ANNUAL 2022 REPORT

Western Alliance Bancorporation®

STABLE. RELIABLE. READY.

Letter from President and Chief Executive Officer
Kenneth A. Vecchione

Dear Fellow Shareholders,

At the close of 2022, it would have been difficult to foresee the events that would play out in the banking industry in March of this year. The challenges that impacted our sector were not ones we would ever wish to experience, and yet, as we move forward with a renewed perspective, we are proud of our long history of sound financial management that has served us well.

Our diverse commercial client base, with multiple national deposit business lines, was the key factor in our resilience in the face of historic turbulence in the banking industry. Western Alliance Bank had another strong year in 2022 – and we are confident we will extend our momentum as the industry continues to evolve.

For the year, our diversified national commercial bank posted record net revenue and net income growth of 30% and 17.6%, respectively. Tangible book value per share rose 6.4% over 2021 to $40.25 and pre-provision net revenue (PPNR) climbed 25.7% year over year to nearly $1.4 billion, with net income of $1.1 billion and earnings per share up 11.9% to $9.70.

Importantly, we accomplished all this while maintaining solid and stable asset quality as we experienced virtually no net charge-offs for the year. Thanks to the strong fundamentals of our business, we sustained full-year momentum even as uncertainties around interest rates, inflation and GDP growth continue to affect the banking industry and the U.S. economy more broadly.

National Bank, Regional Footprint

In March 2023, issues unique to Silicon Valley Bank and Signature Bank led to their failures, impacting the entire banking sector. Despite these events, Western Alliance Bank began 2023 with a renewed emphasis on liquidity management and remains in a strong position. As a national bank with a regional branch footprint, Western Alliance's uniquely flexible, diversified business model positions us as a premier commercial bank with strong asset quality across economic cycles. This approach enabled us to close out the fourth quarter with record revenues, earnings and tangible book value as we thoughtfully deployed liquidity into sound organic growth.

Demonstrating the power of our PPNR generation, our Common Equity Tier 1 (CET1) capital ratio for Q4 reached 9.32% – 65 basis points higher than the previous quarter. Through superior PPNR results and industry-leading return on equity and assets, we continue to generate significant capital to fund our organic growth and build strong regulatory capital ratios. Even in the unlikely event that the bank were required to recognize unrealized losses on its held-to-maturity and available-for-sale investment portfolios, which totaled $1.1 billion at year-end 2022, capital levels would remain above those needed to be considered well capitalized. This compares favorably to many of the largest banks in the country.

Our business approach – diversification, strong asset quality and industry-leading operating leverage – will continue to serve us well in a softer economy and validate our franchise as a top-performing commercial bank. We are, indeed, "a bank for all seasons" and remain focused on our mission of becoming the nation's leader in commercial banking despite the market turmoil.

$61.3B Average Interest-Earning Assets 2022

$46.4B Average Interest-Earning Assets 2021

| EXECUTIVE PERSPECTIVES

Consistent Performance Makes Us a Bank for All Seasons

Dale M. Gibbons
Vice Chairman, Chief Financial Officer

I have long described Western Alliance as “a bank for all seasons,” thanks to our ability to deliver consistent, strong performance across every kind of economic cycle. It all starts with our longstanding, demonstrated conservative credit culture, which results in solid asset quality supported by our proven underwriting specialization and focus on business diversification.

We have accomplished these strong results because of our deliberate business transformation: In 2010, our loan portfolio was focused on community banking, concentrated in Nevada and geared toward local C&I businesses and high-net-worth developers. Today, we are a national, specialized commercial bank with a regional branch footprint, geared toward specialized C&I companies and institutional sponsor-backed developers.

Western Alliance is well-equipped to weather the more challenging economic environment expected in 2023. Our emphasis on varied client types and diverse deposit franchises support strong performance in every economic climate.

| EXECUTIVE PERSPECTIVES

Delivering on Specialized Expertise

Stephen R. Curley
Chief Banking Officer, National Business Lines and President, Alliance Association Bank

At Western Alliance Bank, we know that delivering on our specialized expertise – based on deep knowledge of the key industries and sectors we serve – supports both exceptional performance and excellent customer experiences. Our significant expertise enables us to develop sophisticated solutions, including technology enhancements that deliver features and functionality that differentiate us from competitors.

Combined with always-responsive, outstanding personal service, our expertise in a growing number of specialized areas – from HOA banking and mortgage warehouse lending to Public & Nonprofit Finance, Business Escrow Services and more – makes us a trusted advisor for clients across the country and across the U.S. economy.

According to American Banker, which ranked Western Alliance Bank the #1 top-performing bank with more than $50 billion in assets in its most recent listings, one reason our organization succeeds is that our specialty lines are not a commoditized offering.

Doing things differently, by providing outstanding service and spot-on products and services that are custom-built for the specific sectors we serve, including robust, customizable treasury management solutions, adds value for clients. This is what our national business lines are all about.

"As a national bank with a regional branch footprint, Western Alliance's uniquely flexible, diversified business model positions us as a premier commercial bank with strong asset quality across economic cycles. This approach enabled us to close out the fourth quarter with record revenues."

$2.2B Net Interest Income 2022

$1.5B Net Interest Income 2021

Diverse Deposit Generators Strengthen Western Alliance

Western Alliance's ongoing focus on our diversified deposit businesses is an essential element of our national commercial bank strategy. Previous investments in our scalable national funding channels, including HOA, Settlement Services and Business Escrow Services, combined with several other targeted initiatives we expect to roll out in 2023, provide meaningful opportunities to gather incremental deposits this year. Our diverse deposit generators continue to deliver a critical differentiator for Western Alliance versus other mid-size banks. In Q4 2022 alone, HOA banking grew by $293 million over the prior quarter.

$1.384B PPNR 2022

$1.122B PPNR 2021

| EXECUTIVE PERSPECTIVES

Regional Banking Excellence

Tim R. Bruckner
Chief Credit Officer

Our reliable, relationship-driven approach to regional banking consistently hits the sweet spot for small and mid-sized businesses across our core geographic footprint of Arizona, California and Nevada. Being a meaningful part of a client's balance sheet is how we've become trusted business advisors for a broad range of commercial customers in markets we know well.

More than just loans and deposits, our teams work hard to assess the full banking needs of individual clients and then meet those needs with personalized attention and tailored products and services – a proactive, proven approach that leads to deeper, longer-lasting relationships. Importantly, our in-depth knowledge of our customers and their businesses, combined with our long history of conservative underwriting, supports strong credit quality.

Last year, excellence in regional banking was a key driver for tangible book value and other metrics that showcase the continuing strength of Western Alliance Bank.

| EXECUTIVE PERSPECTIVES

Meeting Customers Where They Are: Online and In Person

Tim Boothe
Chief Operating Officer

In 2022, clients and teams in every part of the bank continued to benefit from ongoing, targeted investments in foundational technologies designed to benefit people – from increased transaction speeds and enhanced fraud protection to sophisticated API integrations and more.

These accomplishments are all part of our relentless focus on customers, and we work hard to build even more trust, loyalty and confidence through reliably strong performance. Whether customers choose to bank with us online, in person or both, we are a stable and reliable banking resource, enabling our commercial clients to progress in the most efficient and successful ways possible.

As I said in a recent Wall Street Journal article addressing culture as the "secret sauce" behind our digital technology transformation that enables human-focused innovation: "We don't try to outmaneuver the really large players – we look to out-culture them."

In practical terms, this means that our relationship-centric, entrepreneurial teams across Western Alliance Bank are empowered to make smart, quick decisions that support customers using robust, leading-edge technology tools.

"Western Alliance's ongoing focus on our diversified deposit businesses is an essential element of our national commercial bank strategy."

3.67% Net Interest Margin 2022

3.41% Net Interest Margin 2021

Deliberate Business Transformation Delivers Results

We are confident in our proven business strategy that continues to deliver industry-leading performance. Western Alliance has dramatically – and deliberately – transformed the business over the last decade to become a national commercial bank focused on deep segment expertise, underwriting specialization and business diversification.

Our balanced mix of regionally focused commercial banking divisions and national, specialized businesses enables selective relationships with strong counterparties, sector-leading profitability, consistently low efficiency ratios and commitment to risk management. This has allowed us to achieve greater consistency of earnings growth versus peers over the last decade.

Throughout 2022, we further executed on our strategy of conservatively positioning our loan portfolio, focusing our growth on insured and economically resistant loan categories that are better equipped to withstand economic uncertainty.

Our balance sheet today is well-positioned to weather the more difficult economic environment expected in 2023, with a large percentage of loans in historically low-to-no-loss categories.

44.9% Efficiency Ratio 2022

42.9% Efficiency Ratio 2021

| EXECUTIVE PERSPECTIVES

Risk Management Is Part of Everyone's Job

Emily Nachlas
Chief Risk Officer

Risk management is not just something we do at Western Alliance Bank – it's part of who we are. Here, no matter what someone's official job title is, we are all risk managers. This forward-looking, active approach – versus a "check the box" mentality – positively differentiates our organization.

Over the past few years, Western Alliance has proactively increased our investment in risk management and related technology innovation as we prepare to become a larger organization. Notable initiatives underway to strengthen all three lines of defense include: enhancing capital and liquidity planning, stress testing and internal control governance; our scalable AML Transaction Monitoring System; an enterprise-wide governance, risk and compliance system to automate and integrate risk processes; and improved controls testing programs.

As we work to become the nation's leader in commercial banking, robust and sophisticated risk management will be a key part of how we do business and secure the interests of all our stakeholders.

| EXECUTIVE PERSPECTIVES

Corporate Responsibility Helps Build a Better Bank

Jessica Jarvi
General Counsel

In our world, corporate responsibility is a total ecosystem supporting clients, colleagues, investors and communities. Corporate responsibility incorporates how we manage, develop and empower our people, how we shape the products and services we offer, and the investments we make in our communities.

In 2022, Western Alliance proudly published our first Corporate Responsibility Report, which formalizes our commitment to communicate our Environmental, Social and Governance (ESG) priorities and progress. We recognize that embedding high-quality governance practices and top-tier human capital management within our business operations is a strategic imperative. This commitment drives our corporate responsibility strategy, which also emphasizes sound business conduct and ethics and impactful Diversity, Equity and Inclusion (DEI) practices. Other corporate responsibilities focus on community support programs and investing in sustainable workplaces that emphasize energy efficiency and waste reduction.

We've created an organization in which we all win or lose together. Our DEI and allyship initiatives help define and direct our efforts to build a better bank for all of us.

Demonstrated Conservative Credit Culture

Western Alliance's longstanding, conservative credit culture continues to produce sustained superior asset quality with distinctly low realized credit losses. As noted above, net charge-offs for 2022 totaled a very modest $1.5 million, with a non-performing assets to total assets ratio of only 0.14% at year end. Our annualized, average net charge-offs from Q1 2014 through Q4 2022 were just 1 basis point, well below our peer average of 15 basis points. Year after year, in every economic cycle, maintaining superior asset quality is a top priority for us.

Well-Prepared for the Future

In 2022, Western Alliance Bank took additional steps in preparation for becoming a larger national commercial bank. In Q3, we announced the promotions of several senior executives and the formation of a new Executive Leadership Team (ELT), including Emily Nachlas, Chief Risk Officer, and Jessica Jarvi, General Counsel. Tim Bruckner, in his role as Chief Credit Officer, oversees our proven, conservative approach to credit, and Steve Curley's newly created role as Chief Banking Officer for National Business Lines provides focused leadership to support our diversified commercial bank strategy.

$67.7B Total assets 2022

$56.0B Total assets 2021

Strategic activity across the bank further prepares Western Alliance for what's ahead. Last year, we expanded our presence in Colorado and Chicago to work with our existing client base in these Western and Midwestern states as a complement to our regional banking divisions in Arizona, California and Nevada. We recently opened our first New York City office to better serve our broad array of existing clients in our specialized deposit franchises that are based in the tri-state area. We also announced a new technology hub in Columbus, Ohio, which will enable us to capitalize on the wealth of IT talent in this region of the country to advance our comprehensive digital capabilities for our clients.

As we continue to deepen our connections with customers in every part of the bank, with an emphasis on growing and diversifying core deposits, I am confident that the key differentiating characteristics of our bank and the talented people who work here – entrepreneurial spirit, flexibility and nimbleness – will ensure our ongoing success.

For the people of Western Alliance, our customers are the reason we come to work every day. Being a trusted advisor to their commercial enterprises – providing the tailored banking products and services they count on to run their operations effectively – is what we are all about. While we always appreciate the loyalty and confidence of our clients, we are especially grateful for their trust during the recent turmoil in the banking industry.

I would also like to thank our Board of Directors for their sound guidance and support as we continue to execute our strategic plans. And, on behalf of everyone at Western Alliance Bank, I want to express tremendous gratitude to our shareholders for your steadfast commitment to our organization.

Kenneth A. Vecchione
President and Chief Executive Officer

| EXECUTIVE PERSPECTIVES

Putting People First at Western Alliance

Barbara Kennedy
Chief Human Resources Officer

Teamwork and collaboration are cornerstones of Western Alliance Bank's established culture of "People. Performance. Possibilities." Doing right by our customers, colleagues and communities starts with our people. Every day, our teams demonstrate our core values, including passion and creativity, which leads to decision-making that supports success in our fast-moving organization.

In 2022 and into the present, Western Alliance remains sharply focused on retaining the top-tier talent we work so hard to acquire and successfully integrate into our company. In fact, companywide turnover for 2022 was well below the financial services industry average, a testament to our successful efforts to prioritize hiring deliberately to ensure we choose the right people.

At Western Alliance, our people are engaged and empowered – in turn, fueling a collaborative, committed relationship with our customers. Being nimble, flexible and entrepreneurial are all characteristics that describe our people. These attributes also define Western Alliance Bank and our singular culture that puts people first.

FACTS AND FIGURES

$5.4B
Total Equity

$67.7B
Total Assets

3,365
Employees

56
Offices

LONG-TERM DEPOSIT RATING[1]

A2 Moody's Investor Service

A Kroll Bond Rating Agency

LONG-TERM DEBT RATING[1]

A- Kroll Bond Rating Agency

Baa2 Moody's Investor Service

IDC FINANCIAL PUBLISHING

The Standard in Financial Rating Institutions, Rated 300 Superior*

*Report dated 02/24/2022

INDUSTRY ACCOLADES

#1 Top-Performing Large Bank with Assets $50 Billion and Above
AMERICAN BANKER

#1 Bank with Assets of $50 Billion+ & Top 10 U.S. Banks for Growth Strategy
BANK DIRECTOR'S 2022 RANKINGBANKING STUDY

#2 Best-Performing of the 50 Largest Public U.S. Banks
S&P GLOBAL MARKET INTELLIGENCE 2021

One of Forbes' "America's Best Banks" Year After Year

1. As of April 20, 2023

Financial Highlights

	2020	2021	2022
Balance Sheet ($ in millions)			
Total Assets	36,461	55,983	67,734
HFI Loans, net of deferred fees	27,053	39,075	51,862
Total Deposits	31,930	47,612	53,644
Total Equity	3,413	4,963	5,356
Profitability ($ in millions)			
Net Interest Income	1,166.9	1,548.8	2,216.3
PPNR[2]	746.1	1,122.8	1,384.2
Net Income	506.6	899.2	1,057.3
ROAA (%)	1.61	1.83	1.62
ROATCE[2] (%)	17.7	26.2	25.4
Net Interest Margin (%)	3.97	3.41	3.67
Efficiency Ratio[2] (%)	38.8	42.9	44.9
Tangible Common Equity / Tangible Assets[2] (%)	8.6	7.3	6.5
Asset Quality (%)			
Non-Performing Assets[3] / Total Assets	0.32	0.15	0.14
Loan Loss Reserves / Funded Loans	1.17	0.74	0.69
Common Equity Tier 1 (CET1) Ratio	9.9	9.1	9.3
Per Share Information ($)			
Common Dividends Declared per Share[4]	1.00	1.20	1.42
Earnings Per Share	5.04	8.67	9.70

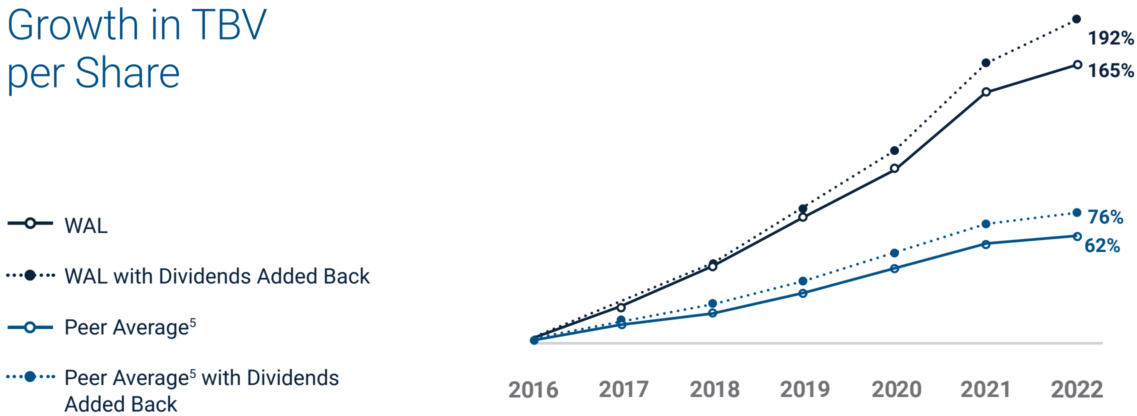
2. Where non-GAAP financial measures are used, the comparable GAAP financial measure, as well as the reconciliation to the comparable GAAP financial measure, can be found in the Company's Annual Report on Form 10-K for the year ended December 31, 2022 as filed with the Securities and Exchange Commission.

3. Non-performing assets include nonaccrual loans and repossessed assets.

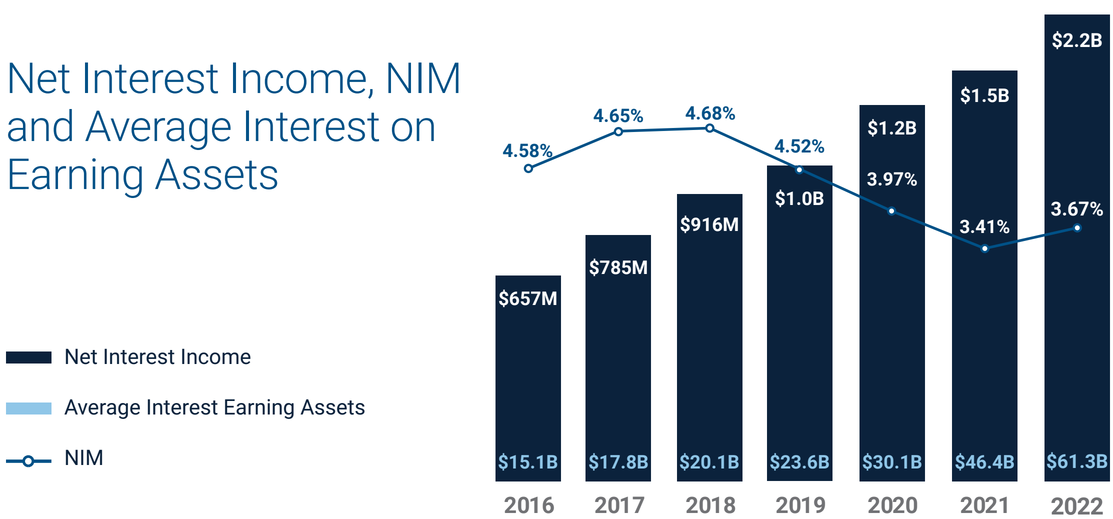
4. Quarterly cash dividend initiated in 3Q 2019.

Financial Highlights Continued

Growth in TBV per Share



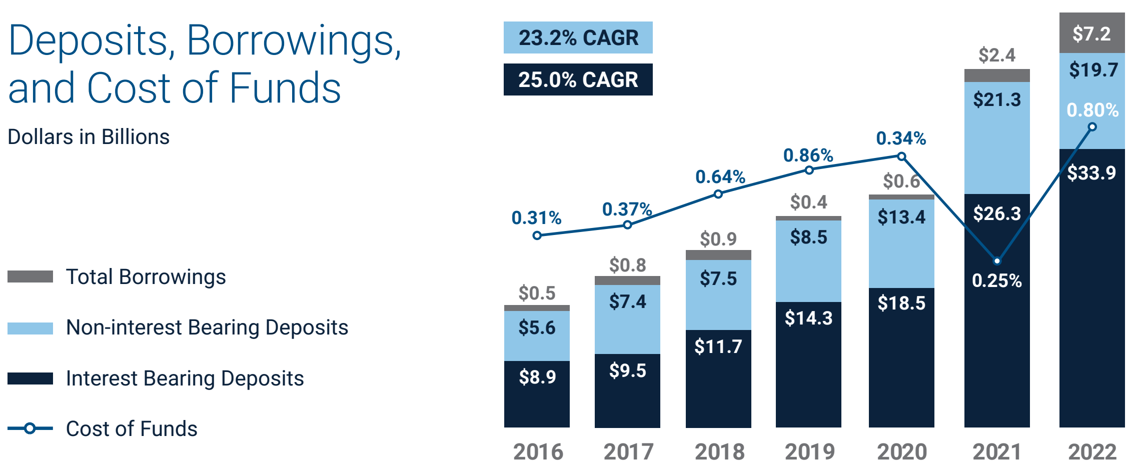
Net Interest Income, NIM and Average Interest on Earning Assets



5. Peers consist of 33 publicly traded banks headquartered in the US with total assets between $25B and $150B, excluding target banks of pending acquisitions, as of December 31, 2022. Source: S&P Global Market Intelligence.

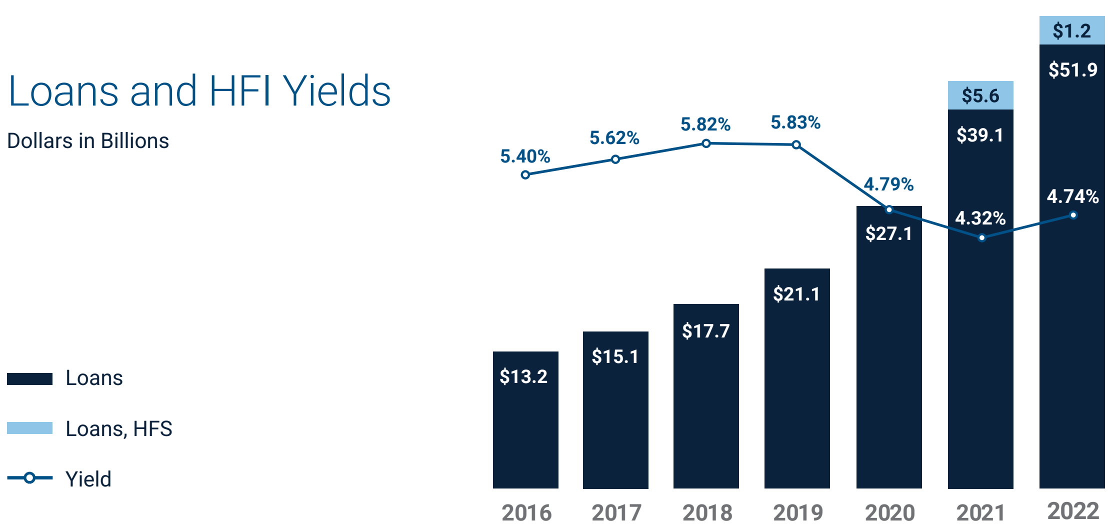
Deposits, Borrowings, and Cost of Funds

Dollars in Billions



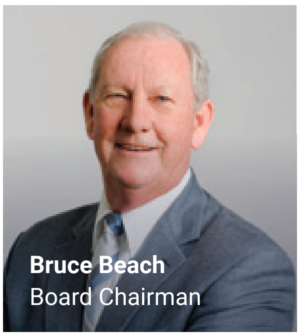
Loans and HFI Yields

Dollars in Billions

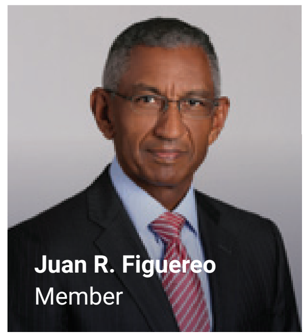


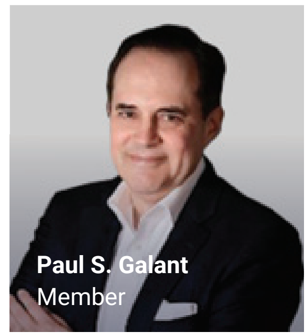
Our Leadership Team

BOARD OF DIRECTORS


Bruce Beach
Board Chairman

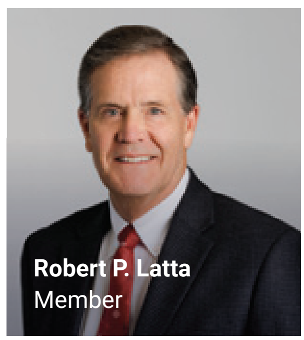

Kevin M. Blakely
Member

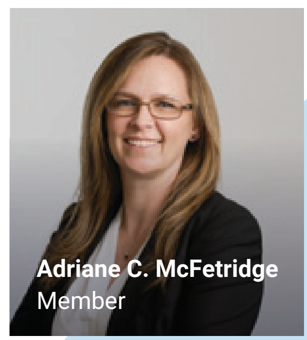

Juan R. Figuereo
Member

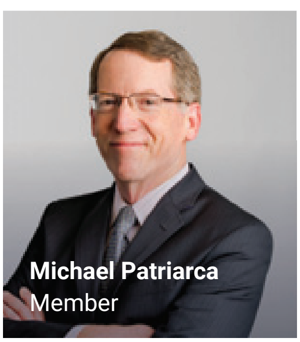

Paul S. Galant
Member

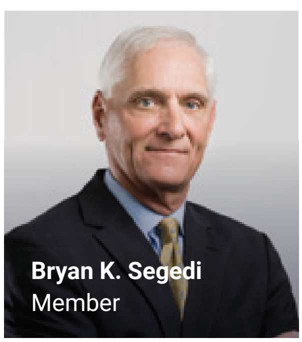

Howard N. Gould
Member

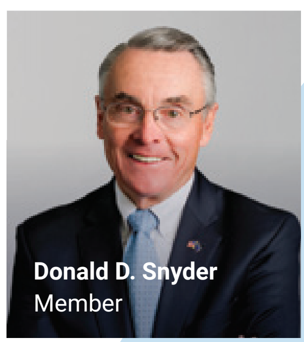

Marianne Boyd Johnson
Member

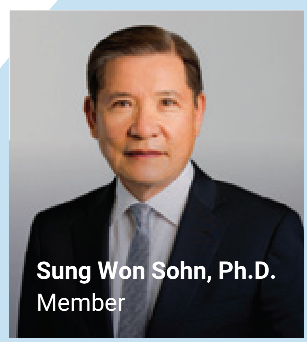

Robert P. Latta
Member

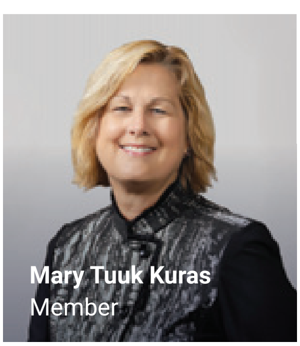

Adriane C. McFetridge
Member

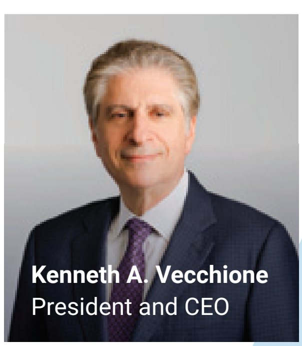

Michael Patriarca
Member

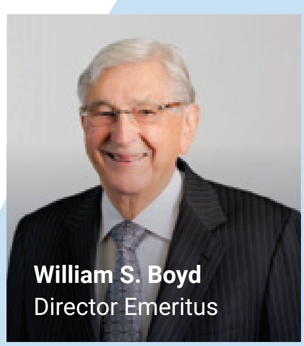

Bryan K. Segedi
Member


Donald D. Snyder
Member

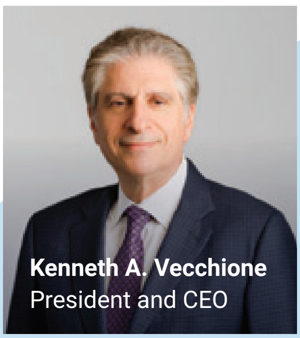

Sung Won Sohn, Ph.D.
Member

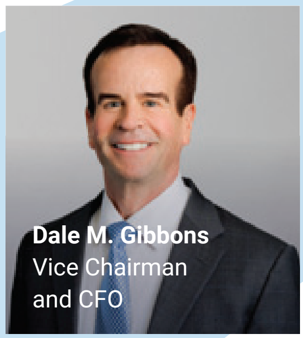

Mary Tuuk Kuras
Member

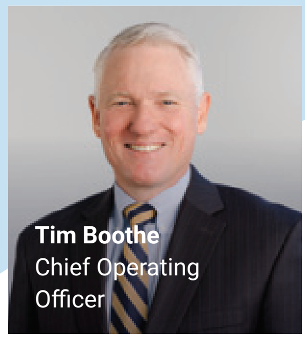

Kenneth A. Vecchione
President and CEO

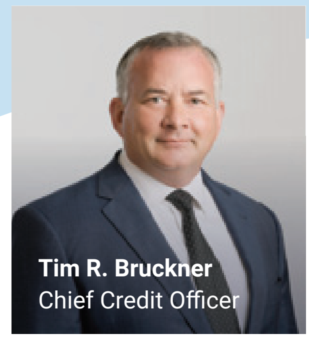

William S. Boyd
Director Emeritus

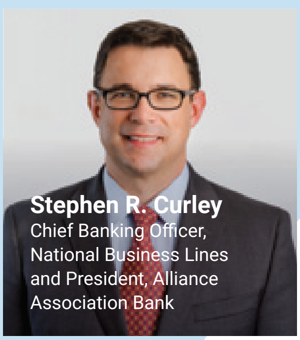
EXECUTIVE LEADERSHIP TEAM

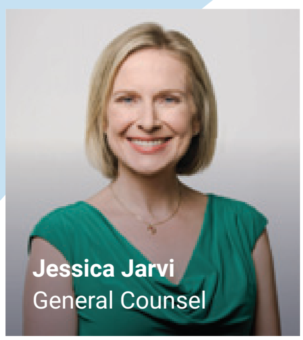

Kenneth A. Vecchione
President and CEO

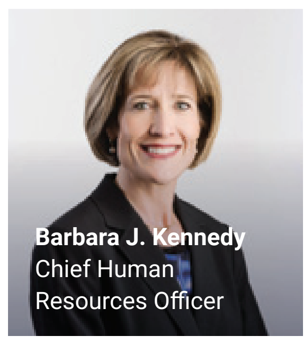

Dale M. Gibbons
Vice Chairman and CFO

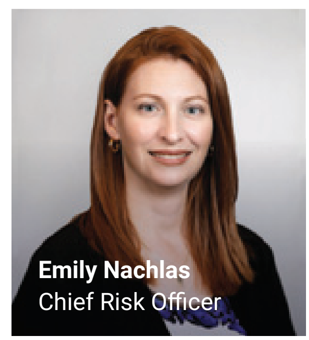

Tim Boothe
Chief Operating Officer

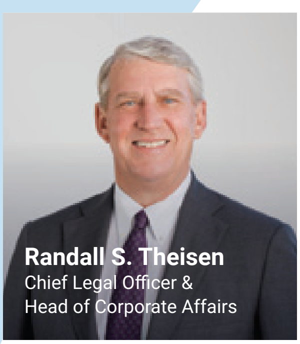

Tim R. Bruckner
Chief Credit Officer


Stephen R. Curley
Chief Banking Officer, National Business Lines and President, Alliance Association Bank


Jessica Jarvi
General Counsel


Barbara J. Kennedy
Chief Human Resources Officer


Emily Nachlas
Chief Risk Officer


Randall S. Theisen
Chief Legal Officer & Head of Corporate Affairs

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-K

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

For the fiscal year ended December 31, 2022

☐ 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: 001-32550

WESTERN ALLIANCE BANCORPORATION

(Exact name of registrant as specified in its charter)

Delaware	**88-0365922**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
One E. Washington Street, Suite 1400 Phoenix Arizona	**85004**
(Address of principal executive offices)	(Zip Code)

(602) 389-3500
(Registrant's telephone number, including area code)
Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, $0.0001 Par Value	WAL	New York Stock Exchange
Depositary Shares, Each Representing a 1/400th Interest in a Share of 4.250% Fixed-Rate Reset Non-Cumulative Perpetual Preferred Stock, Series A	WAL PrA	New York Stock Exchange

Securities registered pursuant to Section 12(g) of the Act: None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☒ No ☐

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes ☐ No ☒

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or 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	☐
		Emerging growth company	☐

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

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

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

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

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

The aggregate market value of the registrant's voting stock held by non-affiliates was approximately $7.26 billion based on the June 30, 2022 closing price of said stock on the New York Stock Exchange ($70.60 per share).

As of February 17, 2023, Western Alliance Bancorporation had 109,614,818 shares of common stock outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's definitive proxy statement for its 2023 Annual Meeting of Stockholders are incorporated by reference into Part III of this report.

INDEX

PART I

Forward-Looking Statements

Certain statements contained in this Annual Report on Form 10-K for the fiscal year ended December 31, 2022 (this “Form 10-K”) are “forward-looking statements” within the meaning of the Private Securities Litigation Reform Act of 1995 (the “Reform Act”). Statements that constitute forward-looking statements within the meaning of the Reform Act are generally identified through the inclusion of words such as “aim,” “anticipate,” “believe,” “drive,” “estimate,” “expect,” “expressed confidence,” “forecast,” “future,” “goals,” “guidance,” “intend,” “may,” “opportunity,” “plan,” “position,” “potential,” “project,” “ seek,” “should,” “strategy,” “target,” “will,” “would” or similar statements or variations of such words and other similar expressions. All statements other than statements of historical fact are “forward-looking statements” within the meaning of the Reform Act, including statements that are related to or are dependent on estimates or assumptions relating to expectations, beliefs, projections, future plans and strategies, anticipated events or trends and similar expressions concerning matters that are not historical facts. These forward-looking statements reflect the Company's current views about future events and financial performance and involve certain risks, uncertainties, assumptions, and changes in circumstances that may cause the Company's actual results to differ significantly from historical results and those expressed in any forward-looking statement. Factors that may cause actual results to differ materially from those contemplated by such forward-looking statements include, but are not limited to, those described in “Risk Factors” in Item 1A of this Form 10-K. Forward-looking statements speak only as of the date they are made and the Company undertakes no obligation to publicly update or revise any forward-looking statements included in this Form 10-K or to update the reasons why actual results could differ from those contained in such statements, whether as a result of new information, future events or otherwise, except to the extent required by federal securities laws. In light of these risks, uncertainties and assumptions, the forward-looking events discussed in this Form 10-K might not occur, and you should not put undue reliance on any forward-looking statements.

GLOSSARY OF ENTITIES AND TERMS

The acronyms and abbreviations identified below are used in various sections of this Form 10-K, including "Management's Discussion and Analysis of Financial Condition and Results of Operations," in Item 7 and the Consolidated Financial Statements and the Notes to Consolidated Financial Statements in Item 8 of this Form 10-K:

ENTITIES / DIVISIONS:					
ABA	Alliance Bank of Arizona	**Company**	Western Alliance Bancorporation and subsidiaries	**WA PWI**	Western Alliance Public Welfare Investments, LLC
AmeriHome	AmeriHome Mortgage Company, LLC	**CSI**	CS Insurance Company	**WAB or Bank**	Western Alliance Bank
Aris	Aris Mortgage Holding Company, LLC	**DST**	Digital Settlement Technologies LLC	**WABT**	Western Alliance Business Trust
BON	Bank of Nevada	**FIB**	First Independent Bank	**WAL or Parent**	Western Alliance Bancorporation
Bridge	Bridge Bank	**TPB**	Torrey Pines Bank	**WATC**	Western Alliance Trust Company, N.A.

TERMS:					
ACL	Allowance for Credit Losses	**EAD**	Exposure at Default	**IRLC**	Interest Rate Lock Commitment
AFS	Available-for-Sale	**EBO**	Early buyout	**ISDA**	International Swaps and Derivatives Association
ALCO	Asset and Liability Management Committee	**EGRRCPA**	The Economic Growth, Regulatory Relief, and Consumer Protection Act	**LGD**	Loss Given Default
Ameribor	American Interbank Offered Rate	**EPS**	Earnings per Share	**LIBOR**	London Interbank Offered Rate
AOCI	Accumulated Other Comprehensive Income	**ESG**	Environmental, Social, and Governance	**LIHTC**	Low-Income Housing Tax Credit
ASC	Accounting Standards Codification	**EVE**	Economic Value of Equity	**MBS**	Mortgage-Backed Securities
ASU	Accounting Standards Update	**Exchange Act**	Securities Exchange Act of 1934, as Amended	**MSA**	Metropolitan Statistical Area
Basel Committee	Basel Committee on Banking Supervision	**FASB**	Financial Accounting Standards Board	**MSR**	Mortgage Servicing Right
Basel III	Banking Supervision's December 2010 Final Capital Framework	**FCRA**	Fair Credit Reporting Act of 1971	**NBL**	National Business Lines
BHCA	Bank Holding Company Act of 1956	**FDIA**	Federal Deposit Insurance Act	**NOL**	Net Operating Loss
BOD	Board of Directors	**FDIC**	Federal Deposit Insurance Corporation	**NPV**	Net Present Value
BOLI	Bank Owned Life Insurance	**FHA**	Federal Housing Administration	**NYSE**	New York Stock Exchange
BSBY	Bloomberg Short Term Bank Yield Index	**FHLB**	Federal Home Loan Bank	**OCI**	Other Comprehensive Income
CAMELS	Capital Adequacy, Assets, Management Capability, Earnings, Liquidity, Sensitivity	**FHLMC**	Federal Home Loan Mortgage Corporation	**OFAC**	Office of Foreign Asset Control
Capital Rules	The FRB, the OCC, and the FDIC 2013 Approved Final Rules	**FICO**	The Financing Corporation	**OREO**	Other Real Estate Owned
CBDP	Commercial Banking Development Program	**FNMA**	Federal National Mortgage Association	**PCAOB**	Public Company Accounting Oversight Board
CCO	Chief Credit Officer	**FOMC**	Federal Open Market Committee	**PCD**	Purchased Credit Deteriorated
CDARS	Certificate Deposit Account Registry Service	**FRA**	Federal Reserve Act	**PD**	Probability of Default
CDO	Collateralized Debt Obligation	**FRB**	Federal Reserve Bank	**PPNR**	Pre-Provision Net Revenue
CECL	Current Expected Credit Loss	**FTC**	Federal Trade Commission	**ROU**	Right of Use
CEO	Chief Executive Officer	**FVO**	Fair Value Option	**SEC**	Securities and Exchange Commission
CET1	Common Equity Tier 1	**GAAP**	U.S. Generally Accepted Accounting Principles	**SERP**	Supplemental Executive Retirement Plan
CFO	Chief Financial Officer	**GLBA**	Gramm-Leach-Bliley Act	**SLC**	Senior Loan Committee
CFPB	Consumer Financial Protection Bureau	**GNMA**	Government National Mortgage Association	**SOFR**	Secured Overnight Funding Rate
CLO	Collateralized Loan Obligation	**GSE**	Government-Sponsored Enterprise	**TDR**	Troubled Debt Restructuring
COSO	Committee of Sponsoring Organizations of the Treadway Commission	**HELOC**	Home Equity Line of Credit	**TEB**	Tax Equivalent Basis
COVID-19	Coronavirus Disease 2019	**HFI**	Held for Investment	**TSR**	Total Shareholder Return
CRA	Community Reinvestment Act	**HFS**	Held for Sale	**UPB**	Unpaid Principal Balance
CRE	Commercial Real Estate	**HTM**	Held-to-Maturity	**USDA**	United States Department of Agriculture
DEI	Diversity, Equity, and Inclusion	**HUD**	U.S. Department of Housing and Urban Development	**VA**	Veterans Affairs
Dodd-Frank Act	The Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010	**ICS**	Insured Cash Sweep Service	**VIE**	Variable Interest Entity
DTA	Deferred Tax Asset	**IRA**	Inflation Reduction Act of 2022	**XBRL**	eXtensible Business Reporting Language

Item 1. Business.

Organization Structure and Description of Services

WAL is a bank holding company headquartered in Phoenix, Arizona, incorporated under the laws of the state of Delaware. WAL provides a full spectrum of customized loan, deposit and treasury management capabilities, including 24/7 funds transfer and other digital payment offerings through its wholly-owned banking subsidiary, WAB.

WAB operates the following full-service banking divisions: ABA, BON, Bridge, FIB, and TPB. The Company also provides an array of specialized financial services to business customers across the country, including mortgage banking services through AmeriHome, and has added to its capabilities with the acquisition of DST on January 25, 2022, which provides digital payment services for the class action legal industry. In addition, the Company has the following non-bank subsidiaries: CSI, a captive insurance company formed and licensed under the laws of the State of Arizona and established as part of the Company's overall enterprise risk management strategy, and WATC, which will provide corporate trust services and levered loan administration solutions.

WAL also has eight unconsolidated subsidiaries used as business trusts in connection with issuance of trust-preferred securities as described in "Note 12. Qualifying Debt" in Item 8 of this Form 10-K.

Bank Subsidiary

At December 31, 2022, WAL has the following bank subsidiary:

Bank Name	Headquarters	Location Cities	Total Assets	Net Loans	Deposits
				(in millions)	
Western Alliance Bank	Phoenix, Arizona	**Arizona:** Chandler, Flagstaff, Gilbert, Mesa, Phoenix, Scottsdale, and Tucson **Nevada:** Carson City, Fallon, Henderson, Las Vegas, Mesquite, Reno, and Sparks **California:** Beverly Hills, Carlsbad, Costa Mesa, Irvine, La Mesa, Los Angeles, Oakland, Pleasanton, San Diego, San Francisco, San Jose, and Woodland Hills **Other:** Atlanta, Georgia; Austin, Houston, and Irving, Texas; Boston, Massachusetts; Chicago, Illinois; Denver, Colorado; Minneapolis, Minnesota; New York, New York; Seattle, Washington; and Tysons, Virginia	**$ 67,684**	**$ 52,737**	**$ 53,918**

WAB also has the following significant wholly-owned subsidiaries:

- WABT holds certain investment securities, municipal and non-profit loans, and leases.
- WA PWI holds interests in certain limited partnerships invested primarily in low income housing tax credits and small business investment corporations.
- BW Real Estate, Inc. operates as a real estate investment trust and holds certain of WAB's real estate loans and related securities.
- Helios Prime, Inc. holds certain equity interests in renewable energy tax credit transactions.
- Western Finance Company purchases and originates equipment finance leases and provides mortgage banking services through its wholly-owned subsidiary, AmeriHome.
- DST provides digital payments services for the class action legal industry.

Market Segments

The Company's reportable segments are aggregated with a focus on products and services offered and consist of three reportable segments:

- Commercial: provides commercial banking and treasury management products and services to small and middle-market businesses, specialized banking services to sophisticated commercial institutions and investors within niche industries, as well as financial services to the real estate industry.
- Consumer Related: offers both commercial banking services to enterprises in consumer-related sectors and consumer banking services, such as residential mortgage banking and beginning on January 25, 2022, includes the financial results of DST, which provides digital payment services for the class action legal industry.

- Corporate & Other: consists of the Company's investment portfolio, Corporate borrowings and other related items, income and expense items not allocated to other reportable segments, and inter-segment eliminations.

Loan and deposit accounts are typically assigned directly to the segments where these products are originated and/or serviced. Equity capital is assigned to each segment based primarily on the risk profile of their assets and liabilities. Any excess equity not allocated to segments based on risk is assigned to the Corporate & Other segment.

Net interest income, provision for credit losses, and non-interest expense amounts are recorded in their respective segments to the extent that the amounts are directly attributable to those segments. Net interest income of a reportable segment includes a funds transfer pricing process that matches assets and liabilities with similar interest rate sensitivity and maturity characteristics. Using this funds transfer pricing methodology, liquidity is transferred between users and providers. Net income amounts for each reportable segment are further derived by the use of expense allocations. Certain expenses not directly attributable to a specific segment are allocated across all segments based on key metrics, such as number of employees, number of transactions processed for loans and deposits, and average loan and deposit balances. Income taxes are applied to each segment based on the effective tax rate for the geographic location of the segment. Any difference in the corporate tax rate and the aggregate effective tax rates in the segments are adjusted in the Corporate & Other segment.

Lending Activities

General

The Company’s lending has focused primarily on meeting the needs of business customers. Through WAB and its banking divisions and operating subsidiaries, the Company provides a variety of lending products to customers, including the loan types discussed below.

Commercial and Industrial: Commercial and industrial loans are a significant portion of the Company's loan portfolio, representing 40% and 47% of the Company's HFI loan portfolio as of December 31, 2022 and 2021, respectively. These loans include working capital lines of credit, loans to technology companies, inventory and accounts receivable lines, mortgage warehouse lines, and other commercial loans. Equipment loans and leases, tax-exempt municipalities, and not-for-profit organizations are also categorized as commercial and industrial loans.

CRE: Loans to fund the purchase or refinancing of CRE for investors (non-owner occupied) or owner occupants are a significant portion of the Company's loan portfolio. These CRE loans are secured by multi-family residential properties, professional offices, industrial facilities, retail centers, hotels, and other commercial properties. Approximately 16% and 13% of the Company's CRE investor portfolio consisted of office loans as of December 31, 2022 and 2021, respectively. These office loans are primarily shorter-term bridge loans that enable borrowers to reposition or redevelop projects and are geographically well diversified, with the vast majority located in midtown or suburban locations. At the time of origination, these loans have an initial loan-to-value ratio of less than 55% and a weighted average loan-to-cost of less than 60%. The properties underlying these loans have stable business trends and low vacancy rates. In addition, conservative underwriting focused on loan-to-cost lending with significant up-front sponsor cash equity, re-appraisal rights by the Company, re-margining requirements and ongoing debt service and debt yield covenants mitigates asset-type credit risk and provides for ongoing sponsor support of and commitment to projects.

