REFINITIV

DELTA REPORT

10-K

UMBF - UMB FINANCIAL CORP

10-K - DECEMBER 31, 2023 COMPARED TO 10-K - DECEMBER 31, 2022

The following comparison report has been automatically generated

TOTAL DELTAS	5023
CHANGES	552
DELETIONS	2761
ADDITIONS	1710

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

☒

For the fiscal year ended: December 31, 2022 December 31, 2023

OR

☐ TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 **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: 001-38481

UMB FINANCIAL CORPORATION CORPORATION

(Exact name of registrant as specified in its charter)

Missouri	**43-0903811**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**
1010 Grand Boulevard, Kansas City, Missouri	**64106**
(Address of principal executive offices)	**(Zip Code)**

(Registrant's telephone number, including area code): (816) (816) 860-7000

Securities Registered Pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, $1.00 Par Value	UMBF	The NASDAQ Global Select Market

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 Yes ☐ No 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 Yes ☐ No 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 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	☐
	Smaller reporting company	☐	
		Emerging growth company	☐

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

Indicate by check mark whether the registrant has filed a report on and attestation to its management’s assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issues 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 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 No

As of June 30, 2022 June 30, 2023, the aggregate market value of common stock outstanding held by nonaffiliates of the registrant was approximately $3,765,571,733 $2,675,077,467 based on the closing price of the registrant’s common stock on the NASDAQ Global Select Market on that date.

Indicate the number of shares outstanding of each of the registrant's classes of common stock, as of the latest practicable date.

Class	Outstanding at February 16, 2023 February 16, 2024
Common Stock, $1.00 Par Value	48,503,947**48,741,902**

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Company's Definitive Proxy Statement on Schedule 14A (the “Proxy Statement”) to be delivered to shareholders in connection with the Annual Meeting of Shareholders to be held on April 26, 2023 April 30, 2024, are incorporated by reference into Part III of this Annual Report on Form 10-K.

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PART I

ITEM 1. *BUSINESS*

General

UMB Financial Corporation (together with its consolidated subsidiaries, unless the context requires otherwise, the Company) is a financial holding company that is headquartered in Kansas City, Missouri. The Company provides banking services and asset servicing to its customers in the United States and around the globe.

The Company was organized as a corporation under Missouri law in 1967 and is registered as a bank holding company under the Bank Holding Company Act of 1956, as amended (the BHCA) and a financial holding company under the Gramm-Leach-Bliley Act of 1999, as amended (the GLBA). The Company currently owns all of the outstanding stock of one national bank and several nonbank subsidiaries.

The Company's national bank, UMB Bank, National Association (the Bank), has its principal office in Missouri and also has branches in Arizona, Colorado, Illinois, Kansas, Nebraska, Oklahoma, and Texas. The Bank offers a full complement of banking products and other services to commercial, retail, government, and correspondent-bank customers, including a wide range of asset-management, trust, bankcard, and cash-management services.

The Company also owns UMB Fund Services, Inc. (UMBFS), which is a significant nonbank subsidiary that has offices in Milwaukee, Wisconsin, Chadds Ford, Pennsylvania, and Ogden, Utah. UMBFS provides fund accounting, transfer agency, and other services to mutual fund and alternative-investment groups.

Prior to March 31, 2021, the Company also owned Prairie Capital Management, LLC (PCM), which provided investment management services and alternative investments in hedge funds and private equity funds. The Company sold its membership interests in PCM during the first quarter of 2021.

COVID-19

For over two years, the Company has experienced the impacts of the COVID-19 global pandemic (the COVID-19 pandemic, or the pandemic). Such impacts have included significant volatility in the global stock and fixed income markets, the enactment of the Coronavirus Aid, Relief, and Economic Security Act (CARES Act) and the American

Rescue Plan Act of 2021, both authorizing the Paycheck Protection Program (PPP) administered by the Small Business Administration, and a variety of rulings from the Company's banking regulators.

The Company continues to actively monitor developments related to COVID-19 and its impact to its business, customers, employees, counterparties, vendors, and service providers. The COVID-19 pandemic has necessitated certain actions related to the way the Company operates its business. The Company is carefully monitoring the activities of its vendors and other third-party service providers to mitigate the risks associated with any potential service disruptions. The length of time the Company may be required to operate under such circumstances and future degrees of disruption remain uncertain. While the Company has not experienced material adverse disruptions to its internal operations due to the pandemic, it continues to review evolving risks and developments.

Business Segments

The Company's products and services are grouped into three segments: Commercial Banking, Institutional Banking, and Personal Banking.

These segments and their financial results are described in detail in (i) the section of Management's Discussion and Analysis of Financial Condition and Results of Operations entitled *Business Segments*, which can be found in Part II, Item 7 of this report and (ii) Note 12, "Business Segment Reporting," in the Notes to the Consolidated Financial Statements, which can be found in Part II, Item 8 of this report.

Competition

The Company faces intense competition in each of its business segments and in all of the markets and geographic regions that the Company serves. Competition comes from both traditional and non-traditional financial-services providers, including banks, savings associations, finance companies, investment advisors, asset managers, mutual funds, private-equity firms, hedge funds, brokerage firms, mortgage-banking companies, credit-card companies, insurance companies, trust companies, securities processing companies, and credit unions. Increasingly, financial-technology (fintech) companies are partnering with financial-services providers to compete with the Company for lending, payments, and other business.Many of the Company's competitors are not subject to the same kind or degree of supervision and regulation as the Company.

Competition is based on a number of factors. Banking customers are generally influenced by convenience, interest rates and pricing, personal experience, quality and availability of products and other services, lending limits, transaction execution, and reputation. Investment advisory services compete primarily on returns, expenses, third-party ratings, and the reputation and performance of managers. Asset servicing competes primarily on price, quality of services, and reputation.The Company and its competitors are all impacted to varying degrees by the overall economy and health of the financial markets.

The Company's ability to successfully compete in its chosen markets and regions also depends on its ability to attract, retain, and motivate talented employees, to invest in technology and infrastructure, and to innovate, all while effectively managing its expenses. The Company expects that competition will likely intensify in the future.

Human Capital

The Company is dedicated to creating *the* Unparalleled Customer Experience, and its associates are critical to achieving this mission. As part of the Company's efforts to recruit and retain top talent, it strives to offer competitive compensation and benefits programs, while fostering a culture rooted in inclusion of a diverse mix of associates who are empowered to be part of something more. The Company believes its associates, customers, and communities mutually benefit by its focus on providing opportunities for its associates to make an impact at work and in its their respective communities. On a full-time equivalent basis at December 31, 2022 December 31, 2023, the Company and its subsidiaries employed 3,770 3,599 associates across the country.

Compensation and Benefits Program. The Company's compensation program is designed to allow it to attract, reward, and retain talented individuals who contribute significant value to the organization. The Company's compensation programs reward performance, reserving the highest rewards for the highest performers. The Company's incentive plans are intended to promote the interests of the Company and its shareholders by providing associates with incentives and rewards to encourage them to continue in service of the Company. The Company provides employees with compensation packages that include base salary, annual short-term incentive bonuses, and long-term equity awards tied to management, growth, and protection of the business of the Company. In addition to cash and equity compensation, the Company offers a robust benefits program that includes medical, dental, and vision insurance, health savings accounts and a variety of insurance options, including pet, life, and long-term care. Additionally, the Company also offers associates benefits including paid time off, paid volunteer time off, paid parental leave, adoption assistance, a 401(k) plan, as well as profit sharing and an employee stock ownership plan. The Company strives to engage and encourage associates to act and take personal responsibility for improving their health and well-being, as well as the health and well-being of their families. To assist associates with their goals, the Company offers wellness resources and incentives and to support wellness coaches for strategic wellness support strategies.

Diversity and Inclusion. The Company believes that an equitable and inclusive environment with diverse teams produces more creative solutions, results in better products and services, and is crucial to its efforts to attract and retain key talent. The Company's talent acquisition team focuses on building recruitment marketing strategies that are designed to identify and attract diverse associates. candidates. The Company's business resource groups (BRGs) also play a vital role in deepening the recruitment pipeline of diverse talent and refer candidates to the Company on a regular basis. BRGs are structured to engage associates who share common interests, including associates from traditionally underrepresented groups. Nearly 20% of the Company's associates participate in one or more BRGs.

Community Involvement. For more than a century, the Company has maintained a commitment to the prosperity of each community it serves. In addition to providing financial products built for the needs of its customers, the Company builds strong community partnerships through associate volunteerism, associate financial

giving, and corporate philanthropy. The Company encourages associates to give back to their local communities through various programs and initiatives, including paid volunteer time off and matching charitable gift programs.

For more information on the Company's diversity and inclusion and community involvement initiatives, please see its Corporate Citizenship Report available at www.umb.com/corporatecitizenship. corporatecitizenship. Information on the Company's website is not incorporated by reference into this report and should not be considered part of this document.

Government Monetary and Fiscal Policies

In addition to the impact of general economic conditions, the Company's business, results of operations, financial condition, capital, liquidity, and prospects are significantly affected by government monetary and fiscal policies that are announced or implemented in the United States and abroad.

A sizeable influence is exerted, in particular, by the policies of the Board of Governors of the Federal Reserve System (the FRB), which influences monetary and credit conditions in the economy in pursuit of maximum employment, stable prices, and moderate long-term interest rates. Among the FRB's policy tools are (1) open market operations (that is, purchases or sales of securities in the open market to adjust the supply of reserve balances in order to achieve targeted federal funds rates or to put pressure on longer-term interest rates in order to achieve more desirable levels of economic activity and job creation), (2) the discount rate charged on loans by the Federal Reserve Banks, (3) the level of reserves required to be held by depository institutions against specified deposit liabilities, (4) the interest paid or charged on balances maintained with the Federal Reserve Banks by depository institutions, including balances used to satisfy their reserve requirements, and (5) other deposit and loan facilities.

The FRB and its policies have a substantial impact on the availability and demand for loans and deposits, the rates, and other aspects of pricing for loans and deposits, and the conditions in equity, fixed income, currency, and other markets in which the Company operates. Policies announced or implemented by other central banks around the world have a meaningful effect as well and sometimes may be coordinated with those of the FRB.

Tax and other fiscal policies, moreover, impact not only general economic conditions but also give rise to incentives or disincentives that affect how the Company and its customers prioritize objectives, operate businesses, and deploy resources.

Regulation and Supervision

The Company is subject to regulatory frameworks in the United States at federal, State, and local levels. In addition, the Company is subject to the direct supervision of various government authorities charged with overseeing the kinds of financial activities conducted by its business segments.

This section summarizes certain provisions of the principal laws and regulations that apply to the Company. The descriptions, however, are not complete and are qualified in their entirety by the full text and judicial or administrative interpretations of those laws and regulations and other laws and regulations that affect the Company.

Overview

The Company is a bank holding company under the BHCA and a financial holding company under the GLBA. As a result, the Company—including all of its businesses and operations—is subject to the regulation, supervision, and examination of the FRB and to restrictions on permissible activities. This framework of regulation, supervision, and examination is intended primarily for the protection and benefit of depositors and other customers of the Bank, the Deposit Insurance Fund (the DIF) of the Federal Deposit Insurance Corporation (the FDIC), the banking and financial systems as a whole, and the broader economy, not for the protection or benefit of the Company's shareholders or its non-deposit creditors.

Many of the Company's subsidiaries are also subject to separate or related forms of regulation, supervision, and examination, including: (1) the Bank, by the Office of the Comptroller of the Currency (the OCC) under the National Banking Acts, the FDIC under the Federal Deposit Insurance Act (the FDIA), and the Consumer Financial Protection

Bureau (the CFPB) under the Dodd-Frank Wall Street Reform and Consumer Protection Act (the Dodd-Frank Act); (2) UMBFS, UMB Distribution Services, LLC, and UMB Financial Services, Inc., by the Securities and Exchange Commission (the SEC) and State regulatory authorities under federal and State securities laws, and UMB

Distribution Services, LLC and UMB Financial Services, Inc., by the Financial Industry Regulatory Authority (FINRA); and (3) UMB Insurance, Inc., by State regulatory authorities under applicable State insurance laws. These regulatory schemes, like those overseen by the FRB, are designed to protect public or private interests that often are not aligned with those of the Company's shareholders or non-deposit creditors.

The FRB possesses extensive authorities and powers to regulate the conduct of the Company's businesses and operations. If the FRB were to take the position that the Company or any of its subsidiaries have violated any law or commitment or engaged in any unsafe or unsound practice, formal or informal corrective or enforcement actions could be taken by the FRB against the Company, its subsidiaries, and institution-affiliated parties (such as directors, officers, and agents). These enforcement actions could include an imposition of civil monetary penalties and could directly affect not only the Company, its subsidiaries, and institution-affiliated parties but also the Company's counterparties, shareholders, and creditors and its commitments, arrangements, or other dealings with them. The OCC has similarly expansive authorities and powers over the Bank and its subsidiaries, as does the CFPB over matters involving consumer financial laws. The SEC, FINRA, and other domestic or foreign government authorities also have an array of means at their disposal to regulate and enforce matters within their jurisdiction that could impact the Company's businesses and operations.

Restrictions on Permissible Activities and Corporate Matters

Under the BHCA, bank holding companies and their subsidiaries are generally limited to the business of banking and to closely related activities that are incidental to banking.

As a bank holding company that has elected to become a financial holding company under the GLBA, the Company is also able—directly or indirectly through its subsidiaries—to engage in activities that are financial in nature, that are incidental to a financial activity, or that are complementary to a financial activity and do not pose a

substantial risk to the safety or soundness of depository institutions or the financial system generally. Activities that are financial in nature include: (1) underwriting, dealing in, or making a market in securities, (2) providing financial, investment, or economic advisory services, (3) underwriting insurance, and (4) merchant banking.

The Company's ability to directly or indirectly engage in these banking and financial activities, however, is subject to conditions and other limits imposed by law or the FRB and, in some cases, requires the approval of the FRB or other government authorities. These conditions or other limits may arise due to the particular type of activity or, in other cases, may apply to the Company's business more generally. Examples of the former are the substantial restrictions on the timing, amount, form, substance, interconnectedness, and management of the Company's merchant banking investments. An example of the latter is a condition that, in order for the Company to engage in broader financial activities, its depository institutions must remain "well capitalized" and "well managed" under applicable banking laws and must receive at least a "satisfactory" rating under the Community Reinvestment Act (CRA).

Under amendments to the BHCA promulgated by the Riegle-Neal Interstate Banking and Branching Efficiency Act of 1994 and the Dodd-Frank Act, the Company may acquire banks outside of its home State of Missouri, subject to specified limits and may establish new branches in other States to the same extent as banks chartered in those States. Under the BHCA, however, the Company must procure the prior approval of the FRB and possibly other government authorities to directly or indirectly acquire ownership or control of five percent or more of any class of voting securities of, or substantially all of the assets of, an unaffiliated bank, savings association, or bank holding company. In deciding whether to approve any acquisition or branch, the FRB, the OCC, and other government authorities will consider public or private interests that may not be aligned with those of the Company's shareholders or non-deposit creditors. The FRB also has the power to require the Company to divest any depository institution that cannot maintain its "well capitalized" or "well managed" status.

The FRB maintains a targeted policy that requires a bank holding company to inform and consult with the staff of the FRB sufficiently in advance of (1) declaring and paying a dividend that could raise safety and soundness concerns (for example, a dividend that exceeds earnings in the period for which the dividend is being paid), (2) redeeming or repurchasing regulatory capital instruments when the holding company is experiencing financial weaknesses, or (3) redeeming or repurchasing common stock or perpetual preferred stock that would result in a net reduction as of the end of the quarter in the amount of those equity instruments outstanding compared with the beginning of the quarter in which the redemption or repurchase occurred.

Requirements Affecting the Relationships among the Company, Its Subsidiaries, and Other Affiliates

The Company is a legal entity separate and distinct from the Bank, UMBFS, and its other subsidiaries but receives the vast majority of its revenue in the form of dividends from those subsidiaries. Without the approval of the OCC, however, dividends payable by the Bank in any calendar year may not exceed the lesser of (1) the current year's net income combined with the retained net income of the two preceding years and (2) undivided profits. In addition, under the Basel III capital-adequacy standards described below under the heading "Capital-Adequacy Standards," the Bank is currently required to maintain a capital conservation buffer in excess of its minimum risk-based capital ratios and will be restricted in declaring and paying dividends whenever the buffer is breached. The authorities and powers of the FRB, the OCC, and other government authorities to prevent any unsafe or unsound practice also could be employed to further limit the dividends that the Bank or the Company's other subsidiaries may declare and pay to the Company.

The Dodd-Frank Act requires a bank holding company like the Company to serve as a source of financial strength for its depository-institution subsidiaries and to commit resources to support those subsidiaries in circumstances when the Company might not otherwise elect to do so. The functional regulator of any nonbank subsidiary of the Company, however, may prevent that subsidiary from directly or indirectly contributing its financial support, and if that were to preclude the Company from serving as an adequate source of financial strength, the FRB may instead require the divestiture of depository-institution subsidiaries and impose operating restrictions pending such a divestiture.

A number of laws, principally Sections 23A and 23B of the Federal Reserve Act (the FRA), and the FRB's Regulation W, also exist to prevent the Company and its nonbank subsidiaries from taking improper advantage of the benefits afforded to the Bank as a depository institution, including its access to federal deposit insurance and the discount window. These laws generally require the Bank and its subsidiaries to deal with the Company and its nonbank subsidiaries only on market terms and, in addition, impose restrictions on the Bank and its subsidiaries in

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directly or indirectly extending credit to or engaging in other covered transactions with the Company or its nonbank subsidiaries. The Dodd-Frank Act extended the restrictions to derivatives and securities lending transactions and expanded the restrictions for transactions involving hedge funds or private-equity funds that are owned or sponsored by the Company or its nonbank subsidiaries.

In addition, under the Volcker Rule, the Company is subject to extensive limits on proprietary trading and on owning or sponsoring hedge funds and private-equity funds. The limits on proprietary trading are largely directed toward purchases or sales of financial instruments by a banking entity as principal primarily for the purpose of short-term resale, a benefit from actual or expected short-term price movements, or the realization of short-term arbitrage profits. The limits on owning or sponsoring hedge funds and private-equity funds are designed to ensure that banking entities generally maintain only small positions in managed or advised funds and are not exposed to significant losses arising directly or indirectly from them. The Volcker Rule also provides for increased capital charges, quantitative limits, rigorous compliance programs, and other restrictions on permitted proprietary trading and fund activities, including a prohibition on transactions with a covered fund that would constitute a covered transaction under Sections 23A and 23B of the FRA.

Stress Testing and Enhanced Prudential Standards

The Economic Growth, Regulatory Relief, and Consumer Protection Act (EGRRCPA) was enacted in May 2018, amending requirements previously established in the Dodd-Frank Act, including stress testing and enhanced prudential standards. Bank holding companies with assets of less than $100 billion, including the Company, are no longer subject to the requirement to conduct forward-looking, company-run stress testing, including publishing a summary of results. The Company continues to run internal stress tests as a component of its comprehensive risk management and capital planning process. In addition, the EGRRCPA increased the statutory asset threshold above which the Federal Reserve is required to apply enhanced prudential standards from $50 billion to $250 billion (subject to certain discretion by the Federal Reserve to apply any enhanced prudential standard requirement to any bank holding company with between $100 billion and $250 billion in total consolidated assets that would otherwise be exempt under EGRRCPA). The Company remains exempt from applying the enhanced prudential standards.

Capital-Adequacy Standards

The FRB and the OCC have adopted risk-based capital and leverage guidelines that require the capital-to-assets ratios of bank holding companies and national banks, respectively, to meet specified minimum standards.

The risk-based capital ratios are based on a banking organization's risk-weighted asset amounts (RWAs), which are generally determined under the standardized approach applicable to the Company and the Bank by (1) assigning on-balance-sheet exposures to broad risk-weight categories according to the counterparty or, if relevant, the guarantor or collateral (with higher risk weights assigned to categories of exposures perceived as representing greater risk) and (2) multiplying off-balance-sheet exposures by specified credit conversion factors to calculate credit equivalent amounts and assigning those credit equivalent amounts to the relevant risk-weight categories. The leverage ratio, in contrast, is based on an institution's average on-balance-sheet exposures alone.

The capital ratios for the Company and the Bank as of December 31, 2022 December 31, 2023, are set forth below:

	Tier 1 Leverage Ratio	Tier 1 Risk-Based Capital Ratio	Common Equity Tier 1 Capital Ratio	Total Risk-Based Capital Ratio	Tier 1 Leverage Ratio	Tier 1 Risk-Based Capital Ratio	Common Equity Tier 1 Capital Ratio	Total Risk-Based Capital Ratio
UMB Financial Corporation	8.43	10.62	10.62	12.50	8.49	10.94	10.94	12.85
UMB Bank, n.a.	8.46	10.88	10.88	11.47	8.52	11.21	11.21	11.90

These capital-to-assets ratios also play a central role in prompt corrective action (PCA), which is an enforcement framework used by the federal banking agencies to constrain the activities of banking organizations based on their levels of regulatory capital. Five categories have been established using thresholds for the total risk-based capital ratio, the tier 1 risk-based capital ratio, the common-equity tier 1 risk-based capital ratio, and the leverage ratio: (1) well capitalized, (2) adequately capitalized, (3) undercapitalized, (4) significantly undercapitalized, and (5) critically undercapitalized. While bank holding companies are not subject to the PCA framework, the FRB is empowered to compel a holding company to take measures—such as the execution of financial or performance guarantees—when prompt corrective action is required in connection with one of its depository-institution subsidiaries. At December 31, 2022 December 31, 2023, the Bank was categorized as well capitalized under the PCA framework.

Basel III, including revisions to the global Basel III capital framework (commonly known as Basel IV), includes a number of more rigorous provisions applicable only to banking organizations that are larger or more internationally active than the Company and the Bank. These include, for example, a supplementary leverage ratio incorporating off-balance-sheet exposures, a liquidity coverage ratio, and a net stable funding ratio. These standards may be informally applied or considered by the FRB and the OCC in their regulation, supervision, and examination of the Company and the Bank.

Deposit Insurance and Related Matters

The deposits of the Bank are insured by the FDIC in the standard insurance amount of $250 thousand per depositor for each account ownership category. This insurance is funded through assessments on the Bank and other insured depository institutions. Under the Dodd-Frank Act, each institution's assessment base is determined based on its average consolidated total assets less average tangible equity, and there is a scorecard method for calculating assessments that combines CAMELS (an acronym that refers to the five components of a bank's condition that are addressed: capital adequacy, asset quality, management, earnings, and liquidity) ratings and specified forward-looking financial measures to determine each institution's risk to the DIF. The Dodd-Frank Act also requires the FDIC, in setting assessments, to offset the effect of increasing its reserve for the DIF on institutions with consolidated assets of less than $10 billion. The result of this revised approach to deposit-insurance assessments is generally an increase in costs, on an absolute or relative basis, for institutions with consolidated assets of $10 billion or more.

If an insured depository institution such as the Bank were to become insolvent or if other specified events were to occur relating to its financial condition or the propriety of its actions, the FDIC may be appointed as conservator or receiver for the institution. In that capacity, the FDIC would have the power to (1) transfer assets and liabilities of the institution to another person or entity without the approval of the institution's creditors, (2) require that its claims process be followed and to enforce statutory or other limits on damages claimed by the institution's creditors, (3) enforce the institution's contracts or leases according to their terms, (4) repudiate or disaffirm the institution's contracts or leases, (5) seek to reclaim, recover, or recharacterize transfers of the institution's assets or to exercise control over assets in which the institution may claim an interest, (6) enforce statutory or other injunctions, and (7) exercise a wide range of other rights, powers, and authorities, including those that could impair the rights and interests of all or some of the institution's creditors. In addition, the administrative expenses of the conservator or receiver could be afforded priority over all or some of the claims of the institution's creditors, and

under the FDIA, the claims of depositors (including the FDIC as subrogee of depositors) would enjoy priority over the claims of the institution's unsecured creditors.

The FDIA also provides that an insured depository institution can be held liable for any loss incurred or expected to be incurred by the FDIC in connection with another commonly controlled insured depository institution that is in default or in danger of default. This cross-guarantee liability is generally superior in right of payment to claims of the institution's holding company and its affiliates.

Other Regulatory and Supervisory Matters

As a public company, the Company is subject to the Securities Act of 1933, as amended (the Securities Act), the Securities Exchange Act of 1934, as amended (the Exchange Act), the Sarbanes-Oxley Act of 2002, and other federal and State securities laws. In addition, because the Company's common stock is listed with The NASDAQ Stock Market LLC (NASDAQ), the Company is subject to the listing rules of that exchange.

The Currency and Foreign Transactions Reporting Act of 1970 (commonly known as the Bank Secrecy Act), the USA PATRIOT Act of 2001, and related laws require all financial institutions, including banks and broker-dealers, to establish a risk-based system of internal controls reasonably designed to prevent money laundering and the financing of terrorism. These laws include a variety of recordkeeping and reporting requirements (such as currency and suspicious activity reporting) as well as know-your-customer and due-diligence rules.

Under the CRA, the Bank has a continuing and affirmative obligation to help meet the credit needs of its local communities—including low- and moderate-income neighborhoods—consistent with safe and sound banking practices. The CRA does not create specific lending programs but does establish the framework and criteria by which the OCC regularly assesses the Bank's record in meeting these credit needs. The Bank's ratings under the CRA are taken into account by the FRB and the OCC when considering merger or other specified applications that the Company or the Bank may submit from time to time.

The Bank is subject as well to a vast array of consumer-protection laws, such as qualified-mortgage and other mortgage-related rules under the jurisdiction of the CFPB. Lending limits, restrictions on tying arrangements, limits on permissible interest-rate charges, and other laws governing the conduct of banking or fiduciary activities are also applicable to the Bank. In addition, the GLBA imposes on the Company and its subsidiaries a number of obligations relating to financial privacy.

Executive Officers of the Registrant. The following are the executive officers of the Company, each of whom is appointed annually, and there are no arrangements or understandings between any of the executive officers and any other person pursuant to which such person was elected as an executive officer.

Name	**Age**	**Position with Registrant**
R. Brian Beaird	4950	Mr. Beaird has served as Executive Vice President, Chief Human Resources Officer since October 2019. Prior to this time, he served as Senior Vice President/Director of Associate Experience and Rewards, Director Compensation and Systems, Manager Bank Strategy and Administration, and Manager Commercial Strategy and Administration. Mr. Beaird held these positions from July 2018 until October 2019, August 2017 until July 2018, September 2015 until August 2017, and December 2011 until September 2015, respectively.
James CorneliusAmy Harris	6138	Mr. Cornelius has served as the President of Institutional Banking for the Bank since June 2015. Prior to this time, he served as the President of Institutional Banking and Investor services from June 2012 until June 2015.
Amy Harris	37	Ms. Harris has served as Executive Vice President and Chief Legal Officer since January 2021. Ms. Harris served the Company as Senior Vice President, Deputy General Counsel and Manager of Legal Operations from January 2020 to January 2021. She also served as Corporate Legal Counsel for the Company from October 2014 to January 2020. Prior to joining the Company, Ms. Harris worked in private practice focusing on commercial, corporate and employment cases cases..
Shannon A. Johnson	4344	Ms. Johnson has served as Executive Vice President and Chief Administrative Officer since October 2019. Ms. Johnson's previous positions with the Company include Executive Vice President, Chief Human Resources Officer; Senior Vice President, Executive Director of Talent Management and Development; and Senior Vice President, Director of Talent Management. Ms. Johnson held these positions from April 2015 to October 2019, May 2011 to April 2015, and December 2009 to May 2011, respectively.
Dominic Karaba	52	Mr. Karaba has served as President Commercial Banking since September 2021. Mr. Karaba has also served as President Specialty Banking from April 2018 to September 2021 and Executive Vice President – Business Banking Director from August 2013 to April 2018. Overall, Mr. Karaba has over 15 years of experience in the banking industry.
J. Mariner Kemper	5051	Mr. Kemper has served as the President of the Company since November 2015 and as the Chairman and Chief Executive Officer of the Company since May 2004. From November 2015 until January 2024, he served as President of the Company. He served as the Chairman and Chief Executive Officer of the Bank between December 2012 and January 2014, and as the Chairman of UMB Bank Colorado, n.a. (a prior subsidiary of the Company) between 2000 and 2012. He was President of UMB Bank Colorado from 1997 to 2000. Mr. Kemper is the brother of Mr. Alexander C. Kemper, who currently serves served on the Company's Company's Board of Directors. Directors during 2023 until his resignation in August, 2023.
Stacy King	4748	Ms. King has served as Executive Vice President, Chief Risk Officer of the Company since March 2020. From May 2019 until March 2020, she served as Senior Director, Operations Management – Benefit Accounts for Willis Towers Watson. Prior to that time, she served as Senior Vice President, Director Healthcare Operations & Compliance; Senior Vice President/Vice President, Director Healthcare Services Risk & Compliance for the Bank; Vice President, Compliance Manager – Bank Operations & Healthcare Services; and Compliance Analyst-Corporate Risk for the Company. Ms. King held these positions from September 2018 until May 2019, October 2015 until September 2018, August 2014 until October 2015, and September 2013 until August 2014, respectively.

Nikki NewtonPhil Mason	5141	Mr. Mason has served as President of Institutional Banking for the Bank since April 2023. He served as Director of Healthcare Services and Chief Operating Officer Institutional Banking for the Bank from November 2019 until March 2023 and as Chief Operating Officer Institutional Banking for the Bank from June 2015 to October 2019. Prior to this time, Mr. Mason served as Director of Relationship Management and Support Institutional Asset Management for the Bank beginning in April 2013. Mr. Mason first joined the Company in June of 2005, working in the corporate finance department in a variety of roles.

Nikki Newton	52	Mr. Newton has served as the President of Private Wealth Management of the Bank since May 2019. From January 1998 until May 2018, Mr. Newton served in various capacities with Waddell & Reed Financial, Inc. or its subsidiary, Ivy Distributors, Inc, including most recently, serving as President of Ivy Distributors, Inc. and Ivy Global from August 2017 to May 2018, and Head of Global Distribution and President of Ivy Global from January 2014 to August 2017.
David C. Odgers	5354	Mr. Odgers has served as Senior Vice President, Chief Accounting Officer of the Company since January 2020, and as the Company's Controller since January 2014. Mr. Odgers was previously the Company's Assistant Controller from January 2005 to January 2014.
John C. Pauls	59	Mr. Pauls has served as Executive Vice President, General Counsel and Corporate Secretary of the Company and the Bank since June 2016. Mr. Pauls served as interim General Counsel from April 2016 until his full appointment in June of 2016. He has been with UMB for over 25 years, having served as a top legal advisor for the Company and the Bank for over 20 years.
James D. Rine	5253	Mr. Rine has served as President of the Company since January 2024, and Vice Chairman of the Company since November 2020 and 2020. He has additionally served as President and Chief Executive Officer of the Bank since October 2018. He served as President of Commercial Banking from December 2017 until October 2018 and as President of Commercial Banking/Western Region from October 2016 to December 2017. Prior to this time, Mr. Rine served as the President of the Kansas City Region since October 2011. Overall, Mr. Rine has over 20 years of commercial banking experience with the Bank.
Ram Shankar	5051	Mr. Shankar was named as Executive Vice President and Chief Financial Officer of the Company effective August 2016. From September 2011 until his employment with the Company commenced, he worked at First Niagara Financial Group, most recently serving as managing director where he headed financial planning and analysis and investor relations. Prior to that, Mr. Shankar spent time at FBR Capital Markets as a senior research analyst and at M&T Bank Corporation in the financial planning measurement and corporate finance/mergers & acquisitions group.
Thomas S. Terry	5960	Mr. Terry has served as Executive Vice President and Chief Credit Officer since October 2019. From January 2011 until October 2019, Mr. Terry served as Executive Vice President and Chief Lending Officer of the Company, and prior to this time, Mr. Terry served as Executive Vice President. Mr. Terry first joined UMB in 1986, and subsequently joined the Commercial Lending department in 1987 where he worked as a loan officer until 2011.
Abigail Wendel	4950	Ms. Wendel was named President of Consumer Banking of the Bank in September 2018. She has also served as Chief Strategy Officer for the Company from June 2015 until September 2018, and as the Director of Investor and Government Relations for the Company from February 2013 through June 2015.
Uma Wilson	4445	Ms. Wilson was named Executive Vice President, Chief Information and Product Officer in September 2021. Previously she served as Executive Vice President, Director of Bank Product, Treasury Management/Card Sales and Implementation and Executive Vice President, Director of Bank Product Group. Ms. Wilson held these positions from January 2020 to September 2021 and May 2015 to January 2020, respectively.

