover any amount of Erroneously Awarded Compensation based on violation of home country law, the Company has obtained an opinion of home country counsel, acceptable to NYSE, that recovery would result in such a violation and a copy of the opinion is provided to NYSE; or

- (iii) Recovery would likely cause an otherwise tax-qualified retirement plan, under which benefits are broadly available to employees of the Company Group, to fail to meet the requirements of 26 U.S.C. 401(a)(13) or 26 U.S.C. 411(a) and regulations thereunder.

Definitions

For purposes of this Policy, the following capitalized terms shall have the meanings set forth below.

“Accounting Restatement” shall mean an accounting restatement (i) due to the material noncompliance of the Company with any financial reporting requirement under the securities laws, including any required accounting restatement to correct an error in previously issued financial statements that is material to the previously issued financial statements (a “Big R” restatement), or (ii) that corrects an error that is not material to previously issued financial statements, but would result in a material misstatement if the error were not corrected in the current period or left uncorrected in the current period (a “little r” restatement).

“Board” shall mean the Board of Directors of the Company.

“Clawback Eligible Incentive Compensation” shall mean, in connection with an Accounting Restatement and with respect to each individual who served as an Executive Officer at any time during the applicable performance period for any Incentive-based Compensation (whether or not such Executive Officer is serving at the time the Erroneously Awarded Compensation is required to be repaid to the Company Group), all Incentive-based Compensation Received by such Executive Officer (i) on or after the Effective Date, (ii) after beginning service as an Executive Officer, (iii) while the Company has a class of securities listed on a national securities exchange or a national securities association, and (iv) during the applicable Clawback Period.

“Clawback Period” shall mean, with respect to any Accounting Restatement, the three completed fiscal years of the Company immediately preceding the Restatement Date and any transition period (that results from a change in the Company’s fiscal year) of less than nine months within or immediately following those three completed fiscal years.

“Company Group” shall mean the Company, together with each of its direct and indirect subsidiaries.

“Erroneously Awarded Compensation” shall mean, with respect to each Executive Officer in connection with an Accounting Restatement, the amount of Clawback Eligible Incentive Compensation that exceeds the amount of Incentive-based Compensation that otherwise would have been Received had it been determined based on the restated amounts, computed without regard to any taxes paid. For Incentive-based Compensation based on (or derived from) stock price or total shareholder return where the amount of Erroneously Awarded Compensation is not subject to mathematical recalculation directly from the information in the applicable Accounting Restatement, the amount shall be determined by the Committee based on a reasonable estimate of the effect of the Accounting Restatement on the stock price or total shareholder return upon which the Incentive-based Compensation was Received (in which case, the Company shall maintain documentation of such determination of that reasonable estimate and provide such documentation to the NYSE).

“Executive Officer” shall mean the Company’s president, principal financial officer, principal accounting officer (or if there is no such accounting officer, the controller), any vice-president of the Company in charge of a principal business unit, division, or function (such as sales, administration, or finance), any other officer who performs a policy-making function, or any other person who performs similar policy-making functions for the Company. Executive officers of the Company’s subsidiaries are deemed Executive Officers if they perform such policy making functions for the Company. Identification of an executive officer for purposes of this Policy would include at a minimum executive officers identified pursuant to 17 C.F.R. 229.401(b).

“Financial Reporting Measures” shall mean measures that are determined and presented in accordance with the accounting principles used in preparing the Company’s financial statements, and all other measures that are derived wholly or in part from such measures. Stock price and total shareholder return (and any measures that are derived wholly or in part from stock price or total shareholder return) shall for purposes of this Policy be considered Financial Reporting Measures. For the avoidance of doubt, a Financial Reporting Measure need not be presented in the Company’s financial statements or included in a filing with the SEC.

“Incentive-based Compensation” shall mean any compensation that is granted, earned or vested based wholly or in part upon the attainment of a Financial Reporting Measure.

“NYSE” shall mean the New York Stock Exchange.

“Policy” shall mean this Executive Compensation Clawback Policy, as the same may be amended and/or restated from time to time.