Substantially all of the Company's remaining CRE loans are secured by first liens with an initial loan-to-value ratio of generally not more than 75%. As of December 31, 2022 and 2021, 16% and 23% of the Company's CRE loans were owner occupied. Owner occupied CRE loans are loans secured by owner occupied non-farm nonresidential properties for which the primary source of repayment (more than 50%) is the cash flow from the ongoing operations and activities conducted by the borrower who owns the property. Non-owner occupied CRE loans are CRE loans for which the primary source of repayment is rental income generated from the collateral property.

Construction and Land Development: Construction and land development loans include single family and multi-family residential projects, industrial/warehouse properties, office buildings, retail centers, medical office facilities, and residential lot developments. These loans are primarily originated to experienced local and national developers with whom the Company has a satisfactory lending history. An analysis of each construction project is performed as part of the underwriting process to determine whether the type of property, location, construction costs, and contingency funds are appropriate and adequate. Loans to finance commercial raw land are primarily to borrowers who plan to initiate active development of the property within two years.

Residential: The Company executes flow and bulk residential loan purchases that meet the Company's goals and underwriting criteria through its residential mortgage acquisition program. These loan purchases consist of both conforming and non-conforming loans. Non-conforming loan purchases are considered to be high quality as the borrowers have high FICO scores and the loans generally have low loan-to-values.

Consumer: Limited types of consumer loans are offered to meet customer demand and to respond to community needs. Examples of these consumer loans include home equity loans and lines of credit, home improvement loans, personal lines of credit, and loans to individuals for investment purposes.

At December 31, 2022, the Company's HFI loan portfolio totaled $51.9 billion, or approximately 77% of total assets. The following table sets forth the composition of the Company's HFI loan portfolio:

	December 31,			
	2022		2021	
	Amount	**Percent**	Amount	Percent
	(dollars in millions)			
Commercial and industrial	**$ 20,710**	**39.9 %**	$ 18,297	46.8 %
Commercial real estate - non-owner occupied	**9,319**	**18.0**	6,526	16.7
Commercial real estate - owner occupied	**1,818**	**3.5**	1,898	4.9
Construction and land development	**4,013**	**7.7**	3,023	7.7
Residential real estate	**15,928**	**30.7**	9,282	23.8
Consumer	**74**	**0.2**	49	0.1
Loans HFI, net of deferred loan fees and costs	**$ 51,862**	**100.0 %**	$ 39,075	100.0 %
Allowance for credit losses	**(310)**		(252)	
Net loans HFI	**$ 51,552**		$ 38,823	

For additional information concerning loans, see "Note 5. Loans, Leases and Allowance for Credit Losses" in Item 8 or "Management's Discussion and Analysis of Financial Condition and Results of Operations—Financial Condition – Loans" in Item 7 of this Form 10-K.

The Company adheres to a specific set of credit standards that are intended to ensure appropriate management of credit risk. Furthermore, the Bank's senior management team plays an active role in monitoring compliance with such standards.

Loan originations are subject to a process that includes the credit evaluation of borrowers, utilizing established lending limits, analysis of collateral, and procedures for continual monitoring and identification of credit deterioration. Loan officers actively monitor their individual credit relationships in order to report suspected risks and potential downgrades as early as possible. The BOD approves all material changes to loan policy, as well as lending limit authorities. The Bank's lending policies generally incorporate consistent underwriting standards across all geographic regions in which the Bank operates, customized as necessary to conform to state law and local market conditions. The Bank's credit culture emphasizes timely identification of troubled credits to allow management to take prompt corrective action, when necessary.

Loan Approval Procedures and Authority

The Company's loan approval procedures are executed through a tiered loan limit authorization process, which is structured as follows:

- *Individual Credit Authorities.* The credit approval levels for individual divisional and senior credit officers are set by policy and certain credit administration officers' approval authorities are established on a delegated basis.
- *Management Loan Committees.* Credits in excess of individual divisional or senior credit officer approval authority are submitted to the appropriate divisional or NBL loan committee. The divisional committees consist of members of the Bank's senior management team of each division and the NBL loan committees consist of the Bank's divisional or senior credit officers.
- *Credit Administration.* Credits in excess of the divisional or NBL loan committee approval authority require the additional approval of the Bank's CCO and any credits in excess of the CCO's individual approval authority are submitted to the WAB SLC. In addition, the SLC reviews all other loan approvals to any one new borrower in excess of established thresholds. The SLC is chaired by the WAB CCO and includes the Company’s CEO.

Loans to One Borrower. In addition to the limits set forth above, subject to certain exceptions, state banking laws generally limit the amount of funds that a bank may lend to a single borrower. Under Arizona law, the obligations of one borrower to a bank generally may not exceed 20% of the bank's capital, plus an additional 10% of its capital if the additional amounts are fully secured by readily marketable collateral. Arizona law does not specifically require aggregation of loans to affiliated entities in determining compliance with the lending limit. As a matter of longstanding practice, the Arizona Department of Financial Institutions uses the same aggregation analysis as applied to national banks by the OCC.

Concentrations of Credit Risk. The Company's lending policies also establish customer and product concentration limits for its HFI and HFS loan portfolios, which are based on outstanding amounts, to control single customer and product exposures. The Company's lending policies have several different measures to limit concentration exposures. Set forth below are the primary segmentation limits and actual measures based on outstanding amounts as of December 31, 2022:

	Percent of Tier 1 Capital and ACL	
	Policy Limit	Actual
Loans HFI		
CRE	295 %	193 %
Commercial and industrial	485	359
Construction and land development	85	70
Residential real estate	300	276
Consumer	10	1
Loans HFS		
Residential real estate	215	21

Asset Quality

General

To measure asset quality, the Company has instituted a loan grading system consisting of nine different categories. The first five are considered satisfactory "pass" ratings. The other four "non-pass" grades range from a “Special mention” category to a “Loss” category and are consistent with the grading systems used by federal banking regulators. All loans are assigned a credit risk grade at the time they are made and formally reviewed on a quarterly basis as part of the Company's loan grade certification process to identify loans that may be exhibiting early-warning signs of credit stress and determine whether a change in the credit risk grade is warranted. In addition, the grading of the Company's loan portfolio is reviewed on a regular basis by its internal Loan Review Department.

Collection Procedure

Bank personnel are responsible for monitoring activity that may indicate an increased risk rating, including, but not limited to, past-dues, overdrafts, and loan agreement covenant defaults. If a borrower fails to make a scheduled payment on a loan, Bank personnel attempt to remedy the deficiency by contacting the borrower and seeking payment. Contact is generally made within 15 business days after the payment becomes past due. The Bank also maintains a special assets department, which generally services and collects loans rated Substandard or worse. Loans deemed uncollectible are charged-off.

Nonperforming Assets

Nonperforming assets include loans past due 90 days or more and still accruing interest (that are not government guaranteed), non-accrual and TDR loans, and repossessed assets, including OREO. In general, loans are placed on non-accrual status when the Company determines that ultimate collection of principal and interest is in doubt due to the borrower's financial condition, collateral value, and collection efforts. In addition, the Company considers all loans rated Substandard or lower to be experiencing financial difficulty. A TDR loan is a loan for which the Company, for reasons related to a borrower's financial difficulties, grants a concession to the borrower that the Company would not otherwise consider. Other repossessed assets result from loans where the Company has received title or physical possession of the borrower's assets. The Company generally re-appraises OREO and collateral dependent non-residential loans with balances greater than $0.5 million every 12 months. The total net realized and unrealized gains and losses of repossessed and other assets was not significant during each of the years ended December 31, 2022, 2021, and 2020. However, losses may be experienced in future periods.

Criticized Assets

Federal bank regulators require banks to classify its assets on a regular basis. In addition, in connection with their examinations of the Bank, examiners have authority to identify problem assets and, if appropriate, re-classify them. A loan grade of "Special Mention" from the Company's internal loan grading system is utilized to identify potential problem assets and loan grades of "Substandard," "Doubtful," and "Loss" are utilized to identify actual problem assets.

The following describes the potential and actual problem assets using the Company's internal loan grading system definitions:

- *"Special Mention" (Grade 6):* Generally these are assets that possess potential weaknesses that warrant management's close attention. These loans may involve borrowers with adverse financial trends, higher debt to equity ratios, or weaker liquidity positions, but not to the degree of being considered a “problem loan” where risk of loss may be apparent. Loans in this category are usually performing as agreed, although there may be non-compliance with financial covenants.

- *“Substandard” (Grade 7):* These assets are characterized by well-defined credit weaknesses and carry the distinct possibility that the Company will sustain some loss if such weakness or deficiency is not corrected. All loans 90 days or more past due and all loans on non-accrual status are considered at least "Substandard," unless extraordinary circumstances would suggest otherwise.

- *“Doubtful” (Grade 8):* These assets have all the weaknesses inherent in those classified as "Substandard" with the added characteristic that the weaknesses present make collection or liquidation in full, on the basis of currently existing facts, conditions and values, highly questionable and improbable, but because of certain known factors which may work to the advantage and strengthening of the asset (for example, capital injection, perfecting liens on additional collateral and refinancing plans), classification as an estimated loss is deferred until a more precise status may be determined.

- *“Loss” (Grade 9):* These assets are considered uncollectible and having such little recoverable value that it is not practical to defer writing off the asset. This classification does not mean that the loan has absolutely no recovery or salvage value, but rather that it is not practicable or desirable to defer writing off the asset, even though partial recovery may be achieved in the future.

Allowance for Credit Losses

The provision for credit losses in each period is reflected as a reduction in earnings for that period and includes amounts related to funded loans, unfunded loan commitments, and investment securities. The provision is equal to the amount required to maintain the ACL at a level that is adequate to absorb estimated lifetime credit losses inherent in the loan and investment securities portfolios as well as off-balance sheet credit exposures. Charge-offs are recorded as a reduction to the ACL and subsequent recoveries of previously charged-off amounts are credited to the ACL. The ACL on funded loans and investment securities are presented as a reduction to the respective asset balance on the Consolidated Balance Sheet. The ACL on unfunded loan commitments is classified in other liabilities on the Consolidated Balance Sheet. For a detailed discussion of the Company’s methodology see “Management’s Discussion and Analysis and Financial Condition – Critical Accounting Policies – Allowance for Credit Losses” in Item 7 of this Form 10-K.

Investment Activities

The Company has an investment policy, which is approved by the BOD on an annual basis. This policy dictates that investment decisions be made based on the safety of the investment, liquidity requirements of the Bank and holding company, potential returns, cash flow targets, and consistency with the Company's interest rate risk management. The Bank’s ALCO is responsible for making securities portfolio decisions in accordance with established policies. The CFO and Treasurer have the authority to purchase and sell securities within specified guidelines. All investment transactions for the Bank and for the holding company were reviewed by the ALCO and BOD.

The Company's investment policy limits new securities purchases to certain eligible investment types and, in the aggregate, are further subject to the following quantitative limits of the Bank:

Securities Category	Basis Limit	Policy Limit	Actual
Collateralized loan obligations	Total assets	5.0 %	4.1 %
Commercial mortgage-backed securities	Total assets	1.0	—
Corporate debt securities	Total assets	2.5	0.6
Investment grade corporate bond mutual funds	Tier 1 capital	5.0	—
Preferred stock	Common equity tier 1	10.0	2.0
Tax-exempt low income housing development bonds	Total capital	30.0	17.4
Tax-exempt municipal securities	Total assets	5.0	1.4

The Company's policies also govern the use of derivatives, and provide that the Company prudently use derivatives in accordance with applicable regulations as a risk management tool to reduce the overall exposure to interest rate risk, and not for speculative purposes.

The Company's investment securities portfolio includes debt and equity securities. Debt securities are classified as AFS or HTM pursuant to ASC Topic 320, *Investments* and ASC Topic 825, *Financial Instruments*. Equity securities are reported at fair value in accordance with ASC Topic 321, *Equity Securities*. For further discussion of significant accounting policies related to the Company's investment securities portfolio refer to "Note 1. Summary of Significant Accounting Policies" in Item 8 of this Form 10-K.

As of December 31, 2022, the Company's investment securities portfolio totals $8.5 billion, representing approximately 13% of the Company's total assets, with a significant portion of the portfolio invested in AAA/AA+ rated securities. The average duration, which is a measure of the interest rate sensitivity of the Company's debt securities portfolio, is 5.5 years as of December 31, 2022.

The following table summarizes the carrying value of the Company's investment securities:

	December 31,			
	2022		2021	
	Amount	**Percent**	Amount	Percent
	(dollars in millions)			
Debt securities				
CLO	**$ 2,706**	**31.7 %**	$ 926	12.4 %
Commercial MBS issued by GSEs	**97**	**1.1**	69	1.0
Corporate debt securities	**390**	**4.6**	383	5.1
Private label residential MBS	**1,397**	**16.3**	1,725	23.1
Residential MBS issued by GSEs	**1,740**	**20.4**	1,993	26.8
Tax-exempt	**1,982**	**23.2**	2,105	28.2
U.S. treasury securities	**—**	**—**	13	0.2
Other	**69**	**0.8**	82	1.1
Total debt securities	**$ 8,381**	**98.1 %**	$ 7,296	97.9 %
Equity securities				
Common stock	**$ 3**	**0.0 %**	$ —	— %
CRA investments	**49**	**0.6**	45	0.6
Preferred stock	**108**	**1.3**	114	1.5
Total equity securities	**$ 160**	**1.9 %**	$ 159	2.1 %
Total investment securities	**$ 8,541**	**100.0 %**	$ 7,455	100.0 %

As of December 31, 2022 and 2021, the Company had investments in BOLI of $182 million and $180 million, respectively. BOLI is used to help offset employee benefit costs. For additional information concerning investments, see “Management’s Discussion and Analysis of Financial Condition and Results of Operations – Financial Condition – Investments” in Item 7 of this Form 10-K.

Deposit Products

The Company offers a variety of deposit products, including demand deposits, checking accounts, savings accounts, money market accounts, and other types of deposit accounts, including fixed-rate, fixed maturity certificates of deposit. The Company has historically focused on growing its lower cost core customer deposits. As of December 31, 2022, the deposit portfolio was comprised of 37% non-interest-bearing deposits and 63% interest-bearing deposits.

The competition for deposits in the Company's markets is strong. The Company has historically been successful in attracting and retaining deposits due to several factors, including its:

- knowledgeable and empowered bankers committed to providing personalized and responsive service that translates into long lasting relationships;
- broad selection of cash management services offered; and
- incentives to employees for business development and retention.

Deposit balances are generally influenced by national and local economic conditions, changes in prevailing interest rates, competitiveness of offered rates, perceived stability of financial institutions, and competition. In order to attract and retain deposits, the Company relies on providing quality service and introducing new products and services that meet the needs of its customers.

The Bank's deposit rates are determined through an internal oversight process under the direction of its ALCO. The Bank considers a number of factors when determining deposit rates, including:

- current and projected national and local economic conditions and the outlook for interest rates;
- competition from other institutions;
- loan and deposit positions and forecasts, including any concentrations in either; and
- alternative borrowing costs from the FHLB or other sources.

The following table shows the Company's deposit composition:

	December 31,			
	2022		2021	
	Amount	**Percent**	Amount	Percent
	(in millions)			
Non-interest-bearing demand deposits	**$ 19,691**	**36.7 %**	$ 21,353	44.9 %
Interest-bearing transaction accounts	**9,507**	**17.7**	6,924	14.5
Savings and money market accounts	**19,397**	**36.2**	17,279	36.3
Time certificates of deposit ($250,000 or more)	**3,815**	**7.1**	523	1.1
Other time deposits	**1,234**	**2.3**	1,533	3.2
Total deposits	**$ 53,644**	**100.0 %**	$ 47,612	100.0 %

Although the Company does not pay interest to depositors of non-interest-bearing accounts, earnings credits and referral fees are awarded to some account holders, which offset charges incurred by account holders for other services. Earnings credits and referral fees earned in excess of charges incurred by account holders are recorded in deposit costs as part of non-interest expense and fluctuate as a result of eligible deposit balances and rates on these deposit balances.

In addition to the Company's deposit base, it has access to other sources of funding, including FHLB and FRB advances, Federal funds purchased, repurchase agreements, and secured and unsecured lines of credit with other financial institutions. Previously, the Company has also accessed the capital markets through trust preferred, credit linked note, subordinated debt, and Senior Note offerings. For additional information concerning the Company's deposits, see “Management’s Discussion and Analysis of Financial Condition and Results of Operations – Balance Sheet Analysis – Deposits” in Item 7 of this Form 10-K.

Other Financial Products and Services

In addition to traditional commercial banking activities, the Company offers other financial services to its customers, including internet banking, wire transfers, electronic bill payment and presentment, 24/7 funds transfer and other digital payment offerings, lock box services, courier, and cash management services.

Customer, Product, and Geographic Concentrations

Commercial and industrial loans make up 40% and 47% of the Company's HFI loan portfolio as of December 31, 2022 and 2021, respectively. In addition, 29% of the Company's loan portfolio at December 31, 2022 and 2021 was represented by CRE and construction and land development loans. The Company’s CRE business is concentrated primarily in the Phoenix, Las Vegas, Los Angeles, Reno, San Francisco, San Jose, San Diego and Tucson metropolitan areas. Consequently, the Company is dependent on the trends of these regional economies.

The Company is not dependent upon any single or limited number of customers, the loss of which would have a material adverse effect on the Company. Neither the Company nor any of its reportable segments have customer relationships that individually account for 10% or more of consolidated or segment revenues. No material portion of the Company’s business is seasonal.

Competition

The financial services industry is highly competitive and has been significantly impacted by federal and state legislation that makes it easier for non-bank financial institutions to compete with the Company. The Company competes for loans, deposits, and customers with other banks, mortgage companies, insurance companies, finance companies, financial technology firms, and other non-bank financial services providers. This strong competition for deposit and loan products directly affects the interest rates on those products and the terms on which they are offered to customers. In addition, many of the Company's competitors are much larger in total assets and capitalization and are able to offer a broader range of financial services than the Company can offer. Technological innovation and capabilities, including changes in product delivery systems and web-based tools, also continue to contribute to greater competition in domestic and international financial services markets and larger competitors may be able to allocate more resources to these technology initiatives.

Human Capital Resources

The Company’s culture is defined by its corporate values of integrity, creativity, teamwork, passion, and excellence. People, Performance, and Possibilities capture the Company's defining values and behaviors that shape our unique culture and how we do business. People are the foundation of the Company and the Company invests in their success by providing expanded opportunities to attract and retain its people. Our people are committed to our clients’ success and, by putting clients first, we create strong shareholder performance. This leads to tremendous possibilities to fuel client growth and support the Company’s communities.

The Company is deeply committed to giving back to the communities where it does business and strives to help low-to-moderate income geographies become healthier and more sustainable communities. Employees are encouraged to dedicate their time and expertise to charitable and civic organizations they are passionate about. In total, employees have volunteered more than 25,000 hours since 2020. The Company is also committed to providing financial support for education, affordable housing, and community development lending and investments.

As of December 31, 2022, the Company employed 3,365 full-time equivalent employees in its branches and loan production offices across the United States, an increase of 7% from December 31, 2021 due to continued organic growth. The Company’s employees are not represented by a union or covered by a collective bargaining agreement.

Diversity, Equity, and Inclusion

The Company is committed to improving workforce diversity at all levels of the organization and to providing equal opportunity in all aspects of employment. In 2022, the Company continued to make progress towards enhancing its ability to attract and retain a diverse population of employees. The Company has built relationships with community and educational institutions to strengthen its pipelines of talent in underrepresented communities. The Company has established an executive-led Opportunity Council, which guides and sponsors DEI initiatives, provides access to leadership, and evaluates organizational and best practice DEI strategies. Overall, the Opportunity Council is focused on accelerating DEI activities and results. One aspect of this work is the active support of Business Resource Groups focused on the career advancement of diverse groups within the Company, such as women, minority groups, and LGBTQIA+ employees. These groups foster opportunities to engage in programs, network with peers, and connect with Bank leadership.

The Company employs a diverse workforce that reflects its communities, which is shown in the Company's ethnic and gender diversity metrics presented in the table below:

	December 31,		
	2022	2021	2020
	(as a percentage of total employees)		
Employees belonging to an ethnic minority group	**43 %**	44 %	38 %
Female employees	**52**	55	58

Of the employees that are women, 44% occupy roles that involve supervising and managing other employees as of December 31, 2022, compared to 47% in the prior year.

The below table presents the ethnic and gender diversity metrics for the Company's BOD:

	December 31,	
	2022	2021
	(as a percentage of total directors)	
Directors belonging to an ethnic minority group	**21 %**	15 %
Female directors	**21**	15

The Company remains committed to increasing the share of women and minority groups in the ranks of its leadership and BOD.

Recruiting, Retention, and Talent Development

The Company recognizes that its success is highly dependent on its ability to attract, retain and develop employees. To foster this development, the Company has created three early talent identification programs, a college internship program, the CBDP, and iLead, the goal of each of which is to enhance management's ability to promote pathways for growth of future leaders. Campus recruitment initiatives and partnerships also help expand the Company's pipeline of talent. Within the internship program, college students and recent graduates are paired with leaders across the Company to create a valuable, immersive experience, with an objective of retaining promising interns and creating a pipeline for the CBDP or other roles. The CBDP is an 18-month, on-the-job development program to train successful credit analysts that offers progressive assignments, mentoring, opportunities to learn the business and various aspects of leadership, with the objective of developing future leaders of the Company. The iLead Program is an 18-month program for recent MBA graduates, designed to accelerate the development of high potential mid-career talent in sales or corporate career paths. Additionally, the Company has expanded its sales training and mentoring efforts to foster internal development within its commercial lending teams.

As a growing company, recruiting new talent to the organization is key to the Company's success and part of that objective includes building a diverse workforce that is representative of the communities that the Company serves. In 2022, 48% of WAB's open positions were filled by external candidates belonging to an ethnic minority group and 74% of promotions were awarded to ethnically diverse or female employees. The Company has made a commitment to growing the share of its employee population from diverse communities and has experienced success in recent years, although the Company believes there is still an opportunity for additional advancement in this area.

Retaining employees who have been key contributors to the Company's success story remains an important objective. The table below presents the Company's overall employee turnover rate:

	Year ended December 31,		
	2022 (1)	2021	2020
Turnover Rate	**17 %**	19 %	13 %

(1) Excludes the impact of reductions in workforce during the period.

For 2022 compared to 2021, the turnover rate decreased from 19% to 17%. During 2022, the Company's residential mortgage banking workforce was reduced to align with lower residential mortgage loan production volumes compared to 2021, which was driven by rising interest rates throughout 2022. This reduction represented 7% of the Company's total 2021 employees.

For 2021, the Company’s turnover rate was impacted by the Great Resignation, which refers to the trend in which employees voluntarily resigned from their jobs in record numbers, with turnover rates highest among mid-career employees. In both 2022 and 2021, the Company's turnover rate was highest among employees in the Under 30 age group, as shown in the table below.

	Year ended December 31,	
Turnover Rate by Age Group	**2022**	2021
Under 30	**27 %**	27 %
Between 30-50	**15**	19
Over 50	**15**	16

The Company also offers a variety of resources to help its employees grow in their current roles and build new skills, including online development programs and workshops, mentoring programs, and internal webinars that feature speakers from across the Company, sharing information about and success in their business line, division, or functional area. The Company encourages its employees to take an active role in their career and through the annual performance management process, employees are able to identify individual development goals and create an action plan to achieve these goals.

With the understanding that bias is a larger societal issue, the Company offers training to create awareness and understanding of everyday biases and micro-behaviors, and helps individuals to implement solutions to create a more inclusive workplace. This training is required for all employees and additional, focused trainings are required for all managers, including one specifically promoting inclusion.

Compensation and Benefits

The Company’s compensation and benefits programs are designed to attract, retain, motivate, and reward employees to deliver strong performance and excellence. In addition to salaries, these programs include annual bonuses, stock awards, a 401(k) Plan with an employer matching contribution, healthcare, life insurance and other benefits, health savings and flexible spending accounts, and various paid time off benefits. Throughout the organization, 100% of employees participate in the annual bonus plan or are eligible to receive business incentives.

Health and Wellness

The Company is committed to supporting the wellness of its people, to enable their personal and professional productivity, improve physical and mental well-being, and provide support for optimal health at work and at home. To support these efforts, the Company has established Wellness Committees to engage its people in well-being initiatives that provide opportunities for employees to develop healthier lifestyles by promoting habits and attitudes that support wellness.

Supervision and Regulation

The Company and its subsidiaries are extensively regulated and supervised under both federal and state laws. A summary description of the laws and regulations that relate to the Company’s operations are discussed in Item 7 of this Form 10-K.

Additional Available Information

The Company maintains an internet website at http://www.westernalliancebancorporation.com. The Company makes available its annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and amendments to such reports filed or furnished pursuant to Sections 13(a) and 15(d) of the Exchange Act and other information related to the Company free of charge, through this site, as soon as reasonably practicable after it electronically files those documents with, or otherwise furnishes them to the SEC. The SEC maintains an internet site at http://www.sec.gov, from which all forms filed electronically may be accessed. The Company’s internet website and the information contained therein are not incorporated into this Form 10-K.

In addition, copies of the Company’s annual report will be made available, free of charge, upon written request.

Item 1A. Risk Factors.

Investing in our common stock involves various risks, many of which are specific to our business. The discussion below addresses the material risks and uncertainties, of which we are currently aware, that could have a material adverse effect on our business, results of operations, and financial condition. Other risks that we do not know about now, or that we do not currently believe are material, could negatively impact our business or the trading price of our securities. Additionally, investors should not interpret the disclosure of a risk to imply that the risk has not already materialized. See additional discussions about credit, interest rate, market, and litigation risks in "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations."

Market and Economic Risks

Our financial performance may be adversely affected by conditions in the financial markets and economic conditions generally.

Our financial performance is highly dependent upon the business environment in the markets where we operate and in the U.S. as a whole. Unfavorable or uncertain economic and market conditions can be caused by declines in economic growth, business activity, or investor or business confidence, limitations on the availability or increases in the cost of credit and capital, increases in inflation or interest rates, US government debt default or shutdown, the imposition of tariffs on trade, natural disasters, the emergence of widespread health emergencies or pandemics (including the COVID-19 pandemic), terrorist attacks, acts of war (including the military conflict between Russia and Ukraine), or a combination of these or other factors.

The specific impact on us of unfavorable or uncertain economic or market conditions is difficult to predict, could be long or short term, and may be indirect, such as disruptions in our customers' supply chain or a reduction in the demand for their products or services. A worsening of business and economic conditions generally or specifically in the principal markets in which we conduct business could have adverse effects, including the following:

- a decrease in deposit balances or the demand for loans and other products and services we offer;
- an increase in the number of borrowers who become delinquent, file for protection under bankruptcy laws or default on their loans or other obligations to us, which could lead to higher levels of nonperforming assets, net charge-offs, and provisions for credit losses;
- a decrease in the value of loans and other assets or in the value of collateral;
- a decrease in net interest income from our lending and deposit gathering activities;
- an impairment of certain intangible assets such as goodwill; and
- an increase in competition resulting from increasing consolidation within the financial services industry; and
- an increase in borrowing costs in excess of changes in the rate at which we reinvest funds.

In the U.S. financial services industry, the soundness of financial institutions is closely interrelated because of credit, trading, clearing or other relationships between the institutions. As a result, concerns about, or a default or threatened default by, one institution could lead to significant market-wide liquidity and credit problems, losses or defaults by other institutions. This is sometimes referred to as "systemic risk" and may adversely affect financial intermediaries, such as clearing agencies, clearing houses, banks, securities firms, and exchanges, with which we interact on a daily basis, and therefore could adversely affect us.

It is possible that the business environment in the U.S. will continue to be challenging or experience recession or additional volatility in the future. There can be no assurance that such conditions will improve in the near term or that conditions will not worsen. Such conditions could adversely affect our business, results of operations, and financial condition.

Changes in interest rates and increased rate competition could adversely affect our profitability, business, and prospects.

Most of our assets and liabilities reprice with changes in interest rates, which subjects us to significant risks from changes in interest rates and can impact our net interest income, mortgage banking revenues, the valuation of our assets and liabilities, and our ability to effectively manage our interest rate risk.

We derive a significant amount of our revenue from net interest income and, therefore, our net income depends heavily on our net interest margin. Net interest margin is the difference between the interest we receive on loans, securities, and other earning assets and the interest we pay on interest-bearing deposits, borrowings, and other liabilities. These rates are highly sensitive to many factors beyond our control, including competition, general economic conditions, the slope of the interest rate curve, and monetary and fiscal policies of various governmental and regulatory authorities, including the FRB. In a rising rate environment, the rate of interest we pay on our interest-bearing deposits, borrowings, and other liabilities may increase more quickly than the rate of interest we receive on loans, securities, and other earning assets, which could adversely impact our net interest income and earnings. Interest rates rose during 2022 and may continue to rise during 2023. As a result, we have experienced certain of the rising rate environment effects described herein. If interest rates continue to increase, our business, financial condition and results of operations may be materially and adversely affected.

Conversely, our earnings also could be adversely affected in a declining rate environment if the rates on our loans and other investments fall more quickly than those on our deposits and other liabilities. Because of our relatively high reliance on net interest income, our revenue and earnings are more sensitive to changes in market rates than other financial institutions that have more diversified sources of revenue.

Loan volumes are also affected by market interest rates on loans. Lower interest rates are usually associated with higher loan originations, but also result in higher loan refinancings which can result in lower average loan yields and the loss of future net servicing revenues on residential loans with an associated write-down of MSRs. In contrast, in rising interest rate environments, loan repayment rates generally decline and result in a lower volume of loan originations. In addition to the impact on our lending business, a decrease in loan originations would adversely affect the volume of loans available for purchase by our mortgage warehouse lending platform.

In addition to the potential effects on net interest margin and loan volumes, an increase in the general level of interest rates affected the ability of certain borrowers to pay interest and principal on their obligations and reduced the amount of non-interest income we can earn due to potentially lower levels of banking business conducted generally as well lower levels of servicing, gain on sale, and other revenues generated through our residential mortgage business.

Our financial instruments expose us to certain market risks and may increase the volatility of earnings and AOCI.

We hold certain financial instruments measured at fair value. For those financial instruments measured at fair value, we are required to recognize the changes in the fair value of such instruments in either earnings or AOCI each quarter. Therefore, any increases or decreases in the fair value of these financial instruments have a corresponding impact on reported earnings or AOCI. Fair value can be affected by a variety of factors, many of which are beyond our control, including credit spreads, interest rate volatility, liquidity, and other economic factors. Accordingly, we are subject to mark-to-market risk and the application of fair value accounting may cause our earnings and AOCI to be more volatile than would be suggested by our underlying performance.

Due to the inherent risk associated with accounting estimates, our ACL may be insufficient, which could require us to raise additional capital or otherwise adversely affect our financial condition and results of operations.

Credit losses are an inherent risk in the business of making loans. Management makes various assumptions and judgments about the collectability of our loan portfolio and maintains an ACL deemed to cover expected losses over the life of the loan portfolio. The measurement of expected credit losses takes place at the time the financial asset is first added to the balance sheet (with periodic updates thereafter) and is based on a number of factors, including the size of the portfolio, asset classifications, economic trends, industry experience and trends, industry and geographic concentrations, estimated collateral values, management’s assessment of the credit risk inherent in the portfolio, loan underwriting policies, historical loan loss experience, and reasonable and supportable forecasts. In addition, with the exception of residential loans, we individually evaluate all loans identified as problem loans with a total commitment of $1.0 million or more, and establish an allowance based upon our estimation of the potential loss associated with those problem loans. Additions to the ACL recorded through our provision for credit losses decrease our net income. If management’s assumptions and judgments are incorrect or if economic conditions worsen compared to forecast, our actual credit losses may exceed our ACL.

At December 31, 2022, our ACL on funded loans and loss contingency on unfunded loan commitments and letters of credit totals $309.7 million and $47.0 million, respectively. Deterioration in the real estate market or general economic conditions could affect the ability of our loan customers to service their debt, which could result in additional loan loss provisions and increases in our ACL. In addition, we may be required to record additional loan provisions or increase our ACL based on new information regarding existing loans, input from regulators in connection with their review of our loan portfolio, changes in regulatory guidance, regulations or accounting standards, identification of additional problem loans, changes in economic outlook, and other factors, both within and outside of our management’s control. Moreover, because future events are uncertain and because we may not successfully identify all deteriorating loans in a timely manner, there may be loans that deteriorate in an accelerated time frame.

Any increases in the provision or ACL would decrease our net income and capital, and may have a material adverse effect on our financial condition and results of operations. If actual credit losses materially exceed our ACL, we may be required to raise additional capital, which may not be available to us on acceptable terms or at all. Our inability to raise additional capital on acceptable terms when needed could materially and adversely affect our financial condition, results of operations, and capital.

The markets in which we operate are subject to the risk of both natural and man-made disasters.

Many of the real and personal properties securing our loans are located in California and more generally in the southwestern portion of the United States. Much of California experiences wildfires from time to time that cause significant damage throughout the state. While these wildfires have not significantly damaged our own properties, it is possible that our borrowers may experience losses in the future, which may materially impair their ability to meet the terms of their obligations. California and the southwestern United States are also prone to other natural disasters, including, but not limited to, drought, earthquakes, flooding, and mudslides. In recent years, drought and decreased snowfall in the Rocky Mountains has led to decreased water flow in the Colorado River, from which many areas in the southwest obtain water, including certain of our markets. Persistence of such conditions or additional significant natural or man-made disasters in the state of California or in our other markets could lead to damage or injury to our own properties and/or employees, declines in population in our markets, and increased risk that our borrowers may experience losses or sustained job interruption, which may materially impair their ability to maintain deposits or meet the terms of their loan obligations. Therefore, additional natural disasters, a man-made disaster or a catastrophic event, persistence of detrimental environmental conditions, or a combination of these or other factors, in any of our markets could have a material adverse effect on our business, financial condition, results of operations, and cash flows.

Climate change or societal responses to climate change could adversely affect our business and performance, including indirectly through impacts on our customers and vendors.

The lack of empirical data surrounding the credit and other financial risks posed by climate change makes it impossible to predict the specific impact climate change may have on our financial condition and results of operations; however, the physical effects of climate change may also impact us. In addition to the risk of more frequent and/or severe natural disasters, climate change can result in longer term shifts in climate patterns such as extreme heat, sea level rise, declining fresh water resources, and more frequent and prolonged drought. The effects of climate change may have a significant effect in our geographic markets, and could disrupt our operations, the operations of our customers or third parties on which we rely, or supply chains generally. These disruptions, including increased regulation and compliance cost for our customers and changes in consumer behaviors, could result in declines in the economic conditions in geographic markets or industries in which our customers operate and impact their ability to repay loans or maintain deposits and could affect the value of real estate and other assets that serve as collateral for loans.

Bank regulators have increasingly viewed financial institutions as playing an important role in helping to address climate change, which may result in increased requirements regarding the disclosure and management of climate risks and related lending activities. We may also become subject to new or heightened regulatory requirements related to climate change, such as requirements relating to operational resiliency or stress testing for various climate stress scenarios. New or increased regulations, including potential additional climate-related disclosure requirements, could result in increased compliance costs or capital requirements. Changes in regulations and customer preferences and behaviors could negatively affect our growth or force us to alter our business strategies, including whether and on what terms and conditions we will engage in certain activities or offer certain products or services and which growth industries and customers we pursue. Additionally, our reputation and customer relationships may be damaged due to our practices related to climate change, including our involvement, or our customers' involvement, in certain industries or projects associated with causing or exacerbating climate change, as well as any decisions we make to continue to conduct or change our activities in response to considerations relating to climate change. Overall, climate change, its effects and the resulting, unknown impact could have a material adverse effect on our financial condition and results of operations.

Increased scrutiny and evolving expectations from customers, regulators, investors, and other stakeholders with respect to ESG practices may impose additional costs on the Company or expose it to new or additional risks.

As a regulated financial institution and a publicly traded company, we are facing increasing scrutiny from customers, regulators, investors, and other stakeholders related to ESG practices and disclosure. Investor advocacy groups, investment funds, and influential investors are increasingly focused on these practices, especially as they relate to climate risk, hiring practices, the diversity of the workforce, and racial and social justice issues. Failure to adapt to or comply with regulatory requirements or investor or stakeholder expectations and standards could negatively impact our reputation, ability to do business with certain customers and business partners, and stock price. New government regulations could also result in new or more stringent forms of ESG oversight and expanding mandatory or voluntary reporting, diligence, and disclosure. ESG-related costs, including with respect to compliance with any additional regulatory or disclosure requirements or expectations, could adversely impact our results of operations.

The COVID-19 pandemic and resulting adverse economic conditions have adversely impacted, and could continue to adversely impact, our financial condition and results of operations.

Our business is dependent on the willingness and ability of our customers to conduct banking and other financial transactions. The ongoing COVID-19 global and national health emergency caused significant disruption in the United States and international economies and financial markets and continues to cause illness, quarantines, reduced attendance at events and reduced travel, reduced commercial and financial activity, and overall economic and financial market instability.

While the level of disruption caused by, and the economic impact of, COVID-19 has lessened in 2022, there is no assurance that the pandemic will not worsen again, including as a result of the emergence of new strains of the virus. Any worsening of the pandemic and its effects on the economy could further impact our business, our provision and ACL, and the value of certain assets that we carry on our balance sheet, such as goodwill. Our customers, business partners, and third-party providers, including those who perform critical services for our business, may also be adversely affected.

Credit Risks

We are highly dependent on real estate and events that negatively impact the real estate market will hurt our business and earnings.

A significant portion of our business is located in areas in which economic growth is largely dependent on the real estate market, and a large part of our loan portfolio is secured by or otherwise dependent on real estate. The market for real estate is cyclical and a significant change in the real estate market that resulted in deterioration in the value of collateral or rental or occupancy rates could adversely affect borrowers' ability to repay loans. Changes in the real estate market could also affect the value of foreclosed assets. A decline in real estate activity would likely cause a decline in asset and deposit growth and negatively impact our earnings and financial condition.

Our loan portfolio contains concentrations in certain business lines or product types that have unique risk characteristics and may expose us to increased lending risks.

Our loan portfolio consists primarily of commercial and industrial, residential mortgage, and CRE loans, which contain material concentrations in certain business lines or product types, such as mortgage warehouse, real estate, corporate finance, as well as in specific business sectors such as technology and innovation. These loan concentrations present unique risks and involve specialized underwriting and management as they often involve large loan balances to a single borrower or group of related borrowers. Consequently, an adverse development with respect to one commercial loan or one credit relationship may adversely affect us. In addition, based on the nature of lending to these specialty markets, repayment of loans may be dependent upon borrowers receiving additional equity financing or, in some cases, a successful sale to a third party, public offering, or other form of liquidity event.

Our commercial and industrial, CRE, and construction and land development loans, are also largely concentrated in selected markets in Arizona, California, and Nevada. As a result of this geographic concentration, deterioration in economic conditions in these markets could result in an increase in loan delinquencies and charge-offs, an increase in problem assets and foreclosures, a decrease in the demand for our products and services or a decrease in the value of real estate and other collateral for loans. Unforeseen adverse events, changes in economic conditions, and changes in regulatory policy affecting borrowers' industries or markets could have a material adverse impact on our financial condition and results of operations.

Our credit linked notes do not ensure full protection against credit losses, and as such we could still incur significant credit losses on loans for which risk of loss has been transferred pursuant to these transactions.

We have entered into transactions to mitigate exposure to losses on our loan portfolio. These transactions are structured as credit linked notes, which transfer the risk of first losses on covered loans to these note holders. These notes have an aggregate principal amount of $1.0 billion on a $12.0 billion reference pool of warehouse and equity fund resource loans and residential mortgages. Pursuant to these arrangements, in the event of borrower default, the principal balance of the notes will be reduced by the amount of the loss, up to the amount of the aggregate principal of the notes. However, all residual risk over and above the first loss position is retained by us. While current estimates of future credit losses are below the first loss position, no assurances can be given that these losses will not exceed the first loss position and, if credit losses were to exceed the first loss position, our financial condition and results of operations could be adversely effected. We may enter into more such transactions in the future.

We are exposed to risk of environmental liabilities with respect to properties to which we obtain title.

Approximately 60% of our loan portfolio at December 31, 2022 was secured by real estate. In the course of our business, we may foreclose on and take title to real estate, and could be subject to environmental liabilities with respect to these properties. We may be held liable to a governmental entity or to third parties for property damage, personal injury, investigation, and clean-up costs incurred by these parties in connection with environmental contamination, or may be required to investigate or clean up hazardous or toxic substances, or chemical releases at a property. The costs associated with investigation or remediation activities could be substantial. In addition, if we are the owner or former owner of a contaminated site, we may be subject to common law claims by third parties based on damages and costs resulting from environmental contamination emanating from the property. These costs and claims could be substantial and adversely affect our business and prospects.

Strategic Risks

Our future success depends on our ability to compete effectively in a highly competitive and rapidly evolving market.

We face substantial competition in all phases of our operations from a variety of different competitors. Our competitors, including money center banks, national and regional commercial banks, community banks, thrift institutions, mutual savings banks, credit unions, finance companies, insurance companies, securities dealers, brokers, mortgage bankers, investment advisors, money market mutual funds, financial technology companies and other financial institutions, compete with lending and deposit-gathering services offered by us. Increased competition in our markets or our inability to compete effectively may result in reduced loans and deposits or less favorable pricing.

In particular, we have experienced intense price and terms competition in some of the lending lines of business and deposits in recent years. Many of these competing institutions have much greater financial and marketing resources than we have. Due to their size and brand recognition, larger competitors can achieve economies of scale and may offer a broader range of products and services or more attractive pricing than us. In addition, some of the financial services organizations with which we compete are not subject to the same degree of regulation as is imposed on bank holding companies and federally insured depository institutions. As a result, these non-bank competitors have certain advantages over us in accessing funding and in providing various services.

The banking business in our primary market areas are very competitive, and the level of competition facing us may increase further, which may limit our asset growth and financial results. In particular, our predominate source of revenue is net interest income. Therefore, if we are unable to compete effectively, including sustaining loan and deposit growth at our historical levels, our business and results of operations may be adversely affected.

The financial services industry also is facing increasing competitive pressure from the introduction of disruptive new technologies such as blockchain and digital payments, often by non-traditional competitors and financial technology companies. Among other things, technology and other changes are allowing customers to complete financial transactions that historically have involved banks at one or both ends of the transaction. The elimination of banks as intermediaries for certain transactions, as well as further disruption of traditional bank businesses and products by non-banks, could result in the loss of fee income and deposits and otherwise adversely affect our business and results.

Our expansion strategy may not prove to be successful and our market value and profitability may suffer.

We continually evaluate expansion through acquisitions of banks and other financial assets and businesses. Like previous acquisitions by us such as the acquisition of AmeriHome in 2021 and DST in 2022, any future acquisitions will be accompanied by risks commonly encountered in such transactions, including, among other things:

- time and expense incurred while identifying, evaluating and negotiating potential acquisitions and transactions;
- difficulty in accurately estimating the value of target companies or assets and in evaluating their credit, operations, management, and market risks;
- potential payment of a premium over book and market values that may cause dilution of our tangible book value or earnings per share;
- exposure to unknown or contingent liabilities of the target company;
- potential exposure to asset quality issues of the target company;
- difficulty of integrating the operations and personnel;
- potential disruption of our ongoing business;
- failure to retain key personnel at the acquired business;

- inability of our management to maximize our financial and strategic position by the successful implementation of uniform product offerings and the incorporation of uniform technology into our product offerings and control systems; and
- failure to realize any expected revenue increases, cost savings, and other projected benefits from an acquisition.

We expect that competition for suitable acquisition candidates may be significant. We may compete with other banks or financial service companies with similar acquisition strategies, many of which are larger and have greater financial and other resources. We cannot assure that we will be able to successfully identify and acquire suitable acquisition targets on acceptable terms and conditions, or that we will be able to obtain the regulatory approvals needed to complete any such transactions.

We cannot provide any assurance that we will be successful in overcoming these risks or any other problems encountered in connection with acquisitions. Potential regulatory enforcement actions could also adversely affect our ability to engage in certain acquisition activities. Our inability to overcome the risks inherent in the successful completion and integration of acquisitions could have an adverse effect on the achievement of our business strategy.

There are substantial risks and uncertainties associated with the introduction or expansion of lines of business or new products and services within existing lines of business.

From time to time, we may implement new lines of business, offer new products and services within existing lines of business, or offer existing products or services to new industries, geographies, or market segments. There are substantial risks and uncertainties associated with these efforts, particularly in instances where the markets are not fully developed or industries are heavily regulated. In developing and marketing new lines of business and/or new products and services, we may invest significant time and resources. Initial timetables for the introduction and development of new lines of business and/or new products or services may not be achieved and price and profitability targets may not prove attainable. External factors, such as compliance with laws and regulations, competitive alternatives, and shifting market preferences or government policies, may also impact the successful implementation of a new line of business, product or service or the offering of existing products and services to an emerging industry. Furthermore, any new line of business and/or new product or service could have a significant impact on the effectiveness of our system of internal controls. Failure to successfully manage these risks in the development and implementation of new lines of business or new products or services could have a material adverse effect on our business, results of operations, and financial condition.

We are pursuing digital payments initiatives which are subject to significant uncertainty and could adversely affect our business, reputation, or financial results.

We are pursuing digital payments initiatives, including our 2022 acquisition of DST, a digital payments platform for the class action legal industry, and implementation of a fully integrated digital banking platform for our customers, including a digital token powered by the TassatPay platform. The digital payments products and services we offer may use or rely on blockchain-based technologies or assets. Use of blockchain-based technologies in payments are a relatively new and unproven technology, and the laws and regulations surrounding them are uncertain and evolving. Blockchain and digital payment technology has drawn significant scrutiny from governments and regulators in multiple jurisdictions and we expect that scrutiny to continue. Any changes in such laws and regulations applicable to, or scrutiny directed at, our products and services may impede or delay the offering of digital payments solutions, increase our operating costs, require significant management time and attention, or otherwise harm our business or results of operations.

In addition, market acceptance of digital payments products and services is subject to significant uncertainty. As such, there can be no assurance that digital payments products and services we offer and the technologies we have chosen to implement will be accepted and desired by customers. We do not have significant prior experience with blockchain-based technology, which may adversely affect our ability to successfully integrate and market such digital payments products and services. We also will continue to incur increased costs in connection with these efforts, and our investments may not be successful. Any of these events could adversely affect our business, reputation, or financial results.

Our success is dependent upon our ability to recruit and retain qualified employees, including members of our leadership and management teams.