The Company makes available free of charge on its website at www.umb.com/investor, its annual report on Form 10-K, quarterly reports on Form 10-Q, proxy statements, current reports on Form 8-K and amendments to such reports, as soon as reasonably practicable after it electronically files or furnishes such material with or to the SEC. Information on the Company's website is not incorporated by reference into this report and should not be considered part of this document. These reports can also be found on the SEC website at www.sec.gov.

ITEM 1A. *RISK FACTORS*

Financial-services companies routinely encounter and address risks and uncertainties. In the following paragraphs, the Company describes some of the principal risks and uncertainties that could adversely affect its business, results of operations, financial condition (including capital and liquidity), or prospects or the value of or return on an investment in the Company. These risks and uncertainties, however, are not the only ones faced by the

Company. Other risks and uncertainties that are not presently known to the Company that it has failed to identify, or that it currently considers immaterial may adversely affect the Company as well. Except where otherwise noted, the risk factors address risks and uncertainties that may affect the Company as well as its subsidiaries. These risk factors should be read in conjunction with Management's Discussion and Analysis of Financial Condition and Results of Operations (which can be found in Part II, Item 7 of this report) and the Notes to the Consolidated Financial Statements (which can be found in Part II, Item 8 of this report).

The COVID-19 pandemic is affecting the Company and its customers, counterparties, employees, and third-party service providers, and the continued impacts on its business, financial position, results of operations, and prospects could potentially be significant. The spread of COVID-19 over the past two years has created a global public-health crisis that has resulted in widespread volatility and deteriorations in household, business, economic, and market conditions. The extent of the impact of the ongoing COVID-19 pandemic on the Company's capital, liquidity, and other financial positions and on its business, results of operations, and prospects will depend on a number of evolving factors, including:

- *The duration, extent, and severity of the COVID-19 pandemic*. COVID-19 continues to affect households and businesses. The duration and severity of the COVID-19 pandemic continue to be impossible to accurately predict.
- *The response of governmental and nongovernmental authorities*. The actions of many governmental and nongovernmental authorities have been directed toward curtailing household and business activity to contain COVID-19 while simultaneously deploying fiscal- and monetary-policy measures to partially mitigate the adverse effects on individual households and businesses.
- *The effect on the Company's customers, counterparties, employees, and third-party service providers*. COVID-19 and its associated consequences and uncertainties may affect individuals, households, and businesses differently and unevenly.
- *The effect on economies and markets*. Whether the actions of governmental and nongovernmental authorities will be successful in mitigating the adverse effects of COVID-19 is unclear. National, regional, and local economies and markets have experienced volatility and could suffer further disruptions that are lasting. An economic slowdown could adversely affect the Company's origination of new loans and the performance of its existing loans. In addition, governmental actions are meaningfully influencing the interest-rate environment, which could adversely affect the Company's results of operations and financial condition.

The COVID-19 pandemic could cause the Company to experience higher credit losses in its lending portfolio, impairment of its goodwill and other financial assets, reduced demand for its products and services, and other negative impacts on its financial position, results of operations, and prospects. Sustained adverse effects of the COVID-19 pandemic may also prevent the Company from satisfying its minimum regulatory capital ratios and other supervisory requirements, failing to be able to sustain the paying of dividends to its shareholders, or result in downgrades in its credit ratings.

Because of the current expected credit loss (CECL) accounting standard, the Company's financial results may be negatively affected as soon as weak or deteriorating economic conditions are forecasted and alter its expectations for credit losses. In addition, due to the expansion of the time horizon over which it is required to estimate future credit losses under CECL, the Company may experience increased volatility in its future provisions for credit losses.

The levels of, or changes in, interest rates could affect the Company's business or performance. The Company's business, results of operations, and financial condition are highly dependent on net interest income, which is the difference between interest income on earning assets (such as loans and investments) and interest expense on deposits and borrowings. Net interest income is significantly affected by market interest rates, which in turn are influenced by monetary and fiscal policies, general economic conditions, the regulatory environment, competitive pressures, and expectations about future changes in interest rates. The policies and regulations of the federal government, in general, and the FRB, in particular, have a substantial impact on market interest rates. See "Government Monetary and Fiscal Policies" in Part I, Item 1 of this report, which is incorporated by reference herein. Additionally, the Company has a significant number of loans, derivative contracts, borrowings and other financial instruments with attributes that are either directly or indirectly dependent on the London Interbank Offered Rate (LIBOR). In 2017, the U.K. Financial Conduct Authority announced that LIBOR is to be transitioned to alternative rates. U.S. regulatory authorities voiced similar support for phasing out LIBOR. The transition from LIBOR could create considerable costs and additional risk. Certain LIBOR rates will continue to be published until June 30, 2023 for existing LIBOR-indexed financial instruments, however no new LIBOR-indexed financial instruments can be originated after December 31, 2021. The Alternative Reference Rates Committee (ARRC) has proposed that the Secured Overnight Financing Rate (SOFR) published by the Federal Reserve Bank of New York represents the best alternative to LIBOR for use in derivatives and other financial contracts that are currently indexed to LIBOR. The Company discontinued entering into new LIBOR-indexed financial instruments effective December 31, 2021. The majority of existing LIBOR-indexed contracts will revert to SOFR. The remainder will be individually negotiated to a mutual preferred replacement index. Since proposed alternative rates are calculated differently, payments under contracts referencing new rates will differ from those referencing LIBOR. Although the Company is currently unable to assess what the ultimate impact of the transition from LIBOR will be, failure to adequately manage the transition could have a material adverse effect on its business, financial condition and results of operations.

The impact of interest rate changes on the Company's funding costs may differ from some peers given the Company's concentration of funding from commercial and institutional sources. These deposits, which often include the benefit of other ancillary revenues, are generally more price-sensitive than consumer funding sources. In a rising rate environment, the Company may experience a sharper decline in low-cost funding sources or an increase in cost of deposits due to its customer profile. However, the expectation of higher earning asset growth and the benefit of higher interest rates on our earning assets may help mitigate any impact.

The Company may be adversely affected by policies, regulations, or events that have the effect of altering the difference between long-term and short-term interest rates (commonly known as the yield curve), depressing the interest rates associated with its earning assets to levels near the rates associated with its interest expense, or changing the spreads among different interest-rate indices. In addition, a rapid change in interest rates could result in interest expense increasing faster than interest income because of differences in the maturities of the Company's assets and liabilities. Further, if laws impacting taxation and interest rates materially change, or if new laws are enacted, certain of the Company's services and products, including municipal bonds, may be subject to less favorable tax treatment or otherwise adversely impacted. The level of and changes in market interest rates—and, as a result, these risks and uncertainties—are beyond the Company's control. The dynamics among these risks and uncertainties are also challenging to assess and manage. For example, while the highly accommodative monetary policy currently adopted by the FRB may benefit the Company to some degree by spurring economic activity among

its customers, such a policy may ultimately cause the Company more harm by inhibiting its ability to grow or sustain net interest income.

The Company's customers and counterparties also may be negatively impacted by the levels of, or changes in, interest rates, which could increase the risk of delinquency or default on obligations to the Company. The levels of, or changes in, interest rates, moreover, may have an adverse effect on the value of the Company's investment portfolio, which includes long-term municipal bonds with fixed interest rates, and other financial instruments, the return on or demand for loans, the prepayment speed of loans (including, without limitation, the pace of pay-downs expected or forecasted for commercial real estate and construction loans), the cost or availability of deposits or other funding sources, or the purchase or sale of investment securities.

See "Quantitative and Qualitative Disclosures About Market Risk—Interest Rate Risk" in Part II, Item 7A of this report for a discussion of how the Company monitors and manages interest-rate risk.

Weak or deteriorating economic conditions, geopolitical events, more liberal origination or underwriting standards, or financial or systemic shocks could increase the Company's credit risk and adversely affect its lending or other banking businesses and the value of its loans or investment securities. The Company's business and results of operations depend significantly on general economic conditions. When those conditions are weak or deteriorating in any of the markets or regions where the Company operates, or there are impacts stemming from geopolitical events, its business or performance could be adversely affected. The Company's lending and other banking businesses, in particular, are susceptible to weak or deteriorating economic conditions, which could result in reduced loan demand or utilization rates and at the same time increased delinquencies or defaults. These kinds of conditions also could dampen the demand for products and other services in the Company's investment-management, asset-servicing, insurance, brokerage, or related businesses. Financial markets and global supply chains may be adversely affected by the impact of military conflict, including the current conflicts in Ukraine and Israel, terrorism or other geopolitical events. Increased delinquencies or defaults could result as well from the Company adopting—for strategic, competitive, or other reasons—more liberal origination or underwriting standards for extensions of credit or other dealings with its customers or counterparties. If delinquencies or defaults on the Company's loans or investment securities increase, their value and the income derived from them could be adversely affected, and the Company could incur administrative and other costs in seeking a recovery on its claims and any collateral. Weak or deteriorating economic conditions also may negatively impact the market value and liquidity of the Company's investment securities, and the Company may be required to record additional impairment charges if investment securities suffer a decline in value that is determined to have resulted from a credit loss. In addition, to to the extent that loan charge-offs exceed estimates, an increase to the amount of provision expense related to the allowance for credit losses would reduce the Company's income. See "Quantitative and Qualitative Disclosures About Market Risk—Credit Risk Management" in Part II, Item 7A of this report for a discussion of how the Company monitors and manages credit risk. A financial or systemic shock and a failure of a significant counterparty or a significant group of counterparties could negatively impact the Company, possibly to a severe degree, due to its role as a financial intermediary and the interconnectedness of the financial system.

A meaningful part of the Company's loan portfolio is secured by real estate and, as a result, could be negatively impacted by deteriorating or volatile real-estate real estate markets, the economic environment or associated environmental liabilities. At December 31, 2022 December 31, 2023, 49.2% 51.2% of the Company's aggregate loan portfolio—comprised of commercial real-estate real estate loans (representing 36.2% 38.4% of the aggregate loan portfolio) and consumer real-estate real estate loans (representing 13.0% 12.8% of the aggregate loan portfolio)—was primarily secured by interests in real estate located in the States where the Company operates. Other credit extended by the Company may be secured in part by real estate as well. Real-estate Real estate values in the markets where this collateral is located may be different from, and in some instances worse than, real-estate real estate values in other markets or in the United States as a whole and may be affected by general economic conditions and a variety of other factors outside of the control of the Company or its customers. Any deterioration or volatility in these real-estate real estate markets could result in increased delinquencies or defaults, could adversely affect the value of the loans and the income to be derived from them, could give rise to unreimbursed recovery costs, and could reduce the demand for new or additional credit and related banking products and other services, all to the detriment of the Company's business and performance. In recent years, commercial real estate markets have been particularly impacted by the economic and other disruptions resulting from the COVID-19 pandemic. Repayment of commercial real estate, which typically involves higher loan principal amounts as compared to consumer real estate lending, is often dependent on the successful operation of the business conducted on the property securing the loans. Negative shifts in economic conditions can impact the borrower's ability to pay. Failures in the Company's risk management policies, procedures and controls could adversely affect its ability to manage this portfolio going forward and could result in an increased rate of delinquencies in, and increased losses from, this portfolio, which could negatively impact the Company's operating and financial performance. In addition, if hazardous or toxic substances were found on any real estate that the Company acquires in foreclosure or otherwise, the Company may incur substantial liability for compliance and remediation costs, personal injury, or property damage.

Challenging business, economic, or market conditions could adversely affect the Company's fee-based banking, investment-management, asset-servicing, or other businesses. The Company's fee-based banking, investment-management, asset-servicing, and other businesses are driven by wealth creation in the economy, robust market activity, monetary and fiscal stability, and positive investor, business, and consumer sentiment. Economic downturns, market disruptions, high unemployment or underemployment, unsustainable debt levels, depressed real-

real estate markets, industry consolidations, or other challenging business, economic, or market conditions could adversely affect these businesses and their results. If the funds or other groups that are clients of UMBFS were to encounter similar difficulties, UMBFS's revenue could suffer. The Company's bank-card revenue is driven

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primarily by transaction volumes in business, healthcare, and consumer spending that generate interchange fees, and any of these conditions could dampen those volumes. Other fee-based banking businesses that could be adversely affected include trading, asset management, custody, trust, and cash and treasury management.

The Company's investment-management and asset-servicing businesses could be negatively impacted by declines in assets under management or administration or by shifts in the mix of assets under management or administration. **The revenues of the Company's investment-management businesses are highly dependent on advisory fee income. These businesses generally earn higher fees on equity-based or alternative investments and strategies and lower fees on fixed income investments and strategies. Advisory-fee income may be negatively impacted by an absolute decline in assets under management or by a shift in the mix of assets under management from equities or alternatives to fixed income. Such a decline or shift could be caused or influenced by any number of factors, such as underperformance in absolute or relative terms, loss of key advisers or other talent, changes in investing preferences or trends, market downturns or volatility, drops in investor confidence, reputational damage, increased competition, or general economic conditions. Any of these factors also could affect clients of UMBFS, and if this were to cause a decline in assets under administration at UMBFS or an adverse shift in the mix of those assets, the performance of UMBFS could suffer.**

To the extent that the Company continues to maintain a sizeable portfolio of available-for-sale investment securities, its income may be adversely affected and its reported equity more volatile. As of December 31, 2022, the Company's securities portfolio totaled approximately $13.2 billion, which represented approximately 34.4% of its total assets. Regulatory restrictions and the Company's investment policies generally result in the acquisition of securities with lower yields than loans. For the year-ended December 31, 2022, the weighted average yield of the Company's securities portfolio was 2.33% as compared to 4.30% for its loan portfolio. Accordingly, to the extent that the Company is unable to effectively deploy its funds to originate or acquire loans or other assets with higher yields than those of its investment securities, the Company's income may be negatively impacted. Additionally, approximately $7.0 billion, or 52.9%, of the Company's investment securities are classified as available for sale and reported at fair value. Unrealized gains or losses on these securities are excluded from earnings and reported in other comprehensive income, which in turn affects the Company's reported equity. As a result, to the extent that the Company continues to maintain a significant portfolio of available-for-sale securities, its reported equity may experience greater volatility.

Cyber incidents and other security breaches at the Company, at the Company's service providers or counterparties, or in the business community or markets may negatively impact the Company's business or performance. In the ordinary course of its business, the Company collects, stores, and transmits sensitive, confidential, or proprietary data and other information, including intellectual property, business information, funds-transfer instructions, and the personally identifiable information of its customers and employees. The secure processing, storage, maintenance, and transmission of this information is critical to the Company's operations and reputation, and if any of this information were mishandled, misused, improperly accessed, lost, held hostage or stolen or if the Company's operations were disrupted, the Company could suffer significant financial, business, reputational, regulatory, or other damage. For example, despite security measures, the Company's information technology and infrastructure may be breached or rendered inaccessible through cyber-attacks, ransomware and other computer viruses or malware, pretext calls, electronic phishing, or other means. These risks and uncertainties are rapidly evolving and increasing in complexity, and the Company's failure to effectively mitigate them could negatively impact its business and operations.

Risks and exposures related to cybersecurity attacks have increased as a result of the COVID-19 pandemic and the related increased reliance on remote working, and are expected to remain high for the foreseeable future due to the rapidly evolving nature and sophistication of these threats and the expanding use of technology-based products and services by the Company and its customers. The Company can provide no assurances that the safeguards it has in place or may implement in the future will prevent all unauthorized infiltrations or breaches and that the Company will not suffer losses related to a security breach in the future, which losses may be material.

Service providers and counterparties also present a source of risk to the Company if their own security measures or other systems or infrastructure were to be breached, rendered inaccessible or otherwise fail. Likewise, a cyber-attack or other security breach affecting the business community, the markets, or parts of them may cycle or

cascade through the financial system and adversely affect the Company or its service providers or counterparties. Many of these risks and uncertainties are beyond the Company's control.

Even when an attempted cyber incident or other security breach is successfully avoided or thwarted, the Company may need to expend substantial resources in doing so, may be required to take actions that could adversely affect customer satisfaction or behavior, and may be exposed to reputational damage. If a breach were to occur, moreover, the Company could be exposed to contractual claims, regulatory actions, and litigation by private plaintiffs, and would additionally suffer reputational harm. Despite the Company's efforts to safeguard the integrity of systems and controls and to manage third-party risk, the Company may not be able to anticipate or implement effective measures to prevent all security breaches or all risks to the sensitive, confidential, or proprietary information that it or its service providers or counterparties collect, store, or transmit.

The trading volume in the Company's common stock at times may be low, which could adversely affect liquidity and stock price. Although the Company's common stock is listed for trading on the NASDAQ Global Select Market, the trading volume in the stock may at times be low and, in relative terms, less than that of other financial-services companies. A public trading market that is deep, liquid, and orderly depends on the presence in the marketplace of a large number of willing buyers and sellers and narrow bid-ask spreads. These market features, in turn, depend on a number of factors, such as the individual decisions of investors and general economic and market conditions, over which the Company has no control. During any period of lower trading volume in the Company's common stock, the stock price could be more volatile, and the liquidity of the stock could suffer.

The Company operates in a highly regulated industry, and its business or performance could be adversely affected by the legal, regulatory and supervisory frameworks applicable to it, changes in those frameworks, and other legal and regulatory risks and uncertainties. The Company is subject to expansive legal and regulatory frameworks in the United States—at the federal, State, and local levels—and in the foreign jurisdictions where its business segments operate. In addition, the Company is subject to the direct supervision of government authorities charged with overseeing the taxation of domestic companies and the kinds of financial activities conducted by the Company in its business segments. These legal, regulatory, and supervisory frameworks are often designed to protect public or private interests that differ from the interests of the Company's shareholders or non-deposit creditors.See "Government Monetary and Fiscal Policies" and "Regulation and Supervision" in Part I, Item 1 of this report, which is incorporated by reference herein. The Company believes that government scrutiny of all financial-services companies has increased, fundamental changes have been made to the banking, securities, and other laws that govern financial services (with the Dodd-Frank Act and Basel III being two of the more prominent examples), and a host of related business practices have been reexamined and reshaped. As a result, the Company expects to continue devoting increased time and resources to risk management, compliance, and regulatory change management. Risks also exist that government authorities could judge the Company's business or other practices as unsafe, unsound, or otherwise unadvisable and bring formal or informal corrective or enforcement actions against it, including fines or other penalties and directives to change its products or other services. For practical or other reasons, the Company may not be able to effectively defend itself against these actions, and they in turn could give rise to litigation by private plaintiffs. Further, if the laws, rules, and regulations materially adversely affect the Company, including any changes that would negatively impact the tax treatment of the Company, the Company's products and services or the Company's shareholders, the Company may be adversely impacted. All of these and other regulatory risks and uncertainties could adversely affect the Company's reputation, business, results of operations, financial condition, or prospects.

Regulatory or supervisory requirements, future growth, operating results, or strategic plans may prompt the Company to raise additional capital, but that capital may not be available at all or on favorable terms and, if raised, may be dilutive. The Company is subject to safety-and-soundness and capital-adequacy standards under applicable law and to the direct supervision of government authorities. See "Regulation and Supervision" in Part I, Item 1 of this report. If the Company is not or is at risk of not satisfying these standards or applicable supervisory requirements—whether due to inadequate operating results that erode capital, future growth that outpaces the accumulation of capital through earnings, or otherwise—the Company may be required to raise capital, restrict dividends, or limit originations of certain types of commercial and mortgage loans. If the Company is required to limit originations of certain types of commercial and mortgage loans, it would thereby reduce the amount of credit available to borrowers and limit opportunities to earn interest income from the loan portfolio. The Company also may be compelled to raise capital if regulatory or supervisory requirements change. In addition, the Company may elect to raise capital for strategic reasons even when it is not required to do so. The Company's ability to raise capital on favorable terms or at all will depend on general economic and market conditions, which are outside of its control, and on the Company's operating and financial performance. Accordingly, the Company

cannot be assured of its ability to raise capital when needed or on favorable terms. An inability to raise capital when needed or on favorable terms could damage the performance and value of its business, prompt regulatory intervention, and harm its reputation, and if the condition were to persist for any appreciable period of time, its viability as a going concern could be threatened. If the Company is able to raise capital and does so by issuing common stock or convertible securities, the ownership interest of its existing stockholders could be diluted, and the market price of its common stock could decline.

The market price of the Company's common stock could be adversely impacted by banking, antitrust, or corporate laws that have or are perceived as having an anti-takeover effect. Banking and antitrust laws, including associated regulatory-approval requirements, impose significant restrictions on the acquisition of direct or indirect control over any bank holding company, including the Company. Acquisition of ten percent or more of any class of voting stock of a bank holding company or depository institution, including shares of its common stock, generally creates a rebuttable presumption that the acquirer "controls" the bank holding company or depository institution. Also, a bank holding company must obtain the prior approval of the Federal Reserve before, among other things, acquiring direct or indirect ownership or control of more than 5 percent of the voting shares of any bank, including the Bank.

In addition, a non-negotiated acquisition of control over the Company may be inhibited by provisions of the Company's restated articles of incorporation and bylaws that have been adopted in conformance with applicable corporate law, such as the ability to issue shares of preferred stock and to determine the rights, terms, conditions and privileges of such preferred stock without stockholder approval. If any of these restrictions were to operate or be perceived as operating to hinder or deter a potential acquirer for the Company, the market price of the Company's common stock could suffer.

The Company's business relies on systems, employees, service providers, and counterparties, and failures or errors by any of them, intellectual property disputes, or other operational risks could adversely affect the Company. The Company engages in a variety of businesses in diverse markets and relies on hosted and on-premises systems, employees, service providers, and counterparties to properly oversee, administer, and process a high volume of transactions and otherwise support our day-to-day operations. This gives rise to meaningful operational risk—including the risk of fraud by employees or outside parties, unauthorized access to its premises or systems, errors in processing, failures of technology, breaches of internal controls or compliance safeguards, inadequate integration of acquisitions, human error, unavailability of systems and services, and other breakdowns in business continuity plans. In addition, service providers utilizing technology or other intellectual property in connection with our services may make allegations of patent infringement or other intellectual property rights violations. Depending on the scope of the claim, the Company may have to engage in protracted litigation, which is often time-consuming, expensive and can be disruptive to the Company's operations. If the Company were found to have infringed an intellectual property right, it may be required to pay substantial damages or royalties to a third-party, not all of which may be covered by insurance policies or subject to indemnification by the Company's service provider. These amounts could have a material adverse effect on the Company's business, financial condition and results of operations.

Significant financial, business, reputational, regulatory, or other harm could come to the Company as a result of these or related risks and uncertainties. For example, the Company could be negatively impacted if financial, accounting, data-processing, or other systems were to fail or not fully perform their functions. The Company also could be adversely affected if key personnel or a significant number of employees were to become unavailable due to a pandemic, natural disaster, war, act of terrorism, accident, or other reason. These same risks arise as well in connection with the systems and employees of the service providers and counterparties on whom the Company depends as well as their own third-party service providers and counterparties. See "Quantitative and Qualitative Disclosures About Market Risk—Operational Risk" in Part II, Item 7A of this report for a discussion of how the Company monitors and manages operational risk.

The soundness of other financial institutions could adversely affect us. The soundness of other financial institutions could adversely affect the Company. Financial services institutions are interrelated because of trading, clearing, counterparty and other relationships. The Company routinely executes transactions with counterparties in the financial services industry, including brokers and dealers, commercial banks, investment banks, payment processors, and other institutional clients, which may result in payment obligations to the Company or to its clients due to products it has arranged. Many of these transactions expose the Company to credit and market risk that may cause its counterparty or client to default. In addition, the Company is exposed to market risk when the collateral it

holds cannot be realized or is liquidated at prices not sufficient to recover the full amount of the secured obligation. Any losses arising from such occurrences could materially and adversely affect the Company's business, results of operations or financial condition.

The Company is heavily reliant on technology, and a failure or delay in effectively implementing technology initiatives or anticipating future technology needs or demands could adversely affect the Company's business or performance. Like most financial-services companies, the Company significantly depends on technology to deliver its products and other services and to otherwise conduct business. To remain technologically competitive and operationally efficient, the Company invests in system upgrades, new solutions, and other technology initiatives, including for both internally and externally hosted solutions. Many of these initiatives are of significant duration, are tied to critical systems, and require substantial internal and external resources. Although the Company takes steps to mitigate the risks and uncertainties associated with these initiatives, there is no guarantee that they will be implemented on time, within budget, or without negative operational or customer impact. The Company also may not succeed in anticipating its future technology needs, the technology demands of its customers, or the competitive landscape for technology. In addition, the Company relies upon the expertise and support of service providers to help implement, maintain and/or service certain of its core technology solutions. If the Company cannot effectively manage these service providers, the service parties fail to materially perform, or the Company was to falter in any of the other noted areas, its business or performance could be negatively impacted.

Negative publicity outside of the Company's control, or its failure to successfully manage issues arising from its conduct or in connection with the financial-services industry generally, could damage the Company's reputation and adversely affect its business or performance. The performance and value of the Company's business could be negatively impacted by any reputational harm that it may suffer. This harm could arise from negative publicity outside of its control or its failure to adequately address issues arising from its own conduct or in connection with the financial-services industry generally. Risks to the Company's reputation could arise in any number of contexts—for example, cyber incidents and other security breaches, mergers and acquisitions, lending or investment-management practices, actual or potential conflicts of interest, failures to prevent money laundering, corporate governance, and unethical behavior and practices committed by Company employees or competitors in the financial services industry.

The Company faces intense competition from other financial-services and financial-services technology companies, and competitive pressures could adversely affect the Company's business or performance. The Company faces intense competition in each of its business segments and in all of its markets and geographic regions, and the Company expects competitive pressures to intensify in the future—especially in light of recent legislative and regulatory initiatives, technological innovations that alter the barriers to entry, current economic and market conditions, and government monetary and fiscal policies. Competition with financial-services technology companies, or technology companies partnering with financial-services companies, may be particularly intense, due to, among other things, differing regulatory environments. See "Competition" in Part I, Item 1 of this report. Competitive pressures may drive the Company to take actions that the Company might otherwise eschew, such as lowering the interest rates or fees on loans or raising the interest rates on deposits in order to keep or attract high-quality customers. These pressures also may accelerate actions that the Company might otherwise elect to defer, such as substantial investments in technology or infrastructure. The Company has certain businesses that utilize wholesale models which can lead to customer concentrations for those businesses that, if negatively impacted by new entrants, competitive pressures, or consolidations, could affect the Company's fee income. Whatever the reason, actions that the Company takes in response to competition may adversely affect its results of operations and financial condition. These consequences could be exacerbated if the Company is not successful in introducing new products and other services, achieving market acceptance of its products and other services, developing and maintaining a strong customer base, or prudently managing expenses.

The Company's internal controls, risk-management and compliance programs or functions may not be effective in identifying and mitigating risk and loss. The Company maintains standards on internal controls (including over financial reporting), and related disclosures which are regularly reviewed by management, as well as an enterprise risk-management program that is designed to identify, quantify, monitor, report, and control the risks that it faces. These include interest-rate risk, credit risk, liquidity risk, market risk, operational risk, reputational risk, and compliance risk. The Company also maintains a compliance program to identify, measure, assess, and report on its adherence to applicable law, policies, and procedures. While the Company assesses and improves these controls and programs on an ongoing basis, there can be no assurance that its frameworks or models for risk management, compliance, and related controls will effectively mitigate risk and limit losses in its business. If conditions or circumstances arise that expose flaws or gaps in the Company's risk-management or compliance programs or if its

controls break down, the performance and value of the Company's business could be adversely affected. The Company could be negatively impacted as well if, despite adequate programs being in place, its risk-management or compliance personnel are ineffective in executing them and mitigating risk and loss.

Liquidity is essential to the Company and its business or performance could be adversely affected by constraints in, or increased costs for, funding. The Company defines liquidity as the ability to fund increases in assets and meet obligations as they come due, all without incurring unacceptable losses. Banks are especially vulnerable to liquidity risk because of their role in the maturity transformation of demand or short-term deposits into longer-term loans or other extensions of credit. The Company, like other financial-services companies, relies to a significant extent on external sources of funding (such as deposits and borrowings) for the liquidity needed to conduct its business. A number of factors beyond the Company's control, however, could have a detrimental impact on the availability or cost of that funding and thus on its liquidity. These factors include market disruptions, changes in its credit ratings or the sentiment of its investors, the state of the regulatory environment and monetary and fiscal policies, declines in the value of its investment securities, the loss of substantial deposits or customer relationships, financial or systemic shocks, significant counterparty failures, and reputational damage. Unexpected declines or limits on the dividends declared and paid by the Company's subsidiaries also could adversely affect its liquidity position. While the Company's policies and controls are designed to ensure that it maintains adequate liquidity to conduct its business in the ordinary course even in a stressed environment, there can be no assurance that its liquidity position will never become compromised. In such an event, the Company may be required to sell assets at a loss in order to continue its operations. This could damage the performance and value of its business, prompt regulatory intervention, and harm its reputation, and if the condition were to persist for any appreciable period of time, its viability as a going concern could be threatened. See "Quantitative and Qualitative Disclosures About Market Risk—Liquidity Risk" in Part II, Item 7A of this report for a discussion of how the Company monitors and manages liquidity risk.

The Company's investment-management and asset-servicing businesses could be negatively impacted by declines in assets under management or administration or by shifts in the mix of assets under management or administration. The revenues of the Company's investment-management businesses are highly dependent on advisory fee income. These businesses generally earn higher fees on equity-based or alternative investments and strategies and lower fees on fixed income investments and strategies. Advisory-fee income may be negatively impacted by an absolute decline in assets under management or by a shift in the mix of assets under management from equities or alternatives to fixed income. Such a decline or shift could be caused or influenced by any number of factors, such as underperformance in absolute or relative terms, loss of key advisers or other talent, changes in investing preferences or trends, market downturns or volatility, drops in investor confidence, reputational damage, increased competition, or general economic conditions. Any of these factors also could affect clients of UMBFS, and if this were to cause a decline in assets under administration at UMBFS or an adverse shift in the mix of those assets, the performance of UMBFS could suffer.

To the extent that the Company continues to maintain a sizeable portfolio of investment securities, its income may be adversely affected and its reported equity more volatile. As of December 31, 2023, the Company's securities portfolio totaled approximately $13.3 billion, which represented approximately 30.1% of its total assets. Regulatory restrictions and the Company's investment policies generally result in the acquisition of securities with lower yields than loans. For the year-ended December 31, 2023, the weighted average yield of the Company's securities portfolio was 2.66% as compared to 6.27% for its loan portfolio. Accordingly, to the extent that the Company is unable to effectively deploy its funds to originate or acquire loans or other assets with higher yields than those of its investment securities, the Company's income may be negatively impacted. Additionally, approximately $7.1 billion, or 53.3%, of the Company's investment securities are classified as available for sale and reported at fair value. Unrealized gains or losses on these securities are excluded from earnings and reported in other comprehensive income, which in turn affects the Company's reported equity. As a result, to the extent that the Company continues to maintain a significant portfolio of available-for-sale securities, its reported equity may experience greater volatility.