“Received” shall, with respect to any Incentive-based Compensation, mean actual or deemed receipt, and Incentive-based Compensation shall be deemed received in the Company’s fiscal period during which the Financial Reporting Measure specified in the Incentive-based Compensation award is attained, even if payment or grant of the Incentive-based Compensation occurs after the end of that period.

“Restatement Date” shall mean the earlier to occur of (i) the date the Board, a committee of the Board or the officers of the Company authorized to take such action if Board action is not required, concludes, or reasonably should have concluded, that the Company is required to prepare an Accounting Restatement, or (ii) the date a court, regulator or other legally authorized body directs the Company to prepare an Accounting Restatement.

“SEC” shall mean the U.S. Securities and Exchange Commission.

Indemnification Prohibited

No member of the Company Group shall be permitted to indemnify any Executive Officer against (i) the loss of any Erroneously Awarded Compensation that is repaid, returned or recovered pursuant to the terms of this Policy, or (ii) any claims relating to the Company Group’s enforcement of its rights under this Policy. Further, no member of the Company Group shall pay or reimburse the cost of insurance against recovery of any Erroneously Awarded Compensation, or enter into any agreement that exempts any Incentive-based Compensation from the application of this Policy or that waives the Company Group’s right to recovery of any Erroneously Awarded Compensation and this Policy shall supersede any such agreement (whether entered into before, on or after the Effective Date).

Administration and Interpretation

This Policy shall be administered by the Committee. The Committee is authorized to interpret and construe this Policy and to make all determinations necessary, appropriate, or advisable for the administration of this Policy. Any determinations made by the Committee shall be final and binding on all affected individuals.

The Committee may amend this Policy from time to time in its discretion and shall amend this Policy as it deems necessary, including as and when it determines that it is legally required by any federal securities laws, SEC rule or the rules of any national securities exchange or national securities association on which the Company’s securities are listed. The Committee may terminate this Policy at any time.

Notwithstanding anything in this paragraph to the contrary, no amendment or termination of this Policy shall be effective if such amendment or termination would (after taking into account any actions taken by the Company contemporaneously with such amendment or termination) cause the Company to

violate any federal securities laws, SEC rule or the rules of any national securities exchange or national securities association on which the Company's securities are listed.

Reference to this policy may be made in any agreement or similar document evidencing awards or grants to any executive to whom this policy is applicable; provided, however, that this policy is applicable to such executive officer notwithstanding any other terms of the agreement or similar documents evidencing such awards or grants.

Other Recoupment Rights; No Additional Payments

This policy shall apply in addition to any right of recoupment against the Chief Executive Officer and Chief Financial Officer pursuant to Section 304 of the Sarbanes-Oxley Act of 2002 and any other remedies or rights of recoupment that may be available to the Company Group under applicable law, regulation or rule or pursuant to the terms of any similar policy in any employment agreement, equity award agreement, or similar agreement and any other legal remedies available to the Company Group; provided that there shall be no duplication of recovery under this Policy and Section 304 of The Sarbanes-Oxley of 2002.

Reporting and Disclosure

The Company shall file all disclosures with respect to this Policy in accordance with the requirements of the federal securities laws, including the disclosure required by the applicable SEC filings.

Acknowledgement Form

Each Executive Officer shall be required to sign and return to the Company the Acknowledgement Form attached hereto as Exhibit A pursuant to which such Executive Officer will agree to be bound by the terms and comply with this Policy.

Exhibit A

**ASSOCIATED BANC-CORP
CLAWBACK POLICY**

ACKNOWLEDGMENT FORM

By signing below, the undersigned acknowledges and confirms that the undersigned has received and reviewed a copy of the Associated Banc-Corp Clawback Policy (the "**Policy**"). Capitalized terms used but not otherwise defined in this Acknowledgment Form (this "**Acknowledgment Form**") shall have the meanings ascribed to such terms in the Policy.

By signing this Acknowledgment Form, the undersigned acknowledges and agrees that the undersigned is and will continue to be subject to the Policy and that the Policy will apply both during and after the undersigned's employment with the Company Group. Further, by signing below, the undersigned agrees to abide by the terms of the Policy, including, without limitation, by returning any Erroneously Awarded Compensation (as defined in the Policy) to the Company Group to the extent required by, and in a manner permitted by, the Policy.

Signature

Print Name

Date