Our business plan includes and is dependent upon hiring and retaining highly qualified and motivated executives and employees at every level. In particular, our relative success to date has been partly the result of our management's ability to identify and retain highly qualified employees in leadership and administrative support roles, and experienced bankers with expertise in certain specialty areas or that have long-standing relationships in their communities or markets, including with respect to our business-to-business mortgage platform. These professionals bring with them valuable knowledge, specialized skills and expertise, customer relationships and in some cases extensive ties within markets upon which our competitive strategy is based, and have been an integral part of our ability to attract deposits and to expand our market share. We have not entered into employment agreements with most of our employees and competition for talent in our industry is intense. The labor market is currently challenging, with employee turnover at an all-time high and increased wage pressure. In addition, the transition to an increased remote work environment, may exacerbate the challenges of attracting and retaining talented and diverse employees as job markets may be less constrained by physical geography. We incentivize employee retention through our equity incentive plans; however, we cannot guarantee the effectiveness of our equity incentive plans in retaining these key employees and executives. Were we to lose key employees, we may not be able to replace them with equally qualified persons who bring the same skills and knowledge of and ties to the communities and markets within which we operate. If we are unable to retain qualified employees or hire new qualified employees to keep up with or outpace employee turnover, we may not be able to successfully execute our business strategy or may incur additional costs to achieve our objectives.

We could be harmed if our succession planning is inadequate to mitigate the loss of key members of our senior management team.

We believe that our senior management team has contributed greatly to our performance. In addition, we from time to time experience retirements and other changes to our senior management team. Our future performance depends on a smooth transition of our senior management, including finding and training highly qualified replacements who are properly equipped to lead us. We have adopted retention strategies, including equity awards, from which our senior management team benefits in order to achieve our goals. However, we cannot assure our succession planning and retention strategies will be effective and the loss of senior management could have an adverse effect on our business.

Capital and Liquidity Risks

We are subject to capital adequacy standards and liquidity rules, and a failure to meet these standards could adversely affect our financial condition.

WAL and WAB are each subject to capital adequacy and liquidity rules and other regulatory requirements specifying minimum amounts and types of capital that must be maintained. From time to time, the regulators implement changes to these regulatory capital adequacy and liquidity guidelines. If we fail to meet these minimum capital and liquidity guidelines and other regulatory requirements, we may be restricted in the types of activities we may conduct and may be prohibited from taking certain capital actions, such as paying executive bonuses or dividends and repurchasing or redeeming capital securities. At December 31, 2022, our CET1 ratio was 9.3%. While this ratio is above the well-capitalized regulatory ratio threshold of 6.5%, it is still below our targeted capital level. As we continue to focus on building our capital ratios, we may need to issue additional equity capital or reduce the pace at which we are growing in order to increase our CET1 and other capital ratios.

If we lose a significant portion of our core deposits or a significant deposit relationship, or our cost of funding deposits increases significantly, our liquidity and/or profitability would be adversely impacted.

Our success depends on our ability to maintain sufficient liquidity to fund our current obligations and support loan growth and, specifically, to attract and retain a stable base of relatively low-cost deposits. The competition for these deposits in our markets is strong and customers may demand higher interest rates on their deposits or seek other investments offering higher rates of return. Additionally, we may accept brokered deposits, which may be more price sensitive than other types of deposits and may become less available if alternative investments offer higher returns. We offer reciprocal deposit products through third party networks to customers seeking federal insurance for deposit amounts that exceed the applicable deposit insurance limit at a single institution. We also from time to time offer other credit enhancements to depositors, such as FHLB letters of credit and, for certain deposits of public monies, pledges of collateral in the form of readily marketable securities. Any event or circumstance that interferes with or limits our ability to offer these products to customers that require greater security for their deposits, such as a significant regulatory enforcement action or a significant decline in capital levels at our bank subsidiary, could negatively impact our ability to attract and retain deposits. If we were to lose a significant deposit relationship or a significant portion of our low-cost deposits, we would be required to borrow from other sources at higher rates and our liquidity and profitability would be adversely impacted.

We may be required to repurchase mortgage loans or indemnify investors under certain circumstances.

A substantial portion of our mortgage banking operations involves the sale of loans to third parties, including through securitization. When loans are sold or securitized, we make customary representations and warranties about such loans to the loan purchaser or through documents governing our securitized loan pools. If a mortgage loan does not comply with the representations and warranties made with respect to it at the time of its sale, we could be required to repurchase the loan, replace it with a substitute loan and/or indemnify secondary market purchasers or investors for losses, and may not have recourse to the correspondent seller that sold the mortgage loans and breached similar or other representations and warranties. Significant indemnification or repurchase activity on securitized or sold loans without offsetting recourse to a counterparty from which the loan was purchased could have a material adverse effect on our financial condition and results of operations.

We utilize borrowings from the FHLB and the FRB, and there can be no assurance these programs will be available as needed.

As of December 31, 2022, we have $4.3 billion of borrowings from the FHLB of San Francisco and no borrowings from the FRB. We utilize borrowings from the FHLB of San Francisco and the FRB to satisfy short-term liquidity needs. Our borrowing capacity is generally dependent on the value of our collateral pledged to these entities. These lenders could reduce our borrowing capacity or eliminate certain types of collateral and could otherwise modify or terminate their loan programs. Any change to or termination of these programs could have an adverse effect on our liquidity and profitability.

A change in our creditworthiness could increase our cost of funding or adversely affect our liquidity.

Market participants regularly evaluate our creditworthiness and the creditworthiness of our long-term debt based on a number of factors, some of which are not entirely within our control, including our financial strength and conditions within the financial services industry generally. There can be no assurance that our perceived creditworthiness will remain the same. Changes could adversely affect the cost and other terms upon which we are able to obtain funding and our access to the capital markets, and could increase our cost of capital. Likewise, any loss of or decline in the credit rating assigned to us could impair our ability to attract deposits or to obtain other funding sources, or increase our cost of funding.

Operational and Technological Risks

A failure in or breach of our operational or security systems or infrastructure, or those of our third-party vendors and other service providers, including as a result of cyber-attacks, could disrupt our businesses, result in the disclosure or misuse of confidential or proprietary information, damage our reputation, increase our costs, and cause losses.

Our operations rely on the secure processing, storage, and transmission of confidential and other information. Moreover, a portion of our employees work remotely at least some of the time. Although we take numerous protective measures to maintain the confidentiality, integrity, and security of our customers' information across all geographies and product lines, and endeavor to modify these protective measures as circumstances warrant, the nature of cyber threats continues to evolve. As a result, our computer systems, software, and networks and those of our customers and third-party vendors may be vulnerable to unauthorized payments and account access, loss or destruction of data (including confidential client information), account takeovers, unavailability of service, computer viruses or other malicious code, cyber-attacks, and other events that could have an adverse security impact and result in significant losses to us and/or our customers. These threats may originate externally from increasingly sophisticated third parties, including foreign governments, organized criminal groups, and other hackers, or from outsourced or infrastructure-support providers and application developers, or the threats may originate from within our organization.

We also face the risk of operational disruption, failure, termination, or capacity constraints of any of the third parties that facilitate our business activities, including vendors, exchanges, clearing agents, clearing houses, or other financial intermediaries. Such parties could also be the source or cause of an attack on, or breach of, our operational systems, data or infrastructure. In addition, we may be at risk of an operational failure with respect to our customers' systems. Our risk and exposure to these matters remains heightened because of, among other things, the evolving nature of these threats, the outsourcing of many of our business operations, and the continued uncertain global economic environment. As cyber threats continue to evolve, we may be required to expend significant additional resources to continue to modify or enhance our protective measures or to investigate and remediate any information security vulnerabilities.

We maintain insurance policies that we believe provide reasonable coverage for an institution of our size and scope with similar technological systems. However, we cannot assure that these policies will afford coverage for all possible losses or would be sufficient to cover all financial losses, damages, or penalties, including lost revenues, should we experience any one or more of our or a third party's systems failing or experiencing an attack.

We rely on third parties to provide key components of our business infrastructure.

We rely on third parties to provide key components for our business operations, such as data processing and storage, recording and monitoring transactions, online banking interfaces and services, internet connections, and network access. While we have a robust due diligence process in place to select third-party vendors, we do not control their actions. Any problems caused by these third parties, including those resulting from breakdowns or other disruptions in communication services provided by a vendor, failure of a vendor to handle current or higher volumes, cyber-attacks and security breaches at a vendor, failure of a vendor to provide services for any reason, or poor performance by a vendor could adversely affect our ability to deliver products and services to our customers and otherwise conduct our business. Financial or operational difficulties of a third-party vendor could also impact our operations if those difficulties interfere with their ability to serve us. Replacing third-party vendors could create significant delays and expense and there is no guarantee that such replacement vendors will be available at comparable rates, on similar terms, or in a timely manner, if at all. Any of these things could adversely affect our business and financial performance.

Our business may be adversely affected by fraud.

As a financial institution, we are inherently exposed to a wide range of operational risks, including, but not limited to, theft and other fraudulent activity by employees, customers, and other third parties targeting us and/or our customers or data. Such activity may take many forms, including check fraud, electronic fraud, wire fraud, phishing, social engineering and other dishonest acts.

Although we devote substantial resources to maintaining effective policies and internal controls to identify and prevent such incidents, given the persistence and increasing sophistication of possible perpetrators, we may experience financial losses or reputational harm as a result of fraud.

Our controls and processes, our reporting systems and procedures, and our operational infrastructure may not be able to keep pace with our growth, which could cause us to experience compliance and operational problems, to lose customers, or incur additional expenditures, any one of which could adversely affect our financial results.

Our future success will depend on the ability of officers and other key employees to effectively implement solutions designed to continually enhance operational, credit, financial, management and other internal risk controls and processes, as well as improve reporting systems and procedures, while at the same time maintaining and growing existing businesses and client relationships. We may not successfully implement such changes or improvements in an efficient or timely manner, or we may discover deficiencies in our existing systems and controls that adversely affect our ability to support and grow our existing businesses and client relationships, and could require us to incur additional expenditures to expand our administrative and operational infrastructure. If we are unable to maintain and implement improvements to our controls, processes, and reporting systems and procedures, we may lose customers, experience compliance and operational problems or incur additional expenditures beyond current projections, any one of which could adversely affect our financial results.

The replacement of LIBOR may adversely affect our business.

LIBOR and certain other interest rate benchmarks are the subject of national, international and other regulatory guidance and reform. Effective January 1, 2022, the administrator of the LIBOR ceased the publication of one-week and two-month US dollar LIBOR and will cease the publications of the remaining tenors of US dollar LIBOR (one, three, six, and 12-month) immediately after June 30, 2023.

The market transition away from LIBOR to alternative reference rates is complex and could have a range of adverse effects on our business, financial condition and results of operations. In particular, the transition could:

- adversely affect the interest rates received or paid on the value of our LIBOR-based assets and liabilities compared to the rate received or paid based on the alternative benchmark rates;
- adversely affect the interest rates received or paid on the value of other securities or financial arrangements, given LIBOR's role in determining market interest rates globally;
- prompt inquiries or other actions from regulators in respect of our preparation and readiness for the replacement of LIBOR with an alternative reference rate; and
- result in disputes, litigation or other actions with borrowers or counterparties about the interpretation and enforceability of certain fallback language in LIBOR-based contracts and securities.

The transition away from LIBOR to an alternative reference rate or rates has required the transition to or development of appropriate systems, models and analytics to effectively transition our risk management and other processes from LIBOR-based products to those based on the applicable alternative reference rate. Accordingly, management’s LIBOR transition team is actively working on the LIBOR transition project. During the second half of 2021, we began offering three alternative rate indices (including Ameribor, SOFR, and BSBY) on our lending products, with Ameribor as our preferred rate index and, as of December 31, 2021, we are no longer originating new loans using any LIBOR index. Despite these efforts, the manner and impact of this transition and related developments, as well as the effect of these developments on our funding costs, investment and trading securities portfolios, and business, is uncertain and could have a material adverse impact on our profitability.

Our risk management practices may prove to be inadequate or ineffective.

Our risk management framework seeks to mitigate risk and appropriately balance risk and return. We have established policies and procedures intended to identify, monitor, and manage the types of risk to which we are subject, including, but not limited to credit risk, market risk, liquidity risk, operational risk, legal and compliance risk, and reputational risk. A BOD level risk committee approves and reviews our key risk management policies and oversees operation of our risk management framework. Although we have devoted significant resources to developing our risk management policies and procedures and expect to continue to do so in the future, these policies and procedures, as well as our risk management techniques, may be ineffective. In addition, as regulations and the markets in which we operate continue to evolve, our risk management framework may not keep sufficient pace with those changes. If our risk management framework does not effectively identify or mitigate significant or material risks, we could suffer unexpected losses or other material adverse impacts. Management of our risks in some cases depends upon the use of analytical and/or forecasting models. If the models we use to mitigate these risks are inadequate, or are subject to ineffective governance, we may incur increased losses. In addition, there may be risks that exist, or that develop in the future, that we have not appropriately anticipated, identified, or mitigated.

Our internal controls and procedures may fail or be circumvented and the accuracy of judgments and estimates about financial and accounting matters may impact operating results and financial condition.

Our management regularly reviews and updates internal controls over financial reporting, disclosure controls and procedures, and corporate governance policies and procedures. Any system of controls and procedures, however well designed and operated, is based in part on certain assumptions and can provide only reasonable, not absolute, assurances that the objectives of the system are met. Any failure or circumvention of controls and procedures, or failure to comply with regulations related to controls and procedures, could result in materially inaccurate reported financial statements and/or have a material adverse effect on our business, results of operations, and financial condition. Similarly, our management makes certain estimates and judgments in preparing financial statements. The quality and accuracy of those estimates and judgments will impact operating results and financial condition.

If we are unable to understand and adapt to technological change and implement new technology-driven products and services, our business could be adversely affected.

The financial services industry is continually undergoing rapid technological change with frequent introductions of new technology-driven products and services. We expect that new technologies will continue to emerge and may be superior to or render obsolete the technologies currently used in our products and services. Our future success depends in part upon our ability to address the needs of our customers by using technology to provide products and services that will satisfy customer demands, as well as to create additional efficiencies in operations. Many of our competitors, because of their larger size and available capital, have substantially greater resources to invest in technological improvements. Developing or acquiring new technologies and incorporating them into our products and services may require significant investment, take considerable time, and ultimately may not be successful. We cannot predict which technological developments or innovations will become widely adopted or how those technologies may be regulated. We also may not be able to effectively market new technology-driven products and services to our customers. Failure to successfully keep pace with technological change affecting the financial services industry could have a material adverse impact on our business and, in turn, our financial condition and results of operations.

Legal and Compliance Risks

We operate in a highly regulated environment and the laws and regulations that govern our operations, corporate governance, executive compensation, and accounting principles, or changes in them, or our failure to comply with them, may adversely affect us.

We are subject to extensive regulation, supervision, and legislation that govern almost all aspects of our operations. Intended to protect customers, depositors, and the DIF, these laws and regulations, among other matters, prescribe minimum capital requirements, impose limitations on the business activities in which we can engage, require monitoring and reporting of suspicious activity and of customers who are perceived to present a heightened risk of money laundering or other illegal activity, limit the dividends or distributions that WAB can pay to WAL or that we can pay to our stockholders, restrict the ability of affiliates to guarantee our debt, impose certain specific accounting requirements on us that may be more restrictive and result in greater or earlier charges to earnings or reductions in our capital than does GAAP, among other things. Our mortgage warehouse lending operations subject us to regulations that have grown in complexity in recent years and may continue to do so as the government continues to prioritize consumer protection measures. Our mortgage warehouse lending operations are subject to federal, state and local laws, regulations and judicial and administrative decisions, including those designed to discourage predatory lending and regulate collections and servicing practices with respect to mortgage loans.

Compliance with laws and regulations can be difficult and costly, and changes to laws and regulations often impose significant additional compliance costs. To the extent we continue to grow and become more complex, regulatory oversight and risk and the cost of compliance will likely increase, which may adversely affect us. See “Management’s Discussion and Analysis of Financial Condition and Results of Operations - Supervision and Regulation” included in this Form 10-K for a more detailed summary of the regulations and supervision to which we are subject.

Changes to the legal and regulatory framework governing our operations, including the passage and continued implementation of the Dodd-Frank Act and EGRRCPA, have drastically revised the laws and regulations under which we operate. In general, bank regulators have increased their focus on risk management and regulatory compliance, and we expect this focus to continue. Additional compliance requirements may be costly to implement, may require additional compliance personnel, and may limit our ability to offer competitive products to our customers.

We are also subject to changes in federal and state law, as well as regulations and governmental policies, income tax laws, and accounting principles. Regulations affecting banks and other financial institutions are undergoing continuous review and frequently change, and the ultimate effect of such changes cannot be predicted. Regulations and laws may be modified at any time, and new legislation may be enacted that will affect us, WAB, and our other subsidiaries. Any changes in federal and state law, as well as regulations and governmental policies, income tax laws, and accounting principles, could affect us in substantial and unpredictable ways, including ways that may adversely affect our business, financial condition, or results of operations. Failure to appropriately comply with any such laws, regulations or principles or an alleged failure to comply, even if we acted in good faith or the alleged failure reflects a difference in interpretation, could result in sanctions by regulatory agencies, civil money penalties or damage to our reputation, all of which could adversely affect our business, financial condition, or results of operations.

State and federal banking agencies periodically conduct examinations of our business, including compliance with laws and regulations, and our failure to comply with any supervisory actions to which we are or become subject as a result of such examinations may adversely affect us.

State and federal banking agencies, including the FRB, FDIC, and CFPB, periodically conduct examinations of our business, including for compliance with laws and regulations. If, as a result of an examination, a federal agency were to determine that our financial condition, capital resources, asset quality, earnings prospects, management, liquidity, or other aspects of our operations had become unsatisfactory, or that we or our management was in violation of any law or regulation, the agency may take a number of different remedial or enforcement actions it deems appropriate to remedy such a deficiency. These actions include the power to enjoin “unsafe or unsound” practices, to require affirmative actions to correct any conditions resulting from any violation or practice, to issue an administrative order that can be judicially enforced, to direct an increase in our capital, to restrict our growth, and to assess civil monetary penalties against us and/or officers or directors, and to remove officers and directors. If the FDIC concludes that such conditions cannot be corrected or there is an imminent risk of loss to depositors, it may terminate WAB’s deposit insurance. Under Arizona law, the state banking supervisory authority has many of the same enforcement powers with respect to our state-chartered bank. The CFPB also has the authority to examine us and to take enforcement actions, including the issuance of cease-and-desist orders or civil monetary penalties against us if it finds that we offer consumer financial products and services in violation of federal consumer financial protection laws or in an unfair, deceptive, or abusive manner. Finally, our AmeriHome subsidiary needs to maintain certain state licenses and federal and government-sponsored agency approvals required to conduct its business and is subject to periodic examinations by such state and federal agencies, which can result in increases in administrative costs, substantial penalties due to compliance errors, or the loss of licenses.

If we were unable to comply with regulatory directives in the future, or if we were unable to comply with the terms of any future supervisory requirements to which we may become subject, then we could become subject to a variety of supervisory actions and orders, including cease and desist orders, prompt corrective actions, MOUs, and/or other regulatory enforcement actions. If our regulators were to take such supervisory actions, then we could, among other things, become subject to restrictions on our ability to enter into acquisitions and develop any new business, as well as restrictions on our existing business. We also could be required to raise additional capital, dispose of certain assets and liabilities within a prescribed period of time, or both. Failure to implement the measures in the time frames provided, or at all, could result in additional orders or penalties from federal and state regulators, which could result in one or more of the remedial actions described above. In the event we were ultimately unable to comply with the terms of a regulatory enforcement action, we could fail and be placed into receivership by the FDIC or the chartering agency. The terms of any such supervisory action and the consequences associated with any failure to comply therewith could have a material negative effect on our business, operating flexibility, and financial condition.

Current and proposed regulations addressing consumer privacy and data use and security could increase our costs and impact our reputation.

We are subject to federal, state and local laws related to consumer privacy and data use and security, including information safeguard rules under the Gramm-Leach-Bliley Act and the California Consumer Protection Act. These rules require that financial institutions develop, implement, and maintain a written, comprehensive information security program containing safeguards that are appropriate to the financial institution's size and complexity, the nature and scope of the financial institution's activities, and the sensitivity of any customer information at issue. The United States has experienced a heightened legislative and regulatory focus on privacy and data security, including requirements as to consumer notification in the event of data breaches and certain types of security breaches. Additional regulations in these areas may increase compliance costs, which could negatively impact earnings. In addition, failure to comply with the privacy, data use and security laws and regulations to which we are subject, including by reason of inadvertent disclosure of confidential information, could result in fines, sanctions, penalties, reputational harm, loss of consumer confidence, and other adverse consequences, any of which could have a material adverse effect on our results of operations and business.

We could be subject to adverse changes or interpretations of tax laws, tax audits, or challenges to our tax positions.

We are subject to federal and applicable state income tax laws and regulations. Income tax laws and regulations are often complex and require significant judgment in determining our effective tax rate and in evaluating our tax positions. Changes in tax laws, changes in interpretations, guidance or regulations that may be promulgated, or challenges to judgments or actions that we may take with respect to tax laws could negatively impact our current and future financial performance. In August 2022, the IRA was signed into law. The IRA, among other provisions, imposes a 15% book minimum tax on corporations with three-year average annual adjusted financial statement income exceeding $1 billion and a 1% excise tax on corporate stock repurchases after December 31, 2022. We are currently assessing the potential impact of these legislative changes and will continue to evaluate the overall impact of other current, future and proposed regulations and interpretive guidance from tax authorities on our effective tax rate and consolidated balance sheets.

In addition, our determination of our tax liability is subject to review by applicable tax authorities. In the normal course of business, we are routinely subject to examinations and challenges from federal and applicable state and local taxing authorities regarding the amount of taxes due in connection with investments we have made and the businesses in which we have engaged. Recently, federal and state and local taxing authorities have been increasingly aggressive in challenging tax positions taken by financial institutions. The challenges made by taxing authorities may result in adjustments to the timing or amount of taxable income or deductions, or the allocation of income among tax jurisdictions. Any such challenges that are not resolved in our favor may adversely affect our effective tax rate, tax payments or financial condition.

Securities-Related Risks

The price of our common stock may fluctuate significantly in the future.

The price of our common stock on the New York Stock Exchange constantly changes. There can be no assurances about the market price for our common stock.

Our stock price may fluctuate as a result of a variety of factors many of which are beyond our control. These factors include:

- actual or anticipated changes in the political climate or public policy;
- sales of our equity securities;
- our financial condition, performance, creditworthiness, and prospects;
- quarterly variations in our operating results or the quality of our assets;
- operating results that vary from the expectations of management, securities analysts, and investors;
- changes in expectations as to our future financial performance;
- announcements of strategic developments, acquisitions, and other material events by us or our competitors;
- the operating and securities price performance of other companies that investors believe are comparable to us;
- the credit, mortgage, and housing markets, the markets for securities relating to mortgages or housing, and developments with respect to financial institutions generally;
- changes in interest rates and the slope of the yield curve;
- changes in national and global financial markets and economies and general market conditions, such as interest or foreign exchange rates, inflation, stock, commodity or real estate valuations or volatility and other global, geopolitical,

regulatory or judicial events that effect the financial markets and economy including pandemics, terrorism and war, including the military conflict between Russia and the Ukraine; and

- our past and future dividend and share repurchase practices.

There may be future sales or other dilution of our equity, which may adversely affect the market price of our common stock or depositary shares representing preferred stock.

We are not restricted from issuing additional common stock or preferred stock, including any securities that are convertible into or exchangeable for, or that represent the right to receive, common stock. We also grant a significant number of shares of common stock to employees and directors under our Incentive Plan each year. The issuance of any additional shares of our common stock, depositary shares, or preferred stock or securities convertible into, exchangeable for or that represent the right to receive common stock, or the exercise of such securities could be substantially dilutive to stockholders of our common stock. Holders of our common stock, depositary shares, and preferred stock have no preemptive rights that entitle such holders to purchase their pro rata share of any offering of shares of any class or series. Because our decision to issue securities in the future will depend on market conditions, our acquisition activity, and other factors, we cannot predict or estimate the amount, timing, or nature of our future offerings. Thus, our stockholders bear the risk of our future offerings reducing the market price of our common stock and diluting their stock holdings in us.

There can be no assurance that we will continue to declare cash dividends or repurchase stock as we have in the past.

We have paid regular quarterly dividends on our common stock since the third quarter of 2019, subject to quarterly declarations by the BOD, and also have paid dividends on our depositary shares representing our preferred stock since the issuance of such securities in the third quarter of 2021. We have previously adopted common stock repurchase programs, pursuant to which we have repurchased shares of our outstanding common stock, the most recent of which expired in December 2020.

Our dividend payments and/or stock repurchase practices may change from time-to-time, and no assurance can be provided that we will continue to declare dividends in any particular amounts or at all, or institute a new stock repurchase program. Dividends and/or stock repurchases are subject to capital availability and the discretion of our BOD, which must evaluate, among other things, whether cash dividends and/or stock repurchases are in the best interest of our stockholders and are in compliance with all applicable laws and any agreements containing provisions that limit our ability to declare and pay cash dividends and/or repurchase stock. Furthermore, our outstanding Series A preferred stock is senior to our common stock and could adversely affect the ability of us to declare or pay dividends or distributions on common stock. Under the terms of the Series A preferred stock, we are prohibited from paying dividends on our common stock unless all dividends for the latest dividend period on all outstanding shares of Series A preferred stock have been declared and paid in full or declared and a sum sufficient for the payment of those dividends has been set aside. A reduction in or elimination of our dividend payments or dividend program could have a negative effect on our stock price.

Offerings of debt, which would be senior to our common stock upon liquidation, and/or preferred equity securities that may be senior to our common stock for purposes of dividend distributions or upon liquidation, may adversely affect the market price of our common stock.

We may from time to time issue debt securities, borrow money through other means, or issue preferred stock. We may also borrow money from the FRB, the FHLB, other financial institutions, and other lenders. At December 31, 2022, we had outstanding subordinated debt, senior secured and unsecured debt, and short-term borrowings. In addition, AmeriHome has outstanding senior notes that were issued prior to the acquisition. We also have outstanding depositary shares representing Series A preferred stock, which is senior to our common stock. All of these securities or borrowings have priority over our common stock in a liquidation, which could affect the market price of our stock.

Our BOD is authorized to issue one or more classes or series of preferred stock from time to time without any action on the part of the stockholders. Our BOD also has the power, without stockholder approval, to set the terms of any such classes or series of preferred stock that may be issued, including voting rights, dividend rights, and preferences over our common stock with respect to dividends or upon our dissolution, winding-up, and liquidation and other terms. If we issue additional preferred stock in the future that has a preference over our common stock, with respect to the payment of dividends or upon our liquidation, dissolution, or winding up, or if we issue preferred stock with voting rights that dilute the voting power of our common stock and/or the rights of holders of our common stock, the market price of our common stock could be adversely affected.

Anti-takeover provisions could negatively impact our stockholders.

Provisions of Delaware law and provisions of our Certificate of Incorporation, as amended, and our Amended and Restated Bylaws could make it more difficult for a third party to acquire control of us or have the effect of discouraging a third party from attempting to acquire control of us. Additionally, our Certificate of Incorporation, as amended, authorizes our BOD to issue additional series of preferred stock and such preferred stock could be issued as a defensive measure in response to a takeover proposal. These provisions could make it more difficult for a third party to acquire us even if an acquisition might be in the best interest of our stockholders.

Item 1B. Unresolved Staff Comments.

None.

Item 2. Properties.

The Company and WAB are headquartered at One E. Washington Street in Phoenix, Arizona. WAB operates 36 domestic branch locations, which include six executive and administrative offices, of which 20 of these locations are owned and 16 are leased. The Company also has several loan production and other offices across the United States. In addition, WAB owns and occupies a 36,000 square foot operations facility in Las Vegas, Nevada. See "Item 1. Business" in this Form 10-K for location cities. For information regarding rental payments, see "Note 7. Premises and Equipment" in Item 8 included in this Form 10-K.

Item 3. Legal Proceedings.

There are no material pending legal proceedings to which the Company is a party or to which any of its properties are subject. There are no material proceedings known to the Company to be contemplated by any governmental authority. See "Note 18. Commitments and Contingencies" in Item 8 included in this Form 10-K for additional information. From time to time, the Company is involved in a variety of litigation matters in the ordinary course of its business and anticipates that it will become involved in new litigation matters in the future.

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.

Market Information

The Company’s common stock began trading on the New York Stock Exchange under the symbol “WAL” on June 30, 2005. The Company has filed, without qualifications, its 2022 Domestic Company Section 303A CEO Certification regarding its compliance with the NYSE’s corporate governance listing standards.

Holders

At February 17, 2023, there were approximately 1,870 stockholders of record of our common stock. This number does not include stockholders who hold shares in the name of brokerage firms or other financial institutions. The Company is not provided the exact number of or identities of these stockholders. There are no other classes of common equity outstanding.

Dividends

During the fourth quarter of 2022, the Company's BOD approved a cash dividend of $0.36 per common share. The dividend payment to shareholders totaled $39.2 million and was paid on December 2, 2022. In addition, the Company paid a cash dividend of $0.27 per depository share to preferred shareholders on December 30, 2022, totaling $3.2 million.

Share Repurchases

The following table provides information about the Company's purchases of equity securities that are registered by the Company pursuant to Section 12 of the Exchange Act for the periods indicated:

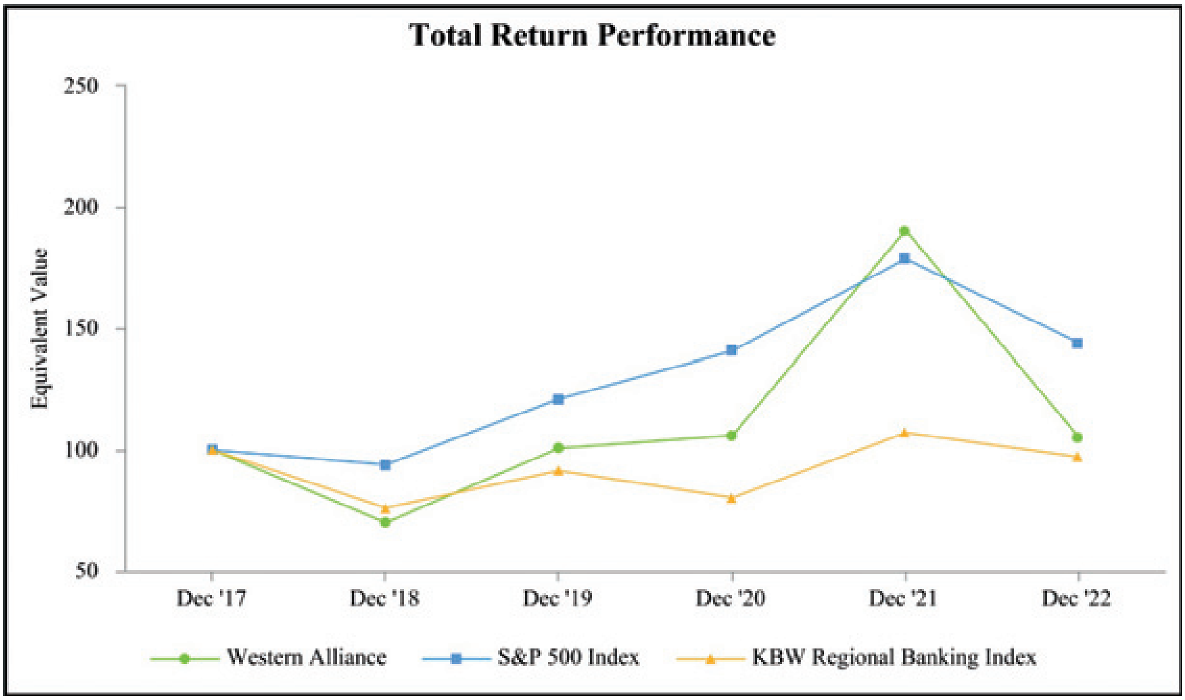
	Total Number of Shares Purchased (1)(2)	Average Price Paid Per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs (2)	Approximate Dollar Value of Shares That May Yet to be Purchased Under the Plans or Programs
October 2022	1,436	$ 66.56	—	$ —
November 2022	—	—	—	—
December 2022	101	65.64	—	—
Total	1,537	$ 66.50	—	$ —

(1) Shares purchased during the period outside of the publicly announced repurchase program were transferred to the Company from employees in satisfaction of minimum tax withholding obligations associated with the vesting of restricted stock awards during the period.

(2) The Company does not currently have a common stock repurchase program.

Performance Graph

The following graph summarizes a five year comparison of the cumulative total returns for the Company's common stock, the Standard & Poor's 500 stock index and the KBW Regional Banking Total Return Index, each of which assumes an initial value of $100.00 on December 31, 2017 and reinvestment of dividends.



Item 6. [Reserved].

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

The following discussion is designed to provide insight on the financial condition and results of operations of Western Alliance Bancorporation and its subsidiaries and should be read in conjunction with "Item 8. Financial Statements and Supplementary Data" of this Form 10-K. This discussion and analysis contains forward-looking statements that involve risk, uncertainties, and assumptions. Certain risks, uncertainties, and other factors, including, but not limited to, those set forth under "Forward-Looking Statements" at the beginning of Part I of this Form 10-K and those discussed in Part I, Item 1A of this Form 10-K under the heading "Risk Factors," may cause actual results to differ materially from those projected in the forward-looking statements.

For a comparison of the 2021 results to the 2020 results and other 2020 information not included herein, refer to the "Management's Discussion and Analysis of Financial Condition and Results of Operations" in Part II, Item 7 of the Company's Annual Report on Form 10-K for the year ended December 31, 2021.

Financial Overview and Highlights

WAL is a bank holding company headquartered in Phoenix, Arizona, incorporated under the laws of the state of Delaware. WAL provides a full spectrum of customized loan, deposit and treasury management capabilities, including 24/7 funds transfer and other digital payment offerings through its wholly-owned banking subsidiary, WAB.

WAB operates the following full-service banking divisions: ABA, BON and FIB, Bridge, and TPB. The Company also provides an array of specialized financial services across the country, including mortgage banking services through AmeriHome, and has added to its capabilities with the acquisition of DST on January 25, 2022, which provides digital payment services for the class action legal industry.

Acquisition of Digital Disbursements

On January 25, 2022, the Company completed its acquisition of DST, doing business as Digital Disbursements, a digital payments platform for the class action legal industry. DST's proprietary platform enables claimants to select their payment method, including direct-to-bank account options and popular digital wallets. This provides the Company with the internal capability to significantly increase efficacy, reduce distribution costs and improve potential fraud detection for the legal class action market. The acquisition is expected to grow the Company's deposit base and continue to extend the suite of legal banking services offered while serving adjacent sectors that will benefit from digital payments technology.

2022 Financial Highlights

- Net income available to common stockholders of $1.0 billion for 2022, an increase from $895.7 million for 2021
- Diluted earnings per share of $9.70 for 2022, an increase from $8.67 per share for 2021
- Net revenue of $2.5 billion, constituting year-over-year growth of 30.1%, or $587.9 million, compared to an increase in non-interest expenses of 35.9%, or $305.3 million
- PPNR[1] increased $282.6 million to $1.4 billion, compared to $1.1 billion in 2021
- Effective tax rate of 19.7% for 2022, compared to 19.9% for 2021
- Total loans HFI of $51.9 billion, up $12.8 billion from December 31, 2021
- Total deposits of $53.6 billion, up $6.0 billion from December 31, 2021
- Stockholders' equity of $5.4 billion, an increase of $393 million from December 31, 2021
- Nonperforming assets (nonaccrual loans and repossessed assets) decreased to 0.14% of total assets, from 0.15% at December 31, 2021
- Net loan charge-offs to average loans outstanding of approximately 0.00% for 2022, compared to 0.02% for 2021
- Net interest margin of 3.67% in 2022, increased from 3.41% in 2021
- Return on average assets of 1.62% for 2022, compared to 1.83% for 2021
- Tangible common equity ratio[1] of 6.5%, compared to 7.3% at December 31, 2021
- Tangible book value per share, net of tax[1], of $40.25, an increase of 6.4% from $37.84 at December 31, 2021
- Efficiency ratio[1] of 44.9% in 2022, compared to 42.9% in 2021

The impact to the Company from these items, and others of both a positive and negative nature, are discussed in more detail below as they pertain to the Company's overall comparative performance for the year ended December 31, 2022.

[1] See Non-GAAP Financial Measures section beginning on page 34.

As a bank holding company, management focuses on key ratios in evaluating the Company's financial condition and results of operations.

Results of Operations and Financial Condition

A summary of the Company's results of operations, financial condition, and selected metrics are included in the following tables:

	Year Ended December 31,		
	2022	2021	2020
	(dollars in millions, except per share amounts)		
Net income	**$ 1,057.3**	$ 899.2	$ 506.6
Net income available to common stockholders	**1,044.5**	895.7	506.6
Earnings per share - basic	**9.74**	8.72	5.06
Earnings per share - diluted	**9.70**	8.67	5.04
Return on average assets	**1.62 %**	1.83 %	1.61 %
Return on average equity	**20.7**	22.3	16.1
Return on average tangible common equity (1)	**25.4**	26.2	17.7
Net interest margin	**3.67**	3.41	3.97

(1) See Non-GAAP Financial Measures section beginning on page 34.

	December 31,	
	2022	2021
	(in millions)	
Total assets	**$ 67,734**	$ 55,983
Loans HFS	**1,184**	5,635
Loans HFI, net of deferred loan fees and costs	**51,862**	39,075
Investment securities	**8,541**	7,454
Total deposits	**53,644**	47,612
Other borrowings	**6,299**	1,502
Qualifying debt	**893**	896
Stockholders' equity	**5,356**	4,963
Tangible common equity, net of tax[1]	**4,383**	4,035

(1) See Non-GAAP Financial Measures section beginning on page 34.

Asset Quality

For all banks and bank holding companies, asset quality plays a significant role in the overall financial condition of the institution and results of operations. The Company measures asset quality in terms of nonaccrual loans as a percentage of gross loans and net charge-offs as a percentage of average loans. Net charge-offs are calculated as the difference between charged-off loans and recovery payments received on previously charged-off loans. The following table summarizes the Company's key asset quality metrics for loans HFI:

	At or for the Year Ended December 31,		
	2022	2021	2020
	(dollars in millions)		
Nonaccrual loans	**$ 85**	$ 73	$ 115
Repossessed assets	**11**	12	1
Non-performing assets	**98**	87	150
Nonaccrual loans to funded loans	**0.16 %**	0.19 %	0.43 %
Nonaccrual and repossessed assets to total assets	**0.14**	0.15	0.32
Allowance for loan losses to funded loans	**0.60**	0.65	1.03
Allowance for credit losses to funded loans	**0.69**	0.74	1.17
Allowance for loan losses to nonaccrual loans	**364**	348	242
Allowance for credit losses to nonaccrual loans	**419**	400	274
Net charge-offs to average loans outstanding	**0.00**	0.02	0.06

Asset and Deposit Growth

The Company's assets and liabilities are comprised primarily of loans and deposits. Therefore, the ability to originate new loans and attract new deposits is fundamental to the Company's growth.

Total assets increased to $67.7 billion at December 31, 2022 from $56.0 billion at December 31, 2021. The increase in total assets of $11.7 billion, or 20.9%, was driven by continued organic loan and deposit growth. loans HFI increased by $12.8 billion, or 32.7%, to $51.9 billion as of December 31, 2022, compared to $39.1 billion as of December 31, 2021. The increase in loans HFI from December 31, 2021 was driven by increases of $6.6 billion in residential real estate (including EBO loans transferred from HFS to HFI in 2022 with a $1.9 billion balance at December 31, 2022), $2.8 billion in CRE, non-owner occupied, $2.4 billion in commercial and industrial, and $990 million in construction and land development loans. This increase in loans HFI was partially offset by a decrease in loans HFS of $4.5 billion from $5.6 billion as of December 31, 2021. The decrease in loans HFS was attributable to sales, a decline in production volumes, and transfer of the remaining EBO loan balance to HFI during the year ended December 31, 2022.

Total deposits increased $6.0 billion, or 12.7%, to $53.6 billion as of December 31, 2022 from $47.6 billion as of December 31, 2021. The increase in deposits from December 31, 2021 was driven by increases of $3.0 billion in certificates of deposits, $2.6 billion of interest bearing demand deposits, and $2.1 billion in savings and money market accounts, partially offset by a decrease of $1.7 billion in non-interest bearing demand deposits.

RESULTS OF OPERATIONS

The following table sets forth a summary financial overview:

	Year Ended December 31,		Increase
	2022	2021	**(Decrease)**
	(in millions, except per share amounts)		
Consolidated Income Statement Data:			
Interest income	**$ 2,691.8**	$ 1,658.7	**$ 1,033.1**
Interest expense	**475.5**	109.9	**365.6**
Net interest income	**2,216.3**	1,548.8	**667.5**
Provision for (recovery of) credit losses	**68.1**	(21.4)	**89.5**
Net interest income after provision for (recovery of) credit losses	**2,148.2**	1,570.2	**578.0**
Non-interest income	**324.6**	404.2	**(79.6)**
Non-interest expense	**1,156.7**	851.4	**305.3**
Income before provision for income taxes	**1,316.1**	1,123.0	**193.1**
Income tax expense	**258.8**	223.8	**35.0**
Net income	**1,057.3**	899.2	**158.1**
Dividends on preferred stock	**12.8**	3.5	**9.3**
Net income available to common stockholders	**$ 1,044.5**	$ 895.7	**$ 148.8**
Earnings per share:			
Basic	**$ 9.74**	$ 8.72	**$ 1.02**
Diluted	**$ 9.70**	$ 8.67	**$ 1.03**

Non-GAAP Financial Measures

The following discussion and analysis contains financial information determined by methods other than those prescribed by GAAP. The Company's management uses these non-GAAP financial measures in their analysis of the Company's performance. Management believes presentation of these non-GAAP financial measures provides useful supplemental information that is essential to a complete understanding of the operating results of the Company. Since the presentation of these non-GAAP performance measures and their impact differ between companies, these non-GAAP disclosures should not be viewed as a substitute for operating results determined in accordance with GAAP, nor are they necessarily comparable to non-GAAP performance measures that may be presented by other companies.

Pre-Provision Net Revenue

Banking regulations define PPNR as the sum of net interest income and non-interest income less expenses before adjusting for loss provisions. Management believes that this is an important metric as it illustrates the underlying performance of the Company, it enables investors and others to assess the Company's ability to generate capital to cover credit losses through the credit cycle, and provides consistent reporting with a key metric used by bank regulatory agencies.

The following table shows the components used in the calculation of PPNR:

	Year Ended December 31,		
	2022	2021	2020
		(in millions)	
Net interest income	**$ 2,216.3**	$ 1,548.8	$ 1,166.9
Total non-interest income	**324.6**	404.2	70.8
Net revenue	**$ 2,540.9**	$ 1,953.0	$ 1,237.7
Total non-interest expense	**1,156.7**	851.4	491.6
Pre-provision net revenue	**$ 1,384.2**	$ 1,101.6	$ 746.1
Less:			
Provision for (recovery of) credit losses	**68.1**	(21.4)	123.6
Income tax expense	**258.8**	223.8	115.9
Net income	**$ 1,057.3**	$ 899.2	$ 506.6

Efficiency Ratio

The following table shows the components used in the calculation of the efficiency ratio, which management uses as a metric for assessing cost efficiency:

	Year Ended December 31,		
	2022	2021	2020
		(dollars in millions)	
Total non-interest expense	**$ 1,156.7**	$ 851.4	$ 491.6
Divided by:			
Total net interest income	**2,216.3**	1,548.8	1,166.9
Plus:			
Tax equivalent interest adjustment	**33.7**	33.3	28.4
Total non-interest income	**324.6**	404.2	70.8
	$ 2,574.6	$ 1,986.3	$ 1,266.1
Efficiency ratio - tax equivalent basis	**44.9 %**	42.9 %	38.8 %

Tangible Common Equity and Return on Average Tangible Common Equity

The following tables present financial measures related to tangible common equity. Tangible common equity represents total stockholders' equity less goodwill and intangible assets and preferred stock. Management believes that tangible common equity financial measures are useful in evaluating the Company's capital strength, financial condition, and ability to manage potential losses.

	December 31,	
	2022	2021
	(dollars and shares in millions)	
Total stockholders' equity	**$ 5,356**	$ 4,963
Less:		
Goodwill and intangible assets	**680**	635
Preferred stock	**295**	295
Total tangible common stockholders' equity	**4,381**	4,033
Plus: deferred tax - attributed to intangible assets	**2**	2
Total tangible common equity, net of tax	**$ 4,383**	$ 4,035
Total assets	**$ 67,734**	$ 55,983
Less: goodwill and intangible assets, net	**680**	635
Tangible assets	**67,054**	55,348
Plus: deferred tax - attributed to intangible assets	**2**	2
Total tangible assets, net of tax	**$ 67,056**	$ 55,350
Tangible common equity ratio	**6.5 %**	7.3 %
Common shares outstanding	**108.9**	106.6
Book value per common share	**$ 46.47**	$ 43.78
Tangible book value per common share, net of tax	**40.25**	37.84

	December 31,		
	2022	2021	2020
		(dollars in millions)	
Net income available to common shareholders	**$ 1,044.5**	$ 895.7	$ 506.6
Divided by:			
Average stockholders' equity	**5,099.0**	4,033.8	3,151.8
Less:			
Average goodwill and intangible assets	**(688.0)**	(528.6)	(297.6)
Average preferred stock	**(294.5)**	(81.5)	—
Average tangible common equity	**$ 4,116.5**	$ 3,423.7	$ 2,854.2
Average accumulated other comprehensive loss (income)	**407.5**	(56.9)	(63.8)
Average tangible common equity, excluding AOCI	**$ 4,524.0**	$ 3,366.8	$ 2,790.4
Return on average tangible common equity	**25.4 %**	26.2 %	17.7 %
Return on average tangible common equity, excluding AOCI	**23.1**	26.6	18.2

Regulatory Capital

The following table presents certain financial measures related to regulatory capital under Basel III, which includes CET 1 and total capital. The FRB and other banking regulators use CET1 and total capital as a basis for assessing a bank's capital adequacy; therefore, management believes it is useful to assess financial condition and capital adequacy using this same basis. Specifically, the total capital ratio takes into consideration the risk levels of assets and off-balance sheet financial instruments. In addition, management believes that the classified assets to CET1 plus allowance measure is an important regulatory metric for assessing asset quality.

As permitted by the regulatory capital rules, the Company elected to delay the estimated impact of CECL on its regulatory capital over a five-year transition period ending December 31, 2024. Beginning in 2022, capital ratios and amounts include a 25% reduction to the capital benefit that resulted from the increased ACL related to the adoption of ASC 326.