Cyber incidents and other security breaches at the Company, at the Company's service providers or counterparties, or in the business community or markets may negatively impact the Company's business or performance. In the ordinary course of its business, the Company collects, stores, and transmits sensitive, confidential, or proprietary data and other information, including intellectual property, business information, funds-transfer instructions, and the personally identifiable information of its customers and employees. The secure processing, storage, maintenance, and transmission of this information is critical to the Company's operations and reputation, and if any of this information were mishandled, misused, improperly accessed, lost, held hostage or stolen or if the Company's operations were disrupted, the Company could suffer significant financial, business, reputational, regulatory, or other damage. For example, despite security measures, the Company's information technology and infrastructure may be breached or rendered inaccessible through cyber-attacks, ransomware and other computer viruses or malware, pretext calls, electronic phishing, or other means. These risks and uncertainties are rapidly evolving and increasing in complexity, and the Company's failure to effectively mitigate them could negatively impact its business and operations.

Risks and exposures related to cybersecurity attacks are expected to remain high for the foreseeable future due to the rapidly evolving nature and sophistication of these threats and the expanding use of technology-based products and services by the Company and its customers. The Company can provide no assurances that the safeguards it has in place or may implement in the future will prevent all unauthorized infiltrations or breaches and that the Company will not suffer losses related to a security breach in the future, which losses may be material.

Service providers and counterparties also present a source of risk to the Company if their own security measures or other systems or infrastructure were to be breached, rendered inaccessible, or otherwise fail. Likewise, a cyber-attack or other security breach affecting the business community, the markets, or parts of them may cycle or cascade through the financial system and adversely affect the Company or its service providers or counterparties. Many of these risks and uncertainties are beyond the Company's control.

Even when an attempted cyber incident or other security breach is successfully avoided or thwarted, the Company may need to expend substantial resources in doing so, may be required to take actions that could adversely affect customer satisfaction or behavior, and may be exposed to reputational damage. If a breach were to occur, moreover, the Company could be exposed to contractual claims, regulatory actions, and litigation by private plaintiffs, and would additionally suffer reputational harm. Despite the Company's efforts to safeguard the integrity of systems and controls and to manage third-party risk, the Company may not be able to anticipate or implement effective measures to prevent all security breaches or all risks to the sensitive, confidential, or proprietary information that it or its service providers or counterparties collect, store, or transmit.

The trading volume in the Company's common stock at times may be low, which could adversely affect liquidity and stock price. Although the Company's common stock is listed for trading on the NASDAQ Global Select Market, the trading volume in the stock may at times be low and, in relative terms, less than that of other financial-services companies. A public trading market that is deep, liquid, and orderly depends on the presence in the marketplace of a large number of willing buyers and sellers and narrow bid-ask spreads. These market features, in turn, depend on a number of factors, such as the individual decisions of investors and general economic and market conditions, over which the Company has no control. During any period of lower trading volume in the Company's common stock, the stock price could be more volatile, and the liquidity of the stock could suffer.

The Company operates in a highly regulated industry, and its business or performance could be adversely affected by the legal, regulatory and supervisory frameworks applicable to it, changes in those frameworks, and other legal and regulatory risks and uncertainties. The Company is subject to expansive legal and regulatory frameworks in the United States—at the federal, State, and local levels—and in the foreign jurisdictions where its business segments operate. In addition, the Company is subject to the direct supervision of government authorities charged with overseeing the taxation of domestic companies and the kinds of financial activities conducted by the Company in its business segments. These legal, regulatory, and supervisory frameworks are often designed to protect public or private interests that differ from the interests of the Company's shareholders or non-deposit creditors.See "Government Monetary and Fiscal Policies" and "Regulation and Supervision" in Part I, Item 1 of this report, which is incorporated by reference herein. The Company believes that government scrutiny of all financial-services companies has increased, fundamental changes have been made to the banking, securities, and other laws that govern financial services (with the Dodd-Frank Act and Basel III being two of the more prominent examples), and a host of related business practices have been reexamined and reshaped. As a result, the Company expects to continue devoting increased time and resources to risk management, compliance, and regulatory change management. Risks also exist that government authorities could judge the Company's business or other practices as unsafe, unsound, or otherwise unadvisable and bring formal or informal corrective or enforcement actions against it, including fines or other penalties and directives to change its products or other services. For practical or other reasons, the Company may not be able to effectively defend itself against these actions, and they in turn could give rise to litigation by private plaintiffs. Further, if the laws, rules, and regulations materially adversely affect the Company, including any changes that would negatively impact the tax treatment of the Company, the Company's products and services or the Company's shareholders, the Company may be adversely impacted. All of

these and other regulatory risks and uncertainties could adversely affect the Company's reputation, business, results of operations, financial condition, or prospects.

Regulatory or supervisory requirements, future growth, operating results, or strategic plans may prompt the Company to raise additional capital, but that capital may not be available at all or on favorable terms and, if raised, may be dilutive. The Company is subject to safety-and-soundness and capital-adequacy standards under applicable law and to the direct supervision of government authorities. See "Regulation and Supervision" in Part I, Item 1 of this report. If the Company is not or is at risk of not satisfying these standards or applicable supervisory requirements—whether due to inadequate operating results that erode capital, future growth that outpaces the accumulation of capital through earnings, or otherwise—the Company may be required to raise capital, restrict dividends, or limit originations of certain types of commercial and mortgage loans. If the Company is required to limit originations of certain types of commercial and mortgage loans, it would thereby reduce the amount of credit available to borrowers and limit opportunities to earn interest income from the loan portfolio. The Company also may be compelled to raise capital if regulatory or supervisory requirements change. In addition, the

Company may elect to raise capital for strategic reasons even when it is not required to do so. The Company's ability to raise capital on favorable terms or at all will depend on general economic and market conditions, which are outside of its control, and on the Company's operating and financial performance. Accordingly, the Company cannot be assured of its ability to raise capital when needed or on favorable terms. An inability to raise capital when needed or on favorable terms could damage the performance and value of its business, prompt regulatory intervention, and harm its reputation, and if the condition were to persist for any appreciable period of time, its viability as a going concern could be threatened. If the Company is able to raise capital and does so by issuing common stock or convertible securities, the ownership interest of its existing stockholders could be diluted, and the market price of its common stock could decline.

The market price of the Company's common stock could be adversely impacted by banking, antitrust, or corporate laws that have or are perceived as having an anti-takeover effect. Banking and antitrust laws, including associated regulatory-approval requirements, impose significant restrictions on the acquisition of direct or indirect control over any bank holding company, including the Company. Acquisition of ten percent or more of any class of voting stock of a bank holding company or depository institution, including shares of its common stock, generally creates a rebuttable presumption that the acquirer "controls" the bank holding company or depository institution. Also, a bank holding company must obtain the prior approval of the Federal Reserve before, among other things, acquiring direct or indirect ownership or control of more than 5 percent of the voting shares of any bank, including the Bank.

In addition, a non-negotiated acquisition of control over the Company may be inhibited by provisions of the Company's restated articles of incorporation and bylaws that have been adopted in conformance with applicable corporate law, such as the ability to issue shares of preferred stock and to determine the rights, terms, conditions and privileges of such preferred stock without stockholder approval. If any of these restrictions were to operate or be perceived as operating to hinder or deter a potential acquirer for the Company, the market price of the Company's common stock could suffer.

The Company's business relies on systems, employees, service providers, and counterparties, and failures or errors by any of them, intellectual property disputes, or other operational risks could adversely affect the Company. The Companyengages in a variety of businesses in diverse markets and relies on hosted and on-premises systems, employees, service providers, and counterparties to properly oversee, administer, and process a high volume of transactions and otherwise support our day-to-day operations. This gives rise to meaningful operational risk—including the risk of fraud by employees or outside parties, unauthorized access to its premises or systems, errors in processing, failures of technology, breaches of internal controls or compliance safeguards, inadequate integration of acquisitions, human error, unavailability of systems and services, and other breakdowns in business continuity plans. In addition, service providers utilizing technology or other intellectual property in connection with our services may make allegations of patent infringement or other intellectual property rights violations. Depending on the scope of the claim, the Company may have to engage in protracted litigation, which is often time-consuming, expensive and can be disruptive to the Company's operations. If the Company were found to have infringed an intellectual property right, it may be required to pay substantial damages or royalties to a third-party, not all of which may be covered by insurance policies or subject to indemnification by the Company's service provider. These amounts could have a material adverse effect on the Company's business, financial condition and results of operations.

Significant financial, business, reputational, regulatory, or other harm could come to the Company as a result of these or related risks and uncertainties. For example, the Company could be negatively impacted if financial, accounting, data-processing, or other systems were to fail or not fully perform their functions. The Company also could be adversely affected if key personnel or a significant number of employees were to become unavailable due to a pandemic, such as the COVID-19 pandemic, natural disaster, geopolitical events, war, act of terrorism, accident, or other reason. These same risks arise as well in connection with the systems and employees of the service providers and counterparties on whom the Company depends as well as their own third-party service providers and counterparties. See "Quantitative and Qualitative Disclosures About Market Risk—Operational Risk" in Part II, Item 7A of this report for a discussion of how the Company monitors and manages operational risk.

The soundness of other financial institutions could adversely affect us. The soundness of other financial institutions could adversely affect the Company. Financial services institutions are interrelated because of trading, clearing, counterparty and other relationships. The Company routinely executes transactions with counterparties in the financial services industry, including brokers and dealers, commercial banks, investment banks, payment processors, and other institutional clients, which may result in payment obligations to the Company or to its clients due to products it has arranged. Many of these transactions expose the Company to credit and market risk that may cause its counterparty or client to default. In addition, the Company is exposed to market risk when the collateral it holds cannot be realized or is liquidated at prices not sufficient to recover the full amount of the secured obligation. Any losses arising from such occurrences could materially and adversely affect the Company's business, results of operations or financial condition.

The Company is heavily reliant on technology, and a failure or delay in effectively implementing technology initiatives or anticipating future technology needs or demands could adversely affect the Company's business or performance. Like most financial-services companies, the Company significantly depends on technology to deliver its products and other services and to otherwise conduct business. To remain technologically competitive and operationally efficient, the Company invests in system upgrades, new solutions, and other technology initiatives, including for both internally and externally hosted solutions. Many of these initiatives are of significant duration, are tied to critical systems, and require substantial internal and external resources. Furthermore, to the extent these initiatives may implicate new technologies or solutions such as those related to artificial intelligence or automation, additional risk may be present. Although the Company takes steps to mitigate the risks and uncertainties associated with these initiatives, there is no guarantee that they will be implemented on time, within budget, or without negative operational or customer impact. The Company also may not succeed in anticipating its future technology needs, the technology demands of its customers, or the competitive landscape for technology. In addition, the Company relies upon the expertise and support of service providers to help implement, maintain and/or service certain of its core technology solutions. If the Company cannot effectively manage these service providers, the service parties fail to materially perform, or the Company was to falter in any of the other noted areas, its business or performance could be negatively impacted.

Negative publicity outside of the Company's control, or its failure to successfully manage issues arising from its conduct or in connection with the financial-services industry generally, could damage the Company's reputation and adversely affect its business or performance. The performance and value of the Company's business could be negatively impacted by any reputational harm that it may suffer. This harm could arise from negative publicity outside of its control or its failure to adequately address issues arising from its own conduct or in connection with the financial-services industry generally. Risks to the Company's reputation could arise in any number of contexts—for example, cyber incidents and other security breaches, mergers and acquisitions, lending or investment-management practices, actual or potential conflicts of interest, failures to prevent money laundering, corporate governance, and unethical behavior and practices committed by Company employees or competitors in the financial services industry.

The Company faces intense competition from other financial-services and financial-services technology companies, and competitive pressures could adversely affect the Company's business or performance. The Company faces intense competition in each of its business segments and in all of its markets and geographic regions, and the Company expects competitive pressures to intensify in the future—especially in light of recent legislative and regulatory initiatives, technological innovations that alter the barriers to entry, current economic and market conditions, and government monetary and fiscal policies. Competition with financial-services technology companies, or technology companies partnering with financial-services companies, may be particularly intense, due to, among other things, differing regulatory environments. See "Competition" in Part I, Item 1 of this report.Competitive pressures may drive the Company to take actions that the Company might otherwise eschew, such as

lowering the interest rates or fees on loans or raising the interest rates on deposits in order to keep or attract high-quality customers. These pressures also may accelerate actions that the Company might otherwise elect to defer, such as substantial investments in technology or infrastructure. The Company has certain businesses that utilize wholesale models which can lead to customer concentrations for those businesses that, if negatively impacted by new entrants, competitive pressures, or consolidations, could affect the Company's fee income. Whatever the reason, actions that the Company takes in response to competition may adversely affect its results of operations and financial condition. These consequences could be exacerbated if the Company is not successful in introducing new products and other services, achieving market acceptance of its products and other services, developing and maintaining a strong customer base, or prudently managing expenses.

The Company's internal controls, risk-management and compliance programs or functions may not be effective in identifying and mitigating risk and loss. The Company maintains standards on internal controls (including over financial reporting), and related disclosures which are regularly reviewed by management, as well as an enterprise risk-management program that is designed to identify, quantify, monitor, report, and control the risks that it faces. These include interest-rate risk, credit risk, liquidity risk, market risk, operational risk, reputational risk, and compliance risk. The Company also maintains a compliance program to identify, measure, assess, and report on its adherence to applicable law, policies, and procedures. While the Company assesses and strives to improve these controls and programs on an ongoing basis, there can be no assurance that its frameworks or models for risk management, compliance, and related controls will effectively mitigate risk and limit losses in its business. If conditions or circumstances arise that expose flaws or gaps in the Company's risk-management or compliance programs or if its controls break down, the performance and value of the Company's business could be adversely affected. The Company could be negatively impacted as well if, despite programs being in place, its risk-management or compliance personnel are ineffective in executing them and mitigating risk and loss.

If the Company's subsidiaries are unable to make dividend payments or distributions to the Company, it may be unable to satisfy its obligations to counterparties or creditors or make dividend payments to its stockholders. The Company is a legal entity separate and distinct from its bank and nonbank subsidiaries and depends on dividend payments and distributions from those subsidiaries to fund its obligations to counterparties and creditors and its dividend payments to stockholders. See "Regulation and Supervision—Requirements Affecting the Relationships among the Company, Its Subsidiaries, and Other Affiliates" in Part I, Item 1 of this report. Any of the Company's subsidiaries, however, may be unable to make dividend payments or distributions to the Company, including as a result of a deterioration in the subsidiary's performance, investments in the subsidiary's own future growth, or regulatory or supervisory requirements. If any subsidiary were unable to remain viable as a going concern, moreover, the Company's right to participate in a distribution of assets would be subject to the prior claims of the subsidiary's creditors (including, in the case of the Bank, its depositors and the FDIC).

An inability to attract, retain, or motivate qualified employees could adversely affect the Company's business or performance. Skilled employees are the Company's most important resource, and competition for talented people is intense. Even though compensation is among the Company's highest expenses, it may not be able to locate and hire the best people, keep them with the Company, or properly motivate them to perform at a high level. Recent scrutiny of compensation practices, especially in the financial-services industry, has made this only more difficult. In addition, some parts of the Company's business are particularly dependent on key personnel, including investment management, asset servicing, and commercial lending. If the Company were to lose and find itself unable to replace these personnel or other skilled employees or if the competition for talent drove its compensation costs to unsustainable levels, the Company's business, results of operations, and financial condition could be negatively impacted.

The Company is subject to a variety of litigation and other proceedings, which could adversely affect its business or performance. The Company is involved from time to time in a variety of judicial, alternative-dispute, and other proceedings arising out of its business or operations. The Company establishes reserves for claims when appropriate under generally accepted accounting principles, but costs often can be incurred in connection with a matter before any reserve has been created. The Company also maintains insurance policies to mitigate the cost of litigation and other proceedings, but these policies have deductibles, limits, and exclusions that may diminish their value or efficacy. Despite the Company's efforts to appropriately reserve for claims and insure its business and operations, the actual costs associated with resolving a claim may be substantially higher than amounts reserved or covered. Substantial legal claims, even if not meritorious, could have a detrimental impact on the Company's business, results of operations, and financial condition and could cause reputational harm.

Changes in accounting standards could impact the Company's financial statements and reported earnings. Accounting standard-setting bodies, such as the Financial Accounting Standards Board, periodically change the financial accounting and reporting standards that affect the preparation of the Company's Consolidated Financial Statements. These changes are beyond the Company's control and could have a meaningful impact on its Consolidated Financial Statements.

The Company's selection of accounting methods, assumptions, and estimates could impact its financial statements and reported earnings. To comply with generally accepted accounting principles, management must sometimes exercise judgment in selecting, determining, and applying accounting methods, assumptions, and estimates. This can arise, for example, in the determination of the allowance for credit losses. Furthermore, accounting methods, assumptions and estimates are part of acquisition purchase accounting and the calculation of the fair value of assets and liabilities that have been purchased, including credit-impaired loans. The judgments required of management can involve difficult, subjective, or complex matters with a high degree of uncertainty, and several different judgments could be reasonable under the circumstances and yet result in significantly different results being reported. See "Critical Accounting Policies and Estimates" in Part II, Item 7 of this report. If management's judgments are later determined to have been inaccurate, the Company may experience unexpected losses that could be substantial.

The Company's ability to engage in opportunistic mergers and acquisitions is subject to significant risks, including the risk that government authorities will not provide the requisite approvals, the risk that integrating acquisitions may be more difficult, costly, or time consuming than expected, and the risk that the value of acquisitions may be less than anticipated. The Company may make opportunistic acquisitions of other financial-services companies or businesses from time to time. These acquisitions may be subject to regulatory approval, and there can be no assurance that the Company will be able to obtain that approval in a timely manner or at all. Even when the Company is able to obtain regulatory approval, the failure of other closing conditions to be satisfied or waived could delay the completion of an acquisition for a significant period of time or prevent it from occurring altogether. Any failure or delay in closing an acquisition could adversely affect the Company's reputation, business, results of operations, financial condition, or prospects.

Additionally, acquisitions involve numerous risks and uncertainties, including lower-than-expected performance or higher-than-expected costs, difficulties related to integration, diversion of management's attention from other business activities, changes in relationships with customers or counterparties, and the potential loss of key employees. An acquisition also could be dilutive to the Company's current stockholders if preferred stock, common stock, or securities convertible into preferred stock or common stock were issued to fully or partially pay or fund the purchase price. The Company, moreover, may not be successful in identifying acquisition candidates, integrating acquired companies or businesses, or realizing the expected value from acquisitions. There is significant competition for valuable acquisition targets, and the Company may not be able to acquire other companies or businesses on attractive terms or at all. There can be no assurance that the Company will pursue future acquisitions, and the Company's ability to grow and successfully compete in its markets and regions may be impaired if it chooses not to pursue, or is unable to successfully complete, acquisitions.

The Company faces risks in connection with its strategic undertakings and new business initiatives. The Company is engaged, and may in the future engage, in strategic activities including acquisitions, joint ventures, partnerships, investments or other business growth initiatives or undertakings. There can be no assurance that the Company will successfully identify appropriate opportunities, that it will be able to negotiate or finance such activities or that such activities, if undertaken, will be successful. The Company is focused on its long-term growth and has undertaken various strategic activities and business initiatives, some of which may involve activities that are new to it. For example, in the future the Company may engage in or focus on new lines of business, financial technologies, and other activities that are outside of its current product offerings. These new initiatives may subject the Company to, among other risks, increased business, reputational and operational risk, as well as more complex legal, regulatory and compliance costs and risks. Its ability to execute strategic activities and new business initiatives successfully will depend on a variety of factors. These factors likely will vary based on the nature of the activity but may include the Company's success in integrating an acquired company or a new internally-developed growth initiative into its business, operations, services, products, personnel and systems, operating effectively with any partner with whom it elects to do business, meeting applicable regulatory requirements and obtaining applicable regulatory licenses or other approvals, hiring or retaining key employees, achieving anticipated synergies, meeting management's expectations, actually realizing the anticipated benefits of the activities, and overall general market conditions. The Company's ability to address these matters successfully cannot be assured. In addition, its strategic efforts may divert resources or management's attention from ongoing business operations and may subject the

Company to additional regulatory scrutiny and potential liability. If the Company does not successfully execute a strategic undertaking, it could adversely affect its business, financial condition, results of operations, reputation, or growth prospects.

Expectations around Environmental, Social and Governance practices, as well as climate change, and related legislative and regulatory initiatives may result in additional risk and operational changes and expenditures that could significantly impact the Company's business. Companies are facing increased scrutiny from customers, regulators and other stakeholders with respect to their environmental, social and governance (ESG) practices and disclosures. Institutional investors, and investor advocacy groups, in particular, are increasingly focused on these matters, and expectations in many of these areas can vary widely. In addition, increased ESG related compliance costs could result in increases to the Company's overall operational costs. Failure to adapt to or comply with regulatory requirements or investor or stakeholder expectations and standards, and fluctuations in these standards, could negatively impact the Company's reputation, ability to do business with certain partners, and its stock price. New government regulations could also result in new or more stringent forms of ESG oversight and expanding mandatory and voluntary reporting, diligence, and disclosure.

In addition to regulatory and investor expectations on environmental matters in general, 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 to attempt to reduce global temperatures, in part by limiting greenhouse gas emissions. The United States 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. These agreements and measures may 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 Company 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 the Company's financial condition and operations; however, as a banking organization, the physical effects of climate change may present certain unique risks to the Company. For example, weather disasters, shifts in local climates and other disruptions related to climate change may adversely affect the value of real properties securing the Company's loans, which could diminish the value of the Company's loan portfolio. Such events may also cause reductions in regional and local economic activity that may have an adverse effect on the Company's customers, which could limit the Company's ability to raise and invest capital in these areas and communities, each of which could have a material adverse effect on the Company's financial condition and results of operations.

ITEM 1B. *UNRESOLVED STAFF COMMENTS*

There are no unresolved comments from the staff of the SEC required to be disclosed herein as of the date of this report.

ITEM 1C. *CYBERSECURITY*

Information security and privacy are an important part of the Company's culture and foundational to its goal of delivering safe, secure and quality products and services. This philosophy is emphasized throughout the organization by its board of directors, senior leaders, officers, managers and associates to help promote a Company-wide culture of cybersecurity risk management.

Further, the Company operates within the highly regulated financial services industry, which is focused on the security, confidentiality, integrity, availability and privacy of information and information systems. The standards of the SEC, the GLBA, the General Data Protection Regulation (GDPR), and the Federal Financial Institution Examination Council (FFIEC) outline specific requirements regarding cybersecurity and data privacy for publicly traded and financial services companies. The Company has established information security and privacy policies focused on protecting the security, confidentiality, integrity, availability and privacy of information, which policies are designed to be compliant with SEC, GLBA, GDPR, state privacy regulations and FFIEC guidance, as applicable, and incorporate principles from the National Institute of Standards and Technology (NIST) and other industry best-practices where appropriate. The Company's security and privacy practices are also subject to ongoing independent oversight by multiple regulatory bodies including the OCC and the Federal Reserve, independent audits such as SOC I and SOC II, independent penetration testing of internal and external systems, independent security attestations of compliance with the requirements of the Society of Worldwide Interbank Financial

Telecommunications (SWIFT) and the Federal Reserve (FedLine), and independent assessments in connection with the Company's Payment Card Industry Data Security Standard (PCI DSS) obligations, as applicable.

As a financial institution, the Company collects, stores, and transmits sensitive, confidential, and proprietary data and other information, including intellectual property, business information, funds-transfer instructions, payment card data, and the personally identifiable information of its customers and employees (Sensitive Information). Sensitive

Information can be of significant value to criminal actors, and, as described in the Company's Risk Factors, cyber incidents and other security breaches involving this information at the Company, at the Company's service providers or counterparties, or in the business community or markets, may negatively impact the Company's business or performance.

The board of directors of the Company has oversight responsibility for the risk management policies of the Company's global operations and the operation of the Company's global risk management framework. The Board Risk Committee, comprised entirely of independent directors, assists the board of directors with this responsibility by, among other things, approving and periodically reviewing the risk management policies of the Company's global operations, including statements of risk appetite, and adapting the Enterprise Risk Management Policy, when and as appropriate, to changes in the Company's structure, risk profile, complexity, activities, or size. The combined Chief Information Security Officer and Chief Privacy Officer (CISO/CPO) supplies the Board, directly or through the Board Risk Committee, with regular reports on the operation of the information security and privacy components of this program, the related evolving risks to the Company's businesses, and the controls and other mitigants utilized to manage those risks. Membership in the Board Risk Committee includes directors experienced at managing risk in various environments, including cybersecurity. Their expertise helps inform the Company's cybersecurity and privacy program.

Management is responsible for the daily assessment and management of cybersecurity risks. This is accomplished through a variety of tools and mechanisms. The Company has strategically integrated cybersecurity and privacy risk management into its broader risk management framework. This integration ensures that cybersecurity and privacy considerations are an integral part of the Company's decision-making processes at multiple levels. The Company has appointed a qualified CISO/CPO, who reports to the Chief Risk Officer (CRO) as part of independent risk management, who is responsible for establishing strategy and overseeing implementation of an effective, integrated, and proactive information security and privacy program. The CISO/CPO is also responsible for advising and partnering with the board of directors, management team, and lines of business to guide the management of cybersecurity, business continuity and resilience, physical information security, data privacy, third party and information governance risks. The CISO/CPO has more than two decades of global experience within the information security and privacy fields, a relevant bachelor's degree from an accredited institution, and holds the National Association of Corporate Directors Directorship Certification (NACD.DC), Certified Information Systems Security Professional (CISSP) and Certified Information Privacy Professional (CIPP/US) designations. The CISO/CPO manages a team of qualified professionals with relevant cybersecurity and privacy experience and expertise. The Company has also established a Security, Technology, and Privacy Committee (STP) to oversee security, technology, and privacy capabilities and risks of the Company and its business. The STP includes the CRO, CISO/CPO, leadership across the lines of business, and a cross-functional team of risk, technology, privacy and legal experts to ensure an appropriate focus on information security, technology and privacy matters. The STP serves as a sub-committee of the Company's Enterprise Risk Committee (ERC), which is a sub-committee of the Board Risk Committee. The ERC is chaired by the CRO, and includes members of executive management and a cross-functional team of leaders experienced in managing risk. The STP and ERC receive quarterly briefings from the CISO/CPO on a variety of topics, including material changes in information security or privacy laws, the Company's ongoing information security posture and compliance, and emerging risks. Company management and its committees may also engage with the CISO/CPO to discuss and receive additional reports regarding cybersecurity and privacy risks on a more frequent basis as appropriate.

Key Program Components

The Company has a vulnerability management program designed to assess and manage risk associated with vulnerabilities in its information systems from multiple perspectives, including: (i) an adversarial cyber risk assessment that aims to identify threats, vulnerabilities and controls and (ii) the scanning of external and internal information systems to identify software vulnerabilities. The vulnerability management program also assesses emerging and potential threats through dedicated threat intelligence capabilities that monitor attacks and breaches associated with financial institutions and key third-party service providers. The CISO/CPO utilizes the data to understand potential exposure to the Company and to take preventative action where appropriate.

The Company has an Incident Response Program (IRP) to support management of cybersecurity or privacy incidents, impact assessment (i.e., type and quantity of data impacted, materiality, etc.), and response coordination including with law enforcement and government agencies, and impacted parties. Notification procedures are aligned with applicable laws, regulatory and contractual requirements, including rules promulgated by the SEC, the GLBA, the GDPR and state privacy regulations. The Company's IRP, led by the CISO/CPO, includes a cross-functional group of risk, technology, privacy and legal experts supplemented by third-party service providers, where necessary, to support the Company's response to potential cybersecurity or privacy incidents. The IRP sets forth the framework to elevate cybersecurity or privacy issues to the CISO/CPO and when and how incidents are escalated and reported beyond the CISO/CPO, including to executive management and the Board Risk Committee. Depending on the incident, escalation to the full board of directors may also occur.

The Company has also implemented a third-party risk program to oversee and manage information security and privacy risks associated with third-party relationships. The program includes the assessment of third parties that provide key services or will access, store, process, or transmit Sensitive Information during initial onboarding and throughout the lifecycle of the relationship, and management of applicable contractual provisions relating to confidentiality, integrity, availability and privacy obligations, including notification of incidents. The Company also leverages third-party services for advice, assessments, auditing, testing and support related to cybersecurity and information technology processes and services, where appropriate, that are also subject to the third-party risk program.

Notwithstanding the breadth of the Company's information security and privacy program, it may not be successful in preventing or mitigating a cybersecurity incident that could have a material adverse impact. For a discussion of whether and how any risks from cybersecurity threats, including as a result of any previous cybersecurity incidents, have materially affected or are reasonably likely to materially affect the Company, including its business strategy, results of operations or financial condition, see Item 1A "Risk Factors", which is incorporated by reference into this Item 1C.

ITEM 2. *PROPERTIES*

The Company's headquarters building is located at 1010 Grand Boulevard in downtown Kansas City, Missouri. The building opened in July 1986 and all 250,000 square feet are occupied by departments and customer service functions of the Bank, as well as administrative offices for the Company.

Other main facilities of the Bank in downtown Kansas City, Missouri are located at 928 Grand Boulevard (215,000 square feet) and 1008 Oak Street (200,000 square feet). The 928 Grand building houses administrative support functions for the Bank. The 1008 Oak building, which opened during 1999, houses the Company's operations and data processing functions.

The Bank leases 48,771 square feet in the Hertz Building located at 2 South Broadway in the heart of the commercial sector of downtown St. Louis, Missouri. This location has a full-service banking center and is home to administrative support functions for the Bank.

The Bank also leases 34,681 square feet on the first, second, and fifth floors of the 1670 Broadway building located in the financial district of downtown Denver, Colorado. The location has a full-service banking center and is home to operational and administrative support functions for the Bank.

As of December 31, 2022 December 31, 2023, the Bank operated a total of 89 88 banking centers.

UMBFS leases 85,164 square feet at 235 West Galena Street in Milwaukee, Wisconsin, for its fund services operations. Additionally, UMBFS leases 18,655 square feet at 2225 Washington Boulevard in Ogden, Utah, and 8,339 square feet at 223 Wilmington West Chester Pike in Chadds Ford, Pennsylvania.

Additional information with respect to properties, premises and equipment is presented in Note 1, "Summary of Significant Accounting Policies," and Note 8, "Premises, Equipment, and Leases," in the Notes to the Consolidated Financial Statements in Item 8 of this report, and is hereby incorporated by reference herein.

ITEM 3. *LEGAL PROCEEDINGS*

In the normal course of business, the Company and its subsidiaries are named defendants in various legal proceedings. In the opinion of management, after consultation with legal counsel, none of these proceedings are expected to have a material effect on the financial position, results of operations, or cash flows of the Company.

ITEM 4. *MINE SAFETY DISCLOSURES*

Not applicable.

PART II

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

The Company's common stock is traded on the NASDAQ Global Select Stock Market under the symbol "UMBF." As of February 16, 2023 February 16, 2024, the Company had 1,324 1,268 shareholders of record.