	December 31,	
	2022	**2021**
	(dollars in millions)	
Common equity tier 1:		
Common equity	**$ 5,097**	$ 4,715
Less:		
Non-qualifying goodwill and intangibles	**672**	631
Disallowed deferred tax asset	**12**	—
AOCI related adjustments	**(664)**	16
Unrealized gain on changes in fair value liabilities	**4**	—
Common equity tier 1	**$ 5,073**	$ 4,068
Divided by: Risk-weighted assets	**$ 54,461**	$ 44,697
Common equity tier 1 ratio	**9.3 %**	9.1 %
Common equity tier 1	**$ 5,073**	$ 4,068
Plus: Preferred stock and trust preferred securities	**376**	376
Tier 1 capital	**$ 5,449**	$ 4,444
Divided by: Tangible average assets	**$ 69,814**	$ 56,973
Tier 1 leverage ratio	**7.8 %**	7.8 %
Total capital:		
Tier 1 capital	**$ 5,449**	$ 4,444
Plus:		
Subordinated debt	**817**	815
Adjusted allowances for credit losses	**320**	240
Tier 2 capital	**$ 1,137**	$ 1,055
Total capital	**$ 6,586**	$ 5,499
Total capital ratio	**12.1 %**	12.3 %
Classified assets to tier 1 capital plus allowance:		
Classified assets	**$ 393**	$ 301
Divided by: Tier 1 capital	**5,449**	4,444
Plus: Adjusted allowances for credit losses	**320**	240
Total Tier 1 capital plus adjusted allowances for credit losses	**$ 5,769**	$ 4,684
Classified assets to tier 1 capital plus allowance	**6.8 %**	6.4 %

Net Interest Margin

The net interest margin is reported on a TEB. A tax equivalent adjustment is added to reflect interest earned on certain securities and loans that are exempt from federal and state income tax. The following tables set forth the average balances, interest income, interest expense, and average yield (on a fully TEB) for the periods indicated:

	Year Ended December 31,					
	2022			2021		
	Average Balance	Interest	Average Yield / Cost	Average Balance	Interest	Average Yield / Cost
	(dollars in millions)					
Interest earning assets						
Loans HFS	$ 4,364	$ 180.3	4.13 %	$ 5,476	$ 174.4	3.18 %
Loans HFI:						
Commercial and industrial	20,083	1,002.8	5.05	14,979	624.8	4.26
CRE - non-owner occupied	7,769	416.4	5.37	5,829	271.3	4.67
CRE - owner occupied	1,841	93.2	5.16	2,030	97.7	4.92
Construction and land development	3,426	229.1	6.69	2,790	160.0	5.74
Residential real estate	13,771	468.5	3.40	5,129	158.9	3.10
Consumer	61	3.1	5.07	39	1.7	4.43
Total loans HFI (1), (2), (3)	46,951	2,213.1	4.74	30,796	1,314.4	4.32
Securities:						
Securities - taxable	6,325	195.3	3.09	5,284	95.8	1.81
Securities - tax-exempt	2,067	77.3	4.68	2,137	68.9	4.05
Total securities (1)	8,392	272.6	3.48	7,421	164.7	2.46
Other	1,574	25.8	1.64	2,718	5.2	0.19
Total interest earning assets (4)	61,281	2,691.8	4.45	46,411	1,658.7	3.65
Non-interest earning assets						
Cash and due from banks	260			293		
Allowance for credit losses	(280)			(261)		
Bank owned life insurance	180			178		
Other assets	3,948			2,487		
Total assets	$ 65,389			$ 49,108		
Interest-bearing liabilities						
Interest-bearing deposits:						
Interest-bearing transaction accounts	$ 8,331	$ 78.8	0.95 %	$ 4,751	$ 5.9	0.13 %
Savings and money market accounts	18,518	158.6	0.86	15,814	33.1	0.21
Certificates of deposit	2,772	39.0	1.40	1,850	8.5	0.46
Total interest-bearing deposits	29,621	276.4	0.93	22,415	47.5	0.21
Short-term borrowings	3,424	92.1	2.69	1,206	8.2	0.68
Long-term debt	1,008	72.0	7.14	373	21.1	5.65
Qualifying debt	893	35.0	3.92	827	33.1	4.00
Total interest-bearing liabilities	34,946	475.5	1.36	24,821	109.9	0.44
Interest cost of funding earning assets			0.78			0.24
Non-interest-bearing liabilities						
Non-interest-bearing demand deposits	24,133			19,416		
Other liabilities	1,211			837		
Stockholders' equity	5,099			4,034		
Total liabilities and stockholders' equity	$ 65,389			$ 49,108		
Net interest income and margin (5)		$ 2,216.3	3.67 %		$ 1,548.8	3.41 %

(1) Yields on loans and securities have been adjusted to a TEB. The taxable-equivalent adjustment was $33.7 million and $33.3 million for the year ended December 31, 2022 and 2021, respectively.

(2) Included in the yield computation are net loan fees of $132.2 million and $131.7 million for the year ended December 31, 2022 and 2021, respectively.

(3) Includes non-accrual loans.

(4) Net yield on interest earning assets based on the balance at December 31, 2022 and 2021 was 3.56% and 2.96%, respectively.

(5) Net interest margin is computed by dividing net interest income by total average earning assets, annualized on an actual/actual basis.

	Year Ended December 31, 2022 versus 2021		
	Increase (Decrease) Due to Changes in (1)		
	Volume	Rate	Total
	(in millions)		
Interest income:			
Loans HFS	$ (45.9)	$ 51.8	$ 5.9
Loans HFI:			
Commercial and industrial	254.9	123.1	378.0
CRE - non-owner occupied	104.0	41.1	145.1
CRE - owner occupied	(9.6)	5.1	(4.5)
Construction and land development	42.5	26.6	69.1
Residential real estate	294.0	15.6	309.6
Consumer	1.1	0.3	1.4
Total loans HFI	686.9	211.8	898.7
Securities:			
Securities - taxable	32.1	67.4	99.5
Securities - tax-exempt	(2.6)	11.0	8.4
Total securities	29.5	78.4	107.9
Other	(18.7)	39.3	20.6
Total interest income	651.8	381.3	1,033.1
Interest expense:			
Interest-bearing transaction accounts	$ 33.9	$ 39.0	$ 72.9
Savings and money market accounts	23.2	102.3	125.5
Time certificates of deposit	13.0	17.5	30.5
Short-term borrowings	59.7	24.2	83.9
Long-term debt	45.3	5.6	50.9
Qualifying debt	2.6	(0.7)	1.9
Total interest expense	177.7	187.9	365.6
Net change	$ 474.1	$ 193.4	$ 667.5

(1) Changes attributable to both volume and rate are designated as volume changes.

Comparison of interest income, interest expense and net interest margin

The Company's primary source of revenue is interest income. For the year ended December 31, 2022, interest income was $2.7 billion, an increase of $1.0 billion, or 62.3%, compared to $1.7 billion for the year ended December 31, 2021. This increase was primarily the result of a $898.7 million increase in interest income from loans HFI that was driven by a $16.2 billion increase in the average HFI loan balance for the year ended December 31, 2022 and to a lesser extent higher rates. Interest income from investment securities also increased by $107.9 million for the comparable period due to increased investment yields driven by a higher rate environment and investment securities mix as the Company held a higher proportion of variable rate securities in 2022 compared to 2021. Average yield on interest earning assets increased to 4.45% for the year ended December 31, 2022, compared to 3.65% for 2021, which was primarily the result of a higher rate environment.

For the year ended December 31, 2022, interest expense was $475.5 million, compared to $109.9 million for the year ended December 31, 2021. Interest expense on deposits increased $228.9 million for the same period due to increasing deposit rates, coupled with a $7.2 billion increase in average interest-bearing deposits. Interest expense across all debt types increased $136.7 million for the year ended December 31, 2022 compared to the same period in 2021 as a result of an increase of $2.9 billion in average total debt. The increase in average total debt during the year ended December 31, 2022 is attributable to increases in overnight borrowings and $579 million of credit linked notes issuances, net of issuance costs.

For the year ended December 31, 2022, net interest income was $2.2 billion, compared to $1.5 billion for the year ended December 31, 2021. The increase in net interest income reflects a $14.9 billion increase in average interest earning assets, partially offset by an increase of $10.1 billion in average interest-bearing liabilities. The increase in net interest margin of 26 basis points compared to 2021 is the result of an increase in average loan balances couple with higher loan and investment security yields due to a rising rate environment, partially offset by higher funding costs on deposits and borrowings during 2022.

Provision for Credit Losses

The provision for credit losses in each period is reflected as a reduction in earnings for that period and includes amounts related to funded loans, unfunded loan commitments, and investment securities. The provision is equal to the amount required to maintain the ACL at a level that is adequate to absorb estimated lifetime credit losses inherent in the loan and investment securities portfolios based on remaining contractual maturity, adjusted for estimated prepayments as of each period end. The Company's CECL models incorporate historical experience, current conditions, and reasonable and supportable forecasts in measuring expected credit losses. For the year ended December 31, 2022, the Company recorded a provision for credit losses of $68.1 million, which is primarily attributable to the Company's strong loan growth during the year and to a lesser extent, the current weakened economic outlook. For the year ended December 31, 2021, the Company recorded a recovery of credit losses of $21.4 million due to improvement in economic forecasts relative to 2020.

Non-interest Income

The following table presents a summary of non-interest income:

	Year Ended December 31,		
	2022	2021	**Increase (Decrease)**
		(in millions)	
Net loan servicing revenue (expense)	**$ 130.9**	$ (16.3)	**$ 147.2**
Net gain on loan origination and sale activities	**104.0**	326.2	**(222.2)**
Service charges and fees	**27.0**	28.3	**(1.3)**
Commercial banking related income	**21.5**	17.4	**4.1**
Income from equity investments	**17.8**	22.1	**(4.3)**
Gain on recovery from credit guarantees	**14.7**	7.2	**7.5**
Gain on sales of investment securities	**6.8**	8.3	**(1.5)**
Fair value loss on assets measured at fair value, net	**(28.6)**	(1.3)	**(27.3)**
Other income	**30.5**	12.3	**18.2**
Total non-interest income	**$ 324.6**	$ 404.2	**$ (79.6)**

Total non-interest income for the year ended December 31, 2022 compared to the same period in 2021 decreased by $79.6 million. The decrease in non-interest income was primarily driven by a decrease in net gain on loan origination and sale activities of $222.2 million as the rise in interest rates throughout 2022 impacted the Company's residential mortgage banking business, resulting in compressed margins, a decline in production volume, and reduced gains due to fair value changes. The rising rate environment also contributed to mark-to-market losses on the Company's equity securities, which was the primary driver of the $27.3 million increase to fair value loss on assets measured at fair value, net. These decreases were partially offset by an increase in net loan servicing revenue of $147.2 million from lower payoffs, gain on sales of MSRs, and higher servicing fees.

Non-interest Expense

The following table presents a summary of non-interest expense:

	Year Ended December 31, 2022	Year Ended December 31, 2021	Increase (Decrease)
		(in millions)	
Salaries and employee benefits	**$ 539.5**	$ 466.7	**$ 72.8**
Deposit costs	**165.8**	29.8	**136.0**
Legal, professional, and directors' fees	**99.9**	58.6	**41.3**
Data processing	**83.0**	58.2	**24.8**
Loan servicing expenses	**55.5**	53.5	**2.0**
Occupancy	**55.5**	43.8	**11.7**
Insurance	**31.1**	23.0	**8.1**
Loan acquisition and origination expenses	**23.1**	28.8	**(5.7)**
Business development and marketing	**22.1**	13.5	**8.6**
Net gain on sales and valuations of repossessed and other assets	**(0.7)**	(3.5)	**2.8**
Acquisition and restructure expenses	**0.4**	15.3	**(14.9)**
Loss on extinguishment of debt	**—**	5.9	**(5.9)**
Other expense	**81.5**	57.8	**23.7**
Total non-interest expense	**$ 1,156.7**	$ 851.4	**$ 305.3**

Total non-interest expense for the year ended December 31, 2022 increased $305.3 million compared to the same period in 2021. The increase in non-interest expense was primarily driven by increases in deposit costs, salaries and employee benefits, legal, professional, and directors' fees, and data processing costs. The increase in deposits costs of $136.0 million primarily relates to higher earnings credit rates as a result of the rising rate environment in 2022. Salaries and employee benefits increased $72.8 million due to an increase in headcount from the prior year to support the Company's continued growth, higher incentive compensation from loan and deposit growth during the year, and inclusion of a full year of compensation costs in 2022 for AmeriHome employees. The increase in legal, professional, and directors' fees of $41.3 million relates to an increase in project initiatives and consulting work to support ongoing implementations and the increase in data processing costs of $24.8 million was driven by an increase in software licensing costs.

Income Taxes

For the years ended December 31, 2022 and 2021, the Company's effective tax rate was 19.7% and 19.9%, respectively. There was not a significant change in the effective tax rate from 2021 to 2022.

Business Segment Results

The Company's reportable segments are aggregated with a focus on products and services offered and consist of three reportable segments:

- Commercial: provides commercial banking and treasury management products and services to small and middle-market businesses, specialized banking services to sophisticated commercial institutions and investors within niche industries, as well as financial services to the real estate industry.
- Consumer Related: offers consumer banking services, such as mortgage banking and commercial banking services to enterprises in consumer-related sectors and beginning on January 25, 2022, includes the financial results of DST.
- Corporate & Other: consists of the Company's investment portfolio, Corporate borrowings and other related items, income and expense items not allocated to other reportable segments, and inter-segment eliminations.

The following tables present selected operating segment information:

	Consolidated Company	Commercial	Consumer Related	Corporate & Other
December 31, 2022		*(in millions)*		
Loans HFI, net of deferred loan fees and costs	**$ 51,862**	**$ 31,414**	**$ 20,448**	**$ —**
Deposits	**53,644**	**29,494**	**18,492**	**5,658**
December 31, 2021				
Loans HFI, net of deferred loan fees and costs	$ 39,075	$ 25,092	$ 13,983	$ —
Deposits	47,612	30,467	15,363	1,782
Year Ended December 31, 2022				
Income (loss) before provision for income taxes	**$ 1,316.1**	**$ 1,095.3**	**$ 450.1**	**$ (229.3)**
Year Ended December 31, 2021				
Income (loss) before provision for income taxes	$ 1,123.0	$ 861.5	$ 496.1	$ (234.6)

BALANCE SHEET ANALYSIS

Total assets increased to $67.7 billion at December 31, 2022 from $56.0 billion at December 31, 2021. The increase in total assets of $11.7 billion, or 20.9%, was driven by continued organic loan and deposit growth. Loans HFI increased by $12.8 billion, or 32.7%, to $51.9 billion as of December 31, 2022, compared to $39.1 billion as of December 31, 2021. The increase in loans HFI from December 31, 2021 was driven by increases in residential real estate loans of $6.6 billion (including EBO loans transferred from HFS to HFI in 2022 with a $1.9 billion balance at December 31, 2022), CRE, non-owner occupied loans of $2.8 billion, commercial and industrial loans of $2.4 billion, and construction and land development loans of $990 million. In addition, loans HFS decreased $4.5 billion, down from $5.6 billion as of December 31, 2021, related to sales, a decline in production volumes, and transfer of the remaining EBO loan balance to loans HFI during the year ended December 31, 2022.

Total liabilities increased $11.4 billion, or 22.3%, to $62.4 billion at December 31, 2022, compared to $51.0 billion at December 31, 2021. The increase in liabilities is due primarily to an increase in total deposits and borrowings. Total deposits increased $6.0 billion, or 12.7%, to $53.6 billion at December 31, 2022. The increase in deposits from December 31, 2021 was driven by increases in certificates of deposit of $3.0 billion, interest-bearing demand deposits of $2.6 billion, and savings and money market accounts of $2.1 billion, partially offset by a decrease in non-interest-bearing demand deposits of $1.7 billion. Other borrowings also increased $4.8 billion due to an increase in overnight borrowings and issuance of credit linked notes during the year.

Total stockholders' equity increased by $393 million, or 7.9%, to $5.4 billion at December 31, 2022, compared to $5.0 billion at December 31, 2021. The increase in stockholders' equity is primarily a function of net income and net proceeds of $157.7 million from issuance of common stock during the year, offset by quarterly dividends to common and preferred shareholders and unrealized fair value losses on AFS securities recorded net of tax in other comprehensive income.

Investment securities

Debt securities are classified at the time of acquisition as either HTM, AFS, or trading based upon various factors, including asset/liability management strategies, liquidity and profitability objectives, and regulatory requirements. HTM securities are carried at amortized cost, adjusted for amortization of premiums or accretion of discounts. AFS securities are debt securities that may be sold prior to maturity based upon asset/liability management decisions. Investment securities classified as AFS are carried at fair value with unrealized gains or losses on these securities recorded in AOCI in stockholders' equity, net of tax. Amortization of premiums or accretion of discounts on MBS is periodically adjusted for estimated prepayments. Trading securities are reported at fair value, with unrealized gains and losses on these securities included in current period earnings.

The Company's investment securities portfolio is utilized as collateral for borrowings, required collateral for public deposits and repurchase agreements, and to manage liquidity, capital, and interest rate risk.

The following table summarizes the carrying value of the Company's investment securities portfolio:

	December 31, 2022	December 31, 2021	Increase (Decrease)
		(in millions)	
Debt securities			
CLO	**$ 2,706**	$ 926	**$ 1,780**
Commercial MBS issued by GSEs	**97**	69	**28**
Corporate debt securities	**390**	383	**7**
Private label residential MBS	**1,397**	1,725	**(328)**
Residential MBS issued by GSEs	**1,740**	1,993	**(253)**
Tax-exempt	**1,982**	2,105	**(123)**
U.S. treasury securities	**—**	13	**(13)**
Other	**69**	82	**(13)**
Total debt securities	**$ 8,381**	$ 7,296	**$ 1,085**
Equity securities			
Common stock	**$ 3**	$ —	**$ 3**
CRA investments	**49**	45	**4**
Preferred stock	**108**	114	**(6)**
Total equity securities	**$ 160**	$ 159	**$ 1**

The carrying value of debt securities increased $1.1 billion, or 14.9%, from December 31, 2021. The increase in investment securities is largely attributable to purchases of CLOs, offset by paydowns and unrealized fair value losses. The Company continued to increase its investment in CLOs during 2022 as these variable rate securities generate yields that are higher than those for MBS and benefited from the rising rate environment. The Company's CLO portfolio consists of second or third credit tranche bonds of structured transactions, rated AA to A. The rates on these securities will convert to a SOFR index when LIBOR is discontinued in June 2023.

The weighted average yield on investment securities is calculated by dividing income within each maturity range by the outstanding amount of the related investment. For purposes of calculating the weighted average yield, AFS securities are carried at amortized cost in the table below and tax-exempt obligations have not been tax-effected. The maturity distribution and weighted average yield of the Company's investment security portfolios at December 31, 2022 are summarized in the table below:

	Due Under 1 Year		Due 1-5 Years		Due 5-10 Years		Due Over 10 Years		Total	
	Amount	Yield	Amount	Yield	Amount	Yield	Amount	Yield	Amount	Yield
					(dollars in millions)					
Held-to-maturity										
Private label residential MBS (1)	$ —	— %	$ —	— %	$ —	— %	$ 198	2.20 %	$ 198	2.20 %
Tax-exempt bonds	9	4.10	17	5.21	29	4.80	1,036	4.33	1,091	4.36
Total HTM securities	$ 9	4.10 %	$ 17	5.21 %	$ 29	4.80 %	$ 1,234	3.99 %	$ 1,289	4.03 %
Available-for-sale										
CLO	$ —	— %	$ —	— %	$ 817	6.13 %	$ 1,979	6.03 %	$ 2,796	6.06 %
Commercial MBS issued by GSEs (1)	—	—	21	2.77	37	7.02	46	2.45	104	4.16
Corporate debt securities	—	—	157	4.28	267	3.78	5	3.70	429	3.97
Private label residential MBS (1)	—	—	—	—	31	4.37	1,411	2.49	1,442	2.53
Residential MBS issued by GSEs (1)	—	—	3	2.70	5	2.82	2,115	2.16	2,123	2.17
Tax-exempt	—	—	5	2.85	42	3.06	957	2.66	1,004	2.68
Other	1	2.00	8	2.65	10	5.06	56	4.84	75	4.59
Total AFS securities	$ 1	2.00 %	$ 194	3.99 %	$ 1,209	5.46 %	$ 6,569	3.50 %	$ 7,973	3.81 %

(1) MBS are comprised of pools of loans with varying maturities, the majority of which are due after 10 years.

The Company does not hold any subprime MBS in its investment portfolio. Approximately 58% of its MBS are GSE issued. The MBS that are not GSE issued consist primarily of investment grade securities, including $1.2 billion rated AAA and $41 million rated AA.

Gross unrealized losses on the Company's AFS securities at December 31, 2022 relate primarily to changes in interest rates and other market conditions that are not considered to be credit-related issues. The Company has reviewed its securities on which there is an unrealized loss in accordance with its ACL policy described in "Note 1. Summary of Significant Accounting Policies" in Item 8 of this Form 10-K. Based on the analysis performed, management determined that an ACL on the Company's AFS securities was not necessary at December 31, 2022.

The credit loss model under ASC 326-20, applicable to HTM securities, requires recognition of lifetime expected credit losses through an allowance account at the time the security is purchased. For the year ended December 31, 2022, the Company recognized no provision for credit losses on HTM securities, compared to a recovery of credit losses of $1.6 million for the same period in 2021, resulting in a total allowance of $5.2 million as of December 31, 2022 and 2021.

Loans HFS

The Company purchases and originates residential mortgage loans through its AmeriHome mortgage banking business channel that are held for sale or securitization. At December 31, 2022, the Company had $1.2 billion of loans HFS, compared to $5.6 billion at December 31, 2021. The decrease in loans HFS from December 31, 2021 relates to sales, a decline in production volumes, and transfer of the remaining EBO loan balance to loans HFI.

Loans HFI

The table below summarizes the distribution of the Company's held for investment loan portfolio:

	December 31, 2022	December 31, 2021	Increase (Decrease)
	(in millions)		
Warehouse lending	**$ 5,561**	$ 5,156	**$ 405**
Municipal & nonprofit	**1,524**	1,579	**(55)**
Tech & innovation	**2,293**	1,418	**875**
Equity fund resources	**3,717**	3,830	**(113)**
Other commercial and industrial	**7,793**	6,465	**1,328**
CRE - owner occupied	**1,656**	1,723	**(67)**
Hotel franchise finance	**3,807**	2,534	**1,273**
Other CRE - non-owner occupied	**5,457**	3,952	**1,505**
Residential	**13,996**	9,243	**4,753**
Residential - EBO	**1,884**	—	**1,884**
Construction and land development	**3,995**	3,006	**989**
Other	**179**	169	**10**
Total loans HFI	**51,862**	39,075	**12,787**
Allowance for credit losses	**(310)**	(252)	**(58)**
Total loans HFI, net of allowance	**$ 51,552**	$ 38,823	**$ 12,729**

Loans classified as HFI are stated at the amount of unpaid principal, adjusted for net deferred fees and costs, premiums and discounts on acquired and purchased loans, and an ACL. Net deferred loan fees of $141 million and $86 million reduced the carrying value of loans as of December 31, 2022 and 2021, respectively. Net unamortized purchase premiums on acquired and purchased loans of $195 million and $185 million increased the carrying value of loans as of December 31, 2022 and 2021, respectively.

The following table sets forth the amount of loans outstanding by type of loan as of December 31, 2022 that were contractually due in under one year, one through five years, after five through 15 years, and more than 15 years based on remaining scheduled repayments of principal. Lines of credit or other loans having no stated final maturity and no stated schedule of repayments are reported as due in one year or less. The table also presents an analysis of the rate structure for loans within the same maturity time periods. Actual cash flows from these loans may differ materially from contractual maturities due to prepayment, refinancing, or other factors.

	Due Under 1 Year	Due 1 - 5 Years	Due 5 - 15 Years	Due Over 15 Years	Total
			(in millions)		
Warehouse lending					
Variable rate	$ 2,180	$ 2,991	$ 7	$ —	$ 5,178
Fixed rate	149	234	—	—	383
Municipal & nonprofit					
Variable rate	—	44	420	15	479
Fixed rate	48	72	647	278	1,045
Tech & innovation					
Variable rate	211	2,016	16	—	2,243
Fixed rate	—	50	—	—	50
Equity fund resources					
Variable rate	2,015	984	7	—	3,006
Fixed rate	544	167	—	—	711
Other commercial and industrial					
Variable rate	821	3,271	1,405	11	5,508
Fixed rate	111	1,671	495	8	2,285
CRE - owner occupied					
Variable rate	65	310	379	91	845
Fixed rate	15	286	477	33	811
Hotel franchise finance					
Variable rate	378	2,531	58	—	2,967
Fixed rate	45	572	223	—	840
Other CRE - non-owner occupied					
Variable rate	844	2,874	396	17	4,131
Fixed rate	164	772	390	—	1,326
Residential					
Variable rate	2	16	3	747	768
Fixed rate	—	1	51	13,176	13,228
Residential - EBO					
Variable rate	—	—	—	—	—
Fixed rate	8	—	2	1,874	1,884
Construction and land development					
Variable rate	1,095	2,560	55	7	3,717
Fixed rate	131	135	12	—	278
Other					
Variable rate	104	18	14	2	138
Fixed rate	1	21	19	—	41
Total	$ 8,931	$ 21,596	$ 5,076	$ 16,259	$ 51,862

As of December 31, 2022, approximately $21.6 billion, or 74.5%, of total variable rate loans were subject to rate floors with a weighted average interest rate of 4.1%. At December 31, 2021, approximately $18.3 billion, or 74.3% of total variable rate loans were subject to rate floors with a weighted average interest rate of 4.0%. At December 31, 2022, total loans consisted of 55.9% with variable rates and 44.1% with fixed rates, compared to 63.0% with variable rates and 37.0% with fixed rates at December 31, 2021.

The Company began offering three alternative rate indices (including Ameribor, SOFR, and BSBY) on its lending products to its customers in the second half of 2021, with Ameribor as its preferred rate index. Existing variable rate loan contracts contain LIBOR replacement language, which allow for conversion to a different rate index and spread adjustment, if necessary.

Concentrations of Lending Activities

The Company monitors concentrations of lending activities at the product and borrower relationship level. As of December 31, 2022 and 2021, no borrower relationships at both the commitment and funded loan level exceeded 5% of total loans HFI.

Commercial and industrial loans made up 40% and 47% of the Company's HFI loan portfolio as of December 31, 2022 and 2021, respectively.

In addition, the Company's loan portfolio includes significant credit exposure to the CRE market as CRE related loans accounted for approximately 29% of total loans at December 31, 2022 and 2021. Approximately 16% and 13% of the Company's CRE investor portfolio consisted of office loans as of December 31, 2022 and 2021, respectively. These office loans are primarily shorter-term bridge loans that enable borrowers to reposition or redevelop projects and are geographically well diversified, with the vast majority located in midtown or suburban locations. At the time of origination, these loans have an initial loan-to-value ratio of less than 55% and a weighted average loan-to-cost of less than 60%. The properties underlying these loans have stable business trends and low vacancy rates. Substantially all of the Company's remaining CRE loans are secured by first liens with an initial loan-to-value ratio of generally not more than 75%. Approximately 16% and 23% of these CRE loans, excluding construction and land loans, were owner-occupied at December 31, 2022 and 2021, respectively.

Non-performing Assets

Total non-performing loans increased by $11 million at December 31, 2022 to $87 million from $76 million at December 31, 2021.

	December 31,	
	2022	2021
	(dollars in millions)	
Total nonaccrual loans (1)	$ **85**	$ 73
Loans past due 90 days or more on accrual status (2)	**—**	—
Accruing troubled debt restructured loans	**2**	3
Total nonperforming loans	**87**	76
Other assets acquired through foreclosure, net	$ **11**	$ 12
Nonaccrual loans to funded loans HFI	**0.16 %**	0.19 %
Loans past due 90 days or more on accrual status to funded loans HFI	**—**	—

(1) Includes non-accrual TDR loans of $12 million and $18 million at December 31, 2022 and 2021, respectively.

(2) Excludes government guaranteed residential mortgage loans of $582 million and zero at December 31, 2022 and 2021, respectively.

Interest income that would have been recorded under the original terms of nonaccrual loans was $4.7 million, $5.3 million, and $5.0 million for the years ended December 31, 2022, 2021, and 2020, respectively.

The composition of nonaccrual loans HFI by loan portfolio segment were as follows:

	December 31, 2022		
	Nonaccrual Balance	**Percent of Nonaccrual Balance**	**Percent of Total Loans HFI**
		(dollars in millions)	
Municipal & nonprofit	**$ 7**	**8.2 %**	**0.01 %**
Tech & innovation	**1**	**1.2**	**0.00**
Other commercial and industrial	**24**	**28.2**	**0.04**
CRE - owner occupied	**12**	**14.1**	**0.02**
Hotel franchise finance	**10**	**11.8**	**0.02**
Other CRE - non-owner occupied	**8**	**9.4**	**0.02**
Residential	**19**	**22.4**	**0.04**
Construction and land development	**4**	**4.7**	**0.01**
Total non-accrual loans	**$ 85**	**100.0 %**	**0.16 %**

	December 31, 2021		
	Nonaccrual Balance	Percent of Nonaccrual Balance	Percent of Total Loans HFI
	(dollars in millions)		
Tech & innovation	$ 13	18.3 %	0.03 %
Equity fund resources	1	0.8	0.00
Other commercial and industrial	16	22.2	0.05
CRE - owner occupied	13	17.9	0.03
Other CRE - non-owner occupied	13	18.0	0.03
Residential	15	20.8	0.05
Construction and land development	1	1.4	0.00
Other	1	0.6	0.00
Total non-accrual loans	$ 73	100.0 %	0.19 %

Troubled Debt Restructured Loans

A TDR loan is a loan on which the Company, for reasons related to a borrower's financial difficulties, grants a concession to the borrower that the Company would not otherwise consider. The loan terms that have been modified or restructured due to a borrower's financial situation include, but are not limited to, a reduction in the stated interest rate, an extension of the maturity or renewal of the loan at an interest rate below current market, a reduction in the face amount of the debt, a reduction in the accrued interest, or deferral of interest payments. The majority of the Company's modifications are extensions in terms or deferral of payments which result in no lost principal or interest. Consistent with regulatory guidance, a TDR loan that is subsequently modified in another restructuring agreement but has shown sustained performance and classification as a TDR, will be removed from TDR status provided that the modified terms were market-based at the time of modification.

The following table presents TDR loans:

	December 31, 2022		December 31, 2021	
	Number of Loans	**Recorded Investment**	Number of Loans	Recorded Investment
	(dollars in millions)			
Tech & innovation	—	$ —	2	$ 2
Other commercial and industrial	**4**	**2**	7	6
CRE - owner occupied	**1**	**1**	1	1
Hotel franchise finance	**1**	**10**	—	—
Other CRE - non-owner occupied	**1**	**1**	5	11
Construction and land development	—	—	1	1
Total	**7**	**$ 14**	16	$ 21

The ACL on TDR loans totaled $4 million and zero as of December 31, 2022 and 2021, respectively. There were no outstanding commitments on TDR loans as of December 31, 2022 and 2021.

Allowance for Credit Losses on Loans HFI

The ACL consists of the ACL on loans and an ACL on unfunded loan commitments. The ACL on HTM securities is estimated separately from loans and is discussed within the Investment Securities section.

The following table summarizes the allocation of the ACL on loans HFI by loan portfolio segment:

	December 31, 2022			December 31, 2021		
	Allowance for credit losses	**Percent of total allowance for credit losses**	**Percent of loan type to total loans HFI**	Allowance for credit losses	Percent of total allowance for credit losses	Percent of loan type to total loans HFI
		(dollars in millions)			*(dollars in millions)*	
Warehouse lending	**$ 8.4**	**2.7 %**	**10.7 %**	$ 3.0	1.2 %	13.2 %
Municipal & nonprofit	**15.9**	**5.1**	**3.0**	13.7	5.4	4.1
Tech & innovation	**30.8**	**9.9**	**4.4**	25.7	10.2	3.6
Equity fund resources	**6.4**	**2.1**	**7.2**	9.6	3.8	9.8
Other commercial and industrial	**85.9**	**27.7**	**15.0**	103.6	41.0	16.5
CRE - owner occupied	**7.1**	**2.3**	**3.2**	10.6	4.2	4.4
Hotel franchise finance	**46.9**	**15.1**	**7.4**	41.5	16.4	6.5
Other CRE - non-owner occupied	**47.4**	**15.3**	**10.5**	16.9	6.7	10.1
Residential	**30.4**	**9.8**	**27.0**	12.5	5.0	23.7
Residential - EBO	**—**	**—**	**3.6**	—	—	—
Construction and land development	**27.4**	**8.8**	**7.7**	12.5	5.0	7.7
Other	**3.1**	**1.0**	**0.3**	2.9	1.1	0.4
Total	**$ 309.7**	**100.0 %**	**100.0 %**	$ 252.5	100.0 %	100.0 %

During the years ended December 31, 2022 and 2021, net loan charge-offs to average loans outstanding were approximately 0.00% and 0.02%, respectively.

In addition to the ACL on funded loans HFI, the Company maintains a separate ACL related to off-balance sheet credit exposures, including unfunded loan commitments. This allowance balance totaled $47.0 million and $37.6 million at December 31, 2022 and 2021, respectively, and is included in Other liabilities on the Consolidated Balance Sheets.

Problem Loans

The Company classifies loans consistent with federal banking regulations using a nine category grading system. These loan grades are described in further detail in "Item 1. Business" of this Form 10-K. The following table presents information regarding potential and actual problem loans, consisting of loans graded as Special Mention, Substandard, Doubtful, and Loss, but which are still performing:

	December 31, 2022			
	Number of Loans	**Problem Loan Balance**	**Percent of Problem Loan Balance**	**Percent of Total Loans HFI**
	(dollars in millions)			
Warehouse lending	**1**	**$ 43**	**11.3 %**	**0.08 %**
Tech & innovation	**27**	**81**	**21.4**	**0.16**
Other commercial and industrial	**50**	**36**	**9.5**	**0.07**
CRE - owner occupied	**8**	**4**	**1.0**	**0.01**
Hotel franchise finance	**2**	**26**	**6.9**	**0.05**
Other CRE - non-owner occupied	**9**	**55**	**14.5**	**0.10**
Residential	**39**	**20**	**5.3**	**0.04**
Construction and land development	**2**	**98**	**25.9**	**0.19**
Other	**18**	**16**	**4.2**	**0.03**
Total	**156**	**$ 379**	**100.0 %**	**0.73 %**

	December 31, 2021			
	Number of Loans	Problem Loan Balance	Percent of Problem Loan Balance	Percent of Total Loans HFI
	(dollars in millions)			
Tech & innovation	13	$ 39	11.4 %	0.10 %
Other commercial and industrial	66	60	17.9	0.16
CRE - owner occupied	14	16	4.7	0.04
Hotel franchise finance	9	139	40.9	0.35
Other CRE - non-owner occupied	5	11	3.4	0.03
Residential	35	16	4.6	0.04
Construction and land development	7	28	8.3	0.07
Other	17	30	8.8	0.08
Total	166	$ 339	100.0 %	0.87 %

Mortgage Servicing Rights

The fair value of the Company's MSRs related to residential mortgage loans totaled $1.1 billion and $698 million as of December 31, 2022 and 2021, respectively. The increase in MSRs is primarily related to new production that was not fully offset by sales of MSRs.

The following is a summary of the UPB of loans underlying the Company's MSR portfolio by type:

	December 31,	
	2022	2021
	(in millions)	
FNMA and FHLMC	**$ 38,113**	$ 38,754
GNMA	**31,046**	14,379
Non-agency	**1,690**	1,215
Total unpaid principal balance of loans	**$ 70,849**	$ 54,348

Goodwill and Other Intangible Assets

Goodwill represents the excess consideration paid for net assets acquired in a business combination over their fair value. Goodwill and other intangible assets acquired in a business combination that are determined to have an indefinite useful life are not subject to amortization, but are subsequently evaluated for impairment at least annually. The Company has goodwill totaling $527 million as of December 31, 2022. The increase from $491 million at December 31, 2021 is attributable to the DST acquisition in January 2022. See "Note 2. Mergers, Acquisitions and Dispositions" in Item 8 of this form 10-K for further discussion of the acquisition.

The Company performs its annual goodwill and intangibles impairment tests as of October 1 each year, or more often if events or circumstances indicate that the carrying value may not be recoverable. During the years ended December 31, 2022, 2021, and 2020, there were no events or circumstances that indicated an interim impairment test of goodwill or other intangible assets was necessary.

The following is a summary of acquired intangible assets:

	December 31, 2022			December 31, 2021		
	Gross Carrying Amount	**Accumulated Amortization**	**Net Carrying Amount**	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
			(in millions)			
Subject to amortization						
Core deposits	**$ 14**	**$ 11**	**$ 3**	$ 14	$ 10	$ 4
Correspondent customer relationships	**76**	**7**	**69**	76	3	73
Customer relationships	**18**	**3**	**15**	3	1	2
Developed technology	**4**	**1**	**3**	—	—	—
Operating licenses	**56**	**2**	**54**	56	1	55
Trade names	**10**	**1**	**9**	9	0	9
	$ 178	**$ 25**	**$ 153**	$ 158	$ 15	$ 143

Deferred Tax Assets

As of December 31, 2022, the net DTA balance totaled $311 million, an increase of $290 million from $21 million as of December 31, 2021. This overall increase in the net DTA was primarily the result of decreases in the fair market value of AFS securities, an increase to expected tax credit carryovers, and an increase to the ACL.

As of December 31, 2022 and 2021, the Company had no deferred tax valuation allowance.

Deposits

Deposits are the primary source for funding the Company's asset growth. Total deposits increased to $53.6 billion at December 31, 2022 from $47.6 billion at December 31, 2021, an increase of $6.0 billion, or 12.7%. By deposit type, the increase in deposits is attributable to increases in certificates of deposit of $3.0 billion, interest-bearing demand deposits of $2.6 billion, and savings and money market accounts of $2.1 billion, partially offset by a decrease in non-interest-bearing demand deposits of $1.7 billion.

WAB is a participant in the IntraFi Network, a network that offers deposit placement services such as CDARS and ICS, which offer products that qualify large deposits for FDIC insurance. At December 31, 2022, the Company had $683 million of CDARS deposits and $2.1 billion of ICS deposits, compared to $729 million of CDARS deposits and $1.8 billion of ICS deposits at December 31, 2021. At December 31, 2022 and 2021, the Company also had wholesale brokered deposits of $4.8 billion and $1.8 billion, respectively.

In addition, deposits for which the Company provides account holders with earnings credits or referral fees totaled $13 billion and $11 billion at December 31, 2022 and 2021, respectively. The Company incurred $162.8 million and $27.4 million in deposit related costs on these deposits during the year ended December 31, 2022 and 2021, respectively. These costs are reported as Deposit costs in non-interest expense. The increase in these costs from the prior year is due to an increase in earnings credit rates as well as an increase in average deposit balances eligible for earnings credits or referral fees.

The average balances and weighted average rates paid on deposits are presented below:

	Year Ended December 31,					
	2022		2021		2020	
	Average Balance	**Rate**	Average Balance	Rate	Average Balance	Rate
	(dollars in millions)					
Interest-bearing transaction accounts	**$ 8,331**	**0.95 %**	$ 4,751	0.13 %	$ 3,488	0.26 %
Savings and money market accounts	**18,518**	**0.86**	15,814	0.21	10,009	0.35
Certificates of deposit	**2,772**	**1.40**	1,850	0.46	1,998	1.33
Total interest-bearing deposits	**29,621**	**0.93**	22,415	0.21	15,495	0.45
Non-interest-bearing demand deposits	**24,133**	**—**	19,416	—	11,466	—
Total deposits	**$ 53,754**	**0.51 %**	$ 41,831	0.11 %	$ 26,961	0.26 %

At December 31, 2022 and 2021, the Company had total uninsured deposits of $29.5 billion and $26.9 billion, respectively. Total U.S. time deposits in excess of the FDIC insurance limit were $1.1 billion and $466 million at December 31, 2022 and 2021, respectively.

The table below discloses the remaining maturity for estimated uninsured time deposits as of December 31, 2022:

	(in millions)
3 months or less	**$ 423**
3 to 6 months	**378**
6 to 12 months	**274**
Over 12 months	**51**
Total	**$ 1,126**

Uninsured deposit information presented herein is estimated using the same methodologies utilized for regulatory reporting, where applicable. Specific to uninsured time deposits, the Company made certain assumptions to estimate uninsured amounts by maturity. At the account level, deposit insurance was assumed to apply first to non-time deposits, then any remaining insurance amounts were applied to maturity groupings on a pro-rata basis, based on the depositor's total amount of time deposits.

Other Borrowings

Short-Term Borrowings

The Company utilizes short-term borrowed funds to support short-term liquidity needs generally created by increased loan demand. The majority of these short-term borrowed funds consist of advances from the FHLB, federal funds purchased from correspondent banks or the FHLB, and repurchase agreements. The Company's borrowing capacity with the FHLB is determined based on collateral pledged, generally consisting of securities and loans. In addition, the Company has borrowing capacity from other sources, collateralized by securities, including securities sold under agreements to repurchase, which are reflected at the amount of cash received in connection with the transaction, and may require additional collateral based on the fair value of the underlying securities. At December 31, 2022, total short-term borrowed funds consisted of FHLB advances of $4.3 billion, federal funds purchased of $640 million, repurchase agreements of $27 million, and secured borrowings of $25 million. At December 31, 2021, total short-term borrowed funds consisted of federal funds purchased of $675 million, secured borrowings of $35 million, and repurchase agreements of $17 million.

Long-Term Borrowings

The Company's long-term borrowings consist of AmeriHome senior notes from the acquisition on April 7, 2021 and credit linked notes, inclusive of issuance costs and fair market value adjustments. At December 31, 2022, the carrying value of long-term borrowings was $1.3 billion, compared to $775 million at December 31, 2021. The increase in long-term borrowings from December 31, 2021 relates to 2022 credit linked note issuances, totaling $579 million, net of issuance costs.

Qualifying Debt

Qualifying debt consists of subordinated debt and junior subordinated debt, inclusive of issuance costs and fair market value adjustments. At December 31, 2022, the carrying value of qualifying debt was $893 million, compared to $896 million at December 31, 2021.

Capital Resources

The Company and the Bank are subject to various regulatory capital requirements administered by the federal banking agencies. Failure to meet minimum capital requirements could trigger certain mandatory or discretionary actions that, if undertaken, could have a direct material effect on the Company's business and financial statements. Under capital adequacy guidelines and the regulatory framework for prompt corrective action, the Company and the Bank must meet specific capital guidelines that involve quantitative measures of their assets, liabilities, and certain off-balance sheet items (discussed in "Note 18. Commitments and Contingencies" in Item 8 of this Form 10-K) as calculated under regulatory accounting practices. The capital amounts and classification are also subject to qualitative judgments by the regulators about components, risk weightings, and other factors.

As permitted by the regulatory capital rules, the Company elected the CECL transition option that delays the estimated impact on regulatory capital resulting from the adoption of CECL over a five-year transition period ending December 31, 2024. Beginning in 2022, capital ratios and amounts include a 25% reduction to the capital benefit that resulted from the increased ACL related to the adoption of ASC 326.

As a result of the Company's continued commercial loan growth and the acquisition of AmeriHome, the Company continues to undertake various capital actions to ensure that its capital levels remain strong, which during the year ended December 31, 2022, included sales of common stock under the Company's ATM program and three credit linked note issuances. As of December 31, 2022 and 2021, the Company and the Bank exceeded the capital levels necessary to be classified as well-capitalized, as defined by the various banking agencies. The actual capital amounts and ratios for the Company and the Bank are presented in the following tables:

	Total Capital	Tier 1 Capital	Risk-Weighted Assets	Tangible Average Assets	Total Capital Ratio	Tier 1 Capital Ratio	Tier 1 Leverage Ratio	Common Equity Tier 1
				(dollars in millions)				
December 31, 2022								
WAL	**$ 6,586**	**$ 5,449**	**$ 54,461**	**$ 69,814**	**12.1 %**	**10.0 %**	**7.8 %**	**9.3 %**
WAB	**6,280**	**5,737**	**54,411**	**69,762**	**11.5**	**10.5**	**8.2**	**10.5**
Well-capitalized ratios					**10.0**	**8.0**	**5.0**	**6.5**
Minimum capital ratios					**8.0**	**6.0**	**4.0**	**4.5**
December 31, 2021								
WAL	$ 5,499	$ 4,444	$ 44,697	$ 56,973	12.3 %	9.9 %	7.8 %	9.1 %
WAB	5,120	4,658	44,726	56,962	11.4	10.4	8.2	10.4
Well-capitalized ratios					10.0	8.0	5.0	6.5
Minimum capital ratios					8.0	6.0	4.0	4.5

The Company is also required to maintain specified levels of capital to remain in good standing with certain federal government agencies, including FNMA, FHLMC, GNMA, and HUD. These capital requirements are generally tied to the unpaid balances of loans included in the Company's servicing portfolio or loan production volume. Noncompliance with these capital requirements can result in various remedial actions up to, and including, removing the Company's ability to sell loans to and service loans on behalf of the respective agency. The Company believes that it is in compliance with these requirements as of December 31, 2022.

Critical Accounting Estimates

The Notes to the Consolidated Financial Statements contain a discussion of the Company's significant accounting policies, including information regarding recently issued accounting pronouncements, adoption of such policies, and the related impact of their adoption. The Company believes that certain of these policies, along with various estimates that it is required to make in recording its financial transactions, are important to have a complete understanding of the Company's financial position. In addition, these estimates require management to make complex and subjective judgments, many of which include matters with a high degree of uncertainty. The following is a summary of these critical accounting policies and significant estimates.

Allowance for credit losses

The ACL guidance requires that an organization measure all expected credit losses for financial assets held at the reporting date, including off-balance sheet credit exposures, based on historical experience, current conditions, and reasonable and supportable forecasts. Determining the appropriateness of the allowance is complex and requires judgment by management about the effect of matters that are inherently uncertain. In future periods, evaluations of the overall loan portfolio, in light of the factors and forecasts then prevailing, may result in significant changes in the ACL and credit loss expense in those future periods. The allowance level is influenced by loan volumes and mix, average remaining maturities, loan performance metrics, asset quality characteristics, delinquency status, historical credit loss experience, and other conditions influencing loss expectations, such as reasonable and supportable forecasts of economic conditions. During the year ended December 31, 2022, the allowance level was most impacted by the Company's strong loan growth, which resulted in recognition of a provision for credit losses of $68.1 million. Changes to the assumptions in the model in future periods could have a material impact on the Company's Consolidated Financial Statements. See "Note 1. Summary of Significant Accounting Policies" in Item 8 of this Form 10-K for a detailed discussion of the Company's methodologies for estimating expected credit losses.