Purchases of Equity Securities by the Issuer and Affiliated Purchasers

The following table provides information about common stock repurchase activity by the Company during the quarter ended December 31, 2022 December 31, 2023:

ISSUER PURCHASES OF EQUITY SECURITIES

Period	Total Number of Shares Purchased	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
October 1 - October 31, 2022	$ —	$ —	$ —	1,895,707
November 1 - November 30, 2022	1,623	82.74	1,623	1,894,084
December 1 - December 31, 2022	563	100.25	563	1,893,521
Total	2,186	$ 87.25	2,186	

Period	Total Number of Shares (or Units) Purchased (1)	Average Price Paid per Share (or Unit)	Total Number of Shares (or Units) Purchased as Part of Publicly Announced Plans or Programs (2)	Maximum Number (or Approximate Dollar Value) of Shares (or Units) that May Yet Be Purchased Under the Plans or Programs
October 1 - October 31, 2023	—	$ —	—	1,000,000
November 1 - November 30, 2023	—	—	—	1,000,000
December 1 - December 31, 2023	2,940	91.93	—	1,000,000
Total	2,940	$ 91.93	—	

(1) Includes shares acquired pursuant to the Company's share-based incentive programs. Under the terms of the Company's share-based incentive programs, the Company accepts previously owned shares of common stock surrendered to satisfy tax withholding obligations associated with equity compensation. These purchases do not count against the maximum value of shares remaining available for purchase under Repurchase Authorizations.

(2) Includes shares acquired under the Board of Directors approved Repurchase Authorization(s).

On April 26, 2022 July 25, 2023, the Company's Board of Directors (the Board) authorized the repurchase of up to two one million shares of the Company's common stock, which will terminate on April 25, 2023 April 30, 2024 (a Repurchase Authorization). The Company has not made any repurchases other than through this Repurchase Authorization. The Company is not currently engaging in repurchases. In the future, it may determine to resume repurchases. All share purchases pursuant to a Repurchase Authorization are intended to be within the scope of Rule 10b-18 promulgated under the Exchange Act. Rule 10b-18 provides a safe harbor for purchases in a given day if the Company satisfies the manner, timing and volume conditions of the rule when purchasing its own shares of common stock. For discussion of management's intentions regarding dividends, see "Results of Operations" in Part II, Item 7 of this report.

Performance Graph

The performance graph below compares the cumulative total shareholder return on UMB Financial Corporation Common Stock with the cumulative total return on the equity securities of companies included in the Standard & Poor's 500 Stock Index and the S&P US BMI Banks Index, measured at the last trading day of each year shown. The graph assumes an investment of $100 on December 31, 2017 December 31, 2018 and reinvestment of dividends. The performance graph represents past performance and should not be considered to be an indication of future performance.

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Index	2018	2019	2020	2021	2022	2023
UMB Financial Corporation	$ 100.00	$ 114.71	$ 117.74	$ 183.72	$ 147.04	$ 150.29
S&P US BMI Banks Index	100.00	137.36	119.83	162.92	135.13	147.41
S&P 500 Index	100.00	131.49	155.68	200.37	164.08	207.21

ITEM 6. [RESERVED]

Index	2017	2018	2019	2020	2021	2022
UMB Financial Corporation	$ 100.00	$ 86.14	$ 98.81	$ 101.42	$ 158.25	$ 126.66
S&P US BMI Banks Index	100.00	83.54	114.74	100.10	136.10	112.89
S&P 500 Index	100.00	95.62	125.72	148.85	191.58	156.88

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

MANAGEMENT'S DISCUSSION AND ANALYSIS

This Management's Discussion and Analysis highlights the material changes in the results of operations and changes in financial condition for each of the three years in the period ended December 31, 2022 December 31, 2023. It should be read in conjunction with the accompanying Consolidated Financial Statements, Notes to Consolidated Financial Statements, and other financial statistics appearing elsewhere in this Annual Report on Form 10-K. Results of operations for the periods included in this review are not necessarily indicative of results to be attained during any future period.

CAUTIONARY NOTICE ABOUT FORWARD-LOOKING STATEMENTS

From time to time the Company has made, and in the future will make, forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. These statements can be identified by the fact that they do not relate strictly to historical or current facts. Forward-looking statements often use words such as "believe," "expect," "anticipate," "intend," "estimate," "project," "outlook," "forecast," "target," "trend," "plan," "goal," or other words of comparable meaning or future-tense or conditional verbs such as "may," "will," "should," "would," or "could." Forward-looking statements convey the Company's expectations, intentions, or forecasts about future events, circumstances, results, or aspirations.

This report, including any information incorporated by reference in this report, contains forward-looking statements. The Company also may make forward-looking statements in other documents that are filed or furnished with the SEC. In addition, the Company may make forward-looking statements orally or in writing to investors, analysts, members of the media, or others.

All forward-looking statements, by their nature, are subject to assumptions, risks, and uncertainties, which may change over time and many of which are beyond the Company's control. You should not rely on any forward-looking statement as a prediction or guarantee about the future. Actual future objectives, strategies, plans, prospects, performance, conditions, or results may differ materially from those set forth in any forward-looking statement. While no list of assumptions, risks, or uncertainties could be complete, some of the factors that may cause actual results or other future events, circumstances, or aspirations to differ from those in forward-looking statements include:

•local, regional, local, regional, national, or international business, economic, or political conditions or events;

national, or international business, economic, or political conditions or events;

- changes in laws or the regulatory environment, including as a result of financial-services legislation or regulation;
- changes in monetary, fiscal, or trade laws or policies, including as a result of actions by central banks or supranational authorities;
- the pace and magnitude of interest rate movements;
- changes in accounting standards or policies;
- shifts in investor sentiment or behavior in the securities, capital, or other financial markets, including changes in market liquidity or volatility or changes in interest or currency rates;
- changes in spending, borrowing, or saving by businesses or households;
- the Company’s ability to effectively manage capital or liquidity or to effectively attract or

deploy deposits;

- changes in any credit rating assigned to the Company or its affiliates;
- adverse publicity or other reputational harm to the Company;
- changes in the Company’s corporate strategies, the composition of its assets, or the way in which it funds those assets;
- the Company’s ability to develop, maintain, or market products or services or to absorb unanticipated costs or liabilities associated with those products or services;

- the Company’s ability to innovate to anticipate the needs of current or future customers, to successfully compete in its chosen business lines, to increase or hold market share in changing competitive environments, or to deal with pricing or other competitive pressures;

- changes in the credit, liquidity, or other condition of the Company’s customers, counterparties, or competitors;
- the Company’s ability to effectively deal with economic, business, or market slowdowns or disruptions;
- judicial, regulatory, or administrative investigations, proceedings, disputes, or rulings that create uncertainty for, or are adverse to, the Company or the financial-services industry;
- the Company’s ability to address changing or stricter regulatory or other governmental supervision or requirements;
- the Company’s ability to maintain secure and functional financial, accounting, technology, data processing, or other operating systems or facilities, including its capacity to withstand cyber-attacks;
- the adequacy of the Company’s corporate governance, risk-management framework, compliance

programs, or internal controls, including its ability to control lapses or deficiencies in financial reporting or to effectively mitigate or manage operational risk;

- the efficacy of the Company’s methods or models in assessing business strategies or opportunities or in valuing, measuring, monitoring, or managing positions or risk;
- the Company’s ability to keep pace with changes in technology that affect the Company or its customers, counterparties, or competitors;
- mergers, acquisitions, or dispositions, including the Company’s ability to integrate acquisitions and divest assets;
- the adequacy of the Company’s succession planning for key executives or other personnel;
- the Company’s ability to grow revenue, control expenses, or attract and retain qualified employees;
- natural disasters, war,

terrorist activities, including instability in the Middle East and Russia's military action in Ukraine, pandemics, and their effects on economic and business environment in which the Company operates;

- macroeconomic and adverse developments and uncertainties related to the collateral effects of the collapse of, and challenges for, domestic and international banks, including the impacts to the U.S. and global economies and reputational harm to the U.S. banking system; or
- other assumptions, risks, or uncertainties described in the Risk Factors (Item 1A), Management's Discussion and Analysis of Financial Condition and Results of Operations (Item 7), or the Notes to the Consolidated Financial Statements (Item 8) in this Annual Report on Form 10-K or described in any of the Company's annual, quarterly or current reports.
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- changes in laws or the regulatory environment, including as a result of financial-services legislation or regulation;
- changes in monetary, fiscal, or trade laws or policies, including as a result of actions by central banks or supranational authorities;
- the pace and magnitude of interest rate movements;
- changes in accounting standards or policies;
- shifts in investor sentiment or behavior in the securities, capital, or other financial markets, including changes in market liquidity or volatility or changes in interest or currency rates;
- changes in spending, borrowing, or saving by businesses or households;
- the Company’s ability to effectively manage capital or liquidity or to effectively attract or deploy deposits;
- changes in any credit rating assigned to the Company or its affiliates;
- adverse publicity or other reputational harm to the Company;
- changes in the Company’s corporate strategies, the composition of its assets, or the way in which it funds those assets;
- the Company’s ability to develop, maintain, or market products or services or to absorb unanticipated costs or liabilities associated with those products or services;
- the Company’s ability to innovate to anticipate the needs of current or future customers, to successfully compete in its chosen business lines, to increase or hold market share in changing competitive environments, or to deal with pricing or other competitive pressures;
- changes in the credit, liquidity, or other condition of the Company’s customers, counterparties, or competitors;
- the Company’s ability to effectively deal with economic, business, or market slowdowns or disruptions;
- judicial, regulatory, or administrative investigations, proceedings, disputes, or rulings that create uncertainty for, or are adverse to, the Company or the financial-services industry;
- the Company’s ability to address changing or stricter regulatory or other governmental supervision or requirements;
- the Company’s ability to maintain secure and functional financial, accounting, technology, data processing, or other operating systems or facilities, including its capacity to withstand cyber-attacks;
- the adequacy of the Company’s corporate governance, risk-management framework, compliance programs, or internal controls, including its ability to control lapses or deficiencies in financial reporting or to effectively mitigate or manage operational risk;
- the efficacy of the Company's methods or models in assessing business strategies or opportunities or in valuing, measuring, monitoring, or managing positions or risk;
- the Company’s ability to keep pace with changes in technology that affect the Company or its customers, counterparties, or competitors;
- mergers, acquisitions, or dispositions, including the Company’s ability to integrate acquisitions and divest assets;
- the adequacy of the Company’s succession planning for key executives or other personnel;
- the Company’s ability to grow revenue, control expenses, or attract and retain qualified employees;
- natural disasters, war, terrorist activities, pandemics, or the outbreak of COVID-19 or similar outbreaks, and their effects on economic and business environment in which the Company operates;
- adverse effects due to COVID-19 on the Company and its customers, counterparties, employees, and third-party service providers, and the adverse impacts to its business, financial position, results of operations, and prospects;
- impacts related to or resulting from Russia’s military action in Ukraine, such as the broader impacts to financial markets and the global macroeconomic and geopolitical environments; or
- other assumptions, risks, or uncertainties described in the Risk Factors (Item 1A), Management’s Discussion and Analysis of Financial Condition and Results of Operations (Item 7), or the Notes to the Consolidated Financial Statements (Item 8) in this Annual Report on Form 10-K or described in any of the Company’s annual, quarterly or current reports.

Any forward-looking statement made by the Company or on its behalf speaks only as of the date that it was made. The Company does not undertake to update any forward-looking statement to reflect the impact of events, circumstances, or results that arise after the date that the statement was made, except as required by applicable securities laws. You, however, should consult further disclosures (including disclosures of a forward-looking nature) that the Company may make in any subsequent Annual Report on Form 10-K, Quarterly Report on Form 10-Q, or Current Report on Form 8-K.

Results of Operations

Overview

For over two years,The rapid rise in interest rates during 2022 and 2023, the Company has experienced resulting industry-wide reduction in the impacts fair value of securities portfolios, and the COVID-19 global pandemic (the COVID-19 pandemic, or recent bank runs that led to the pandemic). Such impacts failures of some financial institutions in March of 2023, among other events, have included resulted in significant volatility in the global stock U.S. banking sector and fixed income markets, heightened focus on liquidity, uninsured deposits, deposit composition, unrecognized investment losses, and capital.

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During November 2023, the enactment FDIC approved a final rule to implement a special assessment to recover the losses to the DIF associated with protecting uninsured depositors following the closures of certain financial institutions in early 2023. The assessment base for the Coronavirus Aid, Relief, special assessment is equal to an insured depository institution's uninsured deposits as of December 31, 2022, adjusted to exclude the first $5 billion, and Economic Security (CARES) Act will be collected at an annual rate of 13.4 basis points for eight quarterly assessment periods. The Company's portion of this special assessment was $52.8 million and was recognized in noninterest expense during the American Rescue Plan Act fourth quarter of 2021, the Paycheck Protection Program (PPP) administered by the Small Business Administration, and a variety of rulings from the Company's banking regulators.

The Company continues to actively monitor developments related to COVID-19 2023 and its impact to its business, customers, employees, counterparties, vendors, and service providers. During 2022, the Company's results of operations included continued maintenance of the allowance for credit losses (ACL) at a level appropriate given the state of key macroeconomic variables utilized in the econometric models. Additionally, the Company continued to see impacts of the volatile equity and debt markets in its fee-based businesses, as well as the impacts of the recent interest rate increases in net interest income.

The COVID-19 pandemic has necessitated certain actions related to the way the Company operates its business. The Company is carefully monitoring the activities of its vendors and other third-party service providers to mitigate the risks associated with any potential service disruptions. The length of time it may be required to operate under such circumstances and future degrees of disruption remain uncertain. While the Company has not experienced material adverse disruptions to its internal operations due to the pandemic, it continues to review evolving risks and developments. are discussed below.

The Company focuses on the following four core financial objectives. Management believes these objectives will guide its efforts to achieve its vision, to deliver *the* Unparalleled Customer Experience, all while seeking to improve net income and strengthen the balance sheet while undertaking prudent risk management management..

The first financial objective is to continuously improve operating efficiencies. The Company has focused on identifying efficiencies that simplify its organizational and reporting structures, streamline back-office functions and take advantage of synergies and newer technologies among various platforms and distribution networks. The Company has identified and expects to continue identifying ongoing efficiencies through the normal course of business that, when combined with increased revenue, will contribute to improved operating leverage. For 2022, 2023, total revenue increased 14.4% decreased 0.4%, and noninterest expense increased 7.7% 11.2%, as compared to the previous year. Revenue for 2022 included a $66.2 million gain realized on the sale of the Company's Visa Inc. Class B common shares. Revenue Noninterest expense for 2021 2023 included a loss on the Company's investment in Tattooed Chef, Inc. (TTCF) special FDIC assessment of $15.4 million. $52.8 million as discussed above. The Company continues to invest in technological advances that it believes will help management drive operating leverage in the future through improved data analysis and automation. The Company also continues to evaluate core systems and will invest in enhancements that it believes will yield operating efficiencies.

The second financial objective is to increase net interest income through profitable loan and deposit growth and the optimization of the balance sheet. For 2022, 2023, net interest income increased $98.3 million $6.3 million, or 12.1% 0.7%, as compared to the previous year. The Company has shown increased net interest income through the effects of increased volume and mix of average earning assets, coupled with higher interest rates. This increase was partially offset by higher interest-bearing deposit rates and lower PPP income. There was a decrease of $37.7 million in interest income for loans recorded under the PPP in 2022 as compared to 2021. increased borrowed funds. Average earning assets increased $2.1 billion $1.9 billion, or 6.2% 5.3%, compared to 2021. 2022. Average loan balances increased $2.2 billion and average securities increased $1.8 billion $3.5 billion, partially offset by a decrease in average federal funds and resell agreements of $649.8 million, a decrease in average securities of $613.8 million, and a decrease in average interest-bearing due from banks of $1.7 billion $362.1 million from the prior year. Average PPP loans decreased $755.1 million as compared to 2021. The funding for these assets was driven primarily by a 2.8% 16.9% increase in average interest-bearing liabilities deposits, and 17.9% a 647.5% increase in average borrowed funds, partially offset by a decrease of 19.8% in noninterest-bearing deposits. Net interest margin, on a fully tax-equivalent (FTE) basis, increased 13 decreased 11 basis points compared to the same period in 2021 2022 in large part due to repricing and mix changes of interest-bearing liabilities with the increase in short-term interest rates, partially offset by an increase in the benefit of free funds with the increase in short-term interest rates, coupled with and the repricing of earning assets. This increase was partially offset by lower liquidity and the repricing of interest-bearing liabilities. Net interest spread contracted by 22 83 basis points during the same period.

The third financial objective is to grow the Company's revenue from noninterest sources. The Company seeks to grow noninterest revenues throughout all economic and interest rate cycles, while positioning itself to benefit in periods of economic growth. Noninterest income increased $87.1 million decreased $12.4 million, or 18.6% 2.2%, to $554.2 million $541.9 million for the year ended December 31, 2022 December 31, 2023, compared to the same period in 2021. 2022. The increase for 2022 decrease in 2023 was driven by a $66.2 million gain realized on the sale of the Company's Visa Inc. Class B common shares coupled with a loss of $15.4 million on the Company's investment in TTCF recognized in 2021. The increase was also driven by increased 12b-1 and money market income. 2022. These changes are discussed in greater detail below under Noninterest income. For the year ended December 31, 2022 December 31, 2023, noninterest income represented 37.8% 37.1% of total revenues, as compared to 36.4% 37.8% for 2021. 2022.

The fourth financial objective is effective capital management. The Company places a significant emphasis on maintaining a strong capital position, which management believes promotes investor confidence, provides access to funding sources under favorable terms, and enhances the Company's ability to capitalize on business growth and

acquisition opportunities. The Company continues to maximize shareholder value through a mix of reinvesting in organic growth, evaluating acquisition opportunities that complement the Company's strategies, increasing dividends over time, and appropriately utilizing a share repurchase program. At December 31, 2022 December 31, 2023, the Company had a total risk-based capital ratio of 12.50% 12.85% and $2.7 billion $3.1 billion in total shareholders' equity, a decrease an increase of $478.3 million $433.3 million, or 15.2% 16.2%, compared to total shareholders' equity at December 31, 2021, driven by increased accumulated other comprehensive losses. December 31, 2022. The Company repurchased 333,185 thousand did not repurchase shares of common stock at an average price of $96.03 per share during 2022 and 2023 except for shares acquired pursuant to the Company's share-based incentive programs. In 2023, the Company declared $72.6 million $75.3 million in dividends, which represents a 7.9% 3.7% increase compared to dividends declared during 2021. 2022.

Earnings Summary

Earnings Summary

The Company recorded consolidated net income of $431.7 million $350.0 million for the year ended December 31, 2022 December 31, 2023. This represents a 22.3% increase an 18.9% decrease over 2021. 2022. Net income for 2021 2022 was $353.0 million $431.7 million, or an increase of 23.2% 22.3% compared to 2020. 2021. Basic earnings per share for the year ended December 31, 2022 December 31, 2023, were $8.93 $7.22 per share compared to $7.31 $8.93 per share in 2021, an increase 2022, a decrease of 22.2% 19.1%. Basic earnings per share were $5.95 $7.31 per share in 2020, 2021, or an increase of 22.9% 22.2% from 2020 2021 to 2021. 2022. Fully diluted earnings per share decreased 19.0% from 2022 to 2023 and increased 22.4% from 2021 to 2022 and increased 22.1% from 2020 to 2021. 2022. Return on average assets and return on average common shareholder's equity for the year ended December 31, 2022 December 31, 2023 were 1.15% 0.88% and 15.83% 12.23%, respectively, compared to 1.00% 1.15% and 11.43% 15.83%, respectively, for the year ended December 31, 2021 December 31, 2022. Return on average assets and return on average common shareholder's equity for the year ended December 31, 2020 December 31, 2021 were 1.00% and 10.21% 11.43%, respectively.

The Company's net interest income increased to $920.1 million in 2023 compared to $913.8 million in 2022 compared to and $815.5 million in 2021 and $731.2 million in 2020. 2021. In total, net interest income increased $98.3 million $6.3 million, as compared to 2021, 2022, primarily driven by a favorable volume variance of $109.6 million $7.8 million, offset by a $11.3 million $1.5 million rate variance. See Table 2. The favorable volume variance on earning assets was predominantly driven by an increase of $2.1 billion $1.9 billion, or 6.2% 5.3%, in average earning assets. In 2022, 2023, average loan balances increased $2.2 billion and average securities balances increased $1.8 billion $3.5 billion, partially offset by a decrease of $1.7 billion in average federal funds and resell agreements of $649.8 million, a decrease in average securities balances of $613.8 million, and a decrease in interest-bearing due from banks of $362.1 million as compared to 2021. 2022. Net interest margin, on a fully tax-equivalent an FTE basis, (FTE), increased decreased to 2.63% 2.52% for 2022, 2023, compared to 2.50% 2.63% for the same period in 2021, 2022, driven by repricing and mix changes of interest-bearing liabilities with the increase in short-term interest rates, partially offset by an increase in the benefit of free funds higher asset yields, offset by increased cost and the repricing of interest-bearing liabilities. earning assets. Net interest spread contracted by 22 83 basis points during the same period. The Company has seen an increase in the benefit from interest-free funds as compared to 2021 2022 driven by the increase in short-term interest rates. The impact of this benefit increased 35 72 basis points compared to 2021 2022 and is illustrated on Table 3. The magnitude and duration of this impact will be largely dependent upon the FRB's policy decisions and market movements. See Table 18 in Item 7A for an illustration of the impact of an interest rate increase or decrease on net interest income as of December 31, 2022 December 31, 2023.

The provision for credit losses totaled $37.9 million $41.2 million for the year ended December 31, 2022 December 31, 2023, which is an increase of $17.9 million $3.3 million, or 89.5% 8.8%, compared to the same period in 2021. 2022. This change is the result of applying the CECL methodology for computing the allowance for credit losses, coupled with the impacts of loan growth, portfolio metric changes, and changes in macro-economic metrics in the current period as compared to the prior period. See further discussion in "Provision and Allowance for Credit Losses" in this report.

The Company had a decrease of $12.4 million, or 2.2%, in noninterest income in 2023, as compared to 2022, and an increase of $87.1 million, or 18.6%, in noninterest income in 2022, as compared to 2021, 2021. The decrease in 2023 is primarily driven by decreased investment securities gains, net of $61.6 million, partially offset by an increase in trust and a decrease securities processing of $93.0 million, or 16.6%, in 2021, compared to 2020. $20.0 million and other income of $21.0 million. The increase in 2022 is primarily driven by increased investment securities gains, net of $53.4 million and brokerage fees of $30.8 million. The decrease in 2021 is primarily attributable to a decrease of $115.6

million in investment securities gains, net, offset by an increase in trust and securities processing of $29.5 million. The change in noninterest income in 2023 from 2022, and 2022 from 2021 and 2021 from 2020 is illustrated in Table 6.

Noninterest expense increased in 2023 by $101.0 million, or 11.2%, compared to 2022 and increased by $64.5 million, or 7.7%, in 2022 compared to 2021 2021. The increase in 2023 is primarily driven by the FDIC special assessment of $52.8 million, and increased by $11.6 million, or 1.4%, increases in 2021 compared to 2020. salaries and employee benefits expense and processing fees. The increase in 2022 is primarily driven by increases in salary salaries and employee benefits benefit expense, processing fees, other miscellaneous expense, bankcard expense, marketing and business development expense, and legal and consulting expense. The increase in 2021 is primarily driven by increases in processing fees and salary and employee benefit expense, offset by lower operating losses and equipment expense. The increase in noninterest expense in 2023 from 2022, and 2022 from 2021 and 2021 from 2020 is illustrated in Table 7. 7 and below under Noninterest Expense.

Net Interest Income

Net interest income is a significant source of the Company's earnings and represents the amount by which interest income on earning assets exceeds the interest expense paid on liabilities. The volume of interest earning assets earning-assets and the related funding sources, the overall mix of these assets and liabilities, and the interest rates paid on each affect net interest income. Table 2 summarizes the change in net interest income resulting from changes in volume and rates for 2023, 2022 2021 and 2020. 2021.

Net interest margin, presented in Table 1, is calculated as net interest income on a fully tax-equivalent basis as a percentage of average earning assets. Net interest income is presented on a tax-equivalent basis to adjust for the

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tax-exempt status of earnings from certain loans and investments, which are primarily obligations of state and local governments. A critical component of net interest income and related net interest margin is the percentage of earning assets funded by interest-free sources. Table 3 analyzes net interest margin for the three years ended December 31, 2022 December 31, 2023, 2021 2022 and 2020. 2021. Net interest income, average balance sheet amounts and the corresponding yields earned and rates paid for the years 2020 2021 through 2022 2023 are presented in Table 1 below.

The following table presents, for the periods indicated, the average earning assets and resulting yields, as well as the average interest-bearing liabilities and resulting yields, expressed in both dollars and rates.

Table 1

THREE YEAR AVERAGE BALANCE SHEETS/YIELDS AND RATES *(tax-equivalent basis)*
(in millions)

	2023			2022		
	Average Balance	Interest Income/ Expense (1)	Rate Earned/ Paid (1)	Average Balance	Interest Income/ Expense (1)	Rate Earned/ Paid (1)
ASSETS						
Loans and loans held for sale (FTE) (2) (3)	$ 22,337.1	$ 1,400.2	6.27 %	$ 18,823.8	$ 810.1	4.30 %
Securities:						
Taxable	9,097.1	215.0	2.36	9,616.7	192.1	2.00
Tax-exempt (FTE)	3,790.9	128.2	3.38	3,885.1	122.8	3.16
Total securities	12,888.0	343.2	2.66	13,501.8	314.9	2.33
Federal funds sold and resell agreements	316.1	17.7	5.58	965.9	19.1	1.98
Interest-bearing due from banks	2,046.4	103.2	5.04	2,408.5	18.6	0.77
Other earning assets (FTE)	14.0	0.8	5.65	12.1	0.6	4.96
Total earning assets (FTE)	37,601.6	1,865.1	4.96	35,712.1	1,163.3	3.26
Allowance for credit losses	(216.2)			(184.1)		
Cash and due from banks	456.6			420.0		
Other assets	1,888.3			1,631.0		

Total assets	$ 39,730.3			$ 37,579.0		
LIABILITIES AND SHAREHOLDERS' EQUITY						
Interest-bearing demand and savings deposits	$ 18,374.9	$ 588.3	3.20 %	$ 17,333.0	$ 162.2	0.94 %
Time deposits under $250,000	1,967.0	92.4	4.70	95.0	0.7	0.74
Time deposits of $250,000 or more	780.4	23.5	3.01	635.5	4.6	0.72
Total interest-bearing deposits	21,122.3	704.2	3.33	18,063.5	167.5	0.93
Short-term debt	1,929.0	96.4	5.00	8.6	0.3	3.49
Long-term debt	382.3	25.0	6.54	300.6	15.2	5.06
Federal funds purchased	170.0	8.4	4.97	249.7	5.2	2.10
Securities sold under agreements to repurchase	2,005.4	84.6	4.22	2,527.4	35.5	1.40
Total interest-bearing liabilities	25,609.0	918.6	3.59	21,149.8	223.7	1.06
Noninterest-bearing demand deposits	10,640.4			13,264.1		
Other	618.2			438.8		
Total	36,867.6			34,852.7		
Total shareholders' equity	2,862.7			2,726.3		
Total liabilities and shareholders' equity	$ 39,730.3			$ 37,579.0		
Net interest income (FTE)		$ 946.5			$ 939.6	
Net interest spread (FTE)			1.37 %			2.20 %
Net interest margin (FTE)			2.52 %			2.63 %

	2022			2021		
	Average Balance	Interest Income/ Expense (1)	Rate Earned/ Paid (1)	Average Balance	Interest Income/ Expense (1)	Rate Earned/ Paid (1)
ASSETS						
Loans and loans held for sale (FTE) (2) (3)	$18,823.8	$ 810.1	4.30%	$16,629.9	$ 619.3	3.72%

(1) Interest income and yields are stated on an FTE basis, using a marginal tax rate of 21%
exempt interest income net of the disallowance of interest expense, for federal income ta

Securities:						
Taxable	9,616.7	192.1	2.00	7,422.4	127.6	1.72
Tax-exempt (FTE)	3,885.1	122.8	3.16	4,247.0	124.5	2.93
Total securities	13,501.8	314.9	2.33	11,669.4	252.1	2.16
Federal funds sold and resell agreements	965.9	19.1	1.98	1,234.5	10.1	0.81
Interest-bearing due from banks	2,408.5	18.6	0.77	4,063.1	5.4	0.13
Other earning assets (FTE)	12.1	0.6	4.96	23.5	1.0	4.33
Total earning assets (FTE)	35,712.1	1,163.3	3.26	33,620.4	887.9	2.64
Allowance for credit losses	(184.1)			(204.7)		
Cash and due from banks	420.0			460.1		
Other assets	1,631.0			1,452.8		
Total assets	$37,579.0			$35,328.6		
LIABILITIES AND SHAREHOLDERS' EQUITY						
Interest-bearing demand and savings deposits	$17,333.0	$ 162.2	0.94%	$16,982.9	$ 24.1	0.14%
Time deposits under $250,000	95.0	0.7	0.74	242.0	0.8	0.33
Time deposits of $250,000 or more	635.5	4.6	0.72	453.2	1.5	0.33
Total interest-bearing deposits	18,063.5	167.5	0.93	17,678.1	26.4	0.15
Borrowed funds	309.2	15.5	5.00	270.5	12.7	4.68
Federal funds purchased	249.7	5.2	2.10	163.8	—	0.04
Securities sold under agreements to repurchase	2,527.4	35.5	1.40	2,454.3	6.9	0.28
Total interest-bearing liabilities	21,149.8	223.7	1.06	20,566.7	46.0	0.22
Noninterest-bearing demand deposits	13,264.1			11,254.8		
Other	438.8			418.0		
Total	34,852.7			32,239.5		
Total						

shareholders' equity	2,726.3		3,089.1	
Total liabilities and shareholders' equity	$37,579.0		$35,328.6	
Net interest income (FTE)		$ 939.6		$ 841.9
Net interest spread (FTE)		2.20%		2.42%
Net interest margin (FTE)		2.63%		2.50%

There were no options granted during 2023, 2022, 2021, or 2020. 2021. The total intrinsic value of options exercised during the years ended December 31, 2022 December 31, 2023, 2022, and 2021, was $640 thousand, $1.2 million and 2020, was $1.2 million, $12.9 million and $2.0 million, $12.9 million, respectively. As of December 31, 2022 December 31, 2023, there was no unrecognized compensation cost related to the nonvested options.

Cash received from options exercised under all share-based compensation plans was $1.5 million, $18.4 million, $1.9 million, $1.5 million, and $4.6 million $18.4 million for the years ended December 31, 2022 December 31, 2023, 2021, 2022, and 2020, 2021, respectively. The tax benefit realized for stock options exercised was $2.2 million, $2.6 million, $1.6 million, $2.2 million, and $345 thousand $2.6 million for the years ended December 31, 2022 December 31, 2023, 2022, and 2021, and 2020, respectively.

The Company has no specific policy to repurchase common shares to mitigate the dilutive impact of options; however, the Company has historically made adequate discretionary repurchases of common shares in an amount that exceeds stock option exercise activity. See a description of the Company's Repurchase Authorizations in Note 14, "Common Stock and Earnings Per Share," in the Notes to the Consolidated Financial Statements provided in Item 8 of this report.

Omnibus Incentive Compensation Plan

At the April 24, 2018 shareholders' meeting, the shareholders of the Company approved the UMB Financial Corporation Omnibus Incentive Compensation Plan (OICP) which became effective as of April 24, 2018. The OICP permits the issuance to key employees of the Company various types of awards, including stock options, restricted stock and restricted stock units, performance awards and other stock-based awards. Service-based restricted stock unit awards contain a service requirement and the performance-based restricted stock unit awards contain performance and service requirements. The number of shares of the Company's stock reserved for issuance under the OICP is 5.40 million5.40 million shares.

The service-based restricted stock unit awards are payable in shares of stock and the majority contain a service requirement with a four-year graded vesting schedule in which 50% of the units are vested after two years, 75% are vested after three years, and 100% are vested after four years. Certain other grants years. Grants of service-based restricted stock units made beginning in 2023 contain a service requirement with either a two-year cliff vesting or a three-year graded pro-rata vesting schedule schedule. Certain other grants utilize vesting schedules in which 50% of the units grants vest after two years of ratably over the requisite service and the remaining 50% vest after three years of service. period or have a cliff vesting.