Fair value of financial instruments

The Company uses fair value measurements to recognize certain financial instruments at fair value. The Company holds financial instruments, including loans HFS, MSRs, and derivative instruments, that are recorded at fair value and require management to make significant judgments in estimating the fair value of these financial instruments. The degree of management judgment involved in determining the fair value of a financial instrument is dependent upon the availability of quoted market prices or observable market inputs. For financial instruments that are actively traded and have quoted market prices or observable market inputs, there is minimal subjectivity involved in measuring fair value. However, when quoted market prices or observable market inputs are not fully available, significant management judgment may be necessary to estimate the fair value of these financial instruments. The fair value of MSRs is determined using a discounted cash flow model based on unobservable inputs, as MSRs are not traded in active markets. Assumptions used to value the Company’s MSRs represent management’s best estimate of assumptions that market participants would use to value this asset and may require significant judgement. The primary risk of material changes to the value of the MSRs resides in the potential volatility and judgment in the assumptions used, specifically prepayment speeds, option adjusted spreads, and discount rates. Hypothetical changes in the value of MSRs based on assumed immediate changes in certain inputs are disclosed in “Note 6. Mortgage Servicing Rights” in Item 8 of this Form 10-K.

Income taxes

The Company’s income tax expense, deferred tax assets and liabilities, and liabilities for unrecognized tax benefits reflect management’s best estimate of current and future taxes to be paid. The Company is subject to federal and state income taxes in the United States. Significant judgments and estimates are required in the determination of the consolidated income tax expense.

Deferred income taxes arise from temporary differences between the tax basis of assets and liabilities and their reported amounts in the financial statements, which will result in taxable or deductible amounts in the future. In evaluating the Company's ability to recover its DTAs in the jurisdictions from which they arise, all available positive and negative evidence is considered, including scheduled reversals of deferred tax liabilities, tax planning strategies, projected future taxable income, and recent operating results. The assumptions about future taxable income require the use of significant judgment and are consistent with the plans and estimates used to manage the underlying business.

Liquidity

Liquidity is the ongoing ability to accommodate liability maturities and deposit withdrawals, fund asset growth and business operations, and meet contractual obligations through unconstrained access to funding at reasonable market rates. Liquidity management involves forecasting funding requirements and maintaining sufficient capacity to meet the needs and accommodate fluctuations in asset and liability levels due to changes in the Company's business operations or unanticipated events.

The ability to have readily available funds sufficient to repay fully maturing liabilities is of primary importance to depositors, creditors, and regulators. The Company's liquidity, represented by cash and amounts due from banks, federal funds sold, loans HFS, and non-pledged marketable securities, is a result of the Company's operating, investing, and financing activities and related cash flows. The Company actively monitors and manages liquidity, and no less than quarterly will estimate probable liquidity needs on a 12-month horizon. Liquidity needs can also be met through short-term borrowings or the disposition of short-term assets.

The following table presents the available and outstanding balances on the Company's lines of credit as of December 31, 2022:

	Available Balance	Outstanding Balance
	(in millions)	
Unsecured fed funds credit lines at correspondent banks	$ 3,989	$ 640

In addition to lines of credit, the Company has borrowing capacity with the FHLB and FRB from pledged loans and securities and warehouse borrowing lines of credit. The borrowing capacity, outstanding borrowings, and available credit as of December 31, 2022 are presented in the following table:

	(in millions)
FHLB:	
Borrowing capacity	$ 11,133
Outstanding borrowings	4,300
Letters of credit	21
Total available credit	$ 6,812
FRB:	
Borrowing capacity	$ 5,249
Outstanding borrowings	—
Total available credit	$ 5,249
Warehouse borrowings:	
Borrowing capacity	$ 1,000
Outstanding borrowings	—
Total available credit	$ 1,000

The Company also plans for potential funding needs related to operating expenses, which in some cases involve contracts that contain penalties for early termination. Further, the Company has entered into certain letters of credit or other commitments to extend credit to customers of the Bank.

The following table sets forth the Company's significant contractual obligations as of December 31, 2022:

	Payments Due by Period				
	Total	Less Than 1 Year	1-3 Years	3-5 Years	After 5 Years
			(in millions)		
Time deposit maturities	$ 5,049	$ 4,904	$ 143	$ 2	$ —
Qualifying debt	909	—	—	—	909
Other borrowings	6,320	5,289	97	77	857
Operating lease obligations	209	18	62	52	77
Purchase obligations	55	17	20	18	—
Total	$ 12,542	$ 10,228	$ 322	$ 149	$ 1,843

Purchase obligations primarily relate to contracts for software licensing, maintenance, and outsourced service providers.

Off-balance sheet commitments associated with outstanding letters of credit, commitments to extend credit, and credit card guarantees as of December 31, 2022 are summarized below. Since commitments associated with letters of credit and commitments to extend credit may expire unused, the amounts shown do not necessarily reflect the actual future cash funding requirements.

	Total Amounts Committed	Amount of Commitment Expiration per Period			
		Less Than 1 Year	1-3 Years	3-5 Years	After 5 Years
			(in millions)		
Commitments to extend credit	**$ 18,674**	**$ 4,496**	**$ 7,307**	**$ 4,902**	**$ 1,969**
Credit card commitments and financial guarantees	**379**	**379**	**—**	**—**	**—**
Letters of credit	**265**	**253**	**7**	**5**	**—**
Total	**$ 19,318**	**$ 5,128**	**$ 7,314**	**$ 4,907**	**$ 1,969**

The following table sets forth certain information regarding short-term borrowings:

	December 31,		
	2022	2021	2020
		(dollars in millions)	
Repurchase Agreements:			
Maximum month-end balance	**$ 523**	$ 22	$ 34
Balance at end of year	**27**	17	16
Average balance	**76**	20	23
Federal Funds Purchased			
Maximum month-end balance	**1,860**	2,283	690
Balance at end of year	**640**	675	—
Average balance	**568**	419	75
FHLB Advances:			
Maximum month-end balance	**6,000**	4,200	130
Balance at end of year	**4,300**	—	5
Average balance	**2,526**	393	21
Warehouse borrowings:			
Maximum month-end balance	**160**	820	—
Balance at end of year	**—**	—	—
Average balance	**201**	442	—
Total Short-Term Borrowed Funds	**$ 4,967**	$ 692	$ 21
Weighted average interest rate at end of year	**4.64 %**	0.16 %	0.12 %
Weighted average interest rate during year	**2.28**	0.67	0.46

The Company has also committed to irrevocably and unconditionally guarantee the payments or distributions with respect to the holders of preferred securities of the Company's eight statutory business trusts to the extent that the trusts have not made such payments or distributions, including: 1) accrued and unpaid distributions; 2) the redemption price; and 3) upon a dissolution or termination of the trust, the lesser of the liquidation amount and all accrued and unpaid distributions and the amount of assets of the trust remaining available for distribution. The Company does not believe that these off-balance sheet arrangements have or are reasonably likely to have a material effect on its financial condition, changes in financial condition, revenues or expenses, results of operations, liquidity, capital expenditures, or capital resources. However, there can be no assurance that such arrangements will not have a future effect.

The Company has a formal liquidity policy and, in the opinion of management, its liquid assets are considered adequate to meet cash flow needs for loan funding and deposit cash withdrawals for the next 90-120 days. At December 31, 2022, there were $7.7 billion in liquid assets, comprised of $1.1 billion in cash and cash equivalents, $1.1 billion in loans HFS, and $5.5 billion in unpledged marketable securities. At December 31, 2021, the Company maintained $8.7 billion in liquid assets, comprised of $516 million of cash and cash equivalents, $4.0 billion in loans HFS, and $4.2 billion of unpledged marketable securities.

The Parent maintains liquidity that would be sufficient to fund its operations and certain non-bank affiliate operations for an extended period should funding from normal sources be disrupted. In the Company's analysis of Parent liquidity, it is assumed that the Parent is unable to generate funds from additional debt or equity issuances, receives no dividend income from subsidiaries and does not pay dividends to stockholders, while continuing to make non-discretionary payments needed to maintain operations and repayment of contractual principal and interest payments owed by the Parent and affiliated companies.

Under this scenario, the amount of time the Parent and its non-bank subsidiary can operate and meet all obligations before the current liquid assets are exhausted is considered as part of the Parent liquidity analysis. Management believes the Parent maintains adequate liquidity capacity to operate without additional funding from new sources for over twelve months.

WAB maintains sufficient funding capacity to address large increases in funding requirements, such as deposit outflows. This capacity is comprised of liquidity derived from a reduction in asset levels and various secured funding sources. On a long-term basis, the Company's liquidity will be met by changing the relative distribution of its asset portfolios (for example, by reducing investment or loan volumes, or selling or encumbering assets). Further, the Company can increase liquidity by soliciting higher levels of deposit accounts through promotional activities and/or borrowing from correspondent banks, the FHLB of San Francisco, and the FRB. At December 31, 2022, the Company's long-term liquidity needs primarily relate to funds required to support loan originations, commitments, and deposit withdrawals, which can be met by cash flows from investment payments and maturities, and investment sales, if necessary.

The Company's liquidity is comprised of three primary classifications: 1) cash flows provided by operating activities; 2) cash flows used in investing activities; and 3) cash flows provided by financing activities. Net cash provided by or used in operating activities consists primarily of net income, adjusted for changes in certain other asset and liability accounts and certain non-cash income and expense items, such as the provision for credit losses, investment and other amortization and depreciation. For the years ended December 31, 2022, 2021, and 2020, net cash provided by (used in) operating activities was $2.2 billion, $(2.7) billion, and $670.2 million, respectively.

The Company's primary investing activities are the origination of real estate and commercial loans, the collection of repayments of these loans, and the purchase and sale of securities. The Company's net cash provided by and used in investing activities has been primarily influenced by its loan and securities activities. The Company's cash balance during the years ended December 31, 2022, 2021, and 2020, was reduced by $11.2 billion, $12.7 billion, and $5.9 billion, respectively, as a result of a net increase in loans as well as a net increase in investment securities of $1.8 billion, $2.0 billion, and $1.5 billion, respectively.

Net cash provided by financing activities has been impacted significantly by increased deposit levels. During the years ended December 31, 2022, 2021, and 2020, net deposits increased $6.0 billion, $15.7 billion, and $9.1 billion, respectively.

Fluctuations in core deposit levels may increase the Company's need for liquidity as certificates of deposit mature or are withdrawn before maturity, and as non-maturity deposits, such as checking and savings account balances, are withdrawn. Additionally, the Company is exposed to the risk that customers with large deposit balances will withdraw all or a portion of such deposits, due in part to the FDIC limitations on the amount of insurance coverage provided to depositors. To mitigate the uninsured deposit risk, the Company participates in the CDARS and ICS programs, which allow an individual customer to invest up to $50.0 million and $150.0 million, respectively, through one participating financial institution or, a combined total of $200.0 million per individual customer, with the entire amount being covered by FDIC insurance. As of December 31, 2022, the Company has $683 million of CDARS and $2.1 billion of ICS deposits.

As of December 31, 2022, the Company has $4.8 billion of wholesale brokered deposits outstanding. Brokered deposits are generally considered to be deposits that have been received from a third party who is engaged in the business of placing deposits on behalf of others. A traditional deposit broker will direct deposits to the banking institution offering the highest interest rate available. Federal banking laws and regulations place restrictions on depository institutions regarding brokered deposits because of the general concern that these deposits are not relationship based and are at a greater risk of being withdrawn and placed on deposit at another institution offering a higher interest rate, thus posing liquidity risk for institutions that gather brokered deposits in significant amounts.

Federal and state banking regulations place certain restrictions on dividends paid. The total amount of dividends which may be paid at any date is generally limited to the retained earnings of the bank. Dividends paid by WAB to the Parent would be prohibited if the effect thereof would cause the Bank's capital to be reduced below applicable minimum capital requirements. During the year ended December 31, 2022, WAB and CSI paid dividends to the Parent of $105.0 million and $155.0 million, respectively. Subsequent to December 31, 2022, WAB paid dividends to the Parent of $55.0 million.

Recent accounting pronouncements

See "Note 1. Summary of Significant Accounting Policies," in Item 8 of this Form 10-K for information on recent and recently adopted accounting pronouncements and their expected impact, if any, on the Company's Consolidated Financial Statements.

SUPERVISION AND REGULATION

WAL, WAB, and certain of its non-banking subsidiaries are subject to comprehensive regulation under federal and state laws. The regulatory framework applicable to bank holding companies and their subsidiary banks is intended to protect depositors, the DIF, and the U.S. banking system as a whole. This system is not designed to protect equity investors in bank holding companies such as WAL.

Set forth below is a summary of the significant laws and regulations applicable to WAL and its subsidiaries. The description that follows is qualified in its entirety by reference to the full text of the statutes, regulations, and policies that are described. Such statutes, regulations, and policies are subject to ongoing review by Congress and state legislatures and federal and state regulatory agencies. A change in any of the statutes, regulations, or regulatory policies applicable to WAL and its subsidiaries could have a material effect on the results of the Company.

Overview

WAL is a separate and distinct legal entity from WAB and its other subsidiaries. As a registered bank holding company, WAL is subject to inspection, examination, and supervision by the FRB, and is regulated under the BHCA. WAL is also under the jurisdiction of the SEC and is subject to the disclosure and other regulatory requirements of the Securities Act of 1933, as amended, and the Exchange Act, as administered by the SEC. The Company's common stock is listed on the NYSE under the trading symbol "WAL" and the Company is subject to the rules of the NYSE for listed companies. The Company is a financial institution holding company within the meaning of Arizona law. WAL provides a full spectrum of deposit, lending, treasury management, and online banking products and services through WAB, its wholly-owned banking subsidiary. WAB is an Arizona chartered bank and a member of the Federal Reserve System. WAB operates the following full-service banking divisions: ABA, BON, Bridge, FIB, and TPB. WAB is subject to the supervision of, and to regular examination by, the Arizona Department of Financial Institutions, the FRB as its primary federal regulator, and the FDIC as its deposit insurer. WAB's deposits are insured by the FDIC up to the applicable deposit insurance limits in accordance with FDIC laws and regulations. The Company also serves business customers through a national platform of specialized financial services providers.

WAL and WAB are also supervised by the CFPB for compliance with federal consumer financial protection laws. The Company's non-bank subsidiaries are subject to federal and state laws and regulations, including regulations of the FRB.

The Dodd-Frank Act significantly changed the financial regulatory regime in the United States. Since the enactment of the Dodd-Frank Act, U.S. banks and financial services firms have been subject to enhanced regulation and oversight. Several provisions of the Dodd-Frank Act are subject to further rulemaking, guidance, and interpretation by the federal banking agencies.

Enacted in 2018, the EGRRCPA, among other things, amended certain provisions of the Dodd-Frank Act. The EGRRCPA provides limited regulatory relief to certain financial institutions while preserving the existing framework under which U.S. financial institutions are regulated. The EGRRCPA relieves bank holding companies with less than $100 billion in assets, such as the Company, from the enhanced prudential standards imposed under Section 165 of the Dodd-Frank Act (including, but not limited to, resolution planning and enhanced liquidity and risk management requirements). In addition to amending the Dodd-Frank Act, the EGRRCPA also includes certain additional banking-related provisions, consumer protection provisions and securities law-related provisions. While many of the EGRRCPA's changes have been implemented through rules adopted by federal agencies, the Company expects to continue to evaluate the potential impact of the EGRRCPA as it is further implemented.

Supervision, Regulation and Licensing of AmeriHome

AmeriHome is a residential mortgage producer and servicer that operates in a heavily regulated industry. In addition to supervision by the federal banking agencies with primary jurisdiction over the Company and WAB, AmeriHome is subject to the rules, regulations and oversight of certain federal, state and local governmental authorities, including the CFPB, HUD, and GNMA, and government-sponsored enterprises in the mortgage industry such as FHLMC and FNMA.

Further, AmeriHome must comply with a large number of federal consumer protection laws and regulations including, among others:

- the Real Estate Settlement Procedures Act and Regulation X, which require lenders, mortgage brokers, or servicers to provide borrowers with pertinent and timely disclosures regarding the nature and costs of the settlement process and prohibit specific practices related thereto;
- the Truth In Lending Act and Regulation Z, which require disclosures and timely information on the nature and costs of the residential mortgages and the real estate settlement process;

- the Secure and Fair Enforcement for Mortgage Licensing Act, which applies to businesses and individuals engaging in the residential mortgage loan business;
- the Dodd-Frank Wall Street Reform and Consumer Protection Act, the Fair Debt Collection Practices Act, the Federal Trade Commission Act, and the rules and regulations of the FTC and CFPB that prohibit unfair, abusive or deceptive acts or practices;
- the Fair Credit Reporting Act (as amended by the Fair and Accurate Credit Transactions Act) and Regulation V, which address the accuracy, fairness, and privacy of information in the files of consumer reporting agencies; and
- the Equal Credit Opportunity Act and Regulation B, the Fair Housing Act, the Homeowners Protection Act, and the Home Mortgage Disclosure Act and Regulation C, which generally disallow discrimination on a prohibited basis, provide applicants and borrowers rights with respect to credit decisioning and the residential mortgage process, and require disclosures and impose obligations on financial businesses conducting residential lending and mortgage servicing.

The CFPB as well as the FTC have rulemaking authority with respect to many of the federal consumer protection laws applicable to mortgage lenders and servicers, and their rulemaking and regulatory agendas relating to the residential mortgage industry continues to evolve. In particular, as part of its enforcement authority, the CFPB can order, among other things, rescission or reformation of contracts, the refund of moneys or the return of real property, restitution, disgorgement or compensation for unjust enrichment, the payment of damages or other monetary relief, public notifications regarding violations, remediation of practices, external compliance monitoring and civil money penalties.

AmeriHome is also subject to state and local laws, rules and regulations and oversight by various state agencies that license and oversee consumer protection, loan servicing, origination and collection activities of mortgage industry participants. Despite the fact that AmeriHome is the operating subsidiary of a depository institution, it must comply with regulatory and licensing requirements in certain states in order to conduct its business, and does (and will continue to) incur significant costs to comply with these requirements. These laws, rules and regulations may change as statutes and regulations are enacted, promulgated, amended, interpreted and enforced.

Supervision and Regulation of WATC

WATC is an OCC-chartered, non-depository national trust bank. WATC will offer levered loan facility administration, loan administration, and securities custody products. As a national trust bank, the ability of WATC to engage in fiduciary activities is governed by federal law at 12 U.S.C. § 92a and the OCC regulations at 12 C.F.R. Part 9, as well as certain state laws to the extent not preempted by federal law and regulation. WATC may engage in any of the enumerated activities or roles permitted for national trust banks listed in federal statutes and regulations as well as any other capacity that the OCC authorizes pursuant to federal law. As a non-depository national trust bank, WATC may not accept deposits and is not subject to legal requirements to maintain FDIC deposit insurance.

The OCC has primary supervisory and regulatory authority over the operations of WATC. As part of this authority, WATC is required to file periodic reports with the OCC and is subject to supervision and periodic examination by the OCC. To support its supervisory function, the OCC has the authority to assess and charge fees on all national banks, including non-depository national trust banks like WATC.

Bank Holding Company Regulation

WAL is a bank holding company as defined under the BHCA. The BHCA generally limits the business of bank holding companies to banking, managing or controlling banks, and other activities that the FRB has determined to be so closely related to banking as to be a proper incident thereto. Business activities that have been determined to be related to banking, and therefore appropriate for bank holding companies and their affiliates to engage in, include securities brokerage services, investment advisory services, fiduciary services, and certain management advisory and data processing services, among others. Bank holding companies that have elected to become financial holding companies may engage in any activity, or acquire and retain the shares of a company engaged in any activity that is either: (i) financial in nature or incidental to such financial activity (as determined by the FRB in consultation with the Secretary of the Treasury) or (ii) complementary to a financial activity, and that does not pose a substantial risk to the safety and soundness of depository institutions or the financial system generally (as solely determined by the FRB). Activities that are financial in nature include securities underwriting and dealing, insurance underwriting, and making merchant banking investments.

Mergers and Acquisitions

The BHCA, the Bank Merger Act, and other federal and state statutes regulate the direct and indirect acquisition of depository institutions. The BHCA requires prior FRB approval for a bank holding company to acquire, directly or indirectly, 5% or more of any class of voting securities of a commercial bank or its parent holding company and for a company, other than a bank holding company, to acquire 25% or more of any class of voting securities of a bank or bank holding company. In April 2020, the Federal Reserve adopted a final rule codifying the presumptions used in determinations of whether a company has the ability to exercise a controlling influence over another company for purposes of the BHCA, and providing greater transparency on the types of relationships that the Federal Reserve generally views as supporting a determination of control. Under the Change in Bank Control Act, any person, including a company, may not acquire, directly or indirectly, control of a bank without providing 60 days' prior notice and receiving a non-objection from the appropriate federal banking agency.

Under the Bank Merger Act, the prior approval of the appropriate federal banking agency is required for insured depository institutions to merge or enter into purchase and assumption transactions. In reviewing applications seeking approval of merger and purchase and assumption transactions, the federal banking agencies will consider, among other things, the competitive effects and public benefits of the transactions, the capital position of the combined banking organization, the applicant's performance record under the CRA, and the effectiveness of the subject organizations in combating money laundering activities. For further information relating to the CRA, see the section titled "Community Reinvestment Act and Fair Lending Laws."

Under Section 6-142 of the Arizona Revised Statutes, no person may acquire control of a company that controls an Arizona bank without the prior approval of the Arizona Superintendent of Financial Institutions, or Arizona Superintendent. A person who has the power to vote 15% or more of the voting stock of a controlling company is presumed to control the company.

Enhanced Prudential Standards

Section 165 of the Dodd-Frank Act imposes enhanced prudential standards on larger banking organizations, with certain of these standards applicable to banking organizations over $10 billion, including WAL and WAB, as of the quarter ending June 30, 2014. In October 2012, the FDIC, the OCC, and the FRB issued separate but similar rules requiring covered banks and bank holding companies with $10 billion to $50 billion in total consolidated assets to conduct an annual company-run stress test. WAL and WAB conducted a company-run capital stress test as required by the Dodd-Frank Act in 2017 and provided the results to the FRB. WAL found the Company would have sufficient capital to maintain regulatory capital levels throughout an economic downturn.

As a result of passage of the EGRRCPA, bank holding companies with less than $100 billion in assets, such as the Company, are exempt from the enhanced prudential standards imposed under Section 165 of the Dodd-Frank Act (including, but not limited to, the resolution planning and enhanced liquidity and risk management requirements therein). Notwithstanding these changes, the capital planning and risk management practices of the Company and the Bank will continue to be reviewed through the regular supervisory processes of the FRB. Further, in connection with the FRB's rules implementing the enhanced prudential standards required by Dodd-Frank (and as subsequently modified by application of the EGRRCPA's higher consolidated asset thresholds for bank holding companies), the Company has established a risk committee of the BOD to manage enterprise-wide risk and has retained its separate risk committee of independent directors.

Further, in connection with the FRB's rules implementing the enhanced prudential standards required by Dodd-Frank (and as subsequently modified by application of the EGRRCPA's higher consolidated asset thresholds for bank holding companies), the Company has established a risk committee of the BOD to manage enterprise-wide risk and has retained its separate risk committee of independent directors.

Volcker Rule

Section 619 of the Dodd-Frank Act, commonly known as the Volcker Rule, restricts the ability of banking entities, such as the Company and WAB, from: (i) engaging in "proprietary trading" and (ii) investing in or sponsoring certain covered funds, subject to certain limited exceptions. Under the Volcker Rule, the term "covered funds" is defined as any issuer that would be an investment company under the Investment Company Act but for the exemption in Section 3(c)(1) or 3(c)(7) of that Act, which includes CLO and CDO securities. There are also several exemptions from the definition of covered fund, including, among other things, loan securitizations, joint ventures, certain types of foreign funds, entities issuing asset-backed commercial paper, and registered investment companies. Further, the final rules permit banking entities, subject to certain conditions and limitations, to invest in or sponsor a covered fund in connection with: (1) organizing and offering the covered fund; (2) certain risk-mitigating hedging activities; and (3) *de minimis* investments in covered funds. Compliance with the Volcker Rule was required by July 21, 2017.

The EGRRCPA and subsequent promulgation of inter-agency final rules have aimed at simplifying and tailoring requirements related to the Volcker Rule, including by eliminating collection of certain metrics and reducing the compliance burdens associated with other metrics for banks with less than $20 billion in average trading assets and liabilities. In June 2020, the Federal Reserve - along with the Commodity Futures Trading Commission, FDIC, the OCC, and the SEC - issued a final rule modifying the Volcker Rule's prohibition on banking entities investing in or sponsoring hedge funds or private equity funds ("covered funds"). The Volcker Rule generally prohibits banking entities from engaging in proprietary trading and from acquiring or retaining ownership interests in, sponsoring or having certain relationships with a hedge fund or private equity fund. The final rule modifies three areas of the Volcker Rule by: (1) streamlining the covered funds portion of the rule; (2) addressing the extraterritorial treatment of certain foreign funds; and (3) permitting banking entities to offer financial services and engage in other activities that do not raise concerns that the Volcker Rule was intended to address. The new rule became effective October 1, 2020. The Company believes it is fully compliant with the Volcker Rule, including as modified by the new rule.

Dividends

The Company has paid regular quarterly dividends since the third quarter of 2019. Whether the Company continues to pay quarterly dividends and the amount of any such dividends will be at the discretion of WAL's BOD and will depend on the Company's earnings, financial condition, results of operations, business prospects, capital requirements, regulatory restrictions, contractual restrictions, and other factors that the BOD may deem relevant.

The Company's ability to pay dividends is subject to the regulatory authority of the FRB. The supervisory concern of the FRB focuses on a bank holding company's capital position, its ability to meet its financial obligations as they come due, and its capacity to act as a source of financial strength to its insured depository institution subsidiaries. In addition, FRB policy discourages the payment of dividends by a bank holding company that is not supported by current operating earnings.

As a Delaware corporation, the Company is also subject to limitations under Delaware law on the payment of dividends. Under the Delaware General Corporation Law, dividends may only be paid out of surplus or out of net profits for the year in which the dividend is declared or the preceding year, and no dividends may be paid on common stock at any time during which the capital of outstanding preferred stock or preference stock exceeds the Company's net assets.

From time to time, the Company may become a party to financing agreements and other contractual obligations that have the effect of limiting or prohibiting the declaration or payment of dividends under certain circumstances. Holding company expenses and obligations with respect to its outstanding trust preferred securities and corresponding subordinated debt also may limit or impair the Company's ability to declare and pay dividends.

Since the Company has no significant assets other than the voting stock of its subsidiaries, it currently depends on dividends from WAB and, to a lesser extent, its non-bank subsidiaries, for a substantial portion of its revenue and as the primary sources of its cash flow. The ability of a state member bank, such as WAB, to pay cash dividends is restricted by the FRB and the State of Arizona. The FRB's Regulation H states that a member bank may not declare or pay a dividend if the total of all dividends declared during that calendar year exceed the bank's net income during that calendar year and the retained net income of the prior two years. Further, without receiving prior approval from both the FRB and two-thirds of its shareholders, a bank cannot declare or pay a dividend that would exceed its undivided profits or withdraw any portion of its permanent capital.

Under Section 6-187 of the Arizona Revised Statutes, WAB may pay dividends on the same basis as any other Arizona corporation, except that cash dividends paid out of capital surplus require the prior approval of the Arizona Superintendent. Under Section 10-640 of the Arizona Revised Statutes, a corporation may not make a distribution to stockholders if to do so would render the corporation insolvent or unable to pay its debts as they become due. However, an Arizona bank may not declare a non-stock dividend out of capital surplus without the approval of the Arizona Superintendent.

Federal Reserve System

As a member of the Federal Reserve System, WAB has historically been required by law to maintain reserves against its transaction deposits, which were to be held in cash or with the FRB. In response to the COVID-19 pandemic, the Federal Reserve reduced the reserve requirement ratios to zero percent effective on March 26, 2020.

Additionally, on June 4, 2021, the Federal Reserve adopted amendments to Regulation D (Reserve Requirements of Depository Institutions, 12 C.F.R. Part 204) to eliminate references to an "interest on required reserves" rate and to an "interest on excess reserves" rate and replace them with a reference to a single "interest on reserve balances" rate. The amendments also simplified the formula used to calculate the amount of interest paid on balances maintained by or on behalf of eligible institutions in master accounts at Federal Reserve Banks, and to made other conforming amendments. The rule became effective on July 29, 2021.

Source of Strength Doctrine

FRB policy requires bank holding companies to act as a source of financial and managerial strength to their subsidiary banks. Section 616 of the Dodd-Frank Act codified the requirement that bank holding companies act as a source of financial strength. As a result, the Company is expected to commit resources to support WAB, including at times when the Company may not be in a financial position to provide such resources. Any capital loans by a bank holding company to any of its subsidiary banks are subordinate in right of payment to deposits and to certain other indebtedness of such subsidiary banks. The U.S. Bankruptcy Code provides that, in the event of a bank holding company's bankruptcy, any commitment by the bank holding company to a federal banking agency to maintain the capital of a subsidiary bank will be assumed by the bankruptcy trustee and entitled to priority of payment.

Capital Adequacy

The Capital Rules established a comprehensive capital framework for U.S. banking organizations. The Capital Rules generally implement the Basel Committee's Basel III final capital framework for strengthening international capital standards. The Capital Rules revise the definitions and the components of regulatory capital, as well as address other issues affecting the numerator in banking institutions' regulatory capital ratios. The Capital Rules also address asset risk weights and other matters affecting the denominator in banking institutions' regulatory capital ratios and replaced the existing general risk-weighting approach with a more risk-sensitive approach.

The Capital Rules: (i) include CET1 and the related regulatory capital ratio of CET1 to risk-weighted assets; (ii) specify that Tier 1 capital consists of CET1 and "Additional Tier 1 capital" instruments meeting certain revised requirements; (iii) mandate that most deductions/adjustments to regulatory capital measures be made to CET1 and not to the other components of capital; and (iv) expand the scope of the deductions from and adjustments to capital as compared to existing regulations. Under the Capital Rules, for most banking organizations, the most common form of Additional Tier 1 capital is non-cumulative perpetual preferred stock, and the most common forms of Tier 2 capital are subordinated notes and a portion of the allocation for loan and lease losses, in each case, subject to the Capital Rules' specific requirements.

Pursuant to the Capital Rules, the minimum capital ratios are as follows:

- 4.5% CET1 to risk-weighted assets;
- 6.0% Tier 1 capital (that is, CET1 plus Additional Tier 1 capital) to risk-weighted assets;
- 8.0% Total capital (that is, Tier 1 capital plus Tier 2 capital) to risk-weighted assets; and
- 4.0% Tier 1 capital to average consolidated assets as reported on consolidated financial statements (called "leverage ratio").

The Capital Rules also include a "capital conservation buffer," composed entirely of CET1, in addition to these minimum risk-weighted asset ratios. The capital conservation buffer is designed to absorb losses during periods of economic stress. Banking institutions with a ratio of CET1 to risk-weighted assets above the minimum but below the capital conservation buffer will face constraints on dividends, equity, and other capital instrument repurchases and compensation based on the amount of the shortfall. The Capital Rules became fully phased-in on January 1, 2019. Thus, the capital standards applicable to the Company include an additional capital conservation buffer of 2.5% of CET1, effectively resulting in minimum ratios inclusive of the capital conservation buffer of (i) CET1 to risk-weighted assets of at least 7%, (ii) Tier 1 capital to risk-weighted assets of at least 8.5%, and (iii) Total capital to risk-weighted assets of at least 10.5%.

The Capital Rules provide for a number of deductions from and adjustments to CET1. These include, for example, the requirement that mortgage servicing assets, DTAs arising from temporary differences that could not be realized through net operating loss carrybacks, and significant investments in non-consolidated financial entities be deducted from CET1 to the extent that any one such category exceeds 10% of CET1 or all such items, in the aggregate, exceed 15% of CET1. The Capital Rules further prescribe that the effects of accumulated other comprehensive income or loss items reported as a component of stockholders' equity be included in CET1 capital; however, non-advanced approaches banking organizations may make a one-time permanent election to exclude these items. The Company, as a non-advanced approaches institution, has made this one-time election.

The Capital Rules also preclude certain hybrid securities, such as trust preferred securities, issued on or after May 19, 2010 from inclusion in bank holding companies' Tier 1 capital. The Company has used trust preferred securities in the past as a tool for raising additional Tier 1 capital and otherwise improving its regulatory capital ratios. Although the Company may continue to include its existing trust preferred securities as Tier 1 capital, the prohibition on the use of these securities as Tier 1 capital going forward may limit the Company's ability to raise capital in the future.

The risk-weighting categories in the Capital Rules are standardized and include a risk-sensitive number of categories, depending on the nature of the assets, generally ranging from 0% for U.S. government and agency securities, to 600% for certain equity exposures, and higher risk weights for a variety of asset classes.

As of April 1, 2020, final rules became effective simplifying the capital treatment for mortgage servicing assets, certain DTAs, investments in the capital instruments of unconsolidated financial institutions, and minority interest. Management believes the Company is in compliance, and will continue to be in compliance, with the targeted capital ratios.

In response to the COVID-19 pandemic, the federal bank regulatory authorities issued a final rule in late August 2020 that allows institutions that adopted the CECL accounting standard in 2020 to mitigate CECL's estimated effects on regulatory capital for two years, followed by a three-year transition period. The Company has elected this capital relief option.

Prompt Corrective Action and Safety and Soundness

Pursuant to Section 38 of the FDIA, federal banking agencies are required to take "prompt corrective action" should a depository institution fail to meet certain capital adequacy standards. At each successive lower capital category, an insured depository institution is subject to more restrictions and prohibitions, including restrictions on growth, restrictions on interest rates paid on deposits, restrictions or prohibitions on payment of dividends and restrictions on the acceptance of brokered deposits. Furthermore, if an insured depository institution is classified in one of the undercapitalized categories, it is required to submit a capital restoration plan to the appropriate federal banking agency, and the holding company must guarantee the performance of that plan. Based upon its capital levels, a bank that is classified as well-capitalized, adequately capitalized, or undercapitalized may be treated as though it were in the next lower capital category if the appropriate federal banking agency, after notice and opportunity for hearing, determines that an unsafe or unsound condition, or an unsafe or unsound practice, warrants such treatment.

For purposes of prompt corrective action, to be: (i) well-capitalized, a bank must have a total risk based capital ratio of at least 10%, a Tier 1 risk based capital ratio of at least 8%, a CET1 risk based capital ratio of at least 6.5%, and a Tier 1 leverage ratio of at least 5%; (ii) adequately capitalized, a bank must have a total risk based capital ratio of at least 8%, a Tier 1 risk based capital ratio of at least 6%, a CET1 risk based capital ratio of at least 4.5%, and a Tier 1 leverage ratio of at least 4%; (iii) undercapitalized, a bank would have a total risk based capital ratio of less than 8%, a Tier 1 risk based capital ratio of less than 6%, a CET1 risk based capital ratio of less than 4.5%, and a Tier 1 leverage ratio of less than 4%; (iv) significantly undercapitalized, a bank would have a total risk based capital ratio of less than 6%, a Tier 1 risk based capital ratio of less than 4%, a CET1 risk based capital ratio of less than 3%, and a Tier 1 leverage ratio of less than 3%; (v) critically undercapitalized, a bank would have a ratio of tangible equity to total assets that is less than or equal to 2%.

Bank holding companies and insured banks also may be subject to potential enforcement actions of varying levels of severity by the federal banking agencies for unsafe or unsound practices in conducting their business, or for violation of any law, rule, regulation, condition imposed in writing by the agency or term of a written agreement with the agency. In more serious cases, enforcement actions may include: (i) the issuance of directives to increase capital; (ii) the issuance of formal and informal agreements; (iii) the imposition of civil monetary penalties; (iv) the issuance of a cease and desist order that can be judicially enforced; (v) the issuance of removal and prohibition orders against officers, directors, and other institution-affiliated parties; (vi) the termination of the bank's deposit insurance; (vii) the appointment of a conservator or receiver for the bank; and (viii) the enforcement of such actions through injunctions or restraining orders based upon a judicial determination that the agency would be harmed if such equitable relief was not granted.

Transactions with Affiliates and Insiders

Under federal law, transactions between insured depository institutions and their affiliates are governed by Sections 23A and 23B of the FRA and implementing Regulation W. In a bank holding company context, at a minimum, the parent holding company of a bank, and any companies which are controlled by such parent holding company, are affiliates of the bank. Generally, Sections 23A and 23B of the FRA are intended to protect insured depository institutions from losses arising from transactions with non-insured affiliates by limiting the extent to which a bank or its subsidiaries may engage in covered transactions with any one affiliate and with all affiliates of the bank in the aggregate, and requiring that such transactions be on terms consistent with safe and sound banking practices.

Further, Section 22(h) of the FRA and its implementing Regulation O restricts loans to directors, executive officers, and principal stockholders ("insiders"). Under Section 22(h), loans to insiders and their related interests may not exceed, together with all other outstanding loans to such persons and affiliated entities, the institution's total capital and surplus. Loans to insiders above specified amounts must receive the prior approval of the BOD. Further, under Section 22(h) of the FRA, loans to directors, executive officers, and principal stockholders must be made on terms substantially the same as offered in comparable transactions to other persons, except that such insiders may receive preferential loans made under a benefit or compensation program that is widely available to the bank's employees and does not give preference to the insider over the employees. Section 22(g) of the FRA places additional limitations on loans to executive officers.

Lending Limits

In addition to the requirements set forth above, state banking law generally limits the amount of funds that a state-chartered bank may lend to a single borrower. Under Section 6-352 of the Arizona Revised Statutes, the obligations of one borrower to a bank may not exceed 20% of the bank's capital, plus an additional 10% of its capital if the additional amounts are fully secured by readily marketable collateral.

Brokered Deposits

Section 29 of the FDIA and FDIC regulations generally limit the ability of any bank to accept, renew or roll over any brokered deposit unless it is "well capitalized" or, with the FDIC's approval, "adequately capitalized." On December 15, 2020, the FDIC issued rules to revise brokered deposit regulations in light of modern deposit-taking methods. The rules established a new framework for certain provisions of the "deposit broker" definition and amended the FDIC's interest rate methodology calculating rates and rate caps. The rules became effective on April 1, 2021 and, to date, there has been no material impact to either the Company or the Bank from the rules.

Consumer Protection and CFPB Supervision

The Dodd-Frank Act centralized responsibility for consumer financial protection by creating the CFPB, an independent agency charged with responsibility for implementing, enforcing, and examining compliance with federal consumer financial protection laws. The Company is subject to a number of federal and state laws designed to protect borrowers and promote lending to various sectors of the economy and population. These laws include the Equal Credit Opportunity Act, the Fair Credit Reporting Act, the Fair Debt Collection Procedures Act, the Truth in Lending Act, the Home Mortgage Disclosure Act, the Real Estate Settlement Practices Act, various state law counterparts, and the Consumer Financial Protection Act of 2010, which is part of the Dodd-Frank Act. The Dodd-Frank Act does not prevent states from adopting stricter consumer protection standards. State regulation of financial products and potential enforcement actions could also adversely affect the Company's business, financial condition, or operations.

Depositor Preference

The FDIA provides that, in the event of the "liquidation or other resolution" of an insured depository institution, the claims of depositors of the institution, including the claims of the FDIC as subrogee of insured depositors, and certain claims for administrative expenses of the FDIC as a receiver, will have priority over other general unsecured claims against the institution. If an insured depository institution fails, insured and uninsured depositors, along with the FDIC, will have priority in payment ahead of unsecured, non-deposit creditors, including the parent bank holding company, with respect to any extensions of credit they have made to such insured depository institution.

Federal Deposit Insurance

Substantially all of the deposits of WAB are insured up to applicable limits by the FDIC's DIF. The basic limit on FDIC deposit insurance is $250,000 per depositor. WAB is subject to deposit insurance assessments to maintain the DIF.

The FDIC uses a risk-based assessment system that imposes insurance premiums based upon a risk matrix that takes into account a bank's CAMELS rating. The risk matrix utilizes different risk categories distinguished by capital levels and supervisory ratings. As a result of the Dodd-Frank Act, the base for insurance assessments is now consolidated average assets less average tangible equity. Assessment rates are calculated using formulas that take into account the risk of the institution being assessed. WAB is classified as, and subject to the scorecard for, a large and highly complex institution to determine its total base assessment rate.

Under the FDIA, the FDIC may terminate deposit insurance upon a finding that the institution has engaged in unsafe and unsound practices, is in an unsafe or unsound condition to continue operations, or has violated any applicable law, regulation, rule, order or condition imposed by the FDIC. The Company's management is not aware of any practice, condition, or violation that might lead to the termination of its deposit insurance.

Financial Privacy and Data Security

The Company is subject to federal laws, including the GLBA, and certain state laws containing consumer privacy protection provisions. These provisions limit the ability of banks and other financial institutions to disclose non-public information about consumers to affiliated and non-affiliated third parties and limit the reuse of certain consumer information received from non-affiliated institutions. These provisions require notice of privacy policies to consumers and, in some circumstances, allow consumers to prevent disclosure of certain personal information to affiliates or non-affiliated third parties by means of “opt out” or “opt in” authorizations.

For example, in August 2018, the CFPB published its final rule to update Regulation P pursuant to the amended GLBA. Under this rule, certain qualifying financial institutions are not required to provide annual privacy notices to customers. To qualify, a financial institution must not share nonpublic personal information about customers except as described in certain statutory exceptions that do not trigger a customer’s statutory opt-out right. In addition, the financial institution must not have changed its disclosure policies and practices from those disclosed in its most recent privacy notice. The rule sets forth timing requirements for delivery of annual privacy notices in the event that a financial institution that qualified for the annual notice exemption later changes its policies or practices in such a way that it no longer qualifies for the exemption.

The GLBA also requires that financial institutions implement comprehensive written information security programs that include administrative, technical, and physical safeguards to protect consumer information. Further, pursuant to interpretive guidance issued under the GLBA and certain state laws, financial institutions are required to notify customers of security breaches that result in unauthorized access to their nonpublic personal information.

For example, under California law, every business that owns or licenses personal information about a California resident must maintain reasonable security procedures and policies to protect that information and comply with specific requirements relating to the destruction of records containing personal information and disclosure of breaches to customers, and restrictions on the use of customer information unless the customer "opts in." Other states, including Arizona and Nevada where WAB has branches, may also have applicable laws requiring businesses that retain consumer personal information to develop reasonable security policies and procedures, notify consumers of a security breach, or provide disclosures about the use and sharing of consumer personal information.

The federal banking agencies, including the FRB, through the Federal Financial Institutions Examination Council, have adopted guidelines to encourage financial institutions to address cybersecurity risks and identify, assess, and mitigate these risks, both internally and at critical third-party services providers. In October 2016, the federal bank regulatory agencies issued proposed rules on enhanced cybersecurity risk management and resilience standards that would apply to very large financial institutions and to services provided by third parties to these institutions. The comment period for these proposed rules has closed and a final rule has not been published.

On November 18, 2021, the federal bank regulatory agencies issued final rule to improve the sharing of information about cyber incidents that may affect the U.S. banking system. The rule requires a banking organization to notify its primary federal regulator of any significant computer-security incident as soon as possible and no later than 36 hours after the banking organization determines that a cyber incident has occurred. Notification is required for incidents that have materially affected—or are reasonably likely to materially affect—the viability of a banking organization’s operations, its ability to deliver banking products and services, or the stability of the financial sector. In addition, the rule requires a bank service provider to notify affected banking organization customers as soon as possible when the provider determines that it has experienced a computer-security incident that has materially affected or is reasonably likely to materially affect banking organization customers for four or more hours. The rule became effective May 1, 2022.

These laws and regulations impose compliance costs and create obligations and, in some cases, reporting obligations, and compliance with these laws, regulations, and obligations require significant resources of WAL and WAB.

Community Reinvestment Act and Fair Lending Laws

WAB has a responsibility under the CRA to help meet the credit needs of its communities, including low and moderate income neighborhoods. The CRA does not establish specific lending requirements or programs for financial institutions nor does it limit an institution's discretion to develop the types of products and services that it believes are best suited to its particular community, consistent with the CRA. In addition, the Equal Credit Opportunity Act and the Fair Housing Act prohibit discrimination in lending practices on the basis of characteristics specified in those statutes. WAB’s failure to comply with the provisions of the CRA could, at a minimum, result in regulatory restrictions on its activities and the activities of the Company. WAB’s failure to comply with the Equal Credit Opportunity Act and the Fair Housing Act could result in enforcement actions. WAB received a rating of “Satisfactory” in its most recent CRA examination, in January 2019.

Federal Home Loan Bank of San Francisco

WAB is a member of the FHLB of San Francisco, which is one of 12 regional FHLBs that provide funding to their members to support residential lending, as well as affordable housing and community development loans. Each FHLB serves as a reserve, or central bank, for the members within its assigned region. Each FHLB makes loans to its members in accordance with policies and procedures established by the board of directors of the FHLB. As a member, WAB must purchase and maintain stock in the FHLB of San Francisco. At December 31, 2022, WAB's total investment in FHLB stock was $134 million.

Incentive Compensation

The Dodd-Frank Act requires the federal banking agencies and the SEC to establish joint regulations or guidelines prohibiting incentive-based payment arrangements at specified regulated entities, including the Company and WAB, with at least $1 billion in total consolidated assets, that encourage inappropriate risks by providing an executive officer, employee, director, or principal shareholder with excessive compensation, fees, or benefits that could lead to material financial loss to the entity. The federal banking agencies and the SEC most recently proposed such regulations in 2016, but the regulations have not yet been finalized. If the regulations are adopted in the form initially proposed, they will restrict the manner in which executive compensation is structured.

The Dodd-Frank Act also requires publicly traded companies to give stockholders a non-binding vote on executive compensation at least every three years and on so-called "golden parachute" payments in connection with approvals of mergers and acquisitions. WAL gives stockholders a non-binding vote on executive compensation annually.