The performance-based restricted stock unit awards are payable in shares of stock and contain a service and a performance requirement. The performance requirement is based on two predetermined performance requirements over a three-year period. The service requirement portion is a three-year cliff vesting. If the minimum performance requirement is not met, the participants do not receive the shares.

The dividends on service-based restricted stock units are treated as two separate transactions. First, cash dividends are paid on the restricted stock units. Those cash dividends are then paid to purchase additional shares of restricted stock units. Dividends earned as additional shares of restricted stock units have the same terms as the associated grant. The dividends paid on the stock are recorded as a reduction to retained earnings, similar to all dividend transactions. Dividends are not paid on performance-based restricted stock units.

The table below discloses the status of the service-based restricted stock units during 2022: 2023:

	Number of Units	Weighted Average Price Per Unit	Number of Units	Weighted Average Price Per Unit
Service Based Restricted Stock Units Under the OICP				
Nonvested - December 31, 2021	363,148	$ 70.47		
Service-Based Restricted Stock Units Under the OICP				
Nonvested - December 31, 2022			379,986	$ 82.64
Granted	156,869	98.76	168,254	88.74
Canceled	(27,880)	80.54	(42,988)	89.57
Vested	(112,151)	66.32	(140,142)	72.64
Nonvested - December 31, 2022	379,986	$ 82.64		
Nonvested - December 31, 2023			365,110	$ 88.47

As of December 31, 2022 December 31, 2023, there was $14.5 million $13.5 million of unrecognized compensation cost related to the nonvested service-based restricted stock units. The cost is expected to be recognized over a period of 2.51.9 years.

Total fair value of units vested during the years ended December 31, 2022 December 31, 2023, 2022, and 2021 was $9.7 million, $11.4 million, and 2020 was $11.4 million, $6.7 million, and $ $0.3 million,6.7 million, respectively.

The table below discloses the status of the performance-based restricted stock units during 2022: 2023:

	Number of Units	Weighted Average Price Per Unit	Number of Units	Weighted Average Price Per Unit
Performance Based Restricted Stock Units Under the OICP				
Nonvested - December 31, 2021	165,822	$ 64.08		
Performance-Based Restricted Stock Units Under the OICP				
Nonvested - December 31, 2022			165,110	$ 64.21
Granted	48,416	93.43	54,026	82.27
Canceled	(1,375)	65.02	(9,756)	81.09
Vested	(71,461)	60.35	(128,496)	61.68
Performance based adjustment	23,708	60.35		
Nonvested - December 31, 2022	165,110	$ 64.21		
Performance-based adjustment			64,248	61.68
Nonvested - December 31, 2023			145,132	$ 70.92

As of December 31, 2022 December 31, 2023, there was $3.7 million $2.0 million of unrecognized compensation cost related to the nonvested performance-based restricted stock units. The cost is expected to be recognized over a period of 1.71.6 years. The fair value of units vested during the years ended December 31, 2022 December 31, 2023, 2022 and 2021 was $7.4 million $11.1 million, $7.4 million, and $2.7 million, $2.7 million, respectively. There were no units vested during 2020.

12. BUSINESS SEGMENT REPORTING

The Company has strategically aligned its operations into the following three reportable segments: Commercial Banking, Institutional Banking, and Personal Banking (collectively, the Business Segments, and each, a Business Segment). The Company's senior executive officers regularly evaluate Business Segment financial results produced by the Company's internal reporting system in deciding how to allocate resources and assess performance for individual Business Segments. The Company's reportable Business Segments include certain corporate overhead, technology and service costs that are allocated based on methodologies that are applied consistently between periods. For comparability purposes, amounts in all periods are based on methodologies in effect at December 31, 2022 December 31, 2023. Previously reported results have been reclassified in this filing to conform to the current organizational structure.

The following summaries provide information about the activities of each segment:

Commercial Banking serves the commercial banking and treasury management needs of the Company's small to middle-market businesses through a variety of products and services. Such services include commercial loans, commercial real estate financing, commercial credit cards, letters of credit, loan syndication services, and consultative services. In addition, the Company's specialty lending group offers a variety of business solutions including asset-based lending, mezzanine debt and minority equity investments. Treasury management services include depository services, account reconciliation and cash management tools such as, accounts payable and receivable solutions, electronic fund transfer and automated payments, controlled disbursements, lockbox services, and remote deposit capture services.

Institutional Banking is a combination of banking services, fund services, asset management services, and healthcare services provided to institutional clients. This segment also provides fixed income sales, trading and underwriting, corporate trust and escrow services, as well as institutional custody. Institutional Banking includes UMBFS, which provides fund administration and accounting, investor services and transfer agency, and other services to mutual fund and alternative investment groups. Healthcare services provides healthcare payment solutions including custodial services for health savings accounts (HSAs) and private label, multipurpose debit cards to insurance carriers, third-party administrators, software companies, employers, and financial institutions.

Personal Banking combines consumer banking and wealth management services offered to clients and delivered through personal relationships and the Company's bank branches, ATM network and internet banking. Products offered include deposit accounts, retail credit cards, private banking, installment loans, home equity lines of credit, and residential mortgages. The range of client services extends from a basic checking account to estate planning and trust services and includes private banking, brokerage services, and insurance services in addition to a full spectrum of investment advisory, trust, and custody services.

BUSINESS SEGMENT INFORMATION

Segment financial results were as follows (in thousands):

	Year Ended December 31, 2022				Year Ended December 31, 2023			
	Commercial Banking	Institutional Banking	Personal Banking	Total	Commercial Banking	Institutional Banking	Personal Banking	Total
Net interest income	$ 596,031	$ 159,679	$ 158,087	$ 913,797	$ 598,371	$ 192,765	$ 128,980	$ 920,116
Provision for credit losses	32,851	495	4,554	37,900	33,184	1,406	6,637	41,227
Noninterest income	122,614	323,794	107,825	554,233	97,614	347,933	96,306	541,853
Noninterest expense	332,912	320,976	244,231	898,119	365,856	382,770	250,514	999,140
Income before taxes	352,882	162,002	17,127	532,011				
Income tax expense	66,548	30,551	3,230	100,329				
Net income	$ 286,334	$ 131,451	$ 13,897	$ 431,682				
Income (loss) before taxes					296,945	156,522	(31,865)	421,602
Income tax expense (benefit)					48,403	26,838	(3,663)	71,578
Net income (loss)					$ 248,542	$ 129,684	$ (28,202)	$ 350,024
Average assets	$ 17,489,000	$ 13,100,000	$ 6,990,000	$ 37,579,000	$ 20,676,000	$ 12,504,000	$ 6,550,000	$ 39,730,000

	Year Ended December 31, 2022			
	Commercial Banking	Institutional Banking	Personal Banking	Total
Net interest income	$ 596,031	$ 159,679	$ 158,087	$ 913,797
Provision for credit losses	32,851	495	4,554	37,900
Noninterest income	122,614	323,794	107,825	554,233
Noninterest expense	332,912	320,976	244,231	898,119
Income before taxes	352,882	162,002	17,127	532,011
Income tax expense	67,134	31,889	1,306	100,329
Net income	$ 285,748	$ 130,113	$ 15,821	$ 431,682
Average assets	$ 17,489,000	$ 13,100,000	$ 6,990,000	$ 37,579,000

	Year Ended December 31, 2021			
	Commercial Banking	Institutional Banking	Personal Banking	Total
Net interest income	$ 579,992	$ 87,644	$ 147,885	$ 815,521
Provision for credit losses	15,543	630	3,827	20,000
Noninterest income	84,417	273,483	109,275	467,175
Noninterest expense	306,424	292,142	235,070	833,636
Income before taxes	342,442	68,355	18,263	429,060
Income tax expense	58,580	12,101	5,361	76,042
Net income	$ 283,862	$ 56,254	$ 12,902	$ 353,018

Average assets	$ 15,243,000	$ 12,255,000	$ 7,831,000	$ 35,329,000

	Year Ended December 31, 2021			
	Commercial Banking	Institutional Banking	Personal Banking	Total
Net interest income	$ 579,992	$ 87,644	$ 147,885	$ 815,521
Provision for credit losses	15,543	630	3,827	20,000
Noninterest income	84,417	273,483	109,275	467,175
Noninterest expense	306,424	292,142	235,070	833,636
Income before taxes	342,442	68,355	18,263	429,060
Income tax expense	60,691	12,113	3,238	76,042
Net income	$ 281,751	$ 56,242	$ 15,025	$ 353,018
Average assets	$ 15,243,000	$ 12,255,000	$ 7,831,000	$ 35,329,000

	Year Ended December 31, 2020			
	Commercial Banking	Institutional Banking	Personal Banking	Total
Net interest income	$ 489,501	$ 106,856	$ 134,872	$ 731,229
Provision for credit losses	119,526	882	10,092	130,500
Noninterest income	192,230	254,874	113,062	560,166
Noninterest expense	289,072	286,635	246,298	822,005
Income (loss) before taxes	273,133	74,213	(8,456)	338,890
Income tax expense (benefit)	42,223	11,472	(1,307)	52,388
Net income (loss)	$ 230,910	$ 62,741	$ (7,149)	$ 286,502
Average assets	$ 12,614,000	$ 9,746,000	$ 6,208,000	$ 28,568,000

13. 13. *REVENUE RECOGNITION*

The following is a description of the principal activities from which the Company generates revenue that are within the scope of ASC 606, *Revenue from Contracts with Customers*:

Trust and securities processing – Trust and securities processing income consists of fees earned on personal and corporate trust accounts, custody of securities services, trust investments and wealth management services, and mutual fund and alternative asset servicing. The performance obligations related to this revenue include items such as performing full bond trustee service administration, investment advisory services, custody and record-keeping services, and fund administrative and accounting services. These fees are part of long-term contractual agreements and the performance obligations are satisfied upon completion of service and fees are generally a fixed flat monthly rate or based on a percentage of the account's market value per the contract with the customer. These fees are primarily recorded within the Company's Institutional and Personal Banking segments.

Trading and investment banking – Trading and investment banking income consists of income earned related to the Company's trading securities portfolio, including futures hedging, dividends, bond underwriting, and other securities incomes. The vast majority of this revenue is recognized in accordance with ASC 320, *Debt and Equity Securities*, and is out of the scope of ASC 606. A portion of trading and investment banking represents fees earned for management fees, commissions, and underwriting of corporate bond issuances. The performance obligations

related to these fees include reviewing the credit worthiness of the customer, ensuring appropriate regulatory approval and participating in due diligence. The fees are fixed per the bond prospectus and the performance obligations are satisfied upon registration approval of the bonds by the applicable regulatory agencies. Revenue is recognized at the point in time upon completion of service and when approval is granted by the regulators.

Service charges on deposits – Service charges on deposit accounts represent monthly analysis fees recognized for the services related to customer deposit accounts, including account maintenance and depository transactions processing fees. Commercial Banking and Institutional Banking depository accounts charge fees in accordance with the customer's pricing schedule while Personal Banking account holders are generally charged a flat service fee per month. Deposit service charges for the healthcare accounts included in the Institutional Banking segment are priced according to either standard pricing schedules with individual account holders or according to service agreements between the Company and employer groups or third-party administrators. The Company satisfies the performance obligation related to providing depository accounts monthly as transactions are processed and deposit service charge revenue is recorded monthly. These fees are recognized within all Business Segments.

Insurance fees and commissions – Insurance fees and commissions includes all insurance-related fees earned, including commissions for individual life, variable life, group life, health, group health, fixed annuity, and variable annuity insurance contracts. The performance obligations related to these revenues primarily represent the placement of insurance policies with the insurance company partners. The fees are based on the contracts with insurance company partners and the performance obligations are satisfied when the terms of the policy have been agreed to and the insurance policy becomes effective.

Brokerage fees – Brokerage fees represent income earned related to providing brokerage transaction services, including commissions on equity and commodity trades, and fees for investment management, advisory and administration. The performance obligations related to transaction services are executing the specified trade and are priced according to the customer's fee schedule. Such income is recognized at a point in time as the trade occurs and the performance obligation is fulfilled. The performance obligations related to investment management, advisory and administration include allocating customer assets across a wide range of mutual funds and other investments, on-going account monitoring and re-balancing of the portfolio. These performance obligations are satisfied over time and the related revenue is calculated monthly based on the assets under management of each customer. All material performance obligations are satisfied as of the end of each accounting period.

Bankcard fees – Bankcard fees primarily represent income earned from interchange revenue from MasterCard and Visa for the Company's processing of debit, credit, HSA, and flexible spending account transactions. Additionally, the Company earns income and incentives related to various referrals of customers to card programs. The performance obligation for interchange revenue is the processing of each transaction through the Company's access to the banking system. This performance obligation is completed for each individual transaction and income is recognized per transaction in accordance with interchange rates established by MasterCard and Visa. The performance obligations for various referral and incentive programs include either referring customers to certain card products or issuing exclusively branded cards for certain customer segments. The pricing of these incentive

and referral programs are in accordance with the agreement with the individual card partner. These performance obligations are completed as the referrals are made or over a period of time when the Company is exclusively issuing branded cards. For the years ended December 31, 2022 December 31, 2023, 2021 2022 and 2020, 2021, the Company also has approximately $34.5 million, $*34.039.7 million, $34.5 million, and $30.034.0 million of expense, respectively, recorded within the Bankcard fees line on the Company's Consolidated Statements of Income related to rebates and rewards programs that are outside of the scope of ASC 606. All material performance obligations are satisfied as of the end of each accounting period.*

Investment securities gains, net – In the regular course of business, the Company recognizes gains and losses on the sale of available-for-sale securities. Additionally, the Company recognizes gains and losses on equity securities with readily determinable fair values and equity securities without readily determinable fair values. These gains and losses are recognized in accordance with ASC 320, *Debt and Equity Securities*, and are outside of the scope of ASC 606.

Other income – The Company recognizes other miscellaneous income through a variety of other revenue streams, the most material of which include letter of credit fees, certain loan origination fees, gains on the sale of assets, derivative income, and bank-owned and company-owned life insurance income. These revenue streams are outside of the scope of ASC 606 and are recognized in accordance with the applicable U.S. GAAP. The remainder of Other income is primarily earned through transactions with personal banking customers, including wire transfer

service charges, stop payment charges, and fees for items like money orders and cashier's checks. The performance obligations of these types of fees are satisfied as transactions are completed and revenue is recognized upon transaction execution according to established fee schedules with the customers.

The Company had no material contract assets, contract liabilities, or remaining performance obligations as of December 31, 2022 December 31, 2023 or 2021. 2022. Total receivables from revenue recognized under the scope of ASC 606 were $76.1 million $86.6 million and $73.6 million $76.1 million as of December 31, 2022 December 31, 2023 and December 31, 2021 December 31, 2022, respectively. These receivables are included as part of the Other assets line on the Company's Consolidated Balance Sheets.

The following tables depict the disaggregation of revenue according to revenue stream and Business Segment for the three years ended December 31, 2022 December 31, 2023, 2021, 2022, and 2020. 2021. As stated in Note 12, "Business Segment Reporting," for comparability purposes, amounts in all periods are based on methodologies in effect at December 31, 2022 December 31, 2023 and previously reported results have been reclassified in this filing to conform to the current organizational structure.

Disaggregated revenue is as follows (in thousands):

	Year Ended December 31, 2023				
NONINTEREST INCOME	**Commercial Banking**	**Institutional Banking**	**Personal Banking**	**Revenue (Expense) out of Scope of ASC 606**	**Total**
Trust and securities processing	$ —	$ 203,887	$ 53,313	$ —	$ 257,200
Trading and investment banking	—	298	—	19,332	19,630
Service charges on deposit accounts	38,358	40,578	5,918	96	84,950
Insurance fees and commissions	—	—	1,009	—	1,009
Brokerage fees	374	46,395	7,350	—	54,119
Bankcard fees	65,302	26,153	22,246	(38,982)	74,719
Investment securities losses, net	—	—	—	(3,139)	(3,139)

Other	762	2,835	2,582	47,186	53,365
Total noninterest income	$ 104,796	$ 320,146	$ 92,418	$ 24,493	$ 541,853

	Year Ended December 31, 2022				
NONINTEREST INCOME	Commercial Banking	Institutional Banking	Personal Banking	Revenue (Expense) out of Scope of ASC 606	Total
Trust and securities processing	$ —	$ 183,724	$ 53,483	$ —	$ 237,207
Trading and investment banking	—	319	—	22,882	23,201
Service charges on deposit accounts	34,399	43,054	7,543	171	85,167
Insurance fees and commissions	—	—	1,338	—	1,338
Brokerage fees	230	35,141	7,648	—	43,019
Bankcard fees	61,939	21,998	23,049	(33,535)	73,451
Investment securities gains, net	—	—	—	58,444	58,444
Other	810	1,812	2,642	27,142	32,406
Total noninterest income	$ 97,378	$ 286,048	$ 95,703	$ 75,104	$ 554,233

	Year Ended December 31, 2022				
NONINTEREST INCOME	Commercial Banking	Institutional Banking	Personal Banking	Revenue (Expense) out of Scope of ASC 606	Total
Trust and securities processing	$ —	$ 183,724	$ 53,483	$ —	$ 237,207
Trading and investment banking	—	319	—	22,882	23,201
Service charges on deposit accounts	34,399	43,054	7,543	171	85,167
Insurance fees and commissions	—	—	1,338	—	1,338
Brokerage fees	230	35,141	7,648	—	43,019
Bankcard fees	61,939	21,998	23,049	(33,535)	73,451
Investment securities gains, net	—	—	—	58,444	58,444
Other	810	1,812	2,642	27,142	32,406
Total noninterest income	$ 97,378	$ 286,048	$ 95,703	$ 75,104	$ 554,233

	Year Ended December 31, 2021				
NONINTEREST INCOME	Commercial Banking	Institutional Banking	Personal Banking	Revenue (Expense) out of Scope of ASC 606	Total
Trust and securities processing	$ —	$ 164,480	$ 59,646	$ —	$ 224,126
Trading and investment banking	—	793	—	30,146	30,939
Service charges on deposit accounts	33,350	45,934	6,457	315	86,056
Insurance fees and commissions	—	—	1,309	—	1,309
Brokerage fees	107	4,069	7,995	—	12,171
Bankcard fees	56,918	19,117	21,779	(33,238)	64,576
Investment securities gains, net	—	—	—	5,057	5,057
Other	889	1,634	2,622	37,796	42,941
Total noninterest income	$ 91,264	$ 236,027	$ 99,808	$ 40,076	$ 467,175

Year Ended December 31, 2021

NONINTEREST INCOME	Commercial Banking	Institutional Banking	Personal Banking	Revenue (Expense) out of Scope of ASC 606	Total
Trust and securities processing	$ —	$ 164,480	$ 59,646	$ —	$ 224,126
Trading and investment banking	—	793	—	30,146	30,939
Service charges on deposit accounts	33,350	45,934	6,457	315	86,056
Insurance fees and commissions	—	—	1,309	—	1,309
Brokerage fees	107	4,069	7,995	—	12,171
Bankcard fees	56,918	19,117	21,779	(33,238)	64,576
Investment securities gains, net	—	—	—	5,057	5,057
Other	889	1,634	2,622	37,796	42,941
Total noninterest income	$ 91,264	$ 236,027	$ 99,808	$ 40,076	$ 467,175

	Year Ended December 31, 2020				
NONINTEREST INCOME	Commercial Banking	Institutional Banking	Personal Banking	Revenue (Expense) out of Scope of ASC 606	Total
Trust and securities processing	$ —	$ 131,249	$ 63,397	$ —	$ 194,646
Trading and investment banking	—	755	—	32,190	32,945
Service charges on deposit accounts	30,470	46,611	6,587	211	83,879
Insurance fees and commissions	—	—	1,369	—	1,369
Brokerage fees	245	16,075	8,030	—	24,350
Bankcard fees	52,257	17,731	19,621	(29,065)	60,544
Investment securities gains, net	—	—	—	120,634	120,634
Other	1,135	1,469	2,603	36,592	41,799
Total noninterest income	$ 84,107	$ 213,890	$ 101,607	$ 160,562	$ 560,166

14. *COMMON STOCK AND EARNINGS PER SHARE*

The following table summarizes the share transactions for the three years ended December 31, 2022 December 31, 2023 (in thousands, except for share data):

	Shares Issued	Shares in Treasury	Shares Issued	Shares in Treasury
Balance January 1, 2020	55,056,730	(5,959,124)		
Accelerated Share Repurchase Program	—	(653,498)		
Purchase of Treasury Stock	—	(563,830)		
Sale of Treasury Stock	—	11,372		
Issued for stock options and restricted stock	—	114,736		
Balance December 31, 2020	55,056,730	(7,050,344)		
Balance January 1, 2021			55,056,730	(7,050,344)
Purchase of Treasury Stock	—	(67,671)	—	(67,671)
Sale of Treasury Stock	—	6,835	—	6,835
Issued for stock options and restricted stock	—	485,255	—	485,255
Balance December 31, 2021	55,056,730	(6,625,925)	55,056,730	(6,625,925)
Purchase of Treasury Stock	—	(341,785)	—	(341,785)
Sale of Treasury Stock	—	6,487	—	6,487
Issued for stock options and restricted stock	—	223,897	—	223,897
Balance December 31, 2022	55,056,730	(6,737,326)	55,056,730	(6,737,326)
Purchase of Treasury Stock			—	(94,727)
Sale of Treasury Stock			—	7,782
Issued for stock options and restricted stock			—	321,668
Balance December 31, 2023			55,056,730	(6,502,603)

The Board authorized, at its April 26, 2022, and April 27, 2021 meetings, the repurchase of up to 2 milliontwo million shares of common stock annually at its 2020, 2021 and 2022 meetings. During 2020, the Company entered into an agreement with BAML to repurchase an aggregate of

$30.0 million of the Company's common stock through an accelerated share during the twelve months following each meeting. On July 25, 2023, the Company's Board of Directors approved the repurchase agreement (ASR). Under the ASR, the Company repurchased a total of 653,498 shares. The final settlement up to one million shares of the transactions under the ASR occurred in the second quarter of 2020. Other than purchases pursuant to the ASR, all Company's common stock, which will terminate on April 30, 2024. All share purchases pursuant to the Repurchase Authorizations are intended to be within the scope of Rule 10b-18 promulgated under the Exchange Act. Rule 10b-18 provides a safe harbor for purchases in a given day if the Company satisfies the manner, timing and volume conditions of the rule when purchasing its own common shares. The Company has not made any repurchase of its securities other than pursuant to the Repurchase Authorizations.

Basic earnings per share are computed by dividing income available to common shareholders by the weighted average number of shares outstanding during the year. Diluted earnings per share gives effect to all potential common shares that were outstanding during the year.

The shares used in the calculation of basic and diluted earnings per share, are shown below:

	For the Years Ended December 31,		
	2023	**2022**	**2021**
Weighted average basic common shares outstanding	48,503,643	48,340,922	48,271,462
Dilutive effect of stock options and restricted stock	260,177	406,477	466,830
Weighted average diluted common shares outstanding	48,763,820	48,747,399	48,738,292

	For the Years Ended December 31,		
	2022	**2021**	**2020**
Weighted average basic common shares outstanding	48,340,922	48,271,462	48,137,791
Dilutive effect of stock options and restricted stock	406,477	466,830	205,959
Weighted average diluted common shares outstanding	48,747,399	48,738,292	48,343,750

15. *COMMITMENTS, CONTINGENCIES AND GUARANTEES*

In the normal course of business, the Company is a party to financial instruments with off-balance-sheet risk in order to meet the financing needs of its customers and to reduce its own exposure to fluctuations in interest rates. These financial instruments include commitments to extend credit, commercial letters of credit, standby letters of credit, and futures contracts. These instruments involve, to varying degrees, elements of credit and interest rate risk in excess of the amount recognized in the Consolidated Balance Sheets. The contract or notional amount of those instruments reflects the extent of involvement the Company has in particular classes of financial instruments. Many of the commitments expire without being drawn upon; therefore, the total amount of these commitments does not necessarily represent the future cash requirements of the Company.

The Company's exposure to credit loss in the event of nonperformance by the other party to the financial instruments for commitments to extend credit, commercial letters of credit, and standby letters of credit is represented by the contract or notional amount of those instruments. The Company uses the same credit policies in making commitments and conditional obligations as it does for on-balance-sheet instruments.

Commitments to extend credit are agreements to lend to a customer as long as there is no violation of any condition established in the agreement. These conditions generally include, but are not limited to, each customer being current as to repayment terms of existing loans and no deterioration in the customer's financial condition. Commitments generally have fixed expiration dates or other termination clauses and may require payment of a fee. The interest rate is generally a variable rate. If the commitment has a fixed interest rate, the rate is generally not set until such time as credit is extended. For credit card customers, the Company has the right to change or terminate terms or conditions of the credit card account at any time. Since a large portion of the commitments and unused credit card lines are never actually drawn upon, the total commitment amount does not necessarily represent future cash requirements. The Company evaluates each customer's creditworthiness on an individual basis. The amount of collateral obtained, if deemed necessary by the Company upon extension of credit, is based on management's credit evaluation. Collateral pledged by customers varies but may include accounts receivable, inventory, real estate, plant and equipment, stock, securities and certificates of deposit.

Commercial letters of credit are issued specifically to facilitate trade or commerce. Under the terms of a commercial letter of credit, as a general rule, drafts will be drawn when the underlying transaction is consummated as intended.

Standby letters of credit are conditional commitments issued by the Company payable upon the non-performance of a customer's obligation to a third party. The Company issues standby letters of credit for terms ranging from three months to six years. years. The Company generally requires the customer to pledge collateral to support the letter of credit. The maximum liability to the Company under standby letters of credit at December 31,

December 31, 2023 and 2022, and 2021, was $437.0 million $407.6 million and $365.0437.0 million, respectively. As of December 31, 2022 December 31, 2023 and 2021, 2022, standby letters of credit totaling $25.5 million $29.7 million and $28.6 million, $25.5 million, respectively, were with related parties to the Company.

The credit risk involved in issuing letters of credit is essentially the same as that involved in extending loan facilities. The Company holds collateral supporting those commitments when deemed necessary. Collateral varies but may include such items as those described for commitments to extend credit.

Futures contracts are contracts for delayed delivery of securities or money market instruments in which the seller agrees to make delivery at a specified future date, of a specified instrument, at a specified yield. Risks arise from the possible inability of counterparties to meet the terms of their contracts and from movement in securities values and interest rates. Instruments used in trading activities are carried at fair value and gains and losses on futures contracts are settled in cash daily. Any changes in the fair value are recognized in trading and investment banking income.

The Company uses contracts to offset interest rate risk on specific securities held in the trading portfolio. As of December 31, 2022 December 31, 2023 and 2021, 2022, there were no notional amounts outstanding for these contracts. There were no open futures contract positions during the years ended December 31, 2022 December 31, 2023 or 2021. 2022. There was no net futures activity for the years ended December 31, 2022 December 31, 2023, 2021, 2022, or 2020. 2021. The Company controls the credit risk of its futures contracts through credit approvals, limits and monitoring procedures.

The Company also enters into foreign exchange contracts on a limited basis. For operating purposes, the Company maintains certain balances in foreign banks. Foreign exchange contracts are purchased on a monthly basis

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to avoid foreign exchange risk on these foreign balances. The Company will also enter into foreign exchange contracts to facilitate foreign exchange needs of customers. The Company will enter into a contract to buy or sell a foreign currency at a future date only as part of a contract to sell or buy the foreign currency at the same future date to a customer. During 2022, 2023, contracts to purchase and to sell foreign currency averaged approximately $13.8 million $19.3 million compared to $21.4 million $13.8 million during 2021. 2022. The net gains on these foreign exchange contracts for 2023, 2022 and 2021 were $4.2 million, $3.4 million and 2020 were $3.4 million, $2.6 million and $1.9 million, $2.6 million, respectively.

With respect to group concentrations of credit risk, most of the Company's business activity is with customers in the states of Missouri, Kansas, Colorado, Oklahoma, Nebraska, Arizona, Illinois, and Texas. At December 31, 2022 December 31, 2023, the Company did not have any significant credit concentrations in any particular industry.

The following table summarizes the Company's off-balance sheet financial instruments as described above (in thousands):

	Contract or Notional Amount December 31,		Contract or Notional Amount December 31,	
	2022	2021	2023	2022
Commitments to extend credit for loans (excluding credit card loans)	$ 12,988,231	$ 10,122,617	$ 12,831,831	$ 12,988,231
Commitments to extend credit under credit card loans	4,008,386	3,743,165	4,286,604	4,008,386
Commercial letters of credit	3,334	2,754	1,224	3,334
Standby letters of credit	436,965	365,030	407,574	436,965
Forward contracts	32,552	9,729	26,471	32,552
Spot foreign exchange contracts	5,112	2,946	4,830	5,112

Allowance for Credit Losses on Off-Balance Sheet Credit Exposure

The Company estimates expected credit losses over the contractual period in which the Company is exposed to credit risk via a contractual obligation to extend credit, unless that obligation is unconditionally cancelable by the Company. 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. The estimate is based on expected utilization rates by portfolio segment. Utilization rates are influenced by historical trends and current conditions. The expected utilization rates are applied to the total commitment to determine the expected amount to be funded. The allowance for off-balance sheet credit exposure is calculated by applying portfolio segment expected credit loss rates to the expected amount to be funded.

The following categories of off-balance sheet credit exposures have been identified:

Revolving Lines of Credit: includes commercial, construction, agricultural, personal, and home-equity. Risk inherent to revolving lines of credit often are related to the susceptibility of an individual or business experiencing unpredictable cash flow or financial troubles, thus leading to payment default. During these financial troubles, the borrower could have less than desirable assets collateralizing the revolving line of credit. The financial strain the borrower is experiencing could lead to drawing against the line without the ability to pay the line down.

Non-Revolving Lines of Credit: include commercial and personal. Lines that do not carry a revolving feature are generally associated with a specific expenditure or project, such as to purchase equipment or the construction of real estate. The predominate risk associated with non-revolving lines is the diversion of funds for other expenditures. If the funds get diverted, the contributory value to collateral suffers.

Letters of Credit: includes standby letters of credit. Generally, a standby letter of credit is established to provide assurance to the beneficiary that the applicant will perform certain obligations arising out of a separate transaction between the beneficiary and the applicant. These obligations might be the performance of a service or delivery of a product. If the obligations are not met, it gives the beneficiary the right to draw on the letter of credit.

The ACL for off-balance sheet credit exposures was $3.1 million $5.1 million and $2.6 million $3.1 million as of December 31, 2022 December 31, 2023 and 2021, 2022, respectively, and was recorded in the Accrued expenses and taxes line of the Company's Consolidated Balance Sheets. Provision of $500 thousand $2.0 million was recorded for off-balance sheet credit exposures for the year ended December 31, 2022 December 31, 2023. A reduction of $3.0 million $500 thousand of provision for off-balance sheet credit exposures was recorded for the year ended December 31, 2022. A reduction of $3.0 million of provision for off-balance sheet credit exposures was

recorded for the year ended December 31, 2021. Provision for off-balance sheet credit exposures is recorded in the Provision for credit losses line of the Company's Consolidated Statements of Income.

16. *INCOME TAXES*

Income taxes as set forth below produce effective income tax rates of 18.9% 17.0% in 2023, 18.9% in 2022, 17.7% and 17.7% in 2021, and 15.5% in 2020. 2021. These percentages are computed by dividing Income tax expense by Income before income taxes.

Income tax expense includes the following components (in thousands):

	Year Ended December 31,		
	2023	2022	2021
Current tax			
Federal	$ 81,565	$ 92,673	$ 72,410
State	10,452	13,964	16,356
Total current tax expense	92,017	106,637	88,766
Deferred tax			
Federal	(19,438)	(3,998)	(9,872)
State	(1,001)	(2,310)	(2,852)
Total deferred tax benefit	(20,439)	(6,308)	(12,724)
Total tax expense	$ 71,578	$ 100,329	$ 76,042

	Year Ended December 31,		
	2022	2021	2020
Current tax			
Federal	$ 92,673	$ 72,410	$ 49,053
State	13,964	16,356	8,171
Total current tax expense	106,637	88,766	57,224
Deferred tax			
Federal	(3,998)	(9,872)	(4,045)
State	(2,310)	(2,852)	(791)
Total deferred tax benefit	(6,308)	(12,724)	(4,836)

Total tax expense	$	100,329	$	76,042	$	52,388

The reconciliation between the income tax expense and the amount computed by applying the statutory federal tax rate of 21%21% for income before income taxes is as follows (in thousands):

	Year Ended December 31,					
	2023		2022		2021	
Statutory federal income tax expense	$	88,536	$	111,722	$	90,103
Tax-exempt interest income		(20,614)		(20,206)		(20,635)
Tax-exempt life insurance related income		(4,961)		(723)		(2,631)
Meals, entertainment and related expenses		1,582		854		580
State and local income taxes, net of federal tax benefits		7,466		9,207		10,659
Equity-based compensation		(1,377)		(1,921)		(1,889)
Federal tax credits, net of amortization of LIHTC investments		(5,049)		(3,748)		(2,634)
Other		5,995		5,144		2,489
Total tax expense	$	71,578	$	100,329	$	76,042

	Year Ended December 31,					
	2022		2021		2020	
Statutory federal income tax expense	$	111,722	$	90,103	$	71,167
Tax-exempt interest income		(20,206)		(20,635)		(20,914)
Tax-exempt life insurance related income		(723)		(2,631)		(3,420)
Meals, entertainment and related expenses		854		580		924
State and local income taxes, net of federal tax benefits		9,207		10,659		5,835
Equity-based compensation		(1,921)		(1,889)		(299)
Federal tax credits, net of amortization of LIHTC investments		(3,748)		(2,634)		(1,772)
Other		5,144		2,489		867
Total tax expense	$	100,329	$	76,042	$	52,388

In preparing its tax returns, the Company is required to interpret tax laws and regulations to determine its taxable income. Periodically, the Company is subject to examinations by various taxing authorities that may give rise to differing interpretations of these laws. Upon examination, agreement of tax liabilities between the Company and the multiple tax jurisdictions in which the Company files tax returns may ultimately be different. During 2022, the Internal Revenue Service closed the examination of tax years 2014 and 2015 with no changes to the tax returns as filed. The Company is in the examination process with two state tax authorities for tax years 2018, 2019 and 2020. The Company believes the aggregate amount of any additional liabilities that may result from these examinations, if any, will not have a material adverse effect on the financial condition, results of operations, or cash flows of the Company.

Deferred income taxes result from differences between the carrying value of assets and liabilities measured for financial reporting and the tax basis of assets and liabilities for income tax return purposes.

The significant components of deferred tax assets and liabilities are reflected in the following table (in thousands):

	December 31,				December 31,	
	2022		2021		2023	2022
Deferred tax assets:						
Net unrealized loss on securities available for sale	$	248,001	$	—	$ 202,804	$ 248,001
Loans, principally due to allowance for credit losses		43,129		45,029	47,995	43,129
Equity-based compensation		7,743		6,493	7,446	7,743
Accrued expenses		25,007		23,032	35,779	25,007
Deferred compensation		15,375		16,320	17,918	15,375
Miscellaneous		2,289		5,515	3,617	2,289
Total deferred tax assets before valuation allowance		341,544		96,389	315,559	341,544

Valuation allowance	(180)	(1,335)	(3,286)	(180)
Total deferred tax assets	341,364	95,054	312,273	341,364
Deferred tax liabilities:				
Net unrealized gain on securities available for sale	—	(35,447)		
Net unrealized gain on fair value hedges	(18,617)	(1,336)	(17,855)	(18,617)
Securities	(87)	(788)		
Net unrealized gain on cash flow hedges			(4,133)	(1,798)
Land, buildings and equipment	(33,036)	(37,370)	(27,772)	(33,036)
Original issue discount	(992)	(1,486)	(496)	(992)
Prepaid expenses	(5,862)	(4,359)	(6,672)	(5,862)
Partnership investments	(6,737)	(5,627)	(6,059)	(6,737)
Trust preferred securities	(6,912)	(7,250)	(6,673)	(6,912)
Intangibles	(17,225)	(20,067)	(16,843)	(17,225)
Miscellaneous	(3,471)	(3,426)	(3,574)	(1,760)
Total deferred tax liabilities	(92,939)	(117,156)	(90,077)	(92,939)
Net deferred tax asset (liability)	$ 248,425	$ (22,102)		
Net deferred tax asset			$ 222,196	$ 248,425

As of December 31, 2022 December 31, 2023, state net operating loss carryforwards of approximately $544 thousand $1.2 million are included in the miscellaneous deferred tax assets line item above. These deferred tax assets include approximately $16.5 million $34.1 million related to net operating losses loss carryforwards that can be used to offset taxable income in future periods and reduce our income taxes payable in those future periods. Most of these net operating losses expire at various times between 2023 2024 and 2041 2043 and some have an indefinite carryforward. During the year ended December 31, 2022 December 31, 2023, due to cumulative losses, the Company released established a portion of the state valuation allowance of $1.2 million, due to positive evidence outweighing negative evidence, specifically no longer being in a cumulative loss position in $2.1 million, against certain jurisdictions. state deferred tax assets. As of December 31, 2022 December 31, 2023 and 2021, 2022, the Company had a valuation allowance of $13 thousand $1.2 million and $514 $13 thousand, respectively, for certain state net operating losses as they are not expected to be realized. In addition, as of December 31, 2022 December 31, 2023 and 2021, 2022, the Company had a valuation allowance of $167 thousand $2.1 million and $821 $167 thousand, respectively, to reduce certain other state deferred tax assets to the amount of tax benefit management believes will be more likely than not realized.

The net deferred tax asset at December 31, 2023 and December 31, 2022 is are included in the Other assets line of the Company's Consolidated Balance Sheets while the net deferred tax liability at December 31, 2021 is included in the Accrued expenses and taxes line of the Company's Consolidated Balance Sheets.

The Company and its subsidiaries file income tax returns in the U.S. federal jurisdiction and various states. state and local jurisdictions. With few exceptions, the Company is no longer subject to U.S. federal, state and local income tax examinations by tax authorities for tax years prior to 2017 2018 in the jurisdictions in which it files.

Liabilities Associated With Unrecognized Tax Benefits

The gross amount of unrecognized tax benefits totaled $9.4 million $10.9 million and $8.8 million $9.4 million at December 31, 2022 December 31, 2023 and 2021, 2022, respectively. The total amount of unrecognized tax benefits, net of associated deferred tax benefit, that would impact the effective tax rate, if recognized, would be $7.4 million $8.6 million and $7.0 million $7.4 million at December 31, 2022 December 31, 2023 and December 31, 2021 December 31, 2022, respectively. The unrecognized tax benefits relate to state tax positions that have a corresponding federal tax benefit. While it is expected that the amount of unrecognized tax benefits will change in the next twelve months, the Company does not expect this change to have a material impact on the financial condition, results of operations, or cash flows of the Company.

A reconciliation of the beginning and ending amount of unrecognized tax benefits is as follows (in thousands):

	December 31,	
	2023	**2022**
Unrecognized tax benefits - opening balance	$ 9,360	$ 8,798
Gross increases - tax positions in prior period	64	—
Gross decreases - tax positions in prior period	—	(63)
Gross increases - current-period tax positions	2,807	2,621

Lapse of statute of limitations		(1,310)		(1,996)
Unrecognized tax benefits - ending balance	$	10,921	$	9,360

	December 31,			
	2022		2021	
Unrecognized tax benefits - opening balance	$	8,798	$	6,717
Gross increases - tax positions in prior period		—		291
Gross decreases - tax positions in prior period		(63)		—
Gross increases - current-period tax positions		2,621		2,201
Lapse of statute of limitations		(1,996)		(411)
Unrecognized tax benefits - ending balance	$	9,360	$	8,798

17. *DERIVATIVES AND HEDGING ACTIVITIES*

Risk Management Objective of Using Derivatives

The Company is exposed to certain risks arising from both its business operations and economic conditions. The Company principally manages its exposures to a wide variety of business and operational risks through management of its core business activities. The Company manages economic risks, including interest rate, liquidity, and credit risk, primarily by managing the amount, sources, and duration of its assets and liabilities. Specifically, the Company 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 value of which are determined by interest rates. The Company's derivative financial instruments are used to manage differences in the amount, timing, and duration of the Company's known or expected cash receipts and its known or expected cash payments principally related to the Company's loans and borrowings. The Company also has interest rate derivatives that result from a service provided to certain qualifying customers and, therefore, are not used to manage interest rate risk of the Company's assets or liabilities. The Company has entered into an offsetting position for each of these

derivative instruments with a matching instrument from another financial institution in order to minimize its net risk exposure resulting from such transactions.

Fair Values of Derivative Instruments on the Consolidated Balance Sheets

The table below presents the fair value of the Company's derivative financial instruments as of December 31, 2022 December 31, 2023 and 2021. 2022. The Company's derivative assets and derivative liabilities are located within Other assets and Other liabilities, respectively, on the Company's Consolidated Balance Sheets.

Derivative fair values are determined using valuation techniques including discounted cash flow analysis on the expected cash flows from each derivative. This analysis reflects the contractual terms of the derivatives, including the period to maturity, and uses observable market-based inputs, including interest rate curves, foreign exchange rates, and implied volatilities. The Company 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 contracts for the effect of nonperformance risk, the Company has considered the impact of netting and any applicable credit enhancements, such as collateral postings, thresholds, mutual puts, and guarantees.

This table provides a summary of the fair value of the Company's derivative assets and liabilities as of December 31, 2022 December 31, 2023 and December 31, 2021 December 31, 2022 (in thousands):

	Derivative Assets				Derivative Liabilities			
	December 31,				December 31,			
Fair Value	2023		2022		2023		2022	
Interest Rate Products:								
Derivatives not designated as hedging instruments	$	99,574	$	47,638	$	105,016	$	126,231
Derivatives designated as hedging instruments		61,922		483		67		103
Total	$	161,496	$	48,121	$	105,083	$	126,334

	Derivative Assets				Derivative Liabilities			
	December 31,				December 31,			
Fair Value	2022		2021		2022		2021	
Interest Rate Products:								
Derivatives not designated as hedging instruments	$	47,638	$	57,134	$	126,231	$	13,944
Derivatives designated as hedging instruments		483		546		103		—
Total	$	48,121	$	57,680	$	126,334	$	13,944

Fair Value Hedges of Interest Rate Risk

The Company is exposed to changes in the fair value of certain of its fixed-rate assets and liabilities due to changes in the benchmark interest rate, LIBOR. rates. Interest rate swaps designated as fair value hedges involve making fixed rate payments to a counterparty in exchange for the Company receiving variable rate payments over the life of the agreements without the exchange of the underlying notional amount. The Company did not have any interest rate swaps that were designated as fair value hedges as of December 31, 2023. As of December 31, 2022, the Company had three interest rate swaps that were designated as fair value hedges of interest rate risk associated with the Company's municipal bond securities. These swaps had a notional amount of $254.6 million $254.6 million as of December 31, 2022. As of December 31, 2021, the Company had 10 interest rate swaps that were designated as fair value hedges of interest rate risk associated with the Company's municipal bond securities. These swaps had a notional amount of $1.0 billion as of December 31, 2021. During the year ended December 31, 2022 December 31, 2023, the Company terminated seven all three fair value hedges. In connection with these terminated hedges, $58.1 million $11.5 million of hedging adjustments will be amortized through the contractual maturity date of each respective hedged item.

For derivatives designated and that qualify as fair value hedges, 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 Interest income in the Consolidated Statements of Income.

Cash Flow Hedges of Interest Rate Risk

The Company's objective in using interest rate derivatives is to manage its exposure to interest rate movements. To accomplish this objective, the Company primarily uses interest rate swaps and floors as part of its interest rate risk management strategy. Interest rate swaps designated as cash flow hedges involve the receipt of variable amounts from a counterparty in exchange for the Company making fixed-rate payments over the life of the agreements without exchange of the underlying notional amount. As of December 31, 2022 December 31, 2023 and 2021, 2022, the Company had two interest rate swaps that were designated as cash flow hedges of interest rate risk associated with the Company's variable-rate subordinated debentures issued by Marquette Capital Trusts III and IV. These swaps had an aggregate notional amount of $51.5 million $51.5 million at both December 31, 2022 December 31, 2023 and 2021. 2022. Interest rate floors designated as cash flow hedges involve the receipt of variable-rate amounts from a counterparty if interest rates fall below the

strike rate on the contract in exchange for an upfront premium. As of December 31, 2023, the Company had three interest rate floors with an aggregate notional amount of $1.0 billion that were designated as cash flow hedges of interest rate risk. The Company did not have any interest rate floors designated as cash flow hedges as of December 31, 2022.

On August 28, 2020August 28, 2020, the Company terminated an interest rate floor with a notional amount of $750.0 million. $750.0 million. At the date of termination, the interest rate floor had a net asset fair value of $34.1 million. $34.1 million. The gross unrealized gain on the terminated interest rate floor remaining in AOCI was $7.4 million, $2.7 million, or $5.6 million $2.0 million net of tax, and $12.3 million, $7.4 million, or $9.4 million $5.6 million net of tax, as of December 31, 2022 December 31, 2023 and 2021, 2022, respectively. The unrealized gain will be reclassified into Interest income as the underlying forecasted transactions impact earnings through the original maturity of the hedged forecasted transactions. The total remaining term over which the unrealized gain will be reclassified into earnings is 1.7 years 0.7. years.

For derivatives designated and that qualify as cash flow hedges of interest rate risk, the gain or loss on the derivative is recorded in AOCI and is subsequently reclassified into interest expense and interest income in the period during which the hedged forecasted transaction affects earnings. Amounts reported in AOCI related to interest rate swap derivatives will be reclassified to Interest expense as interest payments are received or paid on the Company's hedged items. Amounts reported in AOCI related to interest rate floor derivatives will be reclassified to Interest income as interest payments are received or paid on the Company's hedged items. The Company expects to reclassify $1.2 million $1.1 million from AOCI as a reduction to Interest expense and $4.7 million $2.5 million from AOCI to Interest income during the next 12 months. As of December 31, 2022 December 31, 2023, the Company is hedging its exposure to the variability in future cash flows for forecasted transactions over a maximum period of 13.712.7 years.

Non-designated Hedges

The remainder of the Company's derivatives are not designated in qualifying hedging relationships. Derivatives not designated as hedges are not speculative and result from a service the Company provides to certain customers. The Company executes interest rate swaps with commercial banking customers to facilitate their respective risk management strategies. Those interest rate swaps are simultaneously offset by interest rate swaps that the Company executes with a third party, such that the Company minimizes its net risk exposure resulting from such transactions. As the interest rate swaps associated with this program do not meet the strict hedge accounting requirements, changes in the fair value of both the customer swaps and the offsetting swaps are recognized directly

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in earnings. As of December 31, 2022 December 31, 2023, the Company had 230258 interest rate swaps with an aggregate notional amount of $3.5 billion $4.3 billion related to this program. As of December 31, 2021 December 31, 2022, the Company had 188230 interest rate swaps with an aggregate notional amount of $2.9 billion. $3.5 billion.

Effect of Derivative Instruments on the Consolidated Statements of Income and Accumulated Other Comprehensive Income

This table provides a summary of the amount of gain or loss recognized in Other noninterest expense in the Consolidated Statements of Income for the years ended December 31, 2022 December 31, 2023, 2021, 2022, and 2020 2021 related to the Company's derivative assets and liabilities (in thousands):

	Amount of Gain (Loss) Recognized		
	For the Year Ended December 31,		
	2023	2022	2021
Interest Rate Products			
Derivatives not designated as hedging instruments	$ (69)	$ 423	$ 387
Total	$ (69)	$ 423	$ 387
Interest Rate Products			
Derivatives designated as hedging instruments:			
Fair value adjustments on derivatives	$ 904	$ 72,539	$ 5,231
Fair value adjustments on hedged items	(902)	(72,047)	(5,832)
Total	$ 2	$ 492	$ (601)

	Amount of Gain (Loss) Recognized		
	For the Year Ended December 31,		
	2022	2021	2020
Interest Rate Products			
Derivatives not designated as hedging instruments	$ 423	$ 387	$ (720)
Total	$ 423	$ 387	$ (720)
Interest Rate Products			
Derivatives designated as hedging instruments:			
Fair value adjustments on derivatives	$ 72,539	$ 5,231	$ (139)
Fair value adjustments on hedged items	(72,047)	(5,832)	139
Total	$ 492	$ (601)	$ —

This table provides a summary of the effect of hedges on AOCI in the Consolidated Statements of Comprehensive Income for the years ended December 31, 2022 December 31, 2023, 2021, 2022, and 2020 2021 related to the Company's derivative assets and liabilities (in thousands):

	For the Year Ended December 31, 2023					
Derivatives in Cash Flow Hedging Relationships	Gain Recognized in OCI on Derivative	Gain Recognized in OCI Included Component	Loss Recognized in OCI Excluded Component	Gain Reclassified from AOCI into Earnings	Gain Reclassified from AOCI into Earnings Included Component	Loss Reclassified from AOCI into Earnings Excluded Component
Interest rate floors	$ 14,123	$ 24,826	$ (10,703)	$ 4,605	$ 6,948	$ (2,343)
Interest rate swaps	892	892	—	1,312	1,312	—
Total	$ 15,015	$ 25,718	$ (10,703)	$ 5,917	$ 8,260	$ (2,343)

	For the Year Ended December 31, 2022					
Derivatives in Cash Flow Hedging Relationships	Gain Recognized in OCI on Derivative	Gain Recognized in OCI Included Component	Gain Recognized in OCI Excluded Component	Gain (Loss) Reclassified from AOCI into Earnings	Gain (Loss) Reclassified from AOCI into Earnings Included Component	Loss Reclassified from AOCI into Earnings Excluded Component
Interest rate floor	$ —	$ —	$ —	$ 4,998	$ 7,248	$ (2,250)
Interest rate swaps	12,608	12,608	—	(502)	(502)	—
Total	$ 12,608	$ 12,608	$ —	$ 4,496	$ 6,746	$ (2,250)

For the Year Ended December 31, 2022

Derivatives in Cash Flow Hedging Relationships	Gain Recognized in OCI on Derivative	Gain Recognized in OCI Included Component	Gain Recognized in OCI Excluded Component	Gain (Loss) Reclassified from AOCI into Earnings	Gain (Loss) Reclassified from AOCI into Earnings Included Component	Loss Reclassified from AOCI into Earnings Excluded Component
Interest rate floor	$ —	$ —	$ —	$ 4,998	$ 7,248	$ (2,250)
Interest rate swaps	12,608	12,608	—	(502)	(502)	—
Total	$ 12,608	$ 12,608	$ —	$ 4,496	$ 6,746	$ (2,250)

	For the Year Ended December 31, 2021					
Derivatives in Cash Flow Hedging Relationships	Gain Recognized in OCI on Derivative	Gain Recognized in OCI Included Component	Gain Recognized in OCI Excluded Component	Gain (Loss) Reclassified from AOCI into Earnings	Gain (Loss) Reclassified from AOCI into Earnings Included Component	Loss Reclassified from AOCI into Earnings Excluded Component
Interest rate floor	$ —	$ —	$ —	$ 4,696	$ 6,946	$ (2,250)
Interest rate swaps	3,106	3,106	—	(1,344)	(1,344)	—
Total	$ 3,106	$ 3,106	$ —	$ 3,352	$ 5,602	$ (2,250)

	For the Year Ended December 31, 2020					
Derivatives in Cash Flow Hedging Relationships	Gain (Loss) Recognized in OCI on Derivative	Gain (Loss) Recognized in OCI Included Component	Loss Recognized in OCI Excluded Component	Gain (Loss) Reclassified from AOCI into Earnings	Gain (Loss) Reclassified from AOCI into Earnings Included Component	Loss Reclassified from AOCI into Earnings Excluded Component
Interest rate floor	$ 28,390	$ 34,917	$ (6,527)	$ 2,943	$ 5,398	$ (2,455)
Interest rate swaps	(7,411)	(7,411)	—	(1,038)	(1,038)	—
Total	$ 20,979	$ 27,506	$ (6,527)	$ 1,905	$ 4,360	$ (2,455)

Credit-risk-related Contingent Features

The Company has agreements with certain of its derivative counterparties that contain a provision that if the Company defaults on any of its indebtedness, including default where repayment of the indebtedness has not been accelerated by the lender, then the Company could also be declared in default on its derivative obligations.

The Company has minimum collateral posting thresholds with certain of its derivative counterparties. As of December 31, 2022December 31, 2023, the Company had notnot posted any collateral as there were no derivatives in a net liability position. If the Company had breached any of these provisions at December 31, 2022December 31, 2023, it could have been required to settle its obligations under the agreements at the termination value.

18. *DISCLOSURES ABOUT FAIR VALUE OF FINANCIAL INSTRUMENTS*

The following table presents information about the Company's assets and liabilities measured at fair value on a recurring basis as of December 31, 2022December 31, 2023 and 2021 2022 and indicates the fair value hierarchy of the valuation techniques utilized by the Company to determine such fair value.

Fair values determined by Level 1 inputs utilize quoted prices in active markets for identical assets and liabilities that the Company has the ability to access. Fair values determined by Level 2 inputs utilize inputs other than quoted prices included in Level 1 that are observable for the asset or liability, either directly or indirectly. Level 2 inputs include quoted prices for similar assets or liabilities in active markets, and inputs other than quoted prices that are observable for the asset or liability, such as interest rates and yield curves that are observable at commonly quoted intervals. Level 3 inputs are unobservable inputs for the asset or liability, and include situations where there is little, if any, market activity for the asset or liability. In certain cases, the inputs used to measure fair value may fall into different levels of the hierarchy. In such cases, the fair value is determined based on the lowest level input that is significant to the fair value measurement in its entirety.

Assets and liabilities measured at fair value on a recurring basis as of December 31, 2022 December 31, 2023 and 2021 2022 (in thousands):

Description	December 31, 2023	Fair Value Measurement at December 31, 2023 Using: Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Assets				
U.S. Treasury	$ 881	$ 881	$ —	$ —
U.S. Agencies	—	—	—	—
Mortgage-backed	1,738	—	1,738	—
State and political subdivisions	13,482	—	13,482	—
Corporates	1,974	1,974	—	—
Trading – other	18	18	—	—
Trading securities	18,093	2,873	15,220	—
U.S. Treasury	1,298,742	1,298,742	—	—
U.S. Agencies	159,721	—	159,721	—
Mortgage-backed	3,620,785	—	3,620,785	—
State and political subdivisions	1,286,975	—	1,286,975	—
Corporates	351,275	351,275	—	—
Collateralized loan obligations	351,115	—	351,115	—
Securities available for sale	7,068,613	1,650,017	5,418,596	—
Equity securities with readily determinable fair values	11,228	11,228	—	—
Company-owned life insurance	69,727	—	69,727	—
Bank-owned life insurance	523,960	—	523,960	—
Derivatives	161,496	—	161,496	—
Total	$ 7,853,117	$ 1,664,118	$ 6,188,999	$ —
Liabilities				
Derivatives	$ 105,083	$ —	$ 105,083	$ —
Securities sold not yet purchased	8,018	—	8,018	—
Total	$ 113,101	$ —	$ 113,101	$ —

Description	December 31, 2022	Fair Value Measurement at December 31, 2022 Using: Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Assets				
U.S. Treasury	$ 580	$ 580	$ —	$ —
U.S. Agencies	7,558	—	7,558	—
Mortgage-backed	—	—	—	—
State and political subdivisions	8,038	—	8,038	—
Corporates	1,024	1,024	—	—
Trading – other	780	780	—	—
Trading securities	17,980	2,384	15,596	—

U.S. Treasury	777,070	777,070	—	—
U.S. Agencies	171,296	—	171,296	—
Mortgage-backed	3,982,122	—	3,982,122	—
State and political subdivisions	1,362,407	—	1,362,407	—
Corporates	367,500	367,500	—	—
Collateralized loan obligations	345,952	—	345,952	—
Securities available for sale	7,006,347	1,144,570	5,861,777	—
Equity securities with readily determinable fair values	10,782	10,782	—	—
Company-owned life insurance	56,769	—	56,769	—
Bank-owned life insurance	510,293	—	510,293	—
Derivatives	48,121	—	48,121	—
Total	$ 7,650,292	$ 1,157,736	$ 6,492,556	$ —
Liabilities				
Derivatives	$ 126,334	$ —	$ 126,334	$ —
Securities sold not yet purchased	3,503	—	3,503	—
Total	$ 129,837	$ —	$ 129,837	$ —

	Fair Value Measurement at December 31, 2022 Using			
Description	**December 31, 2022**	**Quoted Prices in Active Markets for Identical Assets (Level 1)**	**Significant Other Observable Inputs (Level 2)**	**Significant Unobservable Inputs (Level 3)**
Assets				
U.S. Treasury	$ 580	$ 580	$ —	$ —
U.S. Agencies	7,558	—	7,558	—
Mortgage-backed	—	—	—	—
State and political subdivisions	8,038	—	8,038	—
Corporates	1,024	1,024	—	—
Trading – other	780	780	—	—
Trading securities	17,980	2,384	15,596	—
U.S. Treasury	777,070	777,070	—	—
U.S. Agencies	171,296	—	171,296	—
Mortgage-backed	3,982,122	—	3,982,122	—
State and political subdivisions	1,362,407	—	1,362,407	—
Corporates	367,500	367,500	—	—
Collateralized loan obligations	345,952	—	345,952	—
Securities available for sale	7,006,347	1,144,570	5,861,777	—
Equity securities with readily determinable fair values	10,782	10,782	—	—
Company-owned life insurance	56,769	—	56,769	—
Bank-owned life insurance	510,293	—	510,293	—
Derivatives	48,121	—	48,121	—
Total	$ 7,650,292	$ 1,157,736	$ 6,492,556	$ —
Liabilities				
Derivatives	$ 126,334	$ —	$ 126,334	$ —
Securities sold not yet purchased	3,503	—	3,503	—
Total	$ 129,837	$ —	$ 129,837	$ —

Description	Fair Value Measurement at December 31, 2021 Using			
	December 31, 2021	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Assets				
U.S. Treasury	$ 1,625	$ 1,625	$ —	$ —
U.S. Agencies	2,159	—	2,159	—
Mortgage-backed	2,060	—	2,060	—
State and political subdivisions	21,671	—	21,671	—
Corporates	4,000	4,000	—	—
Trading – other	360	360	—	—
Trading securities	31,875	5,985	25,890	—
U.S. Treasury	69,174	69,174	—	—
U.S. Agencies	124,932	—	124,932	—
Mortgage-backed	7,965,055	—	7,965,055	—
State and political subdivisions	3,422,688	—	3,422,688	—
Corporates	317,846	317,846	—	—
Collateralized loan obligations	76,819	—	76,819	—
Securities available for sale	11,976,514	387,020	11,589,494	—
Equity securities with readily determinable fair values	64,149	64,149	—	—
Company-owned life insurance	65,245	—	65,245	—
Bank-owned life insurance	498,373	—	498,373	—
Derivatives	57,680	—	57,680	—
Total	$ 12,693,836	$ 457,154	$ 12,236,682	$ —
Liabilities				
Derivatives	$ 13,944	$ —	$ 13,944	$ —
Securities sold not yet purchased	3,197	—	3,197	—
Total	$ 17,141	$ —	$ 17,141	$ —

Valuation methods for instruments measured at fair value on a recurring basis

The following methods and assumptions were used to estimate the fair value of each class of financial instruments measured on a recurring basis:

Trading Securities Fair values for trading securities (including financial futures), are based on quoted market prices where available. If quoted market prices are not available, fair values are based on quoted market prices for similar securities.

Securities Available for Sale Fair values are based on quoted market prices or dealer quotes, if available. If a quoted market price is not available, fair value is estimated using quoted market prices for similar securities. Prices are provided by third-party pricing services and are based on observable market inputs. On an annual basis, the Company compares a sample of these prices to other independent sources for the same securities. Additionally, throughout the year, if securities are sold, comparisons are made between the pricing services prices and the market prices at which the securities were sold. Variances are analyzed, and, if appropriate, additional research is conducted with the third-party pricing services. Based on this research, the pricing services may affirm or revise their quoted price. No significant adjustments have been made to the prices provided by the pricing services. The pricing services also provide documentation on an ongoing basis that includes reference data, inputs and methodology by asset class, which is reviewed to ensure that security placement within the fair value hierarchy is appropriate.

Equity securities with readily determinable fair values Fair values are based on quoted market prices.

Company-owned Life Insurance Fair value is equal to the cash surrender value of the life insurance policies.

Bank-owned Life Insurance Fair value is equal to the cash surrender value of the life insurance policies.

Derivatives Fair values are determined using valuation techniques including discounted cash flow analysis on the expected cash flows from each derivative. This analysis reflects the contractual terms of the derivatives, including the period to maturity, and uses observable market-based inputs, including interest rate curves, foreign exchange rates, and implied volatilities. The Company 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 contracts for the effect of nonperformance risk, the Company has considered the impact of netting and any applicable credit enhancements, such as collateral postings, thresholds, mutual puts, and guarantees.

Securities sold not yet purchased Fair values are based on quoted market prices or dealer quotes, if available. If a quoted market price is not available, fair value is estimated using quoted market prices for similar securities. Prices are provided by third-party pricing services and are based on observable market inputs.

Assets measured at fair value on a non-recurring basis as of December 31, 2022 December 31, 2023 and 2021 2022 (in thousands):

		Fair Value Measurement at December 31, 2022 Using					Fair Value Measurement at December 31, 2023 Using			
Description	December 31, 2022	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Total Losses Recognized During the Twelve Months Ended December 31	December 31, 2023	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Total Gains Recognized During the Twelve Months Ended December 31
Collateral dependent assets	$ 4,373	$ —	$ —	$ 4,373	$ (2,998)	$ 2,796	$ —	$ —	$ 2,796	$ 141
Other real estate owned	68	—	—	68	—	1,738	—	—	1,738	66
Total	$ 4,441	$ —	$ —	$ 4,441	$ (2,998)	$ 4,534	$ —	$ —	$ 4,534	$ 207

		Fair Value Measurement at December 31, 2022 Using			
Description	December 31, 2022	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Total Losses Recognized During the Twelve Months Ended December 31
Collateral dependent assets	$ 4,373	$ —	$ —	$ 4,373	$ (2,998)
Other real estate owned	68	—	—	68	—
Total	$ 4,441	$ —	$ —	$ 4,441	$ (2,998)

		Fair Value Measurement at December 31, 2021 Using			
Description	December 31, 2021	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Total Gains Recognized During the Twelve Months Ended December 31
Collateral dependent assets	$ 46,979	$ —	$ —	$ 46,979	$ 1,521
Other real estate owned	—	—	—	—	—
Total	$ 46,979	$ —	$ —	$ 46,979	$ 1,521

Valuation methods for instruments measured at fair value on a non-recurring basis

The following methods and assumptions were used to estimate the fair value of each class of financial instruments measured on a non-recurring basis:

Collateral Dependent Assets Collateral Collateral dependent assets are assets evaluated as part of the ACL on an individual basis. Those assets for which there is an associated allowance are considered financial assets measured at fair value on a non-recurring basis. Adjustments are recorded on certain assets to reflect write-downs that are based on the external appraised value of the underlying collateral. The external appraisals are generally based on recent sales of comparable properties which are then adjusted for the unique characteristics of the property being valued. In the case of non-real estate collateral, reliance is placed on a variety of sources, including external estimates of value and judgments based on the experience and expertise of internal specialists within the Company's property management group and the Company's credit department. The valuation of collateral dependent assets and impaired loans are reviewed on a quarterly basis. Because many of these inputs are not observable, the measurements are classified as Level 3.