Preventing Suspicious Activity

Under Title III of the USA PATRIOT Act, all financial institutions are required to take certain measures to identify their customers, prevent money laundering, monitor customer transactions, and report suspicious activity to U.S. law enforcement agencies. Financial institutions also are required to respond to requests for information from federal banking agencies and law enforcement agencies. Information sharing among financial institutions for the above purposes is encouraged by an exemption granted to complying financial institutions from the privacy provisions of the GLBA and other privacy laws. Financial institutions that hold correspondent accounts for foreign banks or provide private banking services to foreign individuals are required to take measures to avoid dealing with certain foreign individuals or entities, including foreign banks with profiles that raise money laundering concerns, and are prohibited from dealing with foreign "shell banks" and persons from jurisdictions of particular concern. The primary federal banking agencies and the Secretary of the Treasury have adopted regulations to implement several of these provisions. All financial institutions also are required to establish internal anti-money laundering programs. The effectiveness of a financial institution in combating money laundering activities is a factor to be considered in any application submitted by the financial institution under the Bank Merger Act. The Company has a Bank Secrecy Act and USA PATRIOT Act Board-approved compliance program and engages in relatively few transactions with foreign financial institutions or foreign persons.

The FCRA's Red Flags Rule requires financial institutions with covered accounts (e.g., consumer bank accounts and loans) to develop, implement, and administer an identity theft prevention program. This program must include reasonable policies and procedures to detect suspicious patterns or practices that indicate the possibility of identity theft, such as inconsistencies in personal information or changes in account activity.

Office of Foreign Assets Control Regulation

The United States has imposed economic sanctions that affect transactions with designated foreign countries, nationals, and others. These are typically known as the OFAC rules based on their administration by the OFAC. The OFAC-administered sanctions targeting countries take many different forms. Generally, they contain one or more of the following elements: (i) restrictions on trade with or investment in a sanctioned country, including prohibitions against direct or indirect imports from and exports to a sanctioned country and prohibitions on "U.S. persons" engaging in financial transactions relating to making investments in, or providing investment-related advice or assistance to, a sanctioned country; and (ii) a blocking of assets in which the government or specially designated nationals of the sanctioned country have an interest, by prohibiting transfers of property subject to U.S. jurisdiction (including property in the possession or control of U.S. persons). Blocked assets (property and bank deposits) cannot be paid out, withdrawn, set off, or transferred in any manner without a license from OFAC. Failure to comply with these sanctions could have serious legal and reputational consequences.

Future Legislative Initiatives

Federal and state legislatures may introduce legislation that will impact the financial services industry. In addition, federal banking agencies may introduce regulatory initiatives that are likely to impact the financial services industry, generally. However it is not clear whether such changes will be enacted or, if enacted, what their effect on the Company will be. New legislation could change banking statutes and the operating environment of the Company in substantial and unpredictable ways. If enacted, such legislation could increase or decrease the cost of doing business, limit or expand permissible activities, or affect the competitive balance among banks, savings associations, credit unions, and other financial institutions. The Company cannot predict whether any such legislation will be enacted, and, if enacted, the effect that it or any implementing regulations would have on the financial condition or results of operations of the Company. A change in statutes, regulations, or regulatory policies applicable to WAL or any of its subsidiaries could have a material effect on the business of the Company.

Item 7A. Quantitative and Qualitative Disclosures about Market Risk.

Market risk is the risk of loss in a financial instrument arising from adverse changes in market prices and rates, foreign currency exchange rates, commodity prices, and equity prices. The Company's market risk arises primarily from interest rate risk inherent in its lending, investing, and deposit taking activities. To that end, management actively monitors and manages the Company's interest rate risk exposure. The Company generally manages its interest rate sensitivity by evaluating re-pricing opportunities on its earning assets to those on its funding liabilities.

Management uses various asset/liability strategies to manage the re-pricing characteristics of the Company's assets and liabilities, all of which are designed to ensure that exposure to interest rate fluctuations is limited to within the Company's guidelines of acceptable levels of risk-taking. Hedging strategies, including the terms and pricing of loans and deposits and management of the deployment of its securities, are used to reduce mismatches in interest rate re-pricing opportunities of portfolio assets and their funding sources.

Interest rate risk is addressed by ALCO, which includes members of executive management, finance, and operations. ALCO monitors interest rate risk by analyzing the potential impact on the net EVE and net interest income from potential changes in interest rates and considers the impact of alternative strategies or changes in balance sheet structure. The Company manages its balance sheet in part to maintain the potential impact on EVE and net interest income within acceptable ranges despite changes in interest rates.

The Company's exposure to interest rate risk is reviewed at least quarterly by ALCO. Interest rate risk exposure is measured using interest rate sensitivity analysis to determine its change in both EVE and net interest income in the event of hypothetical changes in interest rates. If potential changes to EVE and net interest income resulting from hypothetical interest rate changes are not within the limits established by the BOD, the BOD may direct management to adjust the asset and liability mix to bring interest rate risk within Board-approved limits.

Net Interest Income Simulation. To measure interest rate risk at December 31, 2022, the Company used a simulation model to project changes in net interest income that result from forecasted changes in interest rates. This analysis calculates the difference between a baseline net interest income forecast using current yield curves that do not take into consideration any future anticipated rate hikes, compared to forecasted net income resulting from an immediate parallel shift in rates upward or downward, along with other scenarios directed by ALCO. The income simulation model includes various assumptions regarding re-pricing relationships for each of the Company's products. Many of the Company's assets are variable rate loans, which are assumed to re-price immediately and, proportional to the change in market rates, depending on their contracted index, including the impact of caps or floors. Some loans and investments contain contractual prepayment features (embedded options) and, accordingly, the simulation model incorporates prepayment assumptions. The Company's non-term deposit products re-price concurrently with interest rate changes taken by the FOMC.

This analysis indicates the impact of changes in net interest income for the given set of rate changes and assumptions. It assumes the balance sheet remains static and that its structure does not change over the course of the year. It does not account for all factors that could impact the Company's results, including changes by management to mitigate interest rate changes or secondary factors, such as changes to the Company's credit risk profile as interest rates change.

Furthermore, loan prepayment rate estimates and spread relationships change regularly. Interest rate changes create changes in actual loan prepayment speeds that will differ from the market estimates incorporated in this analysis. Changes that vary significantly from the modeled assumptions may have a significant effect on the Company's actual net interest income.

This simulation model assesses the changes in net interest income that would occur in response to an instantaneous and sustained increase or decrease (shock) in market interest rates. At December 31, 2022, our net interest income exposure for the next twelve months related to these hypothetical changes in market interest rates was within our current guidelines.

Sensitivity of Net Interest Income

	Parallel Shift Rate Scenario (change in basis points from Base)			
	Down 100	**Base**	**Up 100**	**Up 200**
		(in millions)		
Interest Income	$ 3,176.2	$ 3,499.6	$ 3,824.6	$ 4,142.6
Interest Expense	1,004.9	1,260.1	1,516.0	1,771.9
Net Interest Income	**2,171.3**	**2,239.5**	**2,308.6**	**2,370.7**
% Change	(3.0)%		3.1 %	5.9 %

	Interest Rate Ramp Scenario (change in basis points from Base)			
	Down 100	**Base**	**Up 100**	**Up 200**
		(in millions)		
Interest Income	$ 3,358.3	$ 3,499.6	$ 3,642.2	$ 3,782.9
Interest Expense	1,148.7	1,260.1	1,371.7	1,483.4
Net Interest Income	**2,209.6**	**2,239.5**	**2,270.5**	**2,299.5**
% Change	(1.3)%		1.4 %	2.7 %

Economic Value of Equity. The Company measures the impact of market interest rate changes on the NPV of estimated cash flows from its assets, liabilities, and off-balance sheet items, defined as EVE, using a simulation model. This simulation model assesses the changes in the market value of interest rate sensitive financial instruments that would occur in response to an instantaneous and sustained increase or decrease (shock) in market interest rates.

At December 31, 2022, the Company's EVE exposure related to these hypothetical changes in market interest rates was within the Company's current guidelines, with the exception of the Up 100 rate scenario, where there was a slight breach on the Company's guideline of (10.0)%. The breach is the result of a decline in duration of the Company's deposit liabilities from lower non-interest bearing deposit balances and increasing decay rates as well as an increase in the duration of earning assets related to decreases in loans HFS and shorter-term investments. The BOD and ALCO have accepted the breach and believe that as the Company continues to grow its balance sheet with an emphasis on deposits, the EVE exposure in the Up 100 rate scenario will be reduced.

The following table shows the Company's projected change in EVE for this set of rate shocks at December 31, 2022:

Economic Value of Equity

	Interest Rate Scenario (change in basis points from Base)					
	Down 200	**Down 100**	**Base**	**Up 100**	**Up 200**	**Up 300**
			(in millions)			
Assets	$ 66,887	$ 64,861	$ 63,049	$ 61,484	$ 60,126	$ 58,939
Liabilities	57,278	56,310	55,527	54,765	54,034	53,255
Net Present Value	**9,609**	**8,551**	**7,522**	**6,719**	**6,092**	**5,684**
% Change	27.7 %	13.7 %		(10.7)%	(19.0)%	(24.4)%

The computation of prospective effects of hypothetical interest rate changes are based on numerous assumptions, including relative levels of market interest rates, asset prepayments, and deposit decay, and should not be relied upon as indicative of actual results. Further, the computations do not contemplate any actions the Company may undertake in response to changes in interest rates. Actual amounts may differ from the projections set forth above should market conditions vary from the underlying assumptions.

Derivative Contracts. In the normal course of business, the Company uses derivative instruments to meet the needs of its customers and manage exposure to fluctuations in interest rates. The following table summarizes the aggregate notional amounts, market values, and terms of the Company's derivative positions:

Outstanding Derivatives Positions

December 31,					
2022			2021		
Notional	**NPV**	**Weighted Average Term (Years)**	Notional	NPV	Weighted Average Term (Years)
(dollars in millions)					
$ 322,057	**$ 11**	**0.6**	$ 480,766	$ (50)	1.5

Item 8. Financial Statements and Supplementary Data.

The Company's Consolidated Financial Statements and Supplementary Data included in this Annual Report is immediately following the Index to Consolidated Financial Statements page to this Annual Report.

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

Report of Independent Registered Public Accounting Firm

To the Stockholders and Board of Directors of Western Alliance Bancorporation

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Western Alliance Bancorporation and subsidiaries (the Company) as of December 31, 2022 and 2021, the related consolidated statements of income, comprehensive income, stockholders' equity and cash flows for each of the three years in the period ended December 31, 2022, and the related notes to the consolidated financial statements (collectively, the financial statements).

In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2022 and 2021, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2022, in conformity with accounting principles generally accepted in the United States of America.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2022, based on criteria established in *Internal Control—Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission in 2013, and our report, dated February 23, 2023, expressed an unqualified opinion on the effectiveness of the Company's internal control over financial reporting.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matters

The critical audit matters communicated below are matters arising from the current period audit of the financial statements that were communicated or required to be communicated to the audit committee and that: (1) relate to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the financial statements, taken as a whole, and we are not, by communicating the critical audit matters below, providing separate opinions on the critical audit matters or on the accounts or disclosures to which they relate.

Allowance for Credit Losses – Loans Held for Investment

As described in Notes 1 and 5 to the financial statements, the Company's allowance for credit losses for loans held for investment and unfunded loan commitments totaled $310 million and $47 million as of December 31, 2022, respectively. The allowance for credit losses on loans held for investment and unfunded loan commitments is calculated under the expected credit loss model and is an estimate of life-of-loan losses for the Company's loans held for investment and unfunded loan commitments.

The allowance for credit losses for loans held for investment consists of an asset-specific component for estimating credit losses for individual loans that do not share risk characteristics with other loans and a pooled component for estimating credit losses for pools of loans that share similar risk characteristics. The allowance for credit losses on unfunded loan commitments consists of a pooled component for estimating credit losses for pools of loans that share similar risk characteristics and includes consideration of the likelihood that estimated funding levels will occur. The allowance for the pooled component for the allowance for credit losses on loans held for investment and the allowance for credit losses on unfunded loan commitments is derived from an estimate of expected credit losses primarily using an expected loss methodology that incorporates risk parameters (probability of default, loss given default and exposure at default) which are derived from various vendor models, internally developed statistical models or nonstatistical estimation approaches.

Probability of default is projected in these models or estimation approaches using economic scenarios, whose outcomes are weighted based on the Company's economic outlook and were developed to incorporate relevant information about past events, current conditions, and reasonable and supportable forecasts.

Loss given default is typically derived from the Company's own loss experience; however, for the warehouse lending, equity fund resources and municipal and nonprofit loan segments, non-modeled methodologies are employed to estimate loss given default.

Exposure at default refers to the Company's exposure to loss at the time of borrower default. For revolving lines of credit, the Company incorporates an expectation of increased line utilization for a higher exposure at default on defaulted loans based on historical experience. For term loans, exposure at default is calculated using an amortization schedule based on loan terms, adjusted for prepayment assumptions.

The quantitative estimates of expected credit losses derived from the probability of default, loss given default and exposure at default are then adjusted to incorporate considerations of current trends and conditions that are not captured in the quantitative credit loss estimates through the use of qualitative or environmental factors. The measurement of expected credit losses is influenced by loan volumes, loan mix, loan performance metrics, asset quality characteristics, delinquency status, historical credit loss experience, current conditions and reasonable and supportable economic forecasts.

The estimation of the allowance for credit losses on loans held for investment for pools of loans and unfunded loan commitments that share similar risk characteristics involves many inputs and assumptions, many of which are derived from various vendor and in-house models. These inputs and assumptions include, among others, the selection, evaluation and measurement of the reasonable and supportable forecast scenarios, which requires management to apply a significant amount of judgment and involves a high degree of estimation.

We identified the determination and evaluation of the probability of default, loss given default, exposure at default and estimated unfunded credit utilization assumptions and forecasted economic scenario components of the allowance for credit losses for loans held for investment and the allowance for credit losses on unfunded loan commitments as a critical audit matter because auditing the underlying assumptions, and economic scenario forecasts used in the allowance for credit losses on loans held for investment and the allowance for credit losses on unfunded loan commitments involved a high degree of complexity and auditor judgment given the high degree of subjectivity exercised by management in developing the allowance for credit losses on loans held for investment and the allowance for credit losses on unfunded loan commitments, which resulted in high estimation uncertainty.

Our audit procedures related to management's evaluation and establishment of the probability of default, loss given default, exposure at default and estimated unfunded credit utilization assumptions and forecasted economic scenarios components of the allowance for credit losses for loans held for investment and the allowance for credit losses on unfunded loan commitments included the following, among others:

- We obtained an understanding of the relevant controls related to the evaluation and establishment of the probability of default, loss given default, exposure at default and estimated unfunded credit utilization assumptions and the forecasted economic scenario components of the allowance for credit losses for loans held for investment and tested such controls for design and operating effectiveness.

- We tested management's process and significant judgments in the evaluation and establishment of the probability of default, loss given default, exposure at default and estimated unfunded credit utilization assumptions and forecasted economic scenario components of the allowance for credit losses, which included:

    - We evaluated management's considerations and data utilized as a basis for the probability of default, loss given default, exposure at default and estimated unfunded credit utilization assumptions and selection of forecasted economic scenarios and weightings and tested the completeness and accuracy of the underlying data that was available to management.

    - We evaluated the reasonableness of management's judgments related to the probability of default, loss given default, exposure at default and estimated unfunded credit utilization assumptions and forecasted scenarios, and qualitative and quantitative assessment of the considerations and data utilized in the determination of the forecasted economic scenarios and the resulting components of the allowance for credit losses for loans held for investment and the allowance for credit losses on unfunded loan commitments.

- We evaluated the reasonableness of management's judgments related to the establishment of the models being used in determining the probability of default, loss given default, exposure at default and estimated unfunded credit utilization assumptions.
- We utilized internal specialists to assist in evaluating the statistical documentation and process used by management in validating the models established by vendors.

Valuation of Mortgage Servicing Rights

As described in Note 6 to the financial statements, the Company's mortgage servicing rights totaled $1,148 million as of December 31, 2022. When the Company sells mortgage loans in the secondary market and retains the right to service these loans, a servicing right asset is capitalized at the time of sale when the benefits of servicing are deemed to be greater than adequate compensation for performing the servicing activities. Mortgage servicing rights represent the then-current fair value of future net cash flows expected to be realized from performing servicing activities. The Company has elected to subsequently measure mortgage servicing rights at fair value. The Company estimates the fair value of mortgage servicing rights using a discounted cash flow model that incorporates assumptions that market participants would use in estimating the fair value of servicing rights, including, but not limited to, option adjusted spread, conditional prepayment rate, servicing fee rate, and cost to service.

We identified the option adjusted spread and conditional prepayment rate assumptions used in the valuation of mortgage servicing rights as a critical audit matter due to the significant judgement required by management in determining these assumptions. Auditing these assumptions involved a high degree of auditor judgement and increased audit effort as there was limited observable market information and the calculated fair value of the mortgage servicing rights is sensitive to changes in these key assumptions.

Our audit procedures related to the valuation of mortgage servicing rights as of December 31, 2022 included, among others, testing management's process for determining the fair value, including:

- We obtained an understanding of the relevant controls related to the establishment of the option adjusted spread and conditional prepayment assumptions used in the valuation of mortgage servicing rights and tested such controls for design and operating effectiveness.
- We evaluated the appropriateness of the valuation model.
- We tested the completeness and accuracy of the data used in the model.
- We utilized valuation specialists to assist with evaluating the reasonableness of the option adjusted spread and conditional prepayment rate assumptions by considering the consistency with external market and industry data.

/s/ RSM US LLP

We have served as the Company's auditor since 1994.

San Francisco, California
February 23, 2023

WESTERN ALLIANCE BANCORPORATION AND SUBSIDIARIES

CONSOLIDATED BALANCE SHEETS

	December 31, 2022	December 31, 2021
	(in millions, except shares and per share amounts)	
Assets:		
Cash and due from banks	**$ 259**	$ 166
Interest-bearing deposits in other financial institutions	**784**	350
Cash and cash equivalents	**1,043**	516
Investment securities - AFS, at fair value; amortized cost of $7,973 and $6,167 at December 31, 2022 and 2021, respectively	**7,092**	6,189
Investment securities - HTM, at amortized cost and net of allowance for credit losses of $5 and $5 (fair value of $1,112 and $1,146) at December 31, 2022 and 2021, respectively	**1,284**	1,102
Investment securities - equity	**160**	159
Investments in restricted stock, at cost	**224**	92
Loans HFS	**1,184**	5,635
Loans HFI, net of deferred loan fees and costs	**51,862**	39,075
Less: allowance for credit losses	**(310)**	(252)
Net loans held for investment	**51,552**	38,823
Mortgage servicing rights	**1,148**	698
Premises and equipment, net	**276**	182
Operating lease right of use asset	**163**	133
Bank owned life insurance	**182**	180
Goodwill and intangible assets, net	**680**	635
Deferred tax assets, net	**311**	21
Investments in LIHTC and renewable energy	**624**	631
Other assets	**1,811**	987
Total assets	**$ 67,734**	$ 55,983
Liabilities:		
Deposits:		
Non-interest-bearing demand	**$ 19,691**	$ 21,353
Interest-bearing	**33,953**	26,259
Total deposits	**53,644**	47,612
Other borrowings	**6,299**	1,502
Qualifying debt	**893**	896
Operating lease liability	**185**	143
Other liabilities	**1,357**	867
Total liabilities	**62,378**	51,020
Commitments and contingencies (Note 18)		
Stockholders' equity:		
Preferred stock (par value $0.0001 and liquidation value per share of $25; 20,000,000 authorized; 12,000,000 issued and outstanding at December 31, 2022 and 2021)	**295**	295
Common stock (par value $0.0001; 200,000,000 authorized; 111,465,292 and 108,981,341 shares issued at December 31, 2022 and 2021, respectively) and additional paid in capital	**2,163**	1,966
Treasury stock, at cost (2,550,766 and 2,350,021 shares at December 31, 2022 and 2021, respectively)	**(105)**	(87)
Accumulated other comprehensive (loss) income	**(661)**	16
Retained earnings	**3,664**	2,773
Total stockholders' equity	**5,356**	4,963
Total liabilities and stockholders' equity	**$ 67,734**	$ 55,983

See accompanying Notes to Consolidated Financial Statements.

WESTERN ALLIANCE BANCORPORATION AND SUBSIDIARIES
CONSOLIDATED INCOME STATEMENTS

	Year Ended December 31,		
	2022	2021	2020
	(in millions, except per share amounts)		
Interest income:			
Loans, including fees	**$ 2,393.4**	$ 1,488.8	$ 1,144.3
Investment securities	**265.6**	158.6	107.8
Dividends and other	**32.8**	11.3	9.7
Total interest income	**2,691.8**	1,658.7	1,261.8
Interest expense:			
Deposits	**276.4**	47.5	70.4
Qualifying debt	**35.0**	33.1	23.9
Other borrowings	**164.1**	29.3	0.6
Total interest expense	**475.5**	109.9	94.9
Net interest income	**2,216.3**	1,548.8	1,166.9
Provision for (recovery of) credit losses	**68.1**	(21.4)	123.6
Net interest income after provision for (recovery of) credit losses	**2,148.2**	1,570.2	1,043.3
Non-interest income:			
Net loan servicing revenue (expense)	**130.9**	(16.3)	—
Net gain on loan origination and sale activities	**104.0**	326.2	—
Service charges and fees	**27.0**	28.3	23.3
Commercial banking related income	**21.5**	17.4	14.7
Income from equity investments	**17.8**	22.1	12.7
Gain on recovery from credit guarantees	**14.7**	7.2	—
Gain on sales of investment securities	**6.8**	8.3	0.2
Fair value (loss) gain on assets measured at fair value, net	**(28.6)**	(1.3)	3.8
Other income	**30.5**	12.3	16.1
Total non-interest income	**324.6**	404.2	70.8
Non-interest expense:			
Salaries and employee benefits	**539.5**	466.7	303.6
Deposit costs	**165.8**	29.8	18.5
Legal, professional, and directors' fees	**99.9**	58.6	42.2
Data processing	**83.0**	58.2	35.7
Loan servicing expenses	**55.5**	53.5	—
Occupancy	**55.5**	43.8	34.1
Insurance	**31.1**	23.0	13.3
Loan acquisition and origination expenses	**23.1**	28.8	—
Business development and marketing	**22.1**	13.5	9.6
Net gain on sales and valuations of repossessed and other assets	**(0.7)**	(3.5)	(1.5)
Acquisition and restructure expenses	**0.4**	15.3	—
Loss on extinguishment of debt	**—**	5.9	—
Other expense	**81.5**	57.8	36.1
Total non-interest expense	**1,156.7**	851.4	491.6
Income before provision for income taxes	**1,316.1**	1,123.0	622.5
Income tax expense	**258.8**	223.8	115.9
Net income	**1,057.3**	899.2	506.6
Dividends on preferred stock	**12.8**	3.5	—
Net income available to common stockholders	**$ 1,044.5**	$ 895.7	$ 506.6
Earnings per share:			
Basic	**$ 9.74**	$ 8.72	$ 5.06
Diluted	**9.70**	8.67	5.04
Weighted average number of common shares outstanding:			
Basic	**107.2**	102.7	100.2
Diluted	**107.6**	103.3	100.5

See accompanying Notes to Consolidated Financial Statements.

WESTERN ALLIANCE BANCORPORATION AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

	Year Ended December 31,		
	2022	2021	2020
	(in millions)		
Net income	**$ 1,057.3**	$ 899.2	$ 506.6
Other comprehensive (loss) income, net:			
Unrealized (loss) gain on AFS securities, net of tax effect of $225.3, $22.4, and $(23.1), respectively	**(674.9)**	(69.0)	70.9
Unrealized loss on SERP, net of tax effect of $—, $—, and $0.1, respectively	**—**	—	(0.3)
Unrealized gain (loss) on junior subordinated debt, net of tax effect of $(1.2), $0.3, and $1.1, respectively	**3.7**	(1.2)	(3.1)
Realized gain on sale of AFS securities included in income, net of tax effect of $1.9, $2.1, and $0.0, respectively	**(5.5)**	(6.4)	(0.2)
Net other comprehensive (loss) income	**(676.7)**	(76.6)	67.3
Comprehensive income	**$ 380.6**	$ 822.6	$ 573.9

See accompanying Notes to Consolidated Financial Statements.

WESTERN ALLIANCE BANCORPORATION AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY

	Preferred Stock		Common Stock		Additional Paid in Capital	Treasury Stock	Accumulated Other Comprehensive Income (Loss)	Retained Earnings	Total Stockholders' Equity
	Shares	Amount	Shares	Amount					
					(in millions)				
Balance, December 31, 2019	—	$ —	102.5	$ —	$ 1,374.1	$ (62.7)	$ 25.0	$ 1,680.3	$ 3,016.7
Balance, January 1, 2020 (2)	—	—	102.5	—	1,374.1	(62.7)	25.0	1,655.4	2,991.8
Net income	—	—	—	—	—	—	—	506.6	506.6
Restricted stock, performance stock units, and other grants, net	—	—	0.6	—	29.1	—	—	—	29.1
Restricted stock surrendered (1)	—	—	(0.2)	—	—	(8.4)	—	—	(8.4)
Stock repurchase	—	—	(2.1)	—	(12.3)	—	—	(59.3)	(71.6)
Dividends paid to common stockholders	—	—	—	—	—	—	—	(101.3)	(101.3)
Other comprehensive income, net	—	—	—	—	—	—	67.3	—	67.3
Balance, December 31, 2020	—	$ —	100.8	$ —	$ 1,390.9	$ (71.1)	$ 92.3	$ 2,001.4	$ 3,413.5
Net income	—	—	—	—	—	—	—	899.2	899.2
Restricted stock, performance stock unit, and other grants, net	—	—	0.6	—	35.0	—	—	—	35.0
Restricted stock surrendered (1)	—	—	(0.2)	—	—	(15.7)	—	—	(15.7)
Preferred stock issuance, net	12.0	294.5	—	—	—	—	—	—	294.5
Common stock issuance, net	—	—	5.4	—	540.3	—	—	—	540.3
Dividends paid to preferred stockholders	—	—	—	—	—	—	—	(3.5)	(3.5)
Dividends paid to common stockholders	—	—	—	—	—	—	—	(124.1)	(124.1)
Other comprehensive loss, net	—	—	—	—	—	—	(76.6)	—	(76.6)
Balance, December 31, 2021	12.0	$ 294.5	106.6	$ —	$ 1,966.2	$ (86.8)	$ 15.7	$ 2,773.0	$ 4,962.6
Net income	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**1,057.3**	**1,057.3**
Restricted stock, performance stock unit, and other grants, net	**—**	**—**	**0.6**	**—**	**39.8**	**—**	**—**	**—**	**39.8**
Restricted stock surrendered (1)	**—**	**—**	**(0.2)**	**—**	**—**	**(18.5)**	**—**	**—**	**(18.5)**
Common stock issuance, net	**—**	**—**	**1.9**	**—**	**157.7**	**—**	**—**	**—**	**157.7**
Dividends paid to preferred stockholders	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**(12.8)**	**(12.8)**
Dividends paid to common stockholders	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**(153.4)**	**(153.4)**
Other comprehensive loss, net	**—**	**—**	**—**	**—**	**—**	**—**	**(676.7)**	**—**	**(676.7)**
Balance, December 31, 2022	**12.0**	**$ 294.5**	**108.9**	$ —	**$ 2,163.7**	**$ (105.3)**	**$ (661.0)**	**$ 3,664.1**	**$ 5,356.0**

(1) Share amounts represent Treasury Shares, see "Note 1. Summary of Significant Accounting Policies" for further discussion.

(2) As adjusted for adoption of ASU 2016-13, *Measurement of Credit Losses on Financial Instruments*. The cumulative effect of adoption of this guidance at January 1, 2020 resulted in a decrease to retained earnings of $24.9 million due to an increase in the ACL.

See accompanying Notes to Consolidated Financial Statements.

WESTERN ALLIANCE BANCORPORATION AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS

	December 31,		
	2022	2021	2020
		(in millions)	
Cash flows from operating activities:			
Net income	**$ 1,057.3**	$ 899.2	$ 506.6
Adjustments to reconcile net income to cash provided by (used in) operating activities:			
Provision for (recovery of) credit losses	**68.1**	(21.4)	123.6
Depreciation and amortization	**52.4**	33.7	22.9
Stock-based compensation	**39.8**	35.1	28.7
Deferred income taxes	**(68.6)**	42.0	(25.1)
Amortization of net premiums for investment securities	**21.1**	39.8	28.2
Amortization of tax credit investments	**63.2**	49.5	49.2
Amortization of operating lease right of use asset	**22.2**	16.3	11.7
Amortization of net deferred loan fees and net purchase premiums	**(73.6)**	(66.3)	(51.2)
Purchases and originations of loans HFS	**(45,407.0)**	(59,569.6)	—
Proceeds from sales and payments on loans held for sale	**47,285.0**	56,647.7	—
Mortgage servicing rights capitalized upon sale of mortgage loans	**(719.7)**	(763.8)	—
Net (gains) losses on:			
Change in fair value of loans HFS, mortgage servicing rights, and related derivatives	**(73.9)**	177.7	—
Other	**17.7**	(16.3)	(9.4)
Other assets and liabilities, net	**(38.7)**	(157.6)	(15.0)
Net cash provided by (used in) operating activities	**$ 2,245.3**	$ (2,654.0)	$ 670.2
Cash flows from investing activities:			
Investment securities - AFS			
Purchases	**$ (2,396.3)**	$ (3,248.4)	$ (2,966.2)
Principal pay downs and maturities	**604.2**	1,634.1	1,515.5
Proceeds from sales	**177.0**	164.5	156.6
Investment securities - HTM			
Purchases	**(281.9)**	(595.6)	(182.7)
Principal pay downs and maturities	**100.6**	54.9	17.4
Equity securities carried at fair value			
Purchases	**(36.2)**	(36.2)	(34.5)
Redemptions	**6.9**	21.0	7.6
Proceeds from sales	**14.1**	4.4	—
Proceeds from sale of mortgage servicing rights and related holdbacks, net	**391.9**	1,182.8	—
Purchase of other investments	**(346.6)**	(134.6)	(133.1)
Proceeds from bank owned life insurance, net	**—**	—	5.9
Net increase in loans HFI	**(11,172.8)**	(12,665.0)	(5,897.2)
Purchase of premises, equipment, and other assets, net	**(141.0)**	(69.4)	(26.8)
Cash consideration paid for acquisitions, net of cash acquired	**(50.0)**	(1,024.4)	—
Net cash used in investing activities	**$ (13,130.1)**	$ (14,711.9)	$ (7,537.5)
Cash flows from financing activities:			
Net increase in deposits	**$ 6,032.1**	$ 15,681.5	$ 9,134.0
Net proceeds from issuance of long-term debt	**578.4**	1,055.7	221.9
Payments on long-term debt	**(30.7)**	(475.9)	(75.0)
Net increase (decrease) in short-term borrowings	**4,859.0**	(1,742.1)	4.3
Cash paid for tax withholding on vested restricted stock and other	**(18.5)**	(15.8)	(7.9)
Common stock repurchases	**—**	—	(71.6)
Cash dividends paid on common stock and preferred stock	**(166.2)**	(127.6)	(101.3)
Proceeds from issuance of common stock in offerings, net	**157.7**	540.3	—
Proceeds from issuance of preferred stock, net	**—**	294.5	—
Net cash provided by financing activities	**$ 11,411.8**	$ 15,210.6	$ 9,104.4
Net increase (decrease) in cash and cash equivalents	**527.0**	(2,155.3)	2,237.1
Cash, cash equivalents, and restricted cash at beginning of period	**516.4**	2,671.7	434.6
Cash, cash equivalents, and restricted cash at end of period	**$ 1,043.4**	$ 516.4	$ 2,671.7

	December 31,		
	2022	2021	2020
	(in millions)		
Supplemental disclosure:			
Cash paid during the period for:			
Interest	**$ 452.9**	$ 111.6	$ 108.6
Income taxes, net	**197.6**	175.7	44.2
Non-cash operating, investing, and financing activity:			
Net increase (decrease) in unfunded commitments and obligations	**$ 259.3**	$ 294.1	$ (102.2)
Transfers of securitized loans HFS to AFS securities	**205.0**	144.5	—
Transfer of EBO loans previously classified as HFS to HFI	**1,638.1**	—	—
Transfers of loans HFI to HFS	**780.0**	—	—
Transfers of mortgage-backed securities in settlement of secured borrowings	**610.5**	640.6	—

See accompanying Notes to Consolidated Financial Statements.

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Nature of operation

WAL is a bank holding company headquartered in Phoenix, Arizona, incorporated under the laws of the state of Delaware. WAL provides a full spectrum of customized loan, deposit and treasury management capabilities, including 24/7 funds transfer and other digital payment offerings through its wholly-owned banking subsidiary, WAB.

WAB operates the following full-service banking divisions: ABA, BON, FIB, Bridge, and TPB. The Company also serves business customers through a national platform of specialized financial services, including mortgage banking services through AmeriHome, and has added to its capabilities with the acquisition of DST on January 25, 2022, which provides digital payment services for the class action legal industry. In addition, the Company has the following non-bank subsidiaries: CSI, a captive insurance company formed and licensed under the laws of the State of Arizona and established as part of the Company's overall enterprise risk management strategy, and WATC, which will provide corporate trust services and levered loan administration solutions.

Basis of presentation

The accounting and reporting policies of the Company are in accordance with GAAP and conform to practices within the financial services industry. The accounts of the Company and its consolidated subsidiaries are included in the Consolidated Financial Statements.

Recent accounting pronouncements

Troubled Debt Restructurings and Vintage Disclosures

In March 2022, the FASB issued guidance within ASU 2022-02, *Financial Instruments—Credit Losses (Topic 326).* The amendments in this update eliminate the accounting guidance and related disclosures for TDRs by creditors in Subtopic 310-40, *Receivables—Troubled Debt Restructurings by Creditors*, while enhancing disclosure requirements for certain loan refinancings and restructurings by creditors when a borrower is experiencing financial difficulty and requiring an entity to disclose current-period gross writeoffs by year of origination for financing receivables and net investments in leases within the scope of Subtopic 326-20, *Financial Instruments—Credit Losses—Measured at Amortized Cost*.

The amendments in this update are effective for fiscal years beginning after December 15, 2022, including interim periods within those fiscal years and are applied prospectively, except with respect to the recognition and measurement of TDRs, where an entity has the option to apply a modified retrospective transition method. The adoption of this accounting guidance is not expected to have a material impact on the Company's Consolidated Financial Statements.

Recently adopted accounting guidance

Reference Rate Reform

In March 2020, the FASB issued guidance within ASU 2020-04, *Reference Rate Reform (Topic 848): Facilitation of the Effects of Reference Rate Reform on Financial Reporting,* in response to the scheduled discontinuation of LIBOR. Since the issuance of this guidance, cessation of U.S. dollar LIBOR has been extended to June 30, 2023. Accordingly, in December 2022, the FASB issued ASU 2022-06, *Reference Rate Reform (Topic 848): Deferral of the Sunset Date of Topic 848,* which deferred the sunset date of ASC Topic 848 from December 31, 2022, to December 31, 2024. The amendments in this update provide optional guidance designed to provide relief from the accounting analysis and impacts that may otherwise be required for modifications to agreements (e.g., loans, debt securities, derivatives, borrowings) necessitated by reference rate reform.

The following optional expedients for applying the requirements of certain ASC Topics or Industry Subtopics in the Codification are permitted for contracts that are modified because of reference rate reform and that meet certain scope guidance: 1) modifications of contracts within the scope of ASC Topics 310, *Receivables*, and 470, *Debt*, should be accounted for by prospectively adjusting the effective interest rate; 2) modifications of contracts within the scope of ASC Topic 842, *Leases*, should be accounted for as a continuation of the existing contracts with no reassessments of the lease classification and the discount rate or remeasurements of lease payments that otherwise would be required under this ASC Topic for modifications not accounted for as separate contracts; 3) modifications of contracts do not require an entity to reassess its original conclusion about whether that contract contains an embedded derivative that is clearly and closely related to the economic characteristics and risks of the host contract under Subtopic ASC 815-15, *Derivatives and Hedging- Embedded Derivatives;* and 4) for other ASC Topics or Industry Subtopics in the Codification, the amendments in this update also include a general principle that permits an entity to consider contract modifications due to reference rate reform to be an event that does not require contract remeasurement at the modification date or reassessment of a previous accounting determination.

In January 2021, the FASB issued ASU 2021-01, *Reference Rate Reform (Topic 848): Scope* in order to clarify that certain optional expedients and exceptions in ASC Topic 848 apply to derivatives that are affected by the discounting transition. Specifically, certain provisions in ASC Topic 848, if elected by an entity, apply to derivative instruments that use an interest rate for margining, discount, or contract price alignment that is modified as a result of reference rate reform.

Due to the prospective nature of the revised guidance, the adoption of this accounting guidance did not have a material impact on the Company's Consolidated Financial Statements.

Convertible Debt and Derivatives and Hedging

In August 2020, the FASB issued guidance within ASU 2020-06, *Debt - Debt with Conversion and Other Options (Subtopic 470-20) and Derivatives and Hedging - Contracts in Entity's Own Equity (Subtopic 815-40)*. The amendments in this update affect entities that issue convertible instruments and/or contracts indexed to and potentially settled in an entity's own equity. This update simplifies the convertible accounting framework through elimination of the beneficial conversion and cash conversion accounting models for convertible instruments. It also amends the accounting for certain contracts in an entity's own equity that are currently accounted for as derivatives because of specific settlement provisions. In addition, the new guidance modifies how particular convertible instruments and certain contracts that may be settled in cash or shares impact the diluted EPS computation. The Company adopted the amendments within ASU 2020-06 using the modified retrospective method. The adoption of this guidance did not have a material impact on the Company's Consolidated Financial Statements.

Use of estimates

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosures of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Management's estimates and judgments are ongoing and are based on experience, current and expected future conditions, third-party evaluations and various other assumptions that management believes are reasonable under the circumstances. The results of these estimates form the basis for making judgments about the carrying values of assets and liabilities, as well as identifying and assessing the accounting treatment with respect to commitments and contingencies. Actual results may differ from those estimates and assumptions used in the Consolidated Financial Statements and related notes. Material estimates that are susceptible to significant changes in the near term, relate to: 1) the determination of the ACL; 2) certain assets and liabilities carried at fair value; and 3) accounting for income taxes.

Principles of consolidation

As of December 31, 2022, WAL has the following significant wholly-owned subsidiaries: WAB and eight unconsolidated subsidiaries used as business trusts in connection with the issuance of trust-preferred securities.

WAB has the following significant wholly-owned subsidiaries: 1) WABT, which holds certain investment securities, municipal and nonprofit loans, and leases; 2) WA PWI, which holds interests in certain limited partnerships invested primarily in low income housing tax credits and small business investment corporations; 3) Helios Prime, which holds interests in certain limited partnerships invested in renewable energy projects; 4) BW Real Estate, Inc., which operates as a real estate investment trust and holds certain of WAB's real estate loans and related securities; and 5) Western Finance Company, which purchases and originates equipment finance leases and provides mortgage banking services through its wholly-owned subsidiary, AmeriHome.

The Company does not have any other significant entities that should be consolidated. All significant intercompany balances and transactions have been eliminated in consolidation.

Reclassifications

Certain amounts in the Consolidated Income Statements for the prior periods have been reclassified to conform to the current presentation. The reclassifications had no effect on net income or stockholders' equity as previously reported.

Cash and cash equivalents

For purposes of reporting cash flows, cash and cash equivalents include cash on hand, amounts due from banks (including cash items in process of clearing), interest-bearing balances due from correspondent banks and the FRB, and federal funds sold.

Business combinations

Business combinations are accounted for under the acquisition method of accounting in accordance with ASC 805, *Business Combinations*. Under the acquisition method, the acquiring entity in a business combination recognizes all of the acquired assets and assumed liabilities at their estimated fair values as of the date of acquisition. Any excess of the purchase price over the fair value of net assets and other identifiable intangible assets acquired is recorded as goodwill. To the extent the fair value of net assets acquired, including identified intangible assets, exceeds the purchase price, a bargain purchase gain is recognized. Assets acquired and liabilities assumed from contingencies are also recognized at fair value if the fair value can be determined during the measurement period. Results of operations of an acquired business are included in the Consolidated Income Statement from the date of acquisition. Acquisition-related costs, including conversion and restructuring charges, are expensed as incurred.

Investment securities

Investment securities include debt and equity securities. Debt securities may be classified as HTM, AFS, or trading. The appropriate classification is initially decided at the time of purchase. Securities classified as HTM are those debt securities that the Company has both the intent and ability to hold to maturity regardless of changes in market conditions, liquidity needs, or general economic conditions. The sale of an HTM security within three months of its maturity date or after the majority of the principal outstanding has been collected is considered a maturity for purposes of classification and disclosure. Securities classified as AFS are debt securities that the Company intends to hold for an indefinite period of time, but not necessarily to maturity. Any decision to sell a security classified as AFS would be based on various factors, including significant movements in interest rates, changes in the maturity mix of the Company's assets and liabilities, liquidity needs, decline in credit quality, and regulatory capital considerations.

HTM securities are carried at amortized cost. AFS securities are carried at their estimated fair value, with unrealized holding gains and losses reported in OCI, net of tax. When AFS debt securities are sold, the unrealized gains or losses are reclassified from OCI to non-interest income. Trading securities are carried at their estimated fair value, with changes in fair value reported in earnings as non-interest income.

Equity securities are carried at their estimated fair value, with changes in fair value reported in earnings as non-interest income.

Interest income is recognized based on the coupon rate and, for HTM and AFS securities, includes the amortization of purchase premiums and the accretion of purchase discounts. Premiums and discounts on investment securities are generally amortized or accreted over the contractual life of the security using the interest method. For the Company's mortgage-backed securities, amortization or accretion of premiums or discounts are adjusted for anticipated prepayments. Gains and losses on the sale of investment securities are recorded on the trade date and determined using the specific identification method.

A debt security is placed on nonaccrual status at the time its principal or interest payments become 90 days past due. Interest accrued but not received for a security placed on nonaccrual is reversed through interest income.

Allowance for credit losses on investment securities

The credit loss model under ASC 326-20, applicable to HTM debt securities, requires recognition of lifetime expected credit losses through an allowance account at the time the security is purchased. The Company measures expected credit losses on its HTM debt securities on a collective basis by major security type. The Company's HTM securities portfolio consists of low income housing tax-exempt bonds and private label residential MBS. Low income housing tax-exempt bonds share similar risk characteristics with the Company's CRE, non-owner occupied or construction and land loan pools, given the similarity in underlying assets or collateral. Accordingly, expected credit losses on HTM securities are estimated using the same models and approaches as these loan pools, which utilize risk parameters (PD, LGD and EAD) in the measurement of expected credit losses. The historical data used to estimate probability of default and severity of loss in the event of default is derived or obtained from internal and external sources and adjusted for the expected effects of reasonable and supportable forecasts over the expected lives of the securities on those historical losses. Accrued interest receivable on HTM securities, which is included in Other assets on the Consolidated Balance Sheet, is excluded from the estimate of expected credit losses.

The credit loss model under ASC 326-30, applicable to AFS debt securities, requires recognition of credit losses through an allowance account with credit losses recognized once securities become impaired. For AFS debt securities, a decline in fair value due to credit loss results in recognition of an ACL. Impairment may result from credit deterioration of the issuer or collateral underlying the security. An assessment to determine whether a decline in fair value resulted from a credit loss is performed at the individual security level. Among other factors, the Company considers: 1) the extent to which the fair value is less than the amortized cost basis; 2) the financial condition and near term prospects of the issuer, including consideration of relevant financial metrics or ratios of the issuer; 3) any adverse conditions related to an industry or geographic area of an issuer; 4) any changes to the rating of the security by a rating agency; and 5) any past due principal or interest payments from the issuer. If an assessment of the above factors indicates that a credit loss exists, the Company records an ACL for the excess of the amortized cost basis over the present value of cash flows expected to be collected, limited to the amount that the security's fair value is less than its amortized cost basis. Subsequent changes in the ACL are recorded as a provision for (or recovery of) credit loss expense. Interest accruals and amortization and accretion of premiums and discounts are suspended when a credit loss is recognized in earnings. Any interest received after the security has been placed on nonaccrual status is recognized on a cash basis. Accrued interest receivable on AFS debt securities, which is included in Other assets on the Consolidated Balance Sheet, is excluded from the estimate of expected credit losses.

For each AFS security in an unrealized loss position, the Company also considers: 1) its intent to retain the security until anticipated recovery of the security's fair value; and 2) whether it is more-likely-than not that the Company would be required to sell the security before recovery of its amortized cost basis. If either of the criteria regarding intent or requirement to sell is met, the debt security is written down to its fair value and the write-down is charged against the ACL with any incremental impairment recorded in earnings.

Charge-offs are made through reversal of the ACL and a direct charge to the amortized cost basis of the AFS security. The Company considers the following events to be indicators that a charge-off should be taken: 1) bankruptcy of the issuer; 2) significant adverse event(s) affecting the issuer in which it is improbable for the issuer to make its remaining payments on the security; and 3) significant loss of value of the underlying collateral behind a security. Recoveries on debt securities, if any, are recorded in the period received.

Restricted stock

WAB is a member of the Federal Reserve System and, as part of its membership, is required to maintain stock in the FRB in a specified ratio to its capital. In addition, WAB is a member of the FHLB system and, accordingly, maintains an investment in the capital stock of the FHLB based on the borrowing capacity used. These investments are considered equity securities with no actively traded market. Therefore, the shares are considered restricted investment securities. These investments are carried at cost, which is equal to the value at which they may be redeemed. Dividend income received from the stock is reported in interest income. The Company conducts a periodic review and evaluation of its restricted stock to determine if any impairment exists. No impairment has been recorded to date.

Loans held for sale

The Company's loans HFS are primarily purchased and originated loans to be sold or securitized through its mortgage banking business. Loans HFS are reported at either fair value, or the lower of cost or fair value, depending on the acquisition source. The Company has elected to record loans purchased from correspondent sellers or originated directly to consumers at fair value to more timely reflect the Company's performance. Changes in fair value of loans HFS are reported in current period income as a component of Net gain on loan origination and sale activities in the Consolidated Income Statement. Alternatively, delinquent loans repurchased under the terms of the GNMA MBS program, referred to as EBO loans, are reported at the lower of cost or fair value. For EBO loans, the amount by which cost exceeds fair value is accounted for as a valuation allowance and any changes in the valuation allowance are included in Net gain on loan origination and sale activities in the Consolidated Income Statement.

The Company recognizes a transfer of loans as a sale when it surrenders control over the transferred loans. Control is considered to be surrendered when the transferred loans have been legally isolated from the Company, the transferee has the right (free of conditions that constrain it from taking advantage of that right) to pledge or exchange the transferred loans, and the Company does not maintain effective control over the transferred loans through either an agreement that entitles or obligates the Company to repurchase or redeem the loans before their maturity or the ability to unilaterally cause the holder to return loans. If the transfer of loans qualifies as a sale, the Company derecognizes such loans. If the transfer of loans does not qualify as a sale, the proceeds from the transfer are accounted for as secured borrowings.

Loan acquisition and origination fees on loans HFS consist of fees earned by the Company for purchasing and originating loans and are recognized at the time the loans are purchased or originated. These fees generally represent flat, per loan fee amounts and are included as Net gain on loan origination and sale activities in the Consolidated Income Statement.

Recognition of interest income on non-government guaranteed or uninsured loans HFS is suspended and accrued unpaid interest receivable is reversed through interest income when loans become 90 days delinquent or when recovery of income and principal becomes doubtful. Loans return to accrual status when the principal and interest become current and it is probable that the amounts are fully collectible. For government guaranteed or insured loans HFS that are 90 days delinquent, the Company continues to recognize interest income at a rate between the debenture and notes rates, as adjusted for probability of default for FHA loans and at the note rate for VA and USDA loans.

If management determines that it no longer intends to sell loans classified as HFS, such loans will be transferred to loans HFI. Loans transferred from HFS to HFI are transferred at amortized cost and any valuation allowance previously recorded is reversed and recognized in earnings at the time of the transfer. The loans are then evaluated to determine the ACL in accordance with the Company's policy as described in the Allowance for credit losses on loans HFI section within this note.

Loans held for investment

Loans HFI are loans that management has the intent and ability to hold for the foreseeable future or until maturity or payoff are reported at amortized cost. Amortized cost is the amount of unpaid principal, adjusted for unamortized net deferred fees and costs, premiums and discounts, and charge-offs. In addition, the amortized cost basis of loans subject to fair value hedges are adjusted for changes in value attributable to the effective portion of the hedged benchmark interest rate risk.

The Company may also purchase loans or acquire loans through a business combination. At the purchase or acquisition date, loans are evaluated to determine whether there has been more than insignificant credit deterioration since origination. Loans that have experienced more than insignificant credit deterioration since origination are referred to as PCD loans. In its evaluation of whether a loan has experienced more than insignificant deterioration in credit quality since origination, the Company takes into consideration loan grades, past due and nonaccrual status, and TDR loans. The Company may also consider external credit rating agency ratings for borrowers and for non-commercial loans, FICO score or band, probability of default levels, and number of times past due. At the purchase or acquisition date, the amortized cost basis of PCD loans is equal to the purchase price and an initial estimate of credit losses. The initial recognition of expected credit losses on PCD loans has no impact on net income. When the initial measurement of expected credit losses on PCD loans is calculated on a pooled loan basis, the expected credit losses are allocated to each loan within the pool. Any difference between the initial amortized cost basis and the unpaid principal balance of the loan represents a noncredit discount or premium, which is accreted (or amortized) into interest income over the life of the loan. Subsequent changes to the ACL on PCD loans are recorded through the provision for credit losses. For purchased loans that are not deemed to have experienced more than insignificant credit deterioration since origination and are therefore not deemed PCD, any discounts or premiums included in the purchase price are accreted (or amortized) over the contractual life of the individual loan. For additional information, see "Note 5. Loans, Leases and Allowance for Credit Losses" of these Notes to Consolidated Financial Statements.

In applying the effective yield method to loans, the Company generally applies the contractual method whereby loan fees collected for the origination of loans less direct loan origination costs (net deferred fees), as well as premiums and discounts and certain purchase accounting adjustments, are amortized over the contractual life of the loan through interest income. If a loan has scheduled payments, the amortization of net deferred fees is calculated using the interest method over the contractual life of the loan. If a loan does not have scheduled payments, such as a line of credit, net deferred loan fees are recognized as interest income on a straight-line basis over the contractual life of the loan commitment. Commitment fees based on a percentage of a customer's unused line of credit and fees related to standby letters of credit are recognized over the commitment period. When loans are repaid, any remaining unamortized balances of premiums, discounts, or net deferred fees are recognized as interest income.

Nonaccrual loans

When a borrower discontinues making payments as contractually required by the note, the Company must determine whether it is appropriate to continue to accrue interest. The Company ceases accruing interest income when a loan becomes delinquent by more than 90 days or when management determines that the full repayment of principal and collection of interest according to contractual terms is no longer likely. Past due status is based on the contractual terms of the loan. The Company may decide to continue to accrue interest on certain loans more than 90 days delinquent if the loans are well secured by collateral and in the process of collection. For government guaranteed or insured loans that are 90 days delinquent, the Company continues to recognize interest income at a rate between the debenture rate and note rates, as adjusted for probability of default for FHA loans, and at the note rate for VA and USDA loans.

For all loans HFI, when a loan is placed on nonaccrual status, all interest accrued but uncollected is reversed against interest income in the period in which the status is changed, and the Company makes a loan-level decision to apply either the cash basis or cost recovery method. The Company may recognize income on a cash basis when a payment is received for those nonaccrual loans for which the collection of the remaining principal balance is not in doubt. Under the cost recovery method, subsequent payments received from the customer are applied to principal and generally no further interest income is recognized until the loan principal has been paid in full or until circumstances have changed such that payments are again consistently received as contractually required. Loans are returned to accrual status when all of the principal and interest amounts contractually due are brought current and future payments are reasonably assured.

Troubled Debt Restructured Loans

A TDR loan is a loan on which the Company, for reasons related to a borrower's financial difficulties, grants a concession to the borrower that the Company would not otherwise consider. In order to determine whether a borrower is experiencing financial difficulty, an evaluation is performed to assess the probability that the borrower will be in payment default on any of its debt in the foreseeable future without the modification. The evaluation is performed in accordance with the Company's internal underwriting policy. The loan terms that may be modified or restructured due to a borrower's financial situation include, but are not limited to, a reduction in the stated interest rate, an extension of the maturity or renewal of the loan at an interest rate below current market, a reduction in the face amount of the debt, a reduction in the accrued interest, or deferral of interest payments. A TDR loan may be returned to accrual status when the loan is brought current, has performed in accordance with the contractual restructured terms for a reasonable period of time (generally six months), and the ultimate collectability of the total contractual restructured principal and interest is no longer in doubt. Consistent with regulatory guidance, a TDR loan that is subsequently modified in another restructuring agreement but has shown sustained performance and classification as a TDR, will be removed from TDR status provided that the modified terms were market-based at the time of modification.

Reference Rate Reform

On March 5, 2021, the United Kingdom administrator of LIBOR announced that the 1-month, 3-month, 6-month and 12-month US dollar LIBOR settings would cease to exist after June 30, 2023. The US federal banking agencies issued a statement in November 2020 encouraging banks to transition away from US dollar LIBOR as soon as practicable and to stop entering into new contracts that use US dollar LIBOR by December 31, 2021. The Bank began offering three alternative rate indices (Ameribor, SOFR, and BSBY) on its loans in the second half of 2021, with Ameribor as its preferred rate index and ceased offering loans indexed to US dollar LIBOR on December 31, 2021. Loans indexed to US dollar LIBOR will be converted to Ameribor, SOFR, or BSBY. The Company applied the optional expedient in Topic 848 for such conversions by prospectively adjusting the effective interest rate. For the Company's borrowing arrangements currently indexed to LIBOR, the paying agent is responsible for choosing the alternate rate index.

Credit quality indicators

Loans are regularly reviewed to assess credit quality indicators and to determine appropriate loan classification and grading in accordance with applicable bank regulations. The Company's risk rating methodology assigns risk ratings ranging from 1 to 9, where a higher rating represents higher risk. The Company differentiates its loan segments based on shared risk characteristics for which expected credit losses are measured on a pool basis.

The nine risk rating categories can generally be described by the following groupings for loans:

"Pass" (grades 1 through 5): The Company has five pass risk ratings, which represent a level of credit quality that ranges from having no well-defined deficiency or weakness to some noted weakness; however, the risk of default on any loan classified as pass is expected to be remote. The five pass risk ratings are described below:

*Minimal risk. C*onsist of loans that are fully secured either with cash held in a deposit account at the Bank or by readily marketable securities with an acceptable margin based on the type of security pledged.

Low risk. Consist of loans with a high investment grade rating equivalent.

Modest risk. Consist of loans where the credit facility greatly exceeds all policy requirements or with policy exceptions that are appropriately mitigated. A secondary source of repayment is verified and considered sustainable. Collateral coverage on these loans is sufficient to fully cover the debt as a tertiary source of repayment. Debt of the borrower is low relative to borrower's financial strength and ability to pay.

Average risk. Consist of loans where the credit facility meets or exceeds all policy requirements or with policy exceptions that are appropriately mitigated. A secondary source of repayment is available to service the debt. Collateral coverage is more than adequate to cover the debt. The borrower exhibits acceptable cash flow and moderate leverage.

Acceptable risk. Consist of loans with an acceptable primary source of repayment but a less than preferable secondary source of repayment. Cash flow is adequate to service debt but there is minimal excess cash flow. Leverage is moderate or high.

"Special mention" (grade 6): These are generally assets that possess potential weaknesses that warrant management's close attention. These loans may involve borrowers with adverse financial trends, higher debt-to-equity ratios, or weaker liquidity positions, but not to the degree of being considered a "problem loan" where risk of loss may be apparent. Loans in this category are usually performing as agreed, although there may be non-compliance with financial covenants.

"Substandard" (grade 7): These assets are characterized by well-defined credit weaknesses and carry the distinct possibility that the Company will sustain some loss if such weakness or deficiency is not corrected. All loans 90 days or more past due and all loans on nonaccrual status are considered at least "Substandard," unless extraordinary circumstances would suggest otherwise.

"Doubtful" (grade 8): These assets have all the weaknesses inherent in those classified as "Substandard" with the added characteristic that the weaknesses present make collection or liquidation in full, on the basis of currently existing facts, conditions and values, highly questionable and improbable, but because of certain known factors that may work to the advantage and strengthening of the asset (for example, capital injection, perfecting liens on additional collateral and refinancing plans), classification as an estimated loss is deferred until a more precise status may be determined. Due to the high probability of loss, loans classified as "Doubtful" are placed on nonaccrual status.

"Loss" (grade 9): These assets are considered uncollectible and having such little recoverable value that it is not practical to defer writing off the asset. This classification does not mean that the loan has absolutely no recovery or salvage value, but rather that it is not practicable or desirable to defer writing off the asset, even though partial recovery may be achieved in the future.

Allowance for credit losses on loans HFI

Credit risk is inherent in the business of extending loans and leases to borrowers and is continuously monitored by management and reflected within the ACL. The ACL is an estimate of life-of-loan losses for the Company's loans HFI. The ACL is a valuation account that is deducted from the amortized cost basis of a loan to present the net amount expected to be collected on the loan. The estimate of expected credit losses excludes accrued interest receivable on these loans, except for accrued interest related to the Residential-EBO loan pool. Accrued interest receivable, net of an ACL on the Residential-EBO loan pool, is included in Other assets on the Consolidated Balance Sheet. The ACL on loans HFI includes an estimate of future net charge-offs as well as an offset for expected recoveries of amounts previously charged-off. The Company formally re-evaluates and establishes the appropriate level of the ACL on a quarterly basis.

Determining the appropriateness of the allowance is complex and requires judgment by management about the effects of matters that are inherently uncertain. In future periods, evaluations of the overall loan portfolio or particular segments of the loan portfolio, in light of the factors and forecasts then prevailing, may result in significant changes in the ACL and credit loss expense in those future periods. The allowance level is influenced by loan volumes and mix, average remaining maturities, loan performance metrics, asset quality characteristics, delinquency status, historical credit loss experience, and other conditions influencing loss expectations, such as reasonable and supportable forecasts of economic conditions. The methodology for estimating the amount of expected credit losses reported in the ACL has two basic components: first, an asset-specific component involving individual loans that do not share similar risk characteristics with other loans and the measurement of expected credit losses for such individual loans and second, a pooled component for estimated expected credit losses for loans that share similar risk characteristics.

Loans that do not share risk characteristics with other loans

Loans that do not share risk characteristics with other loans are evaluated on an individual basis. Loans evaluated individually are not included in the collective evaluation. These loans consist of loans with unique features or loans that no longer share risk characteristics with other pooled loans. The process for determining whether a loan should be evaluated on an individual basis begins with a determination of credit rating. With the exception of residential loans, all accruing loans graded substandard or worse with a total commitment of $1.0 million or more are evaluated on an individual basis. For these loans, the allowance is based primarily on the fair value of the underlying collateral, utilizing independent third-party appraisals, and assessment of borrower guarantees.

Loans that share similar risk characteristics with other loans

In estimating the component of the ACL for loans that share similar risk characteristics, loans are segregated into loan segments with shared risk characteristics. The Company's primary portfolio segments align with the methodology applied in estimating the ACL under CECL. Loans are designated and pooled into loan segments based on product types, business lines, and other risk characteristics.

In determining the ACL, the Company derives an estimate of expected credit losses primarily using an expected loss methodology that incorporates risk parameters (PD, LGD, and EAD), which are derived from various vendor models, internally-developed statistical models, or non-statistical estimation approaches. Probability of default is projected in these models or estimation approaches using a single economic scenario and were developed to incorporate relevant information about past events, current conditions, and reasonable and supportable forecasts. With the exception of the Company's residential loan segment, the Company's PD models define default as loans that are 90 days past due, on nonaccrual status, have a charge-off, or obligor bankruptcy. Input reversion is used for all loan segment models, except for the commercial and industrial and CRE, owner-occupied loan segments. Output reversion is used for the commercial and industrial and CRE, owner-occupied loan segments by incorporating, after the forecast period, a one-year linear reversion to the long-term reversion rate in year three through the remaining life of the loans within the respective segments. LGDs are typically derived from the Company's historical loss experience. However, for the warehouse lending and municipal and nonprofit loan segments, where the Company has either zero (or near zero) losses, or has a limited loss history through the last economic downturn, certain non-modeled methodologies are employed to estimate LGD. Factors utilized in calculating average LGD vary for each loan segment and are further described below. EAD refers to the Company's exposure to loss at the time of borrower default. For revolving lines of credit, the Company incorporates an expectation of increased line utilization for a higher EAD on defaulted loans based on historical experience. For term loans, EAD is calculated using an amortization schedule based on contractual loan terms, adjusted for a prepayment rate assumption. Prepayment trends are sensitive to interest rates and the macroeconomic environment. Fixed rate loans are more influenced by interest rates, whereas variable rate loans are more influenced by the macroeconomic environment. After the quantitative expected loss estimates are calculated, management then adjusts these estimates to incorporate consideration of different probability weighted economic scenarios, current trends and conditions that are not captured in the quantitative loss estimates, through the use of qualitative and/or environmental factors.

The following provides credit quality indicators and risk elements most relevant in monitoring and measuring the ACL on loans for each of the loan portfolio segments identified:

Warehouse lending

The warehouse lending portfolio segment consists of mortgage warehouse lines, MSR financing facilities, and note finance loans, which have a monitored borrowing base to mortgage companies and similar lenders and are primarily structured as commercial and industrial loans. The collateral for these loans is primarily comprised of residential whole loans and MSRs, with the borrowing base of these loans tightly monitored and controlled by the Company. The primary support for these loans takes the form of pledged collateral, with secondary support provided by the capacity of the financial institution. The collateral-driven nature of these loans distinguish them from traditional commercial and industrial loans. These loans are impacted by interest rate shocks, residential lending rates, prepayment assumptions, and general real estate stress. As a result of the unique loan characteristics, limited historical default and loss experience, and the collateral nature of this loan portfolio segment, the Company uses a non-modeled approach to estimate expected credit losses, leveraging grade information, grade migration history, and management judgment.

Municipal and nonprofit

The municipal and nonprofit portfolio segment consists of loans to local governments, government-operated utilities, special assessment districts, hospitals, schools and other nonprofits. These loans are generally, but not exclusively, entered into for the purpose of financing real estate investment or for refinancing existing debt and are primarily structured as commercial and industrial loans. Loans are supported by taxes or utility fees, and in some cases tax liens on real estate, operating revenue of the institution, or other collateral support the loans. While unemployment rates and the market valuation of residential properties have an effect on the tax revenues supporting these loans, these loans tend to be less cyclical in comparison to similar commercial loans due to reliance on diversified tax bases. The Company uses a non-modeled approach to estimate expected credit losses for this portfolio segment, leveraging grade information and historical municipal default rates.

Tech & innovation

The tech & innovation portfolio segment is comprised of commercial loans that are originated within this business line and are not collateralized by real estate. The source of repayment of these loans is generally expected to be the income that is generated from the business or contributions from ownership to sustain the business's growth model. Expected credit losses for this loan segment are estimated using internally-developed models. These models incorporate market level and company-specific factors such as financial statement variables, adjusted for the current stage of the credit cycle and for the Company's loan performance data such as delinquency, utilization, maturity, and size of the loan commitment under specific macroeconomic scenarios to produce a probability of default. Macroeconomic variables include average investment to GDP and treasury yields. LGD and the prepayment rate assumption for EAD are driven by unemployment levels for this loan segment.

Equity fund resources

The equity fund resources portfolio segment is comprised of commercial loans to private equity and venture capital funds. The primary source of repayment of these loans is typically uncalled capital commitments from institutional investors and high net worth individuals. The Company uses a non-modeled approach to estimate expected credit losses for this portfolio segment, leveraging loan grade information.

Other commercial and industrial

The other commercial and industrial segment is comprised primarily of commercial and industrial loans to middle market companies and large corporations that are not collateralized by real estate. The models used to estimate expected credit losses for middle market companies are the same as those used for the tech & innovation portfolio segment, whereas a vendor model is used to estimate expected credit losses for loans to large corporations.

Commercial real estate, owner-occupied

The CRE, owner-occupied portfolio segment is comprised of commercial loans that are collateralized by real estate, where the borrower has a business that occupies the property. These loans are typically entered into for the purpose of providing real estate finance or improvement. The primary source of repayment of these loans is the income generated by the business and where rental or sale of the property may provide secondary support for the loan. These loans are sensitive to general economic conditions as well as the market valuation of CRE properties. The PD estimate for this loan segment is modeled using the same model as the commercial and industrial loan segment. LGD for this loan segment is driven by property appreciation and the prepayment rate assumption for EAD is driven by unemployment levels.

Hotel franchise finance

The hotel franchise finance segment is comprised of loans that are originated within this business line and are collateralized by real estate, where the owner is not the primary tenant. These loans are typically entered into for the purpose of financing or the improvement of commercial investment properties. The primary source of repayment of these loans are the rents paid by tenants and where the sale of the property may provide secondary support for the loan. These loans are sensitive to the market valuation of CRE properties, rental rates, and general economic conditions. The vendor model used to estimate expected credit losses for this loan segment projects PD and EAD based on multiple macroeconomic scenarios by modeling how macroeconomic conditions affect the commercial real estate market. Real estate market factors utilized in this model include vacancy rate, rental growth rate, net operating income growth rate, and commercial property price changes for each specific property type. The model then incorporates loan and property-level characteristics including debt coverage, leverage, collateral size, seasoning, and property type. LGD for this loan segment is derived from a non-modeled approach that is driven by property appreciation and the prepayment rate assumption for EAD is driven by the property appreciation for fixed rate loans and unemployment levels for variable rate loans.

Other commercial real estate, non-owner occupied

The other commercial real estate, non-owner occupied segment is comprised of loans that are collateralized by real estate where the owner is not the primary tenant, but are not originated within the Company's specialty business lines. The model used to estimate expected credit losses for this loan segment is the same as the model used for the hotel franchise finance portfolio segment.

Residential

The residential loan portfolio segment is comprised of loans collateralized primarily by first liens on 1-4 residential family properties and home equity lines of credit that are collateralized by either first liens or junior liens on residential properties. The primary source of repayment of these loans is the value of the property and the capacity of the owner to make payments on the loan. Unemployment rates and the market valuation of residential properties will impact the ultimate repayment of these loans. The residential mortgage loan model is a vendor model that projects PD, LGD severity, prepayment rate, and EAD to calculate expected losses. The model is intended to capture the borrower's payment behavior during the lifetime of the residential loan by incorporating loan level characteristics such as loan type, coupon, age, loan-to-value, and credit score and economic conditions such as Home Price Index, interest rate, and unemployment rate. A default event for residential loans is defined as 60 days or more past due, with property appreciation as the driver for LGD results. The prepayment rate assumption for EAD for residential loans is based on industry prepayment history.

PD for HELOCs is derived from an internally-developed model that incorporates loan level information such as delinquency status, loan term, and FICO score and macroeconomic conditions such as property appreciation. LGD for this loan segment is driven by property appreciation and lien position. EAD for HELOCs is calculated based on utilization rate assumptions using a non-modeled approach and also incorporates management judgment.

Residential - EBO

The residential EBO loan portfolio segment is comprised of government guaranteed or insured loans collateralized primarily by first liens on 1-4 residential family properties purchased from GNMA pools, which were at least three months delinquent at the time of purchase. These loans differ from the residential loans included in the Company's Residential loan portfolio segment as the principal balance of these loans are government guaranteed or insured. The Company has not recognized an ACL on this portfolio segment as management's expectation of nonpayment of the amortized cost basis, based on historical losses, adjusted for current and forecasted conditions, is zero.

The estimate of expected credit losses related to accrued interest and other fees for the Residential-EBO loan pool is based on an expected loss methodology that incorporates risk parameters, PD and LGD, which are derived from an internally-developed statistical model. PD is derived from from delinquency transition rates based on historical data and LGD is derived from historical losses.

Construction and land development

The construction and land portfolio segment is comprised of loans collateralized by land or real estate, which are entered into for the purpose of real estate development. The primary source of repayment of these loans is the eventual sale or refinance of the completed project and where claims on the property provide secondary support for the loan. These loans are impacted by the market valuation of CRE and residential properties and general economic conditions that have a higher sensitivity to real estate markets compared to other real estate loans. Default risk of a property is driven by loan-specific drivers, including loan-to-value, maturity, origination date, and the MSA in which the property is located, among other items. The variables used in the internally-developed model include loan level drivers such as origination loan-to-value, loan maturity, and macroeconomic drivers such as property appreciation, MSA level unemployment rate, and national GDP growth. LGD for this loan segment is driven by property appreciation. The prepayment rate assumption for EAD is driven by the property appreciation for fixed rate loans and unemployment levels for variable rate loans.

Other

The other portfolio consists of loans not already captured in one of the aforementioned loan portfolio segments, which include, but may not be limited to, overdraft lines for treasury services, credit cards, consumer loans not collateralized by real estate, and small business loans collateralized by residential real estate. The consumer and small business loans are supported by the capacity of the borrower and the valuation of any collateral. General economic factors such as unemployment will have an effect on these loans. The Company uses a non-modeled approach to estimate expected credit losses, leveraging average historical default rates. LGD for this loan segment is driven by unemployment levels and lien position. The prepayment rate assumption for EAD is driven by the BBB corporate spread for fixed rate loans and unemployment levels for variable rate loans.

Transfers of financial assets

A transfer of a financial asset is accounted for as a sale when control over the asset has been surrendered. Control over a transferred asset is deemed surrendered when the: 1) asset has been isolated from the Company; 2) transferee obtains the right to pledge or exchange the transferred asset; and 3) Company no longer maintains effective control over the transferred asset through an agreement to repurchase the transferred asset before maturity. If a transfer of a financial asset does not qualify as a sale, the proceeds from the transfer are accounted for as a secured borrowing.

Premises and equipment

Premises and equipment amounts are stated at cost less accumulated depreciation and amortization. Depreciation is computed principally using the straight-line method over the estimated useful lives of the assets. Leasehold improvements are amortized over the term of the lease or the estimated life of the improvement, whichever is shorter. Depreciation and amortization is computed using the following estimated lives:

	Years
Bank premises	31
Furniture, fixtures, and equipment	3 - 10
Leasehold improvements	3 - 10
Software	1 - 8

Management periodically reviews premises and equipment in order to determine whether facts and circumstances suggest that the value of an asset is not recoverable.

Off-balance sheet credit exposures, including unfunded loan commitments

The Company maintains a separate ACL on off-balance-sheet credit exposures, including unfunded loan commitments, financial guarantees, and letters of credit, which is classified in Other liabilities on the Consolidated Balance Sheet. The ACL on off-balance sheet credit exposures is adjusted through increases or decreases to the provision for credit loss expense. The estimate includes consideration of the likelihood that funding will occur, an estimate of EAD that is derived from utilization rate assumptions using a non-modeled approach, and PD and LGD estimates that are derived from the same models and approaches for the Company's other loan portfolio segments described in the ACL on loans HFI section within this note. The Company does not record a credit loss estimate for off-balance sheet credit exposures that are unconditionally cancellable by the Company or for undrawn amounts under such arrangements that may be drawn prior to the cancellation of the arrangement.

Mortgage servicing rights

The Company generates MSRs from its mortgage banking business. When the Company sells mortgage loans in the secondary market and retains the right to service these loans, a servicing right asset is capitalized at the time of sale when the benefits of servicing are deemed to be greater than adequate compensation for performing the servicing activities. MSRs represent the then-current fair value of future net cash flows expected to be realized from performing servicing activities. The Company has elected to subsequently measure MSRs at fair value and report changes in fair value in current period income as a component of Net loan servicing revenue in the Consolidated Income Statement.

The Company may in the ordinary course of business sell MSRs and will recognize, as of the trade date, a gain or loss on the sale equal to the difference between the carrying value of the transferred MSRs and the estimated proceeds to be received as consideration. The Company subsequently derecognizes MSRs when substantially all of the risks and rewards of ownership are irrevocably passed to the transferee and any protection provisions retained by the Company are minor and can be reasonably estimated, which typically occurs on the settlement date. Protection provisions are considered to be minor if the obligation created by such provisions is estimated to be no more than 10 percent of the sales price and the Company retains the risk of prepayment for no more than 120 days. The Company records an estimated liability for retained protection provisions as of the trade date, with any changes in the estimated liability recorded in earnings. In addition, fees to transfer loans associated with the sold MSRs to a new servicer are also recorded on the settlement date. Gains or losses on sales of MSRs, net of retained protection provisions, and transfer fees are included in Net loan servicing revenue in the Consolidated Income Statement.

Leases (lessee)

At inception, contracts are evaluated to determine whether the contract constitutes a lease agreement. For contracts that are determined to be an operating lease, a corresponding ROU asset and operating lease liability are recorded in separate line items on the Consolidated Balance Sheet. A ROU asset represents the Company’s right to use an underlying asset during the lease term and a lease liability represents the Company’s commitment to make contractually obligated lease payments. Operating lease ROU assets and liabilities are recognized at the commencement date of the lease and are based on the present value of lease payments over the lease term. The measurement of the operating lease ROU asset includes any lease payments made and is reduced by lease incentives that are paid or are payable to the Company. Variable lease payments that depend on an index or rate such as the Consumer Price Index are included in lease payments based on the rate in effect at the commencement date of the lease. Lease payments are recognized on a straight-line basis over the lease term as Occupancy expense in the Consolidated Income Statements.

As the rate implicit in the lease is not readily determinable, the Company's incremental collateralized borrowing rate is used to determine the present value of lease payments. This rate gives consideration to the applicable FHLB collateralized borrowing rates and is based on the information available at the commencement date. The Company has elected to apply the short-term lease measurement and recognition exemption to leases with an initial term of 12 months or less; therefore, these leases are not recorded on the Company’s Consolidated Balance Sheet, but rather, lease expense is recognized over the lease term on a straight-line basis. The Company’s lease agreements may include options to extend or terminate the lease. These options are included in the lease term when it is reasonably certain that the options will be exercised.

The Company also made an accounting policy election to not separate non-lease components from the associated lease component, and instead account for them together as part of the applicable lease component. The majority of the Company’s non-lease components such as common area maintenance, parking, and taxes are variable, and are expensed as incurred. Variable payment amounts are determined in arrears by the landlord depending on actual costs incurred.

Goodwill and other intangible assets

The Company records as goodwill the excess of the purchase price in a business combination over the fair value of the identifiable net assets acquired in accordance with applicable guidance. The Company performs its annual goodwill and intangibles impairment tests as of October 1 each year, or more often if events or circumstances indicate that the carrying value may not be recoverable. The Company may first elect to assess, through qualitative factors, whether it is more likely than not that goodwill is impaired. If the qualitative assessment indicates potential impairment, a quantitative impairment test is performed. If, based on the quantitative test, a reporting unit's carrying amount exceeds its fair value, a goodwill impairment charge for this difference is recorded to current period earnings as non-interest expense.

The Company’s intangible assets consist of correspondent relationships, operating licenses, tradenames, core deposit intangibles, customer relationships, and developed technology assets that are being amortized over periods of five to 40 years. See "Note 2. Mergers, Acquisitions and Dispositions" of these Notes to Consolidated Financial Statements for discussion of the intangible assets acquired in the AmeriHome and DST acquisitions.

The Company considers the remaining useful lives of its intangible assets each reporting period, as required by ASC 350, *Intangibles—Goodwill and Other*, to determine whether events and circumstances warrant a revision to the remaining period of amortization. If the estimate of an intangible asset’s remaining useful life has changed, the remaining carrying amount of the intangible asset is amortized prospectively over the revised remaining useful life. The Company has not revised its estimates of the useful lives of its intangible assets during the years ended December 31, 2022, 2021, or 2020.

Low income housing and renewable energy tax credits

The Company holds ownership interests in limited partnerships and limited liability companies that invest in affordable housing and renewable energy projects. These investments are designed to generate a return primarily through the realization of federal tax credits and deductions, which may be subject to recapture by taxing authorities if compliance requirements are not met. The Company accounts for its low income housing investments using the proportional amortization method. Renewable energy projects are accounted for under the deferral method, whereby the investment tax credits are reflected as an immediate reduction in income taxes payable and the carrying value of the asset in the period that the investment tax credits are claimed. See "Note 17. Income Taxes of these Notes to Consolidated Financial Statements for further discussion.

The Company evaluates its interests in these entities to determine whether it has a variable interest and whether it is required to consolidate these entities. A variable interest is an investment or other interest that will absorb portions of an entity's expected losses or receive portions of the entity's expected residual returns. If the Company determines that it has a variable interest in an entity, it evaluates whether such interest is in a VIE. A VIE is broadly defined as an entity where either: 1) the equity investors as a group, if any, lack the power through voting or similar rights to direct the activities of an entity that most significantly impact the entity's economic performance or 2) the equity investment at risk is insufficient to finance that entity's activities without additional subordinated financial support. The Company is required to consolidate any VIE when it is determined to be the primary beneficiary of the VIE's operations.

A variable interest holder is considered to be the primary beneficiary of a VIE if it has both the power to direct the activities of a VIE that most significantly impact the entity's economic performance and has the obligation to absorb losses of, or the right to receive benefits from, the entity that could potentially be significant to the VIE. The Company’s assessment of whether it is the primary beneficiary of a VIE includes consideration of various factors such as: 1) the Company's ability to direct the activities that most significantly impact the entity's economic performance; 2) its form of ownership interest; 3) its representation on the entity's governing body; 4) the size and seniority of its investment; and 5) its ability and the rights of other investors to participate in policy making decisions and to replace the manager of and/or liquidate the entity. The Company is required to evaluate whether to consolidate a VIE both at inception and on an ongoing basis as changes in circumstances require reconsideration.

The Company's investments in qualified affordable housing and renewable energy projects meet the definition of a VIE as the entities are structured such that the limited partner investors lack substantive voting rights. The general partner or managing member has both the power to direct the activities that most significantly impact the economic performance of the entities and the obligation to absorb losses or the right to receive benefits that could be significant to the entities. Accordingly, as a limited partner, the Company is not the primary beneficiary and is not required consolidate these entities.

Bank owned life insurance

BOLI is carried at its cash surrender value with changes recorded in other non-interest income in the Consolidated Income Statement. The face amount of the underlying life insurance policies was \$456 million and \$463 million as of December 31, 2022 and 2021, respectively. There are no loans offset against cash surrender values, and there are no restrictions as to the use of proceeds.

Credit linked notes

Credit linked notes are structured to effectively transfer the risk of first losses on a reference pool of loans and are considered to be free standing credit enhancements. These notes are recorded at the amount of the proceeds received, net of debt issuance costs. In addition, as the credit guarantee component of these notes is considered to be free standing, the ACL measured on the reference pool of loans in accordance with ASC 326 is not reduced by the credit guarantee. Rather, a contra debt balance equal to the estimated ACL on the reference pool of loans is recorded, which reduces the carrying value of the notes. The initial contra debt balance and subsequent adjustments are recorded with a corresponding gain or loss on recovery from credit guarantees recognized in earnings.

Stock compensation plans

The Company has an incentive plan that gives the BOD the authority to grant stock awards, consisting of unrestricted stock, stock units, dividend equivalent rights, stock options (incentive and non-qualified), stock appreciation rights, restricted stock, and performance and annual incentive awards. Compensation expense on non-vested restricted stock awards is based on the fair value of the award on the measurement date which, for the Company, is the date of the grant and is recognized ratably over the service period of the award. Forfeitures are estimated at the time of the award grant and revised in subsequent periods if actual forfeitures differ from those estimates. The fair value of non-vested restricted stock awards is the market price of the Company's stock on the date of grant.

The Company's performance stock units have a cumulative EPS target and a TSR performance measure component. The TSR component is a market-based performance condition that is separately valued as of the date of the grant. A Monte Carlo valuation model is used to determine the fair value of the TSR performance metric, which simulates potential TSR outcomes over the performance period and determines the payouts that would occur in each scenario. The resulting fair value of the TSR component is based on the average of these results. Compensation expense related to the TSR component is based on the fair value determination on the date of the grant and is not subsequently revised based on actual performance. Compensation expense related to the EPS component for these awards is based on the fair value (market price of the Company's stock on the date of the grant) of the award. Compensation expense related to both the TSR and EPS components is recognized ratably over the service period of the award.

See "Note 13. Stockholders' Equity" of these Notes to Consolidated Financial Statements for further discussion of stock awards.

Dividends

WAL is a legal entity separate and distinct from its subsidiaries. As a holding company with limited significant assets other than the capital stock of its subsidiaries, WAL's ability to pay dividends depends primarily upon the receipt of dividends or other capital distributions from its subsidiaries. The Company's subsidiaries' ability to pay dividends to WAL is subject to, among other things, their individual earnings, financial condition, and need for funds, as well as federal and state governmental policies and regulations applicable to WAL and each of those subsidiaries, which limit the amount that may be paid as dividends without prior approval. In addition, the terms and conditions of other securities the Company issues may restrict its ability to pay dividends to holders of the Company's common stock. For example, if any required payments on outstanding trust preferred securities are not made, WAL would be prohibited from paying cash dividends on its common stock.

Preferred stock

On September 22, 2021, the Company issued an aggregate of 12,000,000 depositary shares, each representing a 1/400th ownership interest in a share of the Company’s 4.250% Fixed-Rate Reset Non-Cumulative Perpetual Preferred Shares, Series A, par value $0.0001 per share, with a liquidation preference of $25 per Depositary Share (equivalent to $10,000 per share of Series A preferred stock). The Company's Series A preferred stock is perpetual preferred stock that is not subject to any mandatory redemption, resulting in classification as permanent equity. Dividends on preferred stock are recognized on the declaration date and are recorded as a reduction of retained earnings.

Treasury shares

The Company separately presents treasury shares, which represent shares surrendered to the Company equal in value to the statutory payroll tax withholding obligations arising from the vesting of employee restricted stock awards. Treasury shares are carried at cost.

Sales of common stock under ATM program

The Company has a distribution agency agreement with J.P. Morgan Securities LLC and Piper Sandler & Co., under which the Company may sell shares of its common stock on the NYSE. The Company pays the distribution agents a mutually agreed rate, not to exceed 2% of the gross offering proceeds of the shares sold pursuant to the distribution agency agreement. The common stock is sold at prevailing market prices at the time of the sale or at negotiated prices and, as a result, prices will vary. Any sales under the ATM program are made pursuant to a prospectus dated May 14, 2021 and prospectus supplements filed with the SEC in an offering of shares from the Company's shelf registration statement on Form S-3 (No. 333-256120). See "Note 13. Stockholders' Equity" of these Notes to Consolidated Financial Statements for further discussion of this program.

Derivative financial instruments

Derivative instruments are contracts between two or more parties that have a notional amount and an underlying variable, require a small or no initial investment, and allow for the net settlement of positions. A derivative’s notional amount serves as the basis for the payment provision of the contract and takes the form of units, such as shares or dollars. A derivative’s underlying variable is a specified interest rate, security price, commodity price, foreign exchange rate, index, or other variable. The interaction between the notional amount and the underlying variable determines the number of units to be exchanged between the parties and influences the fair value of the derivative contract.

The Company recognizes derivatives as assets or liabilities on the Consolidated Balance Sheet at their fair value in accordance with ASC 815, *Derivatives and Hedging*. The accounting for changes in the fair value of a derivative instrument depends on whether it has been designated and qualifies as part of a hedging relationship and further, on the type of hedging relationship. Derivative instruments designated in a hedge relationship to mitigate exposure to changes in the fair value of an asset or liability attributable to a particular risk, such as interest rate risk, are considered fair value hedges.

The Company documents its hedge relationships, including identification of the hedging instruments and the hedged items, as well as its risk management objectives and strategies for undertaking the hedge transaction after the derivative contract is executed. At inception, the Company performs a quantitative assessment to determine whether the derivatives used in hedging transactions are highly effective (as defined in the guidance) in offsetting changes in the fair value of the hedged item. Retroactive effectiveness is assessed, as well as the continued expectation that the hedge will remain effective prospectively. After the initial quantitative assessment is performed, on a quarterly basis, the Company performs a qualitative hedge effectiveness assessment. This assessment takes into consideration any adverse developments related to the counterparty's risk of default and any negative events or circumstances that affect the factors that originally enabled the Company to assess that it could reasonably support, qualitatively, an expectation that the hedging relationship was and will continue to be highly effective. The Company discontinues hedge accounting prospectively when it is determined that a hedge is no longer highly effective. When hedge accounting is discontinued on a fair value hedge that no longer qualifies as an effective hedge, the derivative instrument continues to be reported at fair value on the Consolidated Balance Sheet, but the carrying amount of the hedged item is no longer adjusted for future changes in fair value. The adjustment to the carrying amount of the hedged item that existed at the date hedge accounting is discontinued is amortized over the remaining life of the hedged item into earnings.

The Company uses interest rate contracts to mitigate interest-rate risk associated with changes to the fair value of certain fixed-rate financial instruments (fair value hedges). Changes in the fair value of a derivative that is designated and qualifies as a fair value hedge, along with changes in the fair value of the hedged asset or liability that are attributable to the hedged risk, are recorded in the same line item as the offsetting loss or gain on the related interest rate contracts during the period of change. For loans, the gain or loss on the hedged item is included in interest income and for subordinated debt, the gain or loss on the hedged items was included in interest expense.

Derivative instruments that are not designated as hedges, so called free-standing derivatives, are reported on the Consolidated Balance Sheet at fair value and the changes in fair value are recognized in earnings as non-interest income during the period of change. The Company enters into commitments to purchase mortgage loans that will be held for sale. These loan commitments, described as IRLCs, qualify as derivative instruments, except those that are originated rather than purchased, and intended for HFI classification. Changes in fair value associated with changes in interest rates are economically hedged by utilizing forward sale commitments, interest rate futures, and interest rate swaps. These hedging instruments are typically entered into contemporaneously with IRLCs. Loans that have been or will be purchased or originated may be used to satisfy the Company's forward sale commitments. In addition, derivative financial instruments are also used to economically hedge the Company's MSR portfolio. Changes in the fair value of derivative financial instruments that hedge IRLCs and loans HFS are included in Net gain on loan origination and sale activities in the Consolidated Income Statement. Changes in the fair value of derivative financial instruments that hedge MSRs are included in Net loan servicing revenue in the Consolidated Income Statement.

The Company may in the normal course of business purchase a financial instrument or originate a loan that contains an embedded derivative instrument. Upon purchasing the instrument or originating the loan, the Company assesses whether the economic characteristics of the embedded derivative are clearly and closely related to the economic characteristics of the remaining component of the financial instrument (i.e., the host contract) and whether a separate instrument with the same terms as the embedded instrument would meet the definition of a derivative instrument. When it is determined that the embedded derivative possesses economic characteristics that are not clearly and closely related to the economic characteristics of the host contract and a separate instrument with the same terms would qualify as a derivative instrument, the embedded derivative is separated from the host contract and carried at fair value. However, in cases where the host contract is measured at fair value, with changes in fair value reported in current earnings, or the Company is unable to reliably identify and measure an embedded derivative for separation from its host contract, the entire contract is carried on the Consolidated Balance Sheet at fair value and is not designated as a hedging instrument.

Off-balance sheet instruments

In the ordinary course of business, the Company enters into off-balance sheet financial instrument arrangements consisting of commitments to extend credit and letters of credit. Such financial instruments are recorded in the Consolidated Balance Sheets when funded. These off-balance sheet financial instruments impact, to varying degrees, elements of credit risk in excess of amounts recognized on the Consolidated Balance Sheet. Losses could be experienced when the Company is contractually obligated to make a payment under these instruments and must seek repayment from the borrower, which may not be as financially sound in the current period as they were when the commitment was originally made. Commitments to extend credit are agreements to lend to a customer as long as there is no violation of any condition established in the contract and, in certain instances, may be unconditionally cancellable. Commitments generally have fixed expiration dates or other termination clauses and may require payment of a fee. The Company enters into credit arrangements that generally provide for the termination of advances in the event of a covenant violation or other event of default. Since many of the commitments are expected to expire without being drawn upon, the total commitment amounts do not necessarily represent future cash requirements. The Company evaluates each customer’s creditworthiness on a case-by-case basis. The amount of collateral obtained, if deemed necessary by the Company upon extension of credit, is based on management’s credit evaluation of the party. The commitments are collateralized by the same types of assets used as loan collateral.

The Company also has off-balance sheet arrangements related to its derivative instruments. Derivative instruments are recognized in the Consolidated Balance Sheets at fair value and their notional values are carried off-balance sheet. See "Note 15. Derivatives and Hedging Activities" of these Notes to Consolidated Financial Statements for further discussion.

Fair values of financial instruments

The Company uses fair value measurements to record fair value adjustments to certain assets and liabilities. ASC 820, *Fair Value Measurement*, establishes a framework for measuring fair value and a three-level valuation hierarchy for disclosure of fair value measurement, and also sets forth disclosure requirements for fair value measurements. The valuation hierarchy is based upon the transparency of inputs to the valuation of an asset or liability as of the measurement date. The Company uses various valuation approaches, including market, income, and/or cost approaches. ASC 820 establishes a hierarchy for inputs used in measuring fair value that maximizes the use of observable inputs and minimizes the use of unobservable inputs by requiring that observable inputs be used when available. Observable inputs are inputs that market participants would use in pricing the asset or liability and are developed based on market data obtained from sources independent of the Company. Unobservable inputs are inputs that reflect the Company’s assumptions about the factors market participants would consider in pricing the asset or liability and are developed based on the best information available in the circumstances. The hierarchy is broken down into three levels based on the reliability of inputs, as follows:

- Level 1 - Unadjusted quoted prices in active markets that are accessible at the measurement date for identical, unrestricted assets or liabilities.

- Level 2 - Inputs other than quoted prices included in Level 1 that are observable for the asset or liability, either directly or indirectly. These might include quoted prices for similar instruments in active markets, quoted prices for identical or similar instruments in markets that are not active, inputs other than quoted prices that are observable for the asset or liability (such as interest rates, prepayment speeds, volatilities, etc.) or model-based valuation techniques where all significant assumptions are observable, either directly or indirectly, in the market.
- Level 3 - Valuation is generated from model-based techniques where one or more significant inputs are not observable, either directly or indirectly, in the market. These unobservable assumptions reflect the Company's own estimates of assumptions that market participants would use in pricing the asset or liability. Valuation techniques may include use of matrix pricing, discounted cash flow models, and similar techniques.

The availability of observable inputs varies based on the nature of the specific financial instrument. To the extent that valuation is based on models or inputs that are less observable or unobservable in the market, the determination of fair value requires more judgment. Accordingly, the degree of judgment exercised by the Company in determining fair value is greatest for instruments categorized in Level 3. In certain cases, the inputs used to measure fair value may fall into different levels of the fair value hierarchy. For disclosure purposes, the lowest level input that is significant to the fair value measurement determines the level in the fair value hierarchy within which the fair value measurement falls in its entirety.

Fair value is a market-based measure considered from the perspective of a market participant who may purchase the asset or assume the liability, rather than an entity-specific measure. When market assumptions are available, ASC 820 requires that the Company consider the assumptions that market participants would use to estimate the fair value of the financial instrument at the measurement date.

ASC 825, *Financial Instruments*, requires disclosure of fair value information about financial instruments, whether or not recognized on the balance sheet, for which it is practicable to estimate that value.

Management uses its best judgment in estimating the fair value of the Company's financial instruments; however, there are inherent limitations in any estimation technique. Therefore, for substantially all financial instruments, the fair value estimates presented herein are not necessarily indicative of the amounts the Company could have realized in a sales transaction at December 31, 2022 and 2021. The estimated fair value amounts for December 31, 2022 and 2021 have been measured as of period-end and have not been re-evaluated or updated for purposes of these Consolidated Financial Statements subsequent to those dates. As such, the estimated fair values of these financial instruments subsequent to the reporting date may be different than the amounts reported at period-end.

The information in "Note 19. Fair Value Accounting" of these Notes to Consolidated Financial Statements should not be interpreted as an estimate of the fair value of the entire Company since a fair value calculation is only required for a limited portion of the Company's assets and liabilities.

Due to the wide range of valuation techniques and the degree of subjectivity used in making the estimate, comparisons between the Company's disclosures and those of other companies or banks may not be meaningful.

The following methods and assumptions were used by the Company in estimating the fair value of its financial instruments:

Cash, cash equivalents, and restricted cash

The carrying amounts reported on the Consolidated Balance Sheet for cash and due from banks approximate their fair value.

Investment securities

The fair values of U.S. treasury and certain other debt securities as well as publicly-traded CRA investments and exchange-listed common and preferred stock are based on quoted market prices and are categorized as Level 1 in the fair value hierarchy.