Other real estate owned Other real estate owned consists of loan collateral which has been repossessed through foreclosure. This collateral is comprised of commercial and residential real estate and other non-real estate property, including auto, recreational and marine vehicles. Other real estate owned is recorded as held for sale initially at the fair value of the collateral less estimated selling costs. The initial valuation of the foreclosed property

is obtained through an appraisal process similar to the process described in the collateral dependent/impaired loans paragraph above. Subsequent to foreclosure, valuations are reviewed quarterly and updated periodically, and the assets may be marked down further, reflecting a new cost basis. Fair value measurements may be based upon appraisals, third-party price opinions, or internally developed pricing methods and those measurements are classified as Level 3.

Fair value disclosures require disclosure of the fair value of financial assets and financial liabilities, including those financial assets and financial liabilities that are not measured and reported at fair value on a recurring basis or non-recurring basis.

The estimated fair value of the Company's financial instruments at December 31, 2022 December 31, 2023 and 2021 2022 are as follows (in thousands):

	Fair Value Measurement at December 31, 2022 Using					Fair Value Measurement at December 31, 2023 Using				
	Carrying Amount	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Total Estimated Fair Value	Carrying Amount	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Total Estimated Fair Value
FINANCIAL ASSETS										
Cash and short-term investments	$ 2,638,384	$ 1,686,787	$ 951,597	$ —	$ 2,638,384	$ 5,852,347	$ 5,612,003	$ 240,344	$ —	$ 5,852,347
Securities available for sale	7,006,347	1,144,570	5,861,777	—	7,006,347	7,068,613	1,650,017	5,418,596	—	7,068,613
Securities held to maturity (exclusive of allowance for credit losses)	5,861,599	—	5,280,659	—	5,280,659	5,691,868	—	5,183,367	—	5,183,367
Trading securities	17,980	2,384	15,596	—	17,980	18,093	2,873	15,220	—	18,093
Other securities	349,758	10,782	338,976	—	349,758	492,935	11,228	481,707	—	492,935
Loans (exclusive of allowance for credit losses)	21,033,167	—	20,816,899	—	20,816,899	23,176,904	—	22,969,788	—	22,969,788
Derivatives	48,121	—	48,121	—	48,121	161,496	—	161,496	—	161,496
FINANCIAL LIABILITIES										
Demand and savings deposits	31,721,995	31,721,995	—	—	31,721,995	32,719,268	32,719,268	—	—	32,719,268
Time deposits	917,138	—	917,138	—	917,138	3,073,591	—	3,073,591	—	3,073,591

Other borrowings	2,222,167	62,480	2,159,687	—	2,222,167	3,919,644	13,813	3,905,831	—	3,919,644
Long-term debt	381,311	—	418,737	—	418,737	383,247	—	413,896	—	413,896
Derivatives	126,334	—	126,334	—	126,334	105,083	—	105,083	—	105,083
OFF-BALANCE SHEET ARRANGEMENTS										
Commitments to extend credit for loans					9,260					11,523
Commitments to extend resell agreements										208
Commercial letters of credit					185					138
Standby letters of credit					3,982					4,047

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	Fair Value Measurement at December 31, 2021 Using					Fair Value Measurement at December 31, 2022 Using				
	Carrying Amount	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Total Estimated Fair Value	Carrying Amount	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Total Estimated Fair Value
FINANCIAL ASSETS										
Cash and short-term investments	$ 10,472,084	$ 9,255,727	$ 1,216,357	$ —	$ 10,472,084	$ 2,638,384	$ 1,686,787	$ 951,597	$ —	$ 2,638,384
Securities available for sale	11,976,514	387,020	11,589,494	—	11,976,514	7,006,347	1,144,570	5,861,777	—	7,006,347
Securities held to maturity (exclusive of allowance for credit losses)	1,480,416	—	1,442,391	—	1,442,391	5,861,599	—	5,280,659	—	5,280,659
Trading securities	31,875	5,985	25,890	—	31,875	17,980	2,384	15,596	—	17,980
Other securities	327,098	64,149	262,949	—	327,098	349,758	10,782	338,976	—	349,758
Loans (exclusive of allowance for credit losses)	17,172,148	—	17,506,662	—	17,506,662	21,033,167	—	20,816,899	—	20,816,899
Derivatives	57,680	—	57,680	—	57,680	48,121	—	48,121	—	48,121

FINANCIAL LIABILITIES										
Demand and savings deposits	34,748,286	34,748,286	—	—	34,748,286	31,721,995	31,721,995	—	—	31,721,995
Time deposits	851,641	—	851,641	—	851,641	917,138	—	917,138	—	917,138
Other borrowings	3,238,435	12,597	3,225,838	—	3,238,435	2,222,167	62,480	2,159,687	—	2,222,167
Long-term debt	271,544	—	285,961	—	285,961	381,311	—	418,737	—	418,737
Derivatives	13,944	—	13,944	—	13,944	126,334	—	126,334	—	126,334
OFF-BALANCE SHEET ARRANGEMENTS										
Commitments to extend credit for loans					7,841					9,260
Commercial letters of credit					179					185
Standby letters of credit					3,553					3,982

Cash and short-term investments The carrying amounts of cash and due from banks, federal funds sold and resell agreements are reasonable estimates of their fair values.

Securities held to maturity For U.S. Agency and mortgage-backed securities, as well as general obligation bonds in the State and political subdivision portfolio, fair values are based on quoted market prices or dealer quotes, if available. If a quoted market price is not available, fair value is estimated using quoted market prices for similar securities. Prices are provided by third-party pricing services and are based on observable market inputs. On an annual basis, the Company compares a sample of these prices to other independent sources for the same securities. Variances are analyzed, and, if appropriate, additional research is conducted with the third-party pricing services. Based on this research, the pricing services may affirm or revise their quoted price. No significant adjustments have been made to the prices provided by the pricing services. The pricing services also provide documentation on an ongoing basis that includes reference data, inputs and methodology by asset class, which is reviewed to ensure that security placement within the fair value hierarchy is appropriate. For private placement bonds in the State and political subdivision portfolio, fair values are estimated by discounting the future cash flows using current market rates.

Other securities Amount consists of FRB and FHLB stock held by the Company, equity securities with readily determinable fair values, and equity securities without readily determinable fair values, including equity-method investments and other miscellaneous investments. The carrying amount of the FRB and FHLB stock equals its fair value because the shares can only be redeemed by the FRB and FHLB at their carrying amount. Equity securities with readily determinable fair values are measured at fair value using quoted market prices. Equity securities without readily determinable fair values are carried at cost, which approximates fair value.

Loans Fair values are estimated for portfolios with similar financial characteristics. Loans are segregated by type, such as commercial, real estate, consumer, and credit card. Each loan category is further segmented into fixed and variable interest rate categories. The fair value of loans is estimated by discounting the future cash flows. The discount rates used are estimated using comparable market rates for similar types of instruments adjusted to be commensurate with the credit risk, overhead costs, and optionality of such instruments.

Demand and savings deposits The fair value of demand deposits and savings accounts was the amount payable on demand at December 31, 2022 and 2021. period-end.

Time deposits The fair value of fixed-maturity certificates of deposit is estimated by discounting the future cash flows using the rates that are currently offered for deposits of similar remaining maturities.

Other borrowings The carrying amounts of federal funds purchased, repurchase agreements and other short-term debt are reasonable estimates of their fair value because of the short-term nature of their maturities. Federal funds purchased are classified as Level 1 based on availability of quoted market prices and repurchase agreements and other short-term debt are classified as Level 2.

Long-term debt Rates currently available to the Company for debt with similar terms and remaining maturities are used to estimate fair value of existing debt.

Other off-balance sheet instruments The fair value of loan commitments and letters of credit are determined based on the fees currently charged to enter into similar agreements, taking into account the remaining terms of the agreement and the present creditworthiness of the counterparties. Neither the fees earned during the year on these instruments nor their fair value at period-end are significant to the Company's consolidated financial position.

19. *PARENT COMPANY FINANCIAL INFORMATION*

UMB FINANCIAL CORPORATION

BALANCE SHEETS *(in thousands)*

	December 31,	
	2023	2022
ASSETS		
Investment in subsidiaries:		
Banks	$ 3,123,373	$ 2,685,783
Non-banks	173,725	178,973
Total investment in subsidiaries	3,297,098	2,864,756
Goodwill on purchased affiliates	5,011	5,011
Cash	109,352	139,058
Investment securities and other	138,721	106,294
Total assets	$ 3,550,182	$ 3,115,119
LIABILITIES AND SHAREHOLDERS' EQUITY		
Long-term debt	$ 383,247	$ 381,311
Accrued expenses and other	66,516	66,715
Total liabilities	449,763	448,026
Shareholders' equity	3,100,419	2,667,093
Total liabilities and shareholders' equity	$ 3,550,182	$ 3,115,119

	December 31,	
	2022	2021
ASSETS		
Investment in subsidiaries:		
Banks	$ 2,685,783	$ 2,970,227
Non-banks	178,973	169,123
Total investment in subsidiaries	2,864,756	3,139,350
Goodwill on purchased affiliates	5,011	5,011
Cash	139,058	185,372
Investment securities and other	106,294	155,196
Total assets	$ 3,115,119	$ 3,484,929
LIABILITIES AND SHAREHOLDERS' EQUITY		
Long-term debt	$ 381,311	$ 271,544
Accrued expenses and other	66,715	67,961
Total liabilities	448,026	339,505
Shareholders' equity	2,667,093	3,145,424
Total liabilities and shareholders' equity	$ 3,115,119	$ 3,484,929

STATEMENTS OF INCOME AND COMPREHENSIVE INCOME *(in thousands)*

	Year Ended December 31,		
	2023	2022	2021
INCOME			
Dividends and income received from subsidiaries	$ 88,500	$ 57,000	$ 129,217
Service fees from subsidiaries	66,450	74,472	60,346
Other	13,268	55,988	12,771
Total income	168,218	187,460	202,334
EXPENSE			
Salaries and employee benefits	67,015	60,094	62,109
Other	43,418	35,943	31,022
Total expense	110,433	96,037	93,131
Income before income taxes and equity in undistributed earnings of subsidiaries	57,785	91,423	109,203
Income tax (benefit) expense	(9,165)	10,958	(10,322)
Income before equity in undistributed earnings of subsidiaries	66,950	80,465	119,525
Equity in undistributed earnings of subsidiaries:			
Banks	291,473	344,567	263,084
Non-Banks	(8,399)	6,650	(29,591)
Net income	$ 350,024	$ 431,682	$ 353,018
Other comprehensive income (loss)	145,800	(829,049)	(192,026)
Comprehensive income (loss)	$ 495,824	$ (397,367)	$ 160,992

	Year Ended December 31,		
	2022	2021	2020
INCOME			
Dividends and income received from subsidiaries	$ 57,000	$ 129,217	$ 78,360
Service fees from subsidiaries	74,472	60,346	49,191
Other	55,988	12,771	9,241
Total income	187,460	202,334	136,792
EXPENSE			
Salaries and employee benefits	60,094	62,109	56,919
Other	35,943	31,022	22,657
Total expense	96,037	93,131	79,576
Income before income taxes and equity in undistributed earnings of subsidiaries	91,423	109,203	57,216
Income tax expense (benefit)	10,958	(10,322)	(6,230)
Income before equity in undistributed earnings of subsidiaries	80,465	119,525	63,446
Equity in undistributed earnings of subsidiaries:			
Banks	344,567	263,084	234,014
Non-Banks	6,650	(29,591)	(10,958)
Net income	$ 431,682	$ 353,018	$ 286,502
Other comprehensive (loss) income	(829,049)	(192,026)	235,160
Comprehensive (loss) income	$ (397,367)	$ 160,992	$ 521,662

STATEMENTS OF CASH FLOWS *(in thousands)*

	Year Ended December 31,		
	2023	2022	2021
OPERATING ACTIVITIES			
Net income	$ 350,024	$ 431,682	$ 353,018
Adjustments to reconcile net income to cash provided by operating activities:			
Equity in earnings of subsidiaries	(371,574)	(408,217)	(362,709)

Dividends received from subsidiaries	88,500	57,000	129,217
Depreciation and amortization	18	12	15
Amortization of debt issuance costs	876	556	450
Equity based compensation	18,694	21,491	21,208
Changes in other assets and liabilities, net	(32,493)	12,522	(4,049)
Net cash provided by operating activities	54,045	115,046	137,150
INVESTING ACTIVITIES			
Net capital investment in subsidiaries	(3,570)	(207,575)	(60,264)
Net (increase) decrease in investment securities	(30)	40,235	(11,051)
Net cash used in investing activities	(3,600)	(167,340)	(71,315)
FINANCING ACTIVITIES			
Cash dividends paid	(74,245)	(72,030)	(66,750)
Proceeds from long-term debt	—	110,000	—
Payment of debt issuance costs	—	(2,129)	—
Proceeds from exercise of stock options and sales of treasury stock	2,461	2,136	19,048
Purchases of treasury stock	(8,367)	(31,997)	(5,506)
Net cash (used in) provided by financing activities	(80,151)	5,980	(53,208)
Net (decrease) increase in cash	(29,706)	(46,314)	12,627
Cash and cash equivalents at beginning of period	139,058	185,372	172,745
Cash and cash equivalents at end of period	$ 109,352	$ 139,058	$ 185,372

	Year Ended December 31,		
	2022	2021	2020
OPERATING ACTIVITIES			
Net income	$ 431,682	$ 353,018	$ 286,502
Adjustments to reconcile net income to cash provided by operating activities:			
Equity in earnings of subsidiaries	(408,217)	(362,709)	(301,415)
Dividends received from subsidiaries	57,000	129,217	78,360
Depreciation and amortization	12	15	15
Amortization of debt issuance costs	556	450	131
Equity based compensation	21,491	21,208	15,120
Changes in other assets and liabilities, net	12,522	(4,049)	(1,724)
Net cash provided by operating activities	115,046	137,150	76,989
INVESTING ACTIVITIES			
Net capital investment in subsidiaries	(207,575)	(60,264)	(96,678)
Net decrease (increase) in investment securities	40,235	(11,051)	(29,648)
Net cash used in investing activities	(167,340)	(71,315)	(126,326)
FINANCING ACTIVITIES			
Cash dividends paid	(72,030)	(66,750)	(60,281)
Proceeds from short-term debt	—	—	15,000
Repayment of short-term debt	—	—	(15,000)
Proceeds from long-term debt	110,000	—	200,000
Payment of debt issuance costs	(2,129)	—	(2,250)
Proceeds from exercise of stock options and sales of treasury stock	2,136	19,048	5,186
Purchases of treasury stock	(31,997)	(5,506)	(63,766)
Net cash provided by (used in) in financing activities	5,980	(53,208)	78,889
Net (decrease) increase in cash	(46,314)	12,627	29,552
Cash and cash equivalents at beginning of period	185,372	172,745	143,193
Cash and cash equivalents at end of period	$ 139,058	$ 185,372	$ 172,745

ITEM 9. ***CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE***

None.

ITEM 9A. ***CONTROLS AND PROCEDURES***

Disclosure Controls and Procedures At the end of the period covered by this Annual Report on Form 10-K, the Company's Chief Executive Officer and Chief Financial Officer have each evaluated the effectiveness of the Company's "Disclosure Controls and Procedures" (as defined in Rule 13a-15(e) of the Exchange Act) and have concluded that the Company's Disclosure Controls and Procedures were effective as of the end of the period covered by this Annual Report on Form 10-K. 10-K.

Management's Report on Internal Control Over Financial Reporting Management of the Company is responsible for establishing and maintaining adequate "internal control over financial reporting," as such term is defined in Rule 13a-15(f) promulgated under the Exchange Act. Under the supervision and with the participation of management, including the Chief Executive Officer and Chief Financial Officer of the Company,and effected by the Board, management and other personnel, an an evaluation of the effectiveness of internal control over financial reporting was conducted based on the criteria established by the Committee of Sponsoring Organizations of the Treadway Commission's Commission's *Internal Control - Integrated Framework (2013)*.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect all 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. In addition, given the Company's size, operations and footprint, lapses or deficiencies in internal controls may occur from time to time.

Based on the evaluation under the framework in Internal Control - Integrated Framework (2013), management (with the participation of the Company's Chief Executive Officer and Chief Financial Officer) under the oversight of the Board of Directors, has concluded that internal control over financial reporting was effective at the end of the period covered by this Annual Report on Form 10-K. KPMG LLP, Kansas City, Missouri, (U.S. PCAOB Auditor Firm ID: 185), the independent registered public accounting firm that audited the financial statements included within this report, has issued an attestation report on the effectiveness of internal control over financial reporting at the end of the period covered by this report. report. KPMG LLP's attestation report is set forth below below..

Changes in Internal Control Over Financial Reporting No change in the Company's internal control over financial reporting occurred during the last quarter of the period covered by this Annual Report on Form 10-K that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Shareholders and Board of Directors
UMB Financial Corporation:

Opinion on Internal Control Over Financial Reporting

We have audited UMB Financial Corporation and subsidiaries' (the Company) internal control over financial reporting as of December 31, 2022 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, 2022 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, 2022 December 31, 2023 and 2021, 2022, the related consolidated statements of income, comprehensive income, changes in shareholders' equity, and cash flows for each of the years in the three-year period ended December 31, 2022 December 31, 2023, and the related notes (collectively, the consolidated financial statements), and our report dated February 23, 2023 February 22, 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 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; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ KPMG LLP

Kansas City, Missouri
February 23, 2023 22, 2024

ITEM 9B. ***OTHER INFORMATION***

None.On December 13, 2023, four foundations and trusts that are related interests of Chairman and Chief Executive OfficerJ. Mariner Kemperadopted a single, pre-arranged stock sale plan in accordance with Rule 10b5-1(c) (Rule 10b5-1) under the Exchange Act for the sale of shares of the Company's common stock (the 2024 Plan). The 2024 Plan was entered into during an open trading window in accordance with the Company's requirements regarding transactions in the Company's securities and is intended to satisfy the affirmative defense conditions of Rule 10b5-1. The 2024 Plan provides for the monthly sale of an initial number of shares of the Company's common stock once the market price of the Company's common stock meets or exceeds certain minimum threshold prices as specified in the 2024 Plan. Should the market price of the Company's shares meet or exceed secondary and tertiary pricing thresholds as specified in the 2024 Plan, up to double and triple the initial number of shares in the aggregate may be sold in that month, respectively. If no sales occur in a month, the initial number of shares may be carried forward for sale in the following month subject to the pricing thresholds. Sales under the 2024 Plan may occur beginning in March of 2024 (after conclusion of the applicable cooling off period following adoption of the 2024 Plan) and end no later than December 31, 2024. The aggregate number of shares of common stock of the Company that will be available for sale under the 2024 Plan will vary depending on the market price achieved but will not exceed a maximum of 399,000 shares in aggregate.

ITEM 9C. ***DISCLOSURE REGARDING FOREIGN JURISDICTIONS THAT PREVENT INSPECTIONS***

None.

PART III

ITEM 10. ***DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE***

The information required by this item relating to executive officers is included in Part I of this Annual Report on Form 10-K under the caption "Executive Officers of the Registrant."

The information required by this item regarding Directors is incorporated herein by reference to information to be included under the caption "Proposal #1: Election of Directors" of the Company's Proxy Statement for the Annual Meeting of Shareholders to be held on April 25, 2023 April 30, 2024 (the 2023 2024 Annual Meeting of Shareholders), which will be provided to shareholders within 120 days after December 31, 2022 December 31, 2023.

The information required by this item regarding the Audit Committee and the Audit Committee financial experts is incorporated herein by reference to information to be included under the caption "Corporate Governance – Committees of the Board of Directors – Audit Committee" of the Company's Proxy Statement for the 2023 2024 Annual Meeting of Shareholders, which will be provided to shareholders within 120 days after December 31, 2022 December 31, 2023.

The information required by this item concerning Section 16(a) beneficial ownership reporting compliance is incorporated herein by reference to information to be included under the caption "Stock Ownership – Section 16(a) Beneficial Ownership Reporting Compliance" of the Company's Proxy Statement for the 2023 Annual Meeting of Shareholders, which will be provided to shareholders within 120 days after December 31, 2022 December 31, 2023.

The Company has adopted a code of ethics that applies to all directors, officers and employees, including its chief executive officer, chief financial officer and chief accounting officer. You can find the Company's code of ethics on its website by going to the following address: http://investorrelations.umb.com. Information on the Company's website is not incorporated by reference into this report and should not be considered part of this document. The Company will post on its website any amendments or waivers to its code of ethics that are required to be disclosed under the rules of either the SEC or NASDAQ. A copy of the code of ethics will be provided, at no charge, to any person requesting the same, by written notice sent to the Company's Corporate Secretary, 6th floor, 1010 Grand Blvd., Kansas City, Missouri 64106.

ITEM 11. ***EXECUTIVE COMPENSATION***

The information required by this item is incorporated herein by reference to information to be included under the Executive Compensation sections of the Company's Proxy Statement for the 2023 2024 Annual Meeting of Shareholders, which will be provided to shareholders within 120 days after December 31, 2022 December 31, 2023.

ITEM 12. ***SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS***

Security Ownership of Certain Beneficial Owners

The information required by this item is incorporated herein by reference to the Company's Proxy Statement for the 2023 2024 Annual Meeting of Shareholders to information to be included under the caption "Stock Ownership - Principal Shareholders," which will be provided to shareholders within 120 days after December 31, 2022 December 31, 2023.

Security Ownership of Management

The information required by this item is incorporated herein by reference to the Company's Proxy Statement for the 2022 2024 Annual Meeting of Shareholders, which will be provided to shareholders within 120 days after

December 31, 2022, December 31, 2023, under the caption "Stock Ownership – Stock Owned by Directors, Nominees, and Executive Officers."

The following table summarizes shares authorized for issuance under the Company's equity compensation plans as of December 31, 2022 December 31, 2023:

Plan Category	Number of securities to be issued upon exercise of outstanding options, warrants and rights (a)	Weighted average exercise price of outstanding options, warrants and rights (b)	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a)) (c)	Number of securities to be issued upon exercise of outstanding options, warrants and rights (a)	Weighted average exercise price of outstanding options, warrants and rights (b)	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a)) (c)
Equity compensation plans approved by security holders						
2005 Long Term Incentive Plan	137,858	$ 62.08	None	97,624	$ 64.20	None
2018 Omnibus Incentive Compensation Plan	None	None	2,379,522	None	None	1,592,762
Equity compensation plans not approved by security holders	None	None	None	None	None	None
Total	137,858	$ 62.08	2,379,522	97,624	$ 64.20	1,592,762

For additional information concerning the Company's equity compensation plans, see Note 11, "Employee Benefits," in the Notes to the Consolidated Financial Statements provided in Item 8 of this report.

ITEM 13. *CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE*

The information required by this item is incorporated herein by reference to the information to be provided under the captions "Corporate Governance – Transactions with Related Persons", "Corporate Governance – The Board of Directors – Independent Directors" and "Corporate Governance – Committees of the Board of Directors" of the Company's Proxy Statement for the 2023 2024 Annual Meeting of Shareholders, which will be provided to shareholders within 120 days after December 31, 2022 December 31, 2023.

ITEM 14. *PRINCIPAL ACCOUNTANT FEES AND SERVICES*

The information required by this item is incorporated herein by reference to the information to be provided under the caption "Proposal #3: Ratification of the Corporate Audit Committee's Engagement of KPMG LLP as UMB's Independent Public Accounting Firm for 2023" 2024" of the Company's Proxy Statement for the 2023 2024 Annual Meeting of Shareholders, which will be provided to shareholders within 120 days after December 31, 2022 December 31, 2023.

PART IV

ITEM 15. *EXHIBITS AND FINANCIAL STATEMENT SCHEDULES*

Consolidated Financial Statements and Financial Statement Schedules

The following Consolidated Financial Statements of the Company are included in Item 8 of this Annual Report on Form 10-K.

Consolidated Balance Sheets as of December 31, 2022 December 31, 2023 and 2021 2022
Consolidated Statements of Income for the Three Years Ended December 31, 2022 December 31, 2023
Consolidated Statements of Comprehensive Income for the Three Years Ended December 31, 2022 December 31, 2023
Consolidated Statements of Changes in Shareholders' Equity for the Three Years Ended December 31, 2022 December 31, 2023
Consolidated Statements of Cash Flows for the Three Years Ended December 31, 2022 December 31, 2023
Notes to Consolidated Financial Statements
Report of Independent Registered Public Accounting Firm

Condensed Consolidated Financial Statements for the parent company only may be found in Item 8 above. All other schedules have been omitted because the required information is presented in the Consolidated Financial Statements or in the notes thereto, the amounts involved are not significant or the required subject matter is not applicable.

Exhibits

The following Exhibit Index lists the Exhibits to Form 10-K:

3.1	Restated Articles of Incorporation (incorporated by reference to Exhibit 3.1 to the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2006 and filed with the Commission on May 9, 2006).
3.2	Bylaws, amended as of January 24, 2023 April 13, 2023 (incorporated by reference to Exhibit 3.1 of the Company's Current Report on Form 8-K dated January 24, 2023 April 13, 2023 and filed with the Commission on January 26, 2023 April 13, 2023).
4.1	Description of the capital stock included in the Registration Statement on Form 8-A (incorporated by reference to the Registration Statement on Form 8-A dated May 1, 2018 and filed with the Commission on May 1, 2018).
4.2	Description of the capital stock included in the Registration Statement on Form S-3 (incorporated by reference to the Registration Statement on Form S-3 ASR dated August 17, 2022 and filed with the Commission on August 17, 2022).
4.3	Description of UMB Financial Corporation's Securities (incorporated by reference to Exhibit 4.3 to the Company's Form 10-K for December 31, 2019 and filed with the Commission on February 27, 2020).
4.4	Indenture, dated as of September 17, 2020, by and between UMB Financial Corporation and Wells Fargo, National Association (incorporated by reference to Exhibit 4.1 of the Company's Current Report on Form 8-K dated September 17, 2020 and filed with the Commission on September 22, 2020).
4.5	Supplemental Indenture, dated as of September 17, 2020, by and between UMB Financial Corporation and Wells Fargo, National Association, as Trustee, with respect to the 3.700% Fixed-to-Fixed Rate Subordinated Notes due 2030 (incorporated by reference to Exhibit 4.2 of the Company's Current Report on Form 8-K dated September 17, 2020 and filed with the Commission on September 22, 2020).
4.6	Form of 3.700% Fixed-to-Fixed Rate Subordinated Notes due 2030 (incorporated by reference to Exhibit 4.2 of the Company's Current Report on Form 8-K dated September 17, 2020 and filed with the Commission on September 22, 2020).
4.7	Second Supplemental Indenture, dated as of September 28, 2022, by and between UMB Financial Corporation and Wells Fargo, National Association, as Trustee, with respect to the 6.250% Fixed-to-Fixed Rate Subordinated Notes due 2032 (incorporated by reference to Exhibit 4.2 of the Company's Current Report on Form 8-K dated September 28, 2022 and filed with the Commission on September 28, 2022).

4.8	Form of 6.250% Fixed-to-Fixed Rate Subordinated Notes due 2032 (incorporated by reference to Exhibit 4.2 of the Company's Current Report on Form 8-K dated September 28, 2022 and filed with the Commission on September 28, 2022).
10.1	UMB Financial Corporation Long-Term Incentive Compensation Plan amended and restated as of April 23, 2013 (incorporated by reference to Appendix A of the Company's Proxy Statement for the Company's April 23, 2013 Annual Meeting filed with the Commission on March 13, 2013).
10.2	Deferred Compensation Plan, dated as of December 1, 2008 (incorporated by reference to Exhibit 10.3 to the Company's Form 10-K for December 31, 2017 and filed with the Commission on February 22, 2018).
10.3	UMBF 2005 Short-Term Incentive Plan (incorporated by reference to Exhibit 10.7 to the Company's Form 10-K for December 31, 2004 and filed with the Commission on March 14, 2005).
10.4	Performance Share Unit Award Agreement for the UMB Financial Corporation Omnibus Incentive Compensation Plan (incorporated by reference to Exhibit 10.2 of the Company's Current Report on Form 8-K dated June 8, 2018 and filed with the Commission on June 14, 2018).
10.5	Restricted Share Unit Award Agreement for the UMB Financial Corporation Omnibus Incentive Compensation Plan (incorporated by reference to Exhibit 10.5 to the Company's Form 10-K for December 31, 2022 and filed herewith. with the Commission on February 23, 2023).
10.6	Form of 2016 Stock Option Award Agreement for the UMB Financial Corporation Long-Term Incentive Compensation Plan (incorporated by reference to Exhibit 10.3 to the Company's Quarterly Report on Form 10Q filed with the Commission on August 2, 2016).
10.7	UMBF Omnibus Incentive Compensation Plan (incorporated by reference to Appendix A of the Company's Proxy Statement for the Company's April 24, 2018 Annual Meeting filed with the Commission on March 13, 2018).

10.8	Performance Share Unit Award Agreement with Shannon A. Johnson (incorporated by reference to Exhibit 10.1 of the Company's Current Report on Form 8-K dated July 25, 2022 and filed with the Commission on July 29, 2022).
21.1	Subsidiaries of the Registrant filed herewith.
23.1	Consent of Independent Registered Public Accounting Firm – KPMG LLP filed herewith.
24.1	Power of Attorney filed herewith.
31.1	CEO Certification pursuant to Section 302 of the Sarbanes-Oxley Act filed herewith.
31.2	CFO Certification pursuant to Section 302 of the Sarbanes-Oxley Act filed herewith.
32.1	CEO Certification pursuant to Section 906 of the Sarbanes-Oxley Act filed herewith.
32.2	CFO Certification pursuant to Section 906 of the Sarbanes-Oxley Act filed herewith.
101.INS97.1	Compensation Recovery Policy filed herewith.
101.INS	XBRL Instance Document – The instance document does not appear in the Interactive Data File because XBRL tags are embedded within the Inline XBRL document.
101.SCH	Inline XBRL Taxonomy Extension Schema With Embedded Linkbases Document filed herewith.
101.CAL104	Inline XBRL Taxonomy Extension Calculation Document filed herewith.
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document filed herewith.
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document filed herewith.
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document filed herewith.
104	The cover page of our Form 10-K for the year ended December 31, 2022 December 31, 2023, formatted in iXBRL.

ITEM 16. *FORM 10-K SUMMARY*

None.

SIGNATURES

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, as of February 23, 2023 February 22, 2024.

UMB FINANCIAL CORPORATION

/s/ J. Mariner Kemper

J. Mariner Kemper
Chairman of the Board,
Chief Executive Officer

/s/ Ram Shankar

Ram Shankar
Chief Financial Officer

/s/ David C. Odgers

David C. Odgers
Chief Accounting Officer

Date: February 23, 2023 February 22, 2024

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 on the date indicated.

/s/ Robin C. Beery Robin C. Beery	Director	/s/ Leroy J. Williams Leroy J. Williams	Director
/s/ Janine A. Davidson Janine A. Davidson	Director	/s/ Kevin C. Gallagher Kevin C. Gallagher	Director
/s/ Greg M. Graves Greg M. Graves	Director	Alexander C. Kemper Alexander C. Kemper	Director
/s/ Gordon E. Lansford III Greg M. Graves	Director	Timothy R. Murphy Gordon E. Lansford III	Director
/s/ Timothy R. Murphy	Director	/s/ Tamara M. Peterman	Director

Timothy R. Murphy

Kris A. Robbins

Timothy R. Murphy		Tamara M. Peterman	
/s/ Kris A. Robbins Kris A. Robbins	Director	/s/ L. Joshua Sosland L. Joshua Sosland	Director
/s/ J. Mariner Kemper L. Joshua Sosland	Director, Chairman of the Board, Chief Executive Officer	J. Mariner Kemper Attorney-in-Fact for each director	

Kris A. Robbins

Exhibit 10.5

UMB Financial Corporation
Omnibus Incentive Compensation Plan

RESTRICTED SHARE UNIT AWARD AGREEMENT

Pursuant to this Restricted Share Unit Award Agreement (this “Award Agreement”), and subject to the terms and conditions herein and in the UMB Financial Corporation Omnibus Incentive Compensation Plan (the “Plan”), UMB Financial Corporation (the “Company,” as defined in the Plan) grants an award (the “Award”) of restricted share units under the Plan to the following identified Grantee with the following specified terms:

Summary of Award Terms:

Name of grantee: (the “Grantee”)

Date of grant:___________________ (the “Grant Date”)

Number of restricted share units: (the “RSUs”)

Vesting Schedule:

Settlement Date	**Number of RSUs that Vest**
[one year anniversary of Grant Date]	33% of RSUs
[two year anniversary of Grant Date]	33% of RSUs
[three year anniversary of Grant Date]	The remaining 34% of RSUs (100% cumulative)

Capitalized terms used in this Award Agreement, unless otherwise defined, shall have the meanings set forth in the Plan.

Please note that the Award is conditioned on your acknowledgment of receipt and acceptance within one year after receiving this Award Agreement. See Section 15 below. If you do not accept the Award before the one-year anniversary of the Grant Date, your Award will be forfeited.

1. Grant of Restricted Share Units. The Company hereby grants this Award of RSUs, pursuant to which, subject to the terms and conditions of this Award Agreement and the Plan, the Company will pay to the Grantee on the Settlement Date both (i) one share of Common Stock as of the Settlement Date multiplied by the number of vested RSUs, and (ii) one share of Common Stock as of the Settlement Date for each Dividend Equivalent Unit (as defined in Section 2(d) hereof) relating to such vested RSUs, subject to applicable withholding for taxes. For the avoidance of doubt, the right to receive any Dividend Equivalent Units is subject to the same vesting terms as the related RSUs which give rise to the Dividend Equivalent Units, and no Dividend Equivalent Unit is payable with respect to any RSUs that are forfeited (whether or not vested) or that do not vest for any reason.

2. Certain Definitions: For purposes of this Award Agreement:

   a. The term "Cause" is to be construed the same as such similar term is defined in any employment agreement, offer letter, or service provider agreement between the Grantee and the Company as may be in force from time to time, and in the absence of such agreement or letter, shall mean: (i) the Grantee's refusal to perform, or repeated failure to undertake good faith efforts to perform, the duties or responsibilities reasonably assigned to Grantee; (ii) Grantee's engagement in gross misconduct or gross negligence in the course of carrying out his or her duties; or (iii) Grantee's conviction of or plea of guilty or nolo contendere to any felony or any misdemeanor involving fraud, intentionally false statements or intentionally misleading omissions, wrongful taking, embezzlement, bribery, forgery, counterfeiting or extortion; or (iv) Grantee's violation of law or Company policies or procedures.

   b. References to the "Committee" refer to the committee administering the Plan (or its authorized delegate, as applicable).

   c. "Disability" or "Disabled" means: the Grantee (1) is unable to engage in any substantial gainful activity by reason of any medically determinable physical or mental impairment which can be expected to result in death or can be expected to last for a continuous period of not less than twelve months, or (2) is, by reason of any medically determinable physical or mental impairment which can be expected to result in death or can be expected to last for a continuous period of not less than twelve months, receiving income replacement benefits for a period of not less than three months under an accident and health plan covering employees of the Company.

   d. "Dividend Equivalent Units" mean the aggregate number of units determined by dividing (1) the value of the dividends declared on the Common Stock, if any, whose dividend record date occurs during the period from the Grant Date until the day before the Settlement Date, that would be payable with respect to the number of shares of Common Stock relating to the RSUs and any prior Dividend Equivalent Units, by (2) the mean of the high and low stock price of Common Stock on the dividend's payable date (rounded down to the nearest whole share).

   Dividend value for this purpose is determined as of the relevant dividend payment date(s).

   e. Grantee shall be considered to have a "Termination of Employment" on the first day following the Grant Date that the Grantee has a termination of employment as provided in Section 11.2.1 of the Plan, and the term "Termination Date" means the day on which the Grantee's Termination of Employment occurs. Specifically, Grantee will have a Termination of Employment: (i) on the date that Grantee experiences a separation from service within the meaning of Internal Revenue Code Section 409A, (ii) at such time as the Committee determines that the Grantee's authorized leave of absence or absence in military or government service constitutes a Termination of Employment; (iii) on the effective date that a subsidiary of the Company ceases to be a subsidiary, if the Grantee is employed by or provides services to such subsidiary, unless the Committee determines otherwise; and (iv) on the date that the Grantee ceases to be an employee of the Company even if the Grantee continues or simultaneously commences service as a director of the Company.

3. Vesting.

a. The Award is subject to the vesting terms set forth in the Summary of Award Terms above, except as may otherwise be provided in this Award Agreement or in the Plan. Any portion of the Award that does not vest for any reason shall automatically be cancelled and terminated and be of no further force and effect.

b. If the Grantee has a Termination of Employment prior to the Settlement Date due to the Grantee's death or Disability, then all unvested RSUs granted hereunder will vest as of such Termination Date. The Settlement Date for the Award that vests pursuant to this Section shall be within 90 days following the Termination Date.

c. If the Grantee has a Qualified Retirement, then the remaining unvested RSUs granted hereunder will vest and be paid on the remaining Settlement Dates.

For purposes of this paragraph, "Qualified Retirement" means that:
(1) the Grantee has a Termination of Employment prior to the Settlement Date but at least one year following the Grant Date; and
(2) such Termination is due *either* to an involuntary termination as a result of the elimination of the Grantee's position *or* to the Grantee's voluntary termination on or after reaching the later of (i) age 65 plus 5 years of service or (ii) a combination of age and years of service of 75 or more.

4. Forfeiture.

a. If the Grantee has a Termination of Employment prior to the Settlement Date for any reason, the Grantee shall forfeit, and shall have no further rights or interest with respect to, any of the RSUs granted hereby that remain unvested, with

automatic and immediate effect (after giving effect to any applicable vesting acceleration provision in Section 3) as of the Termination Date.

b. The Grantee shall forfeit and cease to have any right or interest in any of the RSUs granted hereby, whether or not vested: (i) immediately as of the time the Grantee receives notice of a termination of Grantee's employment or service for Cause, (ii) upon the Grantee's breach, as determined by the Committee, of any non-disclosure, non-competition, or non-solicitation restrictive covenant obligation owed to the Company, or (iii) upon the Committee's determination that any conduct of the Grantee constitutes grounds for forfeiture under the Plan.

c. The Award, or payment thereunder, shall be subject to reduction, in the discretion of the Company, to the extent the Company determines it is required to avoid the imposition of any excise tax on excess parachute payments under Internal Revenue Code Section 4999.

5. Change in Control. In the event of a Change in Control, the Award shall be subject to the provisions of Section 11.1 of the Plan. The Settlement Date for any portion of the Award that vests pursuant to this Section shall be within 90 days following the Termination Date.

6. Settlement of Award. Within 90 days following the Settlement Date, the Company will, in full satisfaction of the RSUs and any associated Dividend Equivalent Units granted hereby, pay to the Grantee the amount owed in whole shares of Common Stock.

a. Notwithstanding anything herein to the contrary, no transfer of shares of Common Stock shall become effective until the Company determines that such transfer, issuance, and delivery is in compliance with all applicable, laws, regulations of governmental authority, and the requirements of any securities exchange on which shares of Common Stock may be traded.

b. The Committee may, as a condition to the issuance of Shares, require the Grantee to make covenants and representations and/or enter into agreements with the Company to reflect the Grantee's rights and obligations as a stockholder of the Company and any limitations and restrictions on such Shares.

c. The transfer of Shares pursuant to this Award shall be effectuated by an appropriate entry on the books of the Company, the issuance of certificates representing such shares (bearing such legends as the Committee deems necessary or desirable), the transfer of shares to a brokerage account in the name of the Grantee, and/or other appropriate means as determined by the Committee.

d. Unless and until any shares of Common Stock are issued in settlement of the Award, the Award shall not confer to the Grantee any rights or status as a stockholder of the Company.

7. Withholding. Grantee shall surrender to the Company, for no consideration, the portion of any shares of Common Stock that become vested under this Award whose aggregate

Fair Market Value is sufficient to satisfy federal, state, and local withholding tax requirements. Notwithstanding the foregoing, in the event that withholding tax is due prior to the date that the Award is subject to income tax recognition and withholding, the Grantee shall be responsible for the payment of such amount, and shall satisfy such responsibility by paying the amount to the Company prior to the date that the Company is obligated to pay such withholding to the appropriate taxing authority, or by authorizing the Company to deduct such amount from any payment of any kind otherwise due to the Grantee from the Company.

8. No Assignment or Transfer. The Award granted hereunder may not be sold, pledged, assigned, hypothecated, transferred, or disposed of in any manner other than by will or by the laws of descent or distribution. No transfer by will or the laws of descent and distribution shall be effective to bind the Company unless the Committee shall have been furnished with (i) written notice thereof along with such evidence as the Committee may deem necessary to establish the validity of the transfer and (ii) an agreement by the transferee to comply with all the terms and conditions of the Award that are or would have been applicable to the Grantee and to be bound by the acknowledgements made by the Grantee in connection with the grant.

9. Grantee Representations. By accepting the Award, the Grantee represents and acknowledges the following:

a. The Grantee has received a copy of the Plan, has reviewed the Plan and this Award Agreement in their entirety, and has had an opportunity to obtain the advice of independent counsel prior to accepting the Award.

b. The Grantee has had the opportunity to consult with a tax advisor concerning the tax consequences of accepting the Award, and understands that the Company makes no representation regarding the tax treatment as to any aspect of the Award, including the grant, vesting, settlement, or conversion of the Award.

c. The Grantee understands that neither the grant of this discretionary Award nor the Grantee's participation in the Plan confers any right to continue in the service of the Company or to receive any other award or amount of compensation, whether under the Plan or otherwise, and no payment of any award under the Plan will be taken into account in determining any benefits under any pension, retirement, profit sharing, group insurance, or other benefit plan of the Company except as otherwise specifically provided in such other plan.

d. The Grantee consents to the collection, use, and transfer, in electronic or other form, of the Grantee's personal data by the Company, the Committee, and any third party retained to administer the Plan for the exclusive purpose of administering the Award and Grantee's participation in the Plan. The Grantee agrees to promptly notify the Committee of any changes in the Grantee's name, address, or contact information during the entire period of Plan participation.

10. Adjustments. If there is a change in the outstanding shares of Common Stock due to a stock dividend, split, or consolidation, or a recapitalization, corporate change, corporate transaction, or other similar event relating to the Company, the Committee may adjust the type or number of shares of Common Stock subject to any outstanding portion of the Award in accordance with Article X of the Plan.

11. Administration; Interpretation. In accordance with the Plan and this Award Agreement, the Committee shall have full discretionary authority to administer the Award, including discretionary authority to interpret and construe any and all provisions relating to the Award. Decisions of the Committee shall be final, binding, and conclusive on all parties. In the event of a conflict between this Award Agreement and the Plan, the terms of the Plan shall prevail.

12. Section 409A. To the extent applicable, it is intended that this Award Agreement comply with Internal Revenue Code Section 409A and the interpretive guidance thereunder ("Section 409A"), and this Award Agreement shall be administered accordingly, and interpreted and construed on a basis consistent with such intent. To the extent that any provision of this Award Agreement would fail to comply with applicable requirements of Section 409A, the Company may, in its sole and absolute discretion and without requiring the Grantee's consent, make such modifications to this Award Agreement and/or payments to be made thereunder to the extent it determines necessary or advisable to comply with the requirements of Section 409A. Nothing in this Agreement shall be construed as a guarantee of any particular tax effect for the Award, and the Company does not guarantee that any compensation or benefits provided under this Award Agreement will satisfy the provisions of Section 409A. If (i) the Grantee's right to payment is subject to Section 409A, and (ii) the Grantee is a specified employee (within the meaning of Section 409A) as of the Termination Date, then, to the extent necessary to comply with Treasury Regulation section 1.409A-3(i)(2), settlement of the Award shall be delayed until the earlier of (A) the date which is six months after the Grantee's separation from service, or (B) the date of the Grantee's death.

13. Successors. The terms of this Award Agreement shall be binding upon and inure to the benefit of the heirs of the Grantee or distributes of the Grantee's estate and any successor to the Company.

14. Governing Law; Severability.

a. *Governing Law*. This Award Agreement shall be construed and administered in accordance with the laws of Missouri without regard to its conflict of law principles.

b. *Severability*. Any determination by a court of competent jurisdiction or relevant governmental authority that any provision or part of a provision in this Award Agreement is unlawful or invalid shall not serve to invalidate any portion of this Award Agreement not found to be unlawful or invalid, and any provision or part of a provision found to be unlawful or invalid shall be construed in a manner that

will give effect to the terms of such provision or part of a provision to the fullest extent possible while remaining lawful and valid.

15. Acknowledgment of Receipt and Acceptance. By signing below (or execution by other means approved by the Committee, including by electronic signature), the undersigned acknowledges receipt and acceptance of the Award, agrees to the representations made in the Award, and indicates his or her intention to be bound by this Award Agreement and the terms of the Plan.

Exhibit 21.1

SUBSIDIARIES OF UMB FINANCIAL CORPORATION
December 31, 2022 2023

Name of Entity Organization	Incorporation or Jurisdiction of	Parent Ownership Percentage
UMB Financial Corporation (Registrant and Parent Company)	Missouri	
UMB Bank, n.a.	United States	100 %
UMB Bank & Trust, n.a.	Missouri	100 %
UMB Capital Corporation	Missouri	100 %
UMB Banc Leasing Corporation	Missouri	100 %
UMB Trust Company of South Dakota	South Dakota	100 %
UMB Insurance, Inc.	Missouri	100 %
Kansas City Realty Company	Kansas	100 %
UMB Realty Company, LLC	Delaware	100 %
Kansas City Financial Corporation	Kansas	100 %
UMB Colorado Property, LLC	Colorado	100 %
Conifer Properties LLC	Missouri	100 %
Meridian AZ Properties, LLC	Delaware	100 %
9700, LLC	Virginia	100%
SB&T Assets, LLC	Texas	100 %

UMB Foreign LLC	Delaware	100 %
UMBF Trust And and Agency Services (Ireland) Limited	Dublin, Ireland	100 %
UMB Delaware, Inc.	Delaware	100 %
1268 South Jones Spring Lane, LLC	Missouri	100 %
UMBCDC, Inc.	Missouri	100 %
UMB Fund Services, Inc.	Wisconsin	100 %
UMB Distribution Services, LLC	Wisconsin	100 %
UMB Financial Services, Inc.	Missouri	100 %
UMB Family Wealth, Asset Management, LLC	Delaware	100 %
UMB Family Wealth GP 1, LLC	Delaware	100 %
FW Motif LP	Delaware	UMB Family Wealth GP 1, LLC is the general partner
UMB Management Equity Holdings, Inc.	Delaware	100 %
UMB Merchant LLC	Delaware	100 %
UMB Family Wealth - KS Halite LLC	Delaware	100 %
UMB Family Wealth - FW Tessera Horizon LLC	Delaware	100 %
FW Tessera Horizon LLC	Delaware	UMB Family Wealth - FW Tessera Horizon LLC is the managing member
UMB Family Wealth - FW Tessera LLC	Delaware	100 %
FW Tessera LLC	Delaware	UMB Family Wealth - FW Tessera LLC is the managing member
UMB Family Wealth - FW Tessera Royale LLC	Delaware	100 %
FW Tessera Royale LLC	Delaware	UMB Family Wealth - FW Tessera Royale LLC is the managing member

Exhibit 23.1

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the registration statements (No. 333-230787 and 333-266941) on Form S-3 and (Nos. 333-65807, 333-125067, 333-161398, 333-181111, 333-188100, and 333-224585) on Form S-8 of our reports dated February 23, 2023 February 22, 2024, with respect to the consolidated financial statements of UMB Financial Corporation and the effectiveness of internal control over financial reporting.

/s/ KPMG LLP

Kansas City, Missouri
February 23, 2023 22, 2024

Exhibit 24.1

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.

UMB FINANCIAL CORPORATION

	By /s/ J. Mariner Kemper
Date February 23, 2023 February 22, 2024	J. Mariner Kemper Chairman of the Board

POWER OF ATTORNEY

Each person whose signature appears below hereby constitutes and appoints J. Mariner Kemper and Ram Shankar his true and lawful attorneys-in-fact and agents, each acting alone, with full power of substitution and resubstitution, for and in his name, place and stead, in any and all capacities, to file this report the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto such attorneys-in-fact and agents, each acting alone, full power and authority to do and perform each and every act and thing required and necessary to be done in and about the premises, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that such attorneys-in-fact and agents, each acting alone, or his substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

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 in the capacities and on the dates indicated.

Signature and Name	Capacity	Date
/s/ Robin C. Beery Robin C. Beery	Director	1/24/2023 30/2024
/s/ Janine A. Davidson Janine A. Davidson	Director	1/24/2023 30/2024
/s/ Kevin C. Gallagher Kevin C. Gallagher	Director	1/24/2023 30/2024

Signature and Name	Capacity	Date

Signature and Name	Capacity	Date
/s/ Greg M. Graves	Director	1/24/2023 30/2024
Greg M. Graves		
/s/ Alexander C. Kemper	Director	1/24/2023
Alexander C. Kemper		
/s/ J. Mariner Kemper	Director, Chief Executive Officer	1/24/2023 30/2024
J. Mariner Kemper	Chairman of the Board	
/s/ Gordon E. Lansford III	Director	1/24/2023 30/2024
Gordon E. Lansford III		
/s/ Timothy R. Murphy	Director	1/24/2023 30/2024
Timothy R. Murphy		
/s/ Tamara M. Peterman	Director	1/24/2023 30/2024
Tamara M. Peterman		
/s/ Kris A. Robbins	Director	1/24/2023 30/2024
Kris A. Robbins		
/s/ Ram Shankar	Chief Financial Officer	1/24/2023 30/2024
Ram Shankar		
/s/ L. Joshua Sosland	Director	1/24/2023 30/2024
L. Joshua Sosland		
/s/ Leroy J. Williams	Director	1/24/2023 30/2024
Leroy J. Williams		

Exhibit 31.1

CERTIFICATION PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT

I, J. Mariner Kemper, certify that:

1. I have reviewed this Annual Report on Form 10-K of UMB Financial Corporation;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant’s other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act rules 13a-15(f) and 15d-15(f)) for the registrant and have:

a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 23, 2023 February 22, 2024

/s/ J. Mariner Kemper

J. Mariner Kemper

Chief Executive Officer

Exhibit 31.2

CERTIFICATION PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT

I, Ram Shankar, certify that:

1. I have reviewed this Annual Report on Form 10-K of UMB Financial Corporation;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act rules 13a-15(f) and 15d-15(f)) for the registrant and have:

a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 23, 2023 February 22, 2024

/s/ Ram Shankar

Ram Shankar

Chief Financial Officer

Exhibit 32.1

CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350 AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report on Form 10-K of UMB Financial Corporation (the Company) for the year ended December 31, 2022 December 31, 2023, as filed with the Securities and Exchange Commission on the date hereof (the Report), I, J. Mariner Kemper, Chief Executive Officer of the Company, hereby certify, pursuant to 18 U.S.C. 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company. 2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated: February 23, 2023 February 22, 2024

/s/ J. Mariner Kemper

J. Mariner Kemper

Chief Executive Officer

A signed original of this written statement required by Section 906 has been provided to UMB Financial Corporation and will be retained by UMB Financial Corporation and furnished to the Securities and Exchange Commission or its staff upon request.

Exhibit 32.2

CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350 AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report on Form 10-K of UMB Financial Corporation (the Company) for the year ended December 31, 2022 December 31, 2023, as filed with the Securities and Exchange Commission on the date hereof (the Report), I, Ram Shankar, Chief Financial Officer of the Company, hereby certify, pursuant to 18 U.S.C. 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and 1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company. 2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated: February 23, 2023 February 22, 2024

/s/ Ram Shankar

Ram Shankar

Chief Financial Officer

A signed original of this written statement required by Section 906 has been provided to UMB Financial Corporation and will be retained by UMB Financial Corporation and furnished to the Securities and Exchange Commission or its staff upon request.

Exhibit 97.1

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Compensation Recovery Policy

Status: Approved

Revision Date: 10/31/2023

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Compensation Recovery Policy

Status: Approved

Revision Date: 10/31/2023

1. Policy Overview

The Board of Directors (the "**Board**") of UMB Financial Corporation (the "**Company**") believes that it is in the best interest of the Company and its shareholders to create and maintain a culture that emphasizes integrity and accountability and reinforces the Company's pay-for-performance compensation philosophy. This Compensation Recovery Policy (this "**Policy**") provides for the mandatory recoupment of "**erroneously awarded**" (defined below) Incentive-Based Compensation (defined below) to Executive Officers (defined below) in the event that the Company is required to prepare an "**accounting restatement**" due to the material noncompliance of the Company with any financial reporting requirement under applicable securities laws, including any required accounting restatement to correct an error in previously issued financial statements that is material to the previously issued financial statements, or that would result in a material misstatement if the error were corrected in the current period or left uncorrected in the current period. This Policy also provides for the discretionary recoupment of Incentive-Based Compensation from employees who engaged in misconduct that led to a material error in a Financial Reporting Measure (defined below) leading to erroneously awarded Incentive-Based Compensation.

2. Scope

The Board of the Company adopts this Policy to address the mandatory recoupment of certain Incentive-Based Compensation (defined below) in the event of an accounting restatement. The Policy is designed to comply with Section 10D-1 of the Securities and Exchange Act of 1934, as amended (the "**Exchange Act**"), and Rule 5608 of the NASDAQ listing standards and is made in accordance with the provisions of the Compensation Committee's charter. This Policy also addresses the discretionary recoupment of Incentive-Based Compensation from employees who engage in any illegal, dishonest, fraudulent, or intentional misconduct that materially contributes to the Company erroneously awarding Incentive-Based Compensation. The Policy supersedes and replaces in its entirety any prior or existing policies adopted by the Company with respect to the clawback of incentive-based compensation payable to an individual covered by this Policy. Any determinations made by the Compensation Committee of the Board (the "**Compensation Committee**") relating to this Policy shall be binding on all individuals.

3. Definitions

The term "**Executive Officer**" means any individual identified as an officer of the Company pursuant to Rule 16a-1 of the Exchange Act during the relevant recovery period.

The term "**Incentive-Based Compensation**" means any compensation that is granted, earned, or vested based wholly or in part upon the attainment of a Financial Reporting Measure. For the

Company, Incentive-Based Competition may include, but is not limited to:

- Bonuses under any Company Short-Term Incentive Compensation Program (or any equivalent successor plan or program)

- Performance Shares
- Performance Units
- Stock Options
- Cash Incentive Awards under the UMB Financial Corporation Omnibus Incentive Compensation Plan

Incentive-Based Compensation is 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 the payment or grant of the Incentive-Based Compensation occurs after the end of that period.

The term "**Financial Reporting Measures**" refers to measures that are determined and presented in accordance with the accounting principles used in preparing the Company's financial statements, and any measures that are derived in whole or in part from such measures. A Financial Reporting Measure need not be presented within the financial statements of the Company or included in a filing made by the Company with the Securities and Exchange Commission. Financial Reporting Measures include, but are not limited to:

- Company stock price
- Total shareholder return (TSR)
- Revenue
- Net income
- Pre-provision net revenue
- Return measures such as return on assets (ROA), return on equity (ROE), and return on average tangible common equity (ROTCE)
- Earnings measures such as earnings per share

4. Policy Requirements

Mandatory Recoupment of Erroneously Awarded Incentive-Based Compensation

In the event the Company is required to prepare an accounting restatement, the Company will require reimbursement or forfeiture of any erroneously awarded Incentive-Based Compensation Received by any Executive Officer during the three completed fiscal years

immediately preceding the date on which the Company is required to prepare an accounting restatement.

The compensation that is subject to mandatory recoupment under this Policy is erroneously awarded Incentive-Based Compensation that is Received by an Executive Officer:

a. after such person began service as an Executive Officer;
b. who served as an Executive Officer at any time during the performance period for such Incentive-Based Compensation (for the avoidance of doubt, this includes both current and former Executive Officers);
c. while the Company has a class of securities listed on Nasdaq (or such other national securities exchange on which the Company's securities are then listed); and
d. during the three completed fiscal years immediately preceding the date that the Company is required to prepare an accounting restatement.

The Company's obligation to recover erroneously awarded Incentive-Based Compensation is not dependent on if or when the restated financial statements are filed.

Discretionary Recoupment

The Compensation Committee may, in its discretion, require reimbursement or forfeiture of any or all Incentive-Based Compensation from any individual who is identified by the Compensation Committee to have engaged in any illegal, dishonest, fraudulent, or intentional misconduct that materially contributed to the Company erroneously awarding Incentive-Based Compensation during any portion of the three completed fiscal years immediately preceding the discovery of the illegal, dishonest, fraudulent, or intentional misconduct irrespective of whether an accounting restatement is required.

Determination of Recovery Period

For purposes of determining the relevant recovery period for any mandatory recoupment, the date that the Company is required to prepare an accounting restatement shall be the earlier to occur of:

a. The date the Board, a committee of the Board, or the officer or officers of the Company authorized to take such action if Board action is not required, concludes, or reasonably should have concluded, that the Company is required to prepare an accounting restatement; or

b. The date a court, regulator, or other legally authorized body directs the Company to prepare the accounting restatement.

Compensation Recovery Policy

Status: Approved

Revision Date: 10/31/2023

Amount Subject to Mandatory Recoupment

The amount to be recovered (“**erroneously awarded Incentive-Based Compensation**”) will be the amount of Incentive-Based Compensation Received by the Executive Officer 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, as determined by the Compensation Committee. If the erroneously awarded Incentive-Based Compensation is based on a measurement that is not subject to a mathematical recalculation directly from the information in the accounting restatement (i.e., stock price or total shareholder return), the amount must be 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, and the Company must maintain documentation of the determination of the reasonable estimate and provide such documentation to Nasdaq.

Amount Subject to Discretionary Recoupment

The Compensation Committee shall determine the amount of discretionary recoupment up to the full amount of any Incentive-Based Compensation received by an individual during a period where the individual was found to have engaged in any illegal, dishonest, fraudulent, or intentional misconduct that had a material impact on causing the Company to erroneously award Incentive-Based Compensation.

Method of Recoupment; Reasonably Promptly

The Company shall in the case of mandatory recoupment, or may in the case of discretionary recoupment, recover “**reasonably promptly**” any erroneously awarded Incentive-Based Compensation in accordance with this Policy in a method determined by the Compensation Committee which may include, without limitation:

a. Requiring reimbursement of cash Incentive-Based Compensation previously paid;

b. Seeking recovery of any gain realized on the vesting, exercise, settlement, sale, transfer, or other distribution of equity awards;

c. Offsetting the recouped amount from any compensation otherwise owed by the Company to the individual(s);

d. Cancelling outstanding vested or unvested equity awards; and/or

e. Taking any other remedial and recovery action permitted by law, as determined by the Compensation Committee.

The Compensation Committee shall determine the repayment schedule for each amount of erroneously awarded Incentive-Based Compensation in a manner that complies with the "reasonably promptly" requirement. Such determination shall be made consistent with any applicable legal guidance, by the SEC, Nasdaq, judicial opinion, or otherwise. The determination of what constitutes "reasonably promptly" may vary from case to case and will depend on the particular facts and circumstances applicable to the Company, the accounting restatement and the erroneously awarded Incentive-Based Compensation, among other factors. The Compensation Committee is authorized to adopt additional rules to further describe what repayment schedules satisfy this requirement.

In the case of mandatory recoupment, the Compensation Committee may determine that the recovery of erroneously awarded compensation would be impracticable if:

a. The direct expense paid to a third party to assist in enforcing this Policy would exceed the amount to be recovered. Before concluding that it would be impracticable to recover erroneously awarded Incentive-Based Compensation based on expense of enforcement, the Company shall make a reasonable attempt to recover such erroneously awarded Incentive-Based Compensation, document such reasonable attempt(s) to recover, and provide documentation to Nasdaq.

b. Recovery would likely cause an otherwise tax-qualified retirement plan, under which benefits are broadly available to employees of the Company, to fail to meet the requirements of 26 U.S.C. 401(a)(13) or 26 U.S.C. 411(a) and regulations thereunder.

Notwithstanding the foregoing, in the event that a court, regulator, or other legally authorized body directs the Company to prepare an accounting restatement, the Committee may direct the Company to postpone the recovery of any Incentive-Based Compensation: (a) if the Company undertakes any legal challenge to such direction to prepare an accounting restatement; and (b) for only such time as it takes for the process to complete such legal challenge is underway.

No Indemnification

Notwithstanding anything to the contrary in any other policy or governing document of the Company or any agreement between the Company and an Executive Officer or an employee, the Company shall not indemnify or reimburse any Executive Officer or employee against the loss of any erroneously awarded Incentive-Based Compensation.

Agreement to the Policy by Executive Officers

The Compensation Committee will take reasonable steps to inform Executive Officers and employees of this Policy. Executive Officers should read this Policy carefully and ask questions of the Company's General Counsel.

Exhibit 97.1

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5. Roles and Responsibilities

The Compensation Committee shall administer and interpret this Policy, make any required determinations under this Policy and amend this Policy as it deems appropriate at any time. The Compensation Committee shall also consider any guidelines, directives and authorizations provided to the Compensation Committee by the Board from time to time in the course of administering this Policy. Decisions of the Compensation Committee with respect to this Policy shall be final, conclusive, and binding on all individuals subject to this Policy, unless determined to be an abuse of discretion or determined to be unenforceable by the SEC or NASDAQ.

6. Exceptions

There shall be no exceptions to this Policy.

7. Legal Authority and References

Rule 10D-1 of the Exchange Act
Rule 5608 of the NASDAQ listing standards
Charter of the Compensation Committee

8. Revision History

Creation Date: October 31, 2023

Date of Last Review October 31, 2023

Revision Date	Rev No	Reviewer	Change	Reference Sections

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Compensation Recovery Policy
Status: Approved
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9. Appendices

None.

DISCLAIMER

THE INFORMATION CONTAINED IN THE REFINITIV CORPORATE DISCLOSURES DELTA REPORT™ IS A COMPARISON OF TWO FINANCIALS PERIODIC REPORTS. THERE MAY BE MATERIAL ERRORS, OMISSIONS, OR INACCURACIES IN THE REPORT INCLUDING THE TEXT AND THE COMPARISON DATA AND TABLES. IN NO WAY DOES REFINITIV OR THE APPLICABLE COMPANY ASSUME ANY RESPONSIBILITY FOR ANY INVESTMENT OR OTHER DECISIONS MADE BASED UPON THE INFORMATION PROVIDED IN THIS REPORT. USERS ARE ADVISED TO REVIEW THE APPLICABLE COMPANY’S ACTUAL SEC FILINGS BEFORE MAKING ANY INVESTMENT OR OTHER DECISIONS.