The fair values of debt securities are primarily determined based on matrix pricing. Matrix pricing is a mathematical technique that utilizes observable market inputs including, yield curves, credit ratings, and prepayment speeds. Fair values determined using matrix pricing are generally categorized as Level 2 in the fair value hierarchy. In addition to matrix pricing, the Company uses other pricing sources, including observed prices on publicly traded securities and dealer quotes, to estimate the fair value of debt securities, which are also categorized as Level 2 in the fair value hierarchy.

Loans HFS

Government-insured or guaranteed and agency-conforming loans HFS are salable into active markets. Accordingly, the fair value of these loans is based on quoted market or contracted selling prices or a market price equivalent, which are categorized as Level 2 in the fair value hierarchy.

The fair value of non-agency loans HFS as well as certain loans that become nonsalable into active markets due to the identification of a defect is determined based on valuation techniques that utilize Level 3 inputs.

Loans HFI

The fair value of loans HFI is estimated based on discounted cash flows using interest rates currently being offered for loans with similar terms to borrowers with similar credit quality and adjustments that the Company believes a market participant would consider in determining fair value based on a third-party independent valuation. As a result, the fair value for loans HFI is categorized as Level 3 in the fair value hierarchy.

Mortgage servicing rights

The fair value of MSRs is estimated using a discounted cash flow model that incorporates assumptions that a market participant would use in estimating the fair value of servicing rights, including, but not limited to, option adjusted spread, conditional prepayment rate, servicing fee rate, and cost to service. As a result, the fair value for MSRs is categorized as Level 3 in the fair value hierarchy.

Accrued interest receivable and payable

The carrying amounts reported on the Consolidated Balance Sheet for accrued interest receivable and payable approximate their fair values.

Derivative financial instruments

All derivatives are recognized on the Consolidated Balance Sheets at fair value. The valuation methodologies used to estimate the fair value of derivative instruments varies by type. Interest rate contracts, foreign currency contracts, and forward purchase and sales contracts are measured based on valuation techniques using Level 2 inputs, such as quoted market price, contracted selling price, or market price equivalent. IRLCs are measured based on valuation techniques that consider loan type, underlying loan amount, maturity date, note rate, loan program, and expected settlement date, with Level 3 inputs for the servicing release premium and pull-through rate. These measurements are adjusted at the loan level to consider the servicing release premium and loan pricing adjustment specific to each loan. The base value is then adjusted for the pull-through rate. The pull-through rate and servicing fee multiple are unobservable inputs based on historical experience.

Deposits

The fair value for demand and savings deposits is by definition equal to the amount payable on demand at the reporting date (that is, their carrying amount), as these deposits do not have a contractual term. The carrying amount for variable rate deposit accounts approximates their fair value. Fair values for fixed rate certificates of deposit are estimated using a discounted cash flow calculation that applies interest rates currently being offered on certificates to a schedule of aggregated expected monthly maturities on these deposits. The fair value measurement of deposit liabilities is categorized as Level 2 in the fair value hierarchy.

FHLB advances and repurchase agreements

The fair values of the Company's borrowings are estimated using discounted cash flow analyses, based on the market rates for similar types of borrowing arrangements. The carrying value of FHLB advances and repurchase agreements approximate their fair values due to their short durations and have been categorized as Level 2 in the fair value hierarchy.

Credit linked notes

The fair value of credit linked notes is based on observable inputs, when available, and as such credit linked notes are categorized as Level 2 liabilities.

Subordinated debt

The fair value of subordinated debt is based on the market rate for the respective subordinated debt security. Subordinated debt has been categorized as Level 2 in the fair value hierarchy.

Junior subordinated debt

Junior subordinated debt is valued based on a discounted cash flow model which uses the Treasury Bond rates and the 'BB' and 'BBB' rated financial indexes as inputs. Junior subordinated debt has been categorized as Level 3 in the fair value hierarchy.

Income taxes

The Company is subject to income taxes in the United States and files a consolidated federal income tax return with all of its subsidiaries, with the exception of BW Real Estate, Inc. Deferred income taxes are recorded to reflect the effects of temporary differences between the financial reporting carrying amounts of assets and liabilities and their income tax bases using enacted tax rates that are expected to be in effect when the taxes are actually paid or recovered. As changes in tax laws or rates are enacted, deferred tax assets and liabilities are adjusted through the provision for income taxes.

Net DTAs are recorded to the extent that these assets will more-likely-than-not be realized. In making these determinations, all available positive and negative evidence is considered, including scheduled reversals of deferred tax liabilities, tax planning strategies, projected future taxable income, and recent operating results. If it is determined that deferred income tax assets to be realized in the future are in excess of their net recorded amount, an adjustment to the valuation allowance will be recorded, which will reduce the Company's provision for income taxes.

A tax benefit from an unrecognized tax benefit may be recognized when it is more-likely-than-not that the position will be sustained upon examination, including related appeals or litigation, based on technical merits. Income tax benefits must meet a more-likely-than-not recognition threshold at the effective date to be recognized.

Interest and penalties related to unrecognized tax benefits are recognized as provision for income taxes in the Consolidated Income Statement. Accrued interest and penalties are included in the related tax liability line with other liabilities on the Consolidated Balance Sheet. See "Note 17. Income Taxes" of these Notes to Consolidated Financial Statements for further discussion on income taxes.

Non-interest income

Non-interest income includes revenue associated with mortgage banking and commercial banking activities, investment securities, equity investments, and BOLI. These non-interest income streams are primarily generated by different types of financial instruments held by the Company for which there is specific accounting guidance and therefore, are not within the scope of ASC 606, *Revenue from Contracts with Customers*.

Non-interest income amounts within the scope of ASC 606 include service charges and fees, success fees related to equity investments, debit and credit card interchange fees, and legal settlement services fees. Service charges and fees consist of fees earned from performance of account analysis, general account services, and other deposit account services. These fees are recognized as the related services are provided. Success fees are one-time fees detailed as part of certain loan agreements and are earned immediately upon occurrence of a triggering event. Card income includes fees earned from customer use of debit and credit cards, interchange income from merchants, and international charges. Card income is generally within the scope of ASC 310, *Receivables*; however, certain processing transactions for merchants, such as interchange fees, are within the scope of ASC 606. The Company generally receives payment for its services during the period or at the time services are provided and, therefore, does not have material contract asset or liability balances at period end. Legal settlement service fees relate to payment services provided for the distribution of funds from legal settlements and are recognized upon transfer of funds to a claimant. See "Note 25. Revenue from Contracts with Customers" of these Notes to Consolidated Financial Statements for further details related to the nature and timing of revenue recognition for non-interest income revenue streams within the scope of this standard.

2. MERGERS, ACQUISITIONS AND DISPOSITIONS

Acquisition of Digital Disbursements

On January 25, 2022, the Company completed its acquisition of DST, doing business as Digital Disbursements, a digital payments platform for the class action legal industry. The acquisition of DST extends the Company's digital payment efforts by providing a digital payments platform for the class action market and broader legal industry.

This transaction was accounted for as a business combination under the acquisition method of accounting. Assets purchased and liabilities assumed were recorded at their respective acquisition date estimated fair values, which are final as of December 31, 2022. During the measurement period (not to exceed one year from the acquisition date), the fair values of assets acquired and liabilities assumed are subject to adjustment if additional information becomes available to indicate a more accurate or appropriate value for an asset or liability. During the year ended December 31, 2022, the Company adjusted its initial provisional estimates for identified intangible assets based on new available information regarding conditions that existed as of the acquisition date, and recognized a decrease of $7.4 million to the fair value of identified intangible assets as a result of adjustments to certain valuation inputs. This measurement period adjustment resulted in a $0.5 million reduction in previously recorded amortization expense which is a component of Other expense in the Consolidated Income Statement.

Total consideration of $57.0 million, comprised of cash paid at closing of $50.6 million and contingent consideration with an estimated fair value of $6.4 million, was exchanged for all of the issued and outstanding membership interests of DST. The terms of the acquisition include a contingent consideration arrangement that is based on performance for the three year period subsequent to the acquisition. There is no required minimum or maximum payment amount specified under the terms of the contingent consideration agreement. During the year ended December 31, 2022, the Company adjusted its initial provisional estimate of the fair value of the contingent consideration and recognized a decrease of $10.8 million due to new available information regarding conditions that existed as of the acquisition date and adjustments to certain valuation inputs. The fair value of the contingent consideration recognized on the acquisition date was estimated using a discounted cash flow approach.

DST's results of operations have been included in the Company's results beginning January 25, 2022 and are reported as part of the Consumer Related segment. Acquisition and restructure expenses related to the DST acquisition of $0.4 million for the year ended December 31, 2022, were included as a component of non-interest expense in the Consolidated Income Statement, all of which are acquisition related costs as defined by ASC 805.

The fair value amounts of identifiable assets acquired and liabilities assumed in the DST acquisition are as follows:

	January 25, 2022
	(in millions)
Assets acquired:	
Cash and cash equivalents	$ 0.6
Identified intangible assets	20.1
Other assets	0.1
Total assets	$ 20.8
Liabilities assumed:	
Other liabilities	$ 0.4
Total liabilities	0.4
Net assets acquired	$ 20.4
Consideration paid	
Cash	$ 50.6
Contingent consideration	6.4
Total consideration	$ 57.0
Goodwill	$ 36.6

In connection with the acquisition, the Company acquired identifiable intangible assets totaling $20.1 million, as detailed in the table below:

		Acquisition Date Fair Value	Estimated Useful Life
		(in millions)	*(in years)*
Customer relationships	$	15.7	7
Developed technology		4.1	5
Trade name		0.3	10
Total	$	20.1	

Goodwill in the amount of $36.6 million was recognized, of which $31.8 million is expected to be deductible for tax purposes. Goodwill was allocated entirely to the Consumer Related segment and represents the strategic, operational, and financial benefits expected from the acquisition, including expansion of the Company's settlement services offerings, diversification of its revenue sources, and post-acquisition synergies from integrating Digital Disbursements, as well as the value of the acquired workforce.

Acquisition of AmeriHome

On April 7, 2021, the Company completed its acquisition of Aris, the parent company of AmeriHome, and certain other parties, pursuant to which, Aris merged with and into an indirect subsidiary of WAB. As a result of the merger, AmeriHome is a wholly-owned indirect subsidiary of the Company and continues to operate as AmeriHome Mortgage, a Western Alliance Bank company. AmeriHome is a leading national business-to-business mortgage acquirer and servicer. The acquisition of AmeriHome complements the Company's national commercial businesses with a mortgage franchise that allows the Company to expand mortgage-related offerings to existing clients and diversifies the Company's revenue profile by expanding sources of non-interest income.

Total cash consideration of $1.2 billion was paid in exchange for all of the issued and outstanding membership interests of Aris. AmeriHome's results of operations have been included in the Company's results beginning April 7, 2021 and are reported as part of the Consumer Related segment. No acquisition and restructure expenses related to the AmeriHome acquisition were recognized during the year ended December 31, 2022. For the year ended December 31, 2021, the Company recognized $15.3 million in acquisition and restructure expenses related to the AmeriHome acquisition, which included $3.4 million of acquisition related costs, as defined by ASC 805.

This transaction was accounted for as a business combination under the acquisition method of accounting. Assets purchased and liabilities assumed were recorded at their respective acquisition date estimated fair values, which were considered final as of March 31, 2022.

The fair value amounts of identifiable assets acquired and liabilities assumed in the AmeriHome acquisition are as follows:

		April 7, 2021
		(in millions)
Assets acquired:		
Cash and cash equivalents	$	207.2
Loans held for sale		3,552.9
Mortgage servicing rights		1,347.0
Premises and equipment, net		11.3
Operating right of use asset		18.9
Identified intangible assets		141.0
Loans eligible for repurchase		2,744.7
Deferred tax asset		6.6
Other assets		236.0
Total assets	$	8,265.6
Liabilities assumed:		
Other borrowings	$	3,633.9
Operating lease liability		18.9
Liability for loans eligible for repurchase		2,744.7
Other liabilities		149.5
Total liabilities		6,547.0
Net assets acquired	$	1,718.6
Consideration paid		
Cash	$	1,231.6
Elimination of pre-existing debt		686.8
Total consideration	$	1,918.4
Goodwill	$	199.8

In connection with the acquisition, the Company acquired identifiable intangible assets totaling $141.0 million, as detailed in the table below:

		Acquisition Date Fair Value	Estimated Useful Life
		(in millions)	*(in years)*
Correspondent customer relationships	$	76.0	20
Operating licenses		55.5	40
Trade name		9.5	20
Total		141.0	

Goodwill in the amount of $199.8 million was recognized and allocated entirely to the Consumer Related segment. Goodwill represents the strategic, operational, and financial benefits expected from the acquisition, including expansion of the Company's mortgage offerings, diversification of its revenue sources, and post-acquisition synergies from integrating AmeriHome's operating platform, as well as the value of the acquired workforce. Approximately $185.0 million of goodwill is expected to be deductible for tax purposes.

The following table presents pro forma information as if the AmeriHome acquisition was completed on January 1, 2020. The pro forma information includes adjustments for interest income and interest expense on existing loan agreements between WAL and AmeriHome prior to acquisition, the impact of MSR sales contemplated in connection with the acquisition, amortization of intangible assets arising from the acquisition, recognition of stock compensation expense for awards issued to certain AmeriHome executives, transaction costs, and related income tax effects. The pro forma information is not necessarily indicative of the results of operations as they would have been had the transactions been effected on the assumed dates.

	December 31,			
		2021		2020
	(in millions)			
Interest income	**$**	**1,679.9**	$	1,322.6
Non-interest income		**470.5**		902.7
Net income		**909.7**		931.2

3. INVESTMENT SECURITIES

The carrying amounts and fair values of investment securities at December 31, 2022 and 2021 are summarized as follows:

	December 31, 2022			
	Amortized Cost	**Gross Unrealized Gains**	**Gross Unrealized (Losses)**	**Fair Value**
	(in millions)			
Held-to-maturity				
Private label residential MBS	**$ 198**	**$ —**	**$ (39)**	**$ 159**
Tax-exempt	**1,091**	**—**	**(138)**	**953**
Total HTM securities	**$ 1,289**	**$ —**	**$ (177)**	**$ 1,112**
Available-for-sale debt securities				
CLO	**$ 2,796**	**$ —**	**$ (90)**	**$ 2,706**
Commercial MBS issued by GSEs	**104**	**1**	**(8)**	**97**
Corporate debt securities	**429**	**—**	**(39)**	**390**
Private label residential MBS	**1,442**	**—**	**(243)**	**1,199**
Residential MBS issued by GSEs	**2,123**	**—**	**(383)**	**1,740**
Tax-exempt	**1,004**	**2**	**(115)**	**891**
Other	**75**	**6**	**(12)**	**69**
Total AFS debt securities	**$ 7,973**	**$ 9**	**$ (890)**	**$ 7,092**
Equity securities				
Common stock	**$ 4**	**$ —**	**$ (1)**	**$ 3**
CRA investments	**53**	**—**	**(4)**	**49**
Preferred stock	**116**	**—**	**(8)**	**108**
Total equity securities	**$ 173**	**$ —**	**$ (13)**	**$ 160**

	December 31, 2021			
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized (Losses)	Fair Value
	(in millions)			
Held-to-maturity				
Private label residential MBS	$ 217	$ —	$ (2)	$ 215
Tax-exempt	890	43	(2)	931
Total HTM securities	$ 1,107	$ 43	$ (4)	$ 1,146
Available-for-sale debt securities				
CLO	$ 926	$ 1	$ (1)	$ 926
Commercial MBS issued by GSEs	68	1	—	69
Corporate debt securities	383	9	(9)	383
Private label residential MBS	1,529	3	(24)	1,508
Residential MBS issued by GSEs	2,028	7	(42)	1,993
Tax-exempt	1,145	71	(1)	1,215
U.S. treasury securities	13	—	—	13
Other	75	11	(4)	82
Total AFS debt securities	$ 6,167	$ 103	$ (81)	$ 6,189
Equity securities				
CRA investments	$ 45	$ —	$ —	$ 45
Preferred stock	107	8	(1)	114
Total equity securities	$ 152	$ 8	$ (1)	$ 159

Securities with carrying amounts of approximately $1.7 billion and $2.2 billion at December 31, 2022 and 2021, respectively, were pledged for various purposes as required or permitted by law.

The following tables summarize the Company's AFS debt securities in an unrealized loss position at December 31, 2022 and 2021, aggregated by major security type and length of time in a continuous unrealized loss position:

	December 31, 2022					
	Less Than Twelve Months		More Than Twelve Months		Total	
	Gross Unrealized Losses	Fair Value	Gross Unrealized Losses	Fair Value	Gross Unrealized Losses	Fair Value
	(in millions)					
Available-for-sale debt securities						
CLO	**$ 81**	**$ 2,467**	**$ 9**	**$ 216**	**$ 90**	**$ 2,683**
Commercial MBS issued by GSEs	**4**	**46**	**4**	**14**	**8**	**60**
Corporate debt securities	**28**	**263**	**11**	**120**	**39**	**383**
Private label residential MBS	**27**	**279**	**216**	**912**	**243**	**1,191**
Residential MBS issued by GSEs	**82**	**600**	**301**	**1,101**	**383**	**1,701**
Tax-exempt	**93**	**752**	**22**	**78**	**115**	**830**
Other	**4**	**26**	**8**	**26**	**12**	**52**
Total AFS securities	**$ 319**	**$ 4,433**	**$ 571**	**$ 2,467**	**$ 890**	**$ 6,900**

	December 31, 2021					
	Less Than Twelve Months		More Than Twelve Months		Total	
	Gross Unrealized Losses	Fair Value	Gross Unrealized Losses	Fair Value	Gross Unrealized Losses	Fair Value
	(in millions)					
Available-for-sale debt securities						
CLO	$ 1	$ 171	$ —	$ —	$ 1	$ 171
Commercial MBS issued by GSEs	1	19	—	—	1	19
Corporate debt securities	9	107	—	—	9	107
Private label residential MBS	24	1,250	—	—	24	1,250
Residential MBS issued by GSEs	32	1,356	9	142	41	1,498
Tax-exempt	1	141	—	—	1	141
Other	—	2	4	28	4	30
Total AFS securities	$ 68	$ 3,046	$ 13	$ 170	$ 81	$ 3,216

The total number of AFS debt securities in an unrealized loss position at December 31, 2022 is 832, compared to 179 at December 31, 2021.

On a quarterly basis, the Company performs an impairment analysis on its AFS debt securities that are in an unrealized loss position at the end of the period to determine whether credit losses should be recognized on these securities. Qualitative considerations made by the Company in its impairment analysis are further discussed below.

Government Issued Securities

Commercial and residential MBS are issued by either government agencies or GSEs. These securities are either explicitly or implicitly guaranteed by the U.S. government, are highly rated by major rating agencies. Further, principal and interest payments on these securities continue to be made on a timely basis.

Non-Government Issued Securities

Qualitative factors used in the Company's credit loss assessment of its securities that are not issued and guaranteed by the U.S. government include consideration of any adverse conditions related to a specific security, industry, or geographic region of its securities, any credit ratings below investment grade, the payment structure of the security and the likelihood of the issuer to be able to make payments that increase in the future, and failure of the issuer to make any scheduled principal or interest payments.

For the Company's corporate debt and tax-exempt securities, the Company also considers various metrics of the issuer including days of cash on hand, the ratio of long-term debt to total assets, the net change in cash between reporting periods, and consideration of any breach in covenant requirements. The Company's corporate debt securities are investment grade, issuers continue to make timely principal and interest payments, and the unrealized losses on these security portfolios primarily relate to changes in interest rates and other market conditions that are not considered to be credit-related issues. The Company continues to receive timely principal and interest payments on its tax-exempt securities and the majority of these issuers have revenues pledged for payment of debt service prior to payment of other types of expenses.

For the Company's private label residential MBS, which consist of non-agency collateralized mortgage obligations that are secured by pools of residential mortgage loans, the Company also considers metrics such as securitization risk weight factor, current credit support, whether there were any mortgage principal losses resulting from defaults in payments on the underlying mortgage collateral, and the credit default rate over the last twelve months. These securities primarily carry investment grade credit ratings, principal and interest payments on these securities continue to be made on a timely basis, and credit support for these securities is considered adequate.

The Company's CLO portfolio consists of highly rated securitization tranches, containing pools of medium to large-sized corporate, high yield bank loans. These are variable rate securities that have an investment grade rating of Single-A or better. The Company has increased its investment in these securities over the past year and unrealized losses on these securities are primarily a function of the differential from the offer price and the valuation mid-market price as well as changes in interest rates.

Unrealized losses on the Company's other securities portfolio relate to taxable municipal and trust preferred securities. The Company is continuing to receive timely principal and interest payments on its taxable municipal securities, these securities continue to be highly rated, and the number of days of cash on hand is strong. The Company's trust preferred securities are investment grade and the issuers continue to make timely principal and interest payments.

Based on the qualitative factors noted above and as the Company does not intend to sell these securities and it is more likely than not that the Company will not be required to sell the securities prior to their anticipated recovery, no credit losses have been recognized on these securities during the years ended December 31, 2022 and 2021. In addition, as of December 31, 2022 and 2021, no ACL on the Company's AFS securities has been recognized.

The credit loss model under ASC 326-20, applicable to HTM debt securities, requires recognition of lifetime expected credit losses through an allowance account at the time the security is purchased.

The following table presents a rollforward by major security type of the ACL on the Company's HTM debt securities:

	Year Ended December 31, 2022				
	Balance, December 31, 2021	**Provision for Credit Losses**	**Charge-offs**	**Recoveries**	**Balance, December 31, 2022**
			(in millions)		
Held-to-maturity debt securities					
Tax-exempt	**$ 5.2**	**$ —**	**$ —**	**$ —**	**$ 5.2**

	Year Ended December 31, 2021:				
	Balance, December 31, 2020	Recovery of Credit Losses	Charge-offs	Recoveries	Balance December 31, 2021
			(in millions)		
Held-to-maturity debt securities					
Tax-exempt	$ 6.8	$ (1.6)	$ —	$ —	$ 5.2

No allowance has been recognized on the Company's HTM private label residential MBS as losses are not expected due to the Company holding a senior position in these securities.

Accrued interest receivable on HTM securities totaled $4 million and $3 million at December 31, 2022 and 2021, respectively, and is excluded from the estimate of expected credit losses.

The following tables summarize the carrying amount of the Company’s investment ratings position as of December 31, 2022 and 2021, which are updated quarterly and used to monitor the credit quality of the Company's securities:

	December 31, 2022							
	AAA	**Split-rated AAA/AA+**	**AA+ to AA-**	**A+ to A-**	**BBB+ to BBB-**	**BB+ and below**	**Unrated**	**Totals**
	(in millions)							
Held-to-maturity								
Private label residential MBS	$ —	$ —	$ —	$ —	$ —	$ —	$ 198	$ 198
Tax-exempt	—	—	—	—	—	—	1,091	1,091
Total HTM securities (1)	$ —	$ —	$ —	$ —	$ —	$ —	$ 1,289	$ 1,289
Available-for-sale debt securities								
CLO	$ 310	$ —	$ 2,121	$ 275	$ —	$ —	$ —	$ 2,706
Commercial MBS issued by GSEs	—	97	—	—	—	—	—	97
Corporate debt securities	—	—	—	74	316	—	—	390
Private label residential MBS	1,158	—	41	—	—	—	—	1,199
Residential MBS issued by GSEs	—	1,740	—	—	—	—	—	1,740
Tax-exempt	11	15	392	425	—	—	48	891
Other	—	—	9	9	27	6	18	69
Total AFS securities (1)	$ 1,479	$ 1,852	$ 2,563	$ 783	$ 343	$ 6	$ 66	$ 7,092
Equity securities								
Common stock	$ —	$ —	$ —	$ —	$ —	$ —	$ 3	$ 3
CRA investments	—	24	—	—	—	—	25	49
Preferred stock	—	—	—	—	82	17	9	108
Total equity securities (1)	$ —	$ 24	$ —	$ —	$ 82	$ 17	$ 37	$ 160

(1) For rated securities, if ratings differ, the Company uses an average of the available ratings by major credit agencies.

	December 31, 2021							
	AAA	Split-rated AAA/AA+	AA+ to AA-	A+ to A-	BBB+ to BBB-	BB+ and below	Unrated	Totals
	(in millions)							
Held-to-maturity								
Private label residential MBS	$ —	$ —	$ —	$ —	$ —	$ —	$ 217	$ 217
Tax-exempt	—	—	—	—	—	—	890	890
Total HTM securities (1)	$ —	$ —	$ —	$ —	$ —	$ —	$ 1,107	$ 1,107
Available-for-sale debt securities								
CLO	$ 45	$ —	$ 636	$ 245	$ —	$ —	$ —	$ 926
Commercial MBS issued by GSEs	—	69	—	—	—	—	—	69
Corporate debt securities	—	—	—	45	319	19	—	383
Private label residential MBS	1,420	—	87	—	1	—	—	1,508
Residential MBS issued by GSEs	—	1,993	—	—	—	—	—	1,993
Tax-exempt	43	40	469	629	—	—	34	1,215
U.S. treasury securities	—	13	—	—	—	—	—	13
Other	—	—	12	10	30	10	20	82
Total AFS securities (1)	$ 1,508	$ 2,115	$ 1,204	$ 929	$ 350	$ 29	$ 54	$ 6,189
Equity securities								
CRA investments	$ —	$ 28	$ —	$ —	$ —	$ —	$ 17	$ 45
Preferred stock	—	—	—	—	79	20	15	114
Total equity securities (1)	$ —	$ 28	$ —	$ —	$ 79	$ 20	$ 32	$ 159

(1) For rated securities, if ratings differ, the Company uses an average of the available ratings by major credit agencies.

A security is considered to be past due once it is 30 days contractually past due under the terms of the agreement. As of December 31, 2022, the Company did not have a significant amount of investment securities that were past due or on nonaccrual status.

The amortized cost and fair value of the Company's debt securities as of December 31, 2022, by contractual maturities, are shown below. MBS are shown separately as individual MBS are comprised of pools of loans with varying maturities. Therefore, these securities are listed separately in the maturity summary.

	December 31, 2022	
	Amortized Cost	**Estimated Fair Value**
	(in millions)	
Held-to-maturity		
Due in one year or less	**$ 9**	**$ 9**
After one year through five years	**17**	**17**
After five years through ten years	**29**	**28**
After ten years	**1,036**	**900**
Mortgage-backed securities	**198**	**158**
Total HTM securities	**$ 1,289**	**$ 1,112**
Available-for-sale		
Due in one year or less	**$ 1**	**$ 1**
After one year through five years	**170**	**159**
After five years through ten years	**1,136**	**1,086**
After ten years	**2,997**	**2,810**
Mortgage-backed securities	**3,669**	**3,036**
Total AFS securities	**$ 7,973**	**$ 7,092**

The following table presents gross gains and losses on sales of investment securities:

	Year Ended December 31,		
	2022	2021	2020
		(in millions)	
Available-for-sale securities			
Gross gains	**$ 7.6**	$ 8.4	$ 0.4
Gross losses	**(0.2)**	—	(0.2)
Net gains on AFS securities	**$ 7.4**	$ 8.4	$ 0.2
Equity securities			
Gross gains	**$ —**	$ 0.1	$ —
Gross losses	**(0.5)**	(0.2)	—
Net losses on equity securities	**$ (0.5)**	$ (0.1)	$ —

During the years ended December 31, 2022 and 2021, the Company sold securities with a carrying value of $170 million and $161 million, respectively, and recognized net gains of $7.4 million and $8.4 million, respectively. These sales were largely related to the Company's interest rate management actions to secure gains on tax-exempt municipal securities that were purchased at a discount at the onset of the COVID-19 pandemic. During the year ended December 31, 2020, the Company did not have significant sales of investment securities.

4. LOANS HELD FOR SALE

The Company purchases and originates residential mortgage loans to be sold or securitized through its AmeriHome mortgage banking business channel. The following is a summary of loans HFS by type:

	December 31, 2022	December 31, 2021
	(in millions)	
Government-insured or guaranteed:		
EBO (1)	$ —	$ 1,693
Non-EBO	**591**	1,396
Total government-insured or guaranteed	**591**	3,089
Agency-conforming	**593**	2,483
Non-agency	**—**	63
Total loans HFS	**$ 1,184**	$ 5,635

(1) EBO loans are delinquent FHA, VA, or USDA loans repurchased under the terms of the GNMA MBS program that can be repooled or resold when loans are brought current either through the borrower's reperformance or through completion of a loan modification.

During the year ended December 31, 2022, the Company transferred the remaining balance of its EBO loans from HFS to HFI.

The following is a summary of the net gain on loan purchase, origination, and sale activities:

	Year Ended December 31, 2022	Year Ended December 31, 2021 (2)
	(in millions)	
Mortgage servicing rights capitalized upon sale of loans	**$ 719.7**	$ 763.8
Net proceeds from sale of loans (1)	**(1,076.6)**	(465.3)
Provision for and change in estimate of liability for losses under representations and warranties, net	**1.7**	(0.6)
Change in fair value of loans HFS	**(6.8)**	(0.3)
Change in fair value of derivatives related to loans HFS:		
Unrealized loss on derivatives	**(5.9)**	(69.9)
Realized gain on derivatives	**408.0**	20.1
Total change in fair value of derivatives	**402.1**	(49.8)
Net gain on loans HFS	**$ 40.1**	$ 247.8
Loan acquisition and origination fees	**63.9**	78.4
Net gain on loan origination and sale activities	**$ 104.0**	$ 326.2

(1) Represents the difference between cash proceeds received upon settlement and loan basis.

(2) Period from April 7, 2021, the acquisition date of AmeriHome, through December 31, 2021.

5. LOANS, LEASES AND ALLOWANCE FOR CREDIT LOSSES

The composition of the Company's HFI loan portfolio is as follows:

	December 31,	
	2022	2021
	(in millions)	
Warehouse lending	$ 5,561	$ 5,156
Municipal & nonprofit	1,524	1,579
Tech & innovation	2,293	1,418
Equity fund resources	3,717	3,830
Other commercial and industrial	7,793	6,465
CRE - owner occupied	1,656	1,723
Hotel franchise finance	3,807	2,534
Other CRE - non-owner occupied	5,457	3,952
Residential	13,996	9,243
Residential - EBO	1,884	—
Construction and land development	3,995	3,006
Other	179	169
Total loans HFI	51,862	39,075
Allowance for credit losses	(310)	(252)
Total loans HFI, net of allowance	$ 51,552	$ 38,823

Loans classified as HFI are stated at the amount of unpaid principal, adjusted for net deferred fees and costs, premiums and discounts on acquired and purchased loans, and an ACL. Net deferred loan fees of $141 million and $86 million reduced the carrying value of loans as of December 31, 2022 and 2021, respectively. Net unamortized purchase premiums on acquired and purchased loans of $195 million and $185 million increased the carrying value of loans as of December 31, 2022 and 2021, respectively.

Nonaccrual and Past Due Loans

Loans are placed on nonaccrual status when management determines that the full repayment of principal and collection of interest according to contractual terms is no longer likely, generally when the loan becomes 90 days or more past due.

The following tables present nonperforming loan balances by loan portfolio segment:

	December 31, 2022			
	Nonaccrual with No Allowance for Credit Loss	Nonaccrual with an Allowance for Credit Loss	Total Nonaccrual	Loans Past Due 90 Days or More and Still Accruing
	(in millions)			
Municipal & nonprofit	$ —	$ 7	$ 7	$ —
Tech & innovation	—	1	1	—
Other commercial and industrial	1	23	24	—
CRE - owner occupied	10	2	12	—
Hotel franchise finance	—	10	10	—
Other CRE - non-owner occupied	5	3	8	—
Residential	—	19	19	—
Residential - EBO	—	—	—	582
Construction and land development	4	—	4	—
Total	$ 20	$ 65	$ 85	$ 582

Loans contractually delinquent by 90 days or more and still accruing totaled $582 million at December 31, 2022 and consist entirely of government guaranteed EBO residential loans.

	December 31, 2021			
	Nonaccrual with No Allowance for Credit Loss	Nonaccrual with an Allowance for Credit Loss	Total Nonaccrual	Loans Past Due 90 Days or More and Still Accruing
	(in millions)			
Tech & innovation	$ 2	$ 11	$ 13	$ —
Equity fund resources	—	1	1	—
Other commercial and industrial	13	3	16	—
CRE - owner occupied	12	1	13	—
Other CRE - non-owner occupied	11	2	13	—
Residential	—	15	15	—
Construction and land development	1	—	1	—
Other	—	1	1	—
Total	$ 39	$ 34	$ 73	$ —

The reduction in interest income associated with loans on nonaccrual status was approximately $4.7 million, $5.3 million, and $5.0 million for the years ended December 31, 2022, 2021, and 2020, respectively.

The following table presents an aging analysis of past due loans by loan portfolio segment:

	December 31, 2022					
	Current	**30-59 Days Past Due**	**60-89 Days Past Due**	**Over 90 days Past Due**	**Total Past Due**	**Total**
	(in millions)					
Warehouse lending	**$ 5,561**	**$ —**	**$ —**	**$ —**	**$ —**	**$ 5,561**
Municipal & nonprofit	**1,524**	**—**	**—**	**—**	**—**	**1,524**
Tech & innovation	**2,270**	**23**	**—**	**—**	**23**	**2,293**
Equity fund resources	**3,717**	**—**	**—**	**—**	**—**	**3,717**
Other commercial and industrial	**7,791**	**2**	**—**	**—**	**2**	**7,793**
CRE - owner occupied	**1,656**	**—**	**—**	**—**	**—**	**1,656**
Hotel franchise finance	**3,807**	**—**	**—**	**—**	**—**	**3,807**
Other CRE - non-owner occupied	**5,454**	**3**	**—**	**—**	**3**	**5,457**
Residential	**13,955**	**37**	**4**	**—**	**41**	**13,996**
Residential - EBO	**969**	**217**	**116**	**582**	**915**	**1,884**
Construction and land development	**3,995**	**—**	**—**	**—**	**—**	**3,995**
Other	**178**	**1**	**—**	**—**	**1**	**179**
Total loans	**$ 50,877**	**$ 283**	**$ 120**	**$ 582**	**$ 985**	**$ 51,862**

	December 31, 2021					
	Current	30-59 Days Past Due	60-89 Days Past Due	Over 90 days Past Due	Total Past Due	Total
	(in millions)					
Warehouse lending	$ 5,156	$ —	$ —	$ —	$ —	$ 5,156
Municipal & nonprofit	1,579	—	—	—	—	1,579
Tech & innovation	1,418	—	—	—	—	1,418
Equity fund resources	3,830	—	—	—	—	3,830
Other commercial and industrial	6,465	—	—	—	—	6,465
CRE - owner occupied	1,723	—	—	—	—	1,723
Hotel franchise finance	2,534	—	—	—	—	2,534
Other CRE - non-owner occupied	3,952	—	—	—	—	3,952
Residential	9,191	51	1	—	52	9,243
Construction and land development	3,006	—	—	—	—	3,006
Other	169	—	—	—	—	169
Total loans	$ 39,023	$ 51	$ 1	$ —	$ 52	$ 39,075

Credit Quality Indicators

The Company categorizes loans into risk categories based on relevant information about the ability of borrowers to service their debt such as current financial information, historical payment experience, credit documentation, public information, and current economic trends, among other factors. The Company analyzes loans individually to classify the loans as to credit risk. This analysis is performed on a quarterly basis. The risk rating categories are described in "Note 1. Summary of Significant Accounting Policies" of these Notes to Consolidated Financial Statements. The following tables present risk ratings by loan portfolio segment and origination year. The origination year is the year of origination or renewal.

	Term Loan Amortized Cost Basis by Origination Year						Revolving Loans Amortized Cost Basis	
December 31, 2022	2022	2021	2020	2019	2018	Prior		Total
				(in millions)				
Warehouse lending								
Pass	$ 397	$ 41	$ 152	$ —	$ —	$ —	$ 4,928	$ 5,518
Special mention	43	—	—	—	—	—	—	43
Classified	—	—	—	—	—	—	—	—
Total	$ 440	$ 41	$ 152	$ —	$ —	$ —	$ 4,928	$ 5,561
Municipal & nonprofit								
Pass	$ 107	$ 185	$ 187	$ 78	$ 43	$ 917	$ —	$ 1,517
Special mention	—	—	—	—	—	—	—	—
Classified	—	—	—	—	—	7	—	7
Total	$ 107	$ 185	$ 187	$ 78	$ 43	$ 924	$ —	$ 1,524
Tech & innovation								
Pass	$ 813	$ 374	$ 87	$ 66	$ 4	$ 1	$ 853	$ 2,198
Special mention	36	22	3	—	—	—	20	81
Classified	2	12	—	—	—	—	—	14
Total	$ 851	$ 408	$ 90	$ 66	$ 4	$ 1	$ 873	$ 2,293
Equity fund resources								
Pass	$ 1,020	$ 1,189	$ 191	$ 16	$ —	$ —	$ 1,301	$ 3,717
Special mention	—	—	—	—	—	—	—	—
Classified	—	—	—	—	—	—	—	—
Total	$ 1,020	$ 1,189	$ 191	$ 16	$ —	$ —	$ 1,301	$ 3,717
Other commercial and industrial								
Pass	$ 2,968	$ 1,272	$ 262	$ 277	$ 312	$ 206	$ 2,406	$ 7,703
Special mention	—	44	—	—	—	—	3	47
Classified	3	21	10	3	3	1	2	43
Total	$ 2,971	$ 1,337	$ 272	$ 280	$ 315	$ 207	$ 2,411	$ 7,793
CRE - owner occupied								
Pass	$ 338	$ 359	$ 174	$ 157	$ 211	$ 339	$ 29	$ 1,607
Special mention	—	—	—	—	—	1	—	1
Classified	—	14	7	1	5	10	11	48
Total	$ 338	$ 373	$ 181	$ 158	$ 216	$ 350	$ 40	$ 1,656
Hotel franchise finance								
Pass	$ 1,762	$ 726	$ 54	$ 528	$ 290	$ 103	$ 118	$ 3,581
Special mention	—	—	26	—	—	—	—	26
Classified	18	20	—	117	45	—	—	200
Total	$ 1,780	$ 746	$ 80	$ 645	$ 335	$ 103	$ 118	$ 3,807
Other CRE - non-owner occupied								
Pass	$ 2,344	$ 1,201	$ 870	$ 264	$ 160	$ 218	$ 315	$ 5,372
Special mention	3	38	—	12	—	—	1	54
Classified	—	4	—	12	10	5	—	31
Total	$ 2,347	$ 1,243	$ 870	$ 288	$ 170	$ 223	$ 316	$ 5,457

December 31, 2022	Term Loan Amortized Cost Basis by Origination Year 2022	2021	2020	2019	2018	Prior	Revolving Loans Amortized Cost Basis	Total
	(in millions)							
Residential								
Pass	$ 4,041	$ 8,474	$ 878	$ 308	$ 150	$ 90	$ 36	$ 13,977
Special mention	—	—	—	—	—	—	—	—
Classified	6	9	—	3	1	—	—	19
Total	$ 4,047	$ 8,483	$ 878	$ 311	$ 151	$ 90	$ 36	$ 13,996
Residential - EBO								
Pass	$ 3	$ 268	$ 712	$ 454	$ 191	$ 256	$ —	$ 1,884
Special mention	—	—	—	—	—	—	—	—
Classified	—	—	—	—	—	—	—	—
Total	$ 3	$ 268	$ 712	$ 454	$ 191	$ 256	$ —	$ 1,884
Construction and land development								
Pass	$ 1,533	$ 815	$ 273	$ 14	$ —	$ —	$ 1,258	$ 3,893
Special mention	—	—	98	—	—	—	—	98
Classified	—	—	—	4	—	—	—	4
Total	$ 1,533	$ 815	$ 371	$ 18	$ —	$ —	$ 1,258	$ 3,995
Other								
Pass	$ 23	$ 10	$ 13	$ 5	$ 2	$ 61	$ 64	$ 178
Special mention	—	—	—	—	—	1	—	1
Classified	—	—	—	—	—	—	—	—
Total	$ 23	$ 10	$ 13	$ 5	$ 2	$ 62	$ 64	$ 179
Total by Risk Category								
Pass	$ 15,349	$ 14,914	$ 3,853	$ 2,167	$ 1,363	$ 2,191	$ 11,308	$ 51,145
Special mention	82	104	127	12	—	2	24	351
Classified	29	80	17	140	64	23	13	366
Total	$ 15,460	$ 15,098	$ 3,997	$ 2,319	$ 1,427	$ 2,216	$ 11,345	$ 51,862

December 31, 2021	Term Loan Amortized Cost Basis by Origination Year 2021	2020	2019	2018	2017	Prior	Revolving Loans Amortized Cost Basis	Total
	(in millions)							
Warehouse lending								
Pass	$ 243	$ 12	$ —	$ —	$ —	$ —	$ 4,901	$ 5,156
Special mention	—	—	—	—	—	—	—	—
Classified	—	—	—	—	—	—	—	—
Total	$ 243	$ 12	$ —	$ —	$ —	$ —	$ 4,901	$ 5,156
Municipal & nonprofit								
Pass	$ 129	$ 195	$ 101	$ 53	$ 219	$ 878	$ 4	$ 1,579
Special mention	—	—	—	—	—	—	—	—
Classified	—	—	—	—	—	—	—	—
Total	$ 129	$ 195	$ 101	$ 53	$ 219	$ 878	$ 4	$ 1,579
Tech & innovation								
Pass	$ 763	$ 157	$ 101	$ 6	$ —	$ 1	$ 334	$ 1,362
Special mention	26	5	—	—	—	—	8	39
Classified	3	5	7	—	—	—	2	17
Total	$ 792	$ 167	$ 108	$ 6	$ —	$ 1	$ 344	$ 1,418
Equity fund resources								
Pass	$ 9	$ 2	$ —	$ —	$ 2	$ —	$ 3,817	$ 3,830
Special mention	—	—	—	—	—	—	—	—
Classified	—	—	—	—	—	—	—	—
Total	$ 9	$ 2	$ —	$ —	$ 2	$ —	$ 3,817	$ 3,830

December 31, 2021	Term Loan Amortized Cost Basis by Origination Year 2021	2020	2019	2018	2017	Prior	Revolving Loans Amortized Cost Basis	Total
				(in millions)				
Other commercial and industrial								
Pass	$ 2,911	$ 360	$ 387	$ 210	$ 80	$ 98	$ 2,306	$ 6,352
Special mention	5	27	22	18	—	—	15	87
Classified	—	10	6	2	1	—	7	26
Total	$ 2,916	$ 397	$ 415	$ 230	$ 81	$ 98	$ 2,328	$ 6,465
CRE - owner occupied								
Pass	$ 417	$ 199	$ 220	$ 190	$ 278	$ 322	$ 56	$ 1,682
Special mention	—	—	—	10	—	2	—	12
Classified	2	2	1	5	8	11	—	29
Total	$ 419	$ 201	$ 221	$ 205	$ 286	$ 335	$ 56	$ 1,723
Hotel franchise finance								
Pass	$ 721	$ 205	$ 659	$ 332	$ 135	$ 64	$ 123	$ 2,239
Special mention	—	—	88	51	—	—	—	139
Classified	30	—	99	16	11	—	—	156
Total	$ 751	$ 205	$ 846	$ 399	$ 146	$ 64	$ 123	$ 2,534
Other CRE - non-owner occupied								
Pass	$ 1,398	$ 755	$ 673	$ 279	$ 186	$ 283	$ 315	$ 3,889
Special mention	15	—	10	—	—	1	—	26
Classified	—	—	4	5	—	17	11	37
Total	$ 1,413	$ 755	$ 687	$ 284	$ 186	$ 301	$ 326	$ 3,952
Residential								
Pass	$ 7,459	$ 1,019	$ 396	$ 201	$ 42	$ 75	$ 36	$ 9,228
Special mention	—	—	—	—	—	—	—	—
Classified	9	1	3	1	—	1	—	15
Total	$ 7,468	$ 1,020	$ 399	$ 202	$ 42	$ 76	$ 36	$ 9,243
Construction and land development								
Pass	$ 958	$ 632	$ 394	$ 112	$ 4	$ —	$ 870	$ 2,970
Special mention	—	22	—	—	6	—	—	28
Classified	1	4	1	—	—	—	2	8
Total	$ 959	$ 658	$ 395	$ 112	$ 10	$ —	$ 872	$ 3,006
Other								
Pass	$ 16	$ 12	$ 4	$ 4	$ 4	$ 82	$ 46	$ 168
Special mention	—	—	—	—	—	—	—	—
Classified	—	—	—	—	—	1	—	1
Total	$ 16	$ 12	$ 4	$ 4	$ 4	$ 83	$ 46	$ 169
Total by Risk Category								
Pass	$ 15,024	$ 3,548	$ 2,935	$ 1,387	$ 950	$ 1,803	$ 12,808	$ 38,455
Special mention	46	54	120	79	6	3	23	331
Classified	45	22	121	29	20	30	22	289
Total	$ 15,115	$ 3,624	$ 3,176	$ 1,495	$ 976	$ 1,836	$ 12,853	$ 39,075

Troubled Debt Restructurings

A TDR loan is a loan on which the Company, for reasons related to a borrower's financial difficulties, grants a concession to the borrower that the Company would not otherwise consider. The loan terms that have been modified or restructured due to a borrower's financial situation include, but are not limited to, a reduction in the stated interest rate, an extension of the maturity or renewal of the loan at an interest rate below current market, a reduction in the face amount of the debt, a reduction in the accrued interest, or deferral of interest payments. The majority of the Company's modifications are extensions in terms or deferral of payments which result in no lost principal or interest. Consistent with regulatory guidance, a TDR loan that is subsequently modified in another restructuring agreement but has shown sustained performance and classification as a TDR, will be removed from TDR status provided that the modified terms were market-based at the time of modification.

The following table presents TDR loans by loan portfolio segment:

	December 31, 2022		December 31, 2021	
	Number of Loans	Recorded Investment	Number of Loans	Recorded Investment
	(dollars in millions)			
Tech & innovation	—	$ —	2	$ 2
Other commercial and industrial	4	2	7	6
CRE - owner occupied	1	1	1	1
Hotel franchise finance	1	10	—	—
Other CRE - non-owner occupied	1	1	5	11
Construction and land development	—	—	1	1
Total	7	$ 14	16	$ 21

The ACL on TDR loans totaled $4 million and zero as of December 31, 2022 and 2021, respectively. There were no outstanding commitments on TDR loans as of December 31, 2022 and 2021.

During the year ended December 31, 2022, the Company had three new TDR loans with a recorded investment of $11 million, compared to nine new TDR loans with a recorded investment of $13 million during the year ended December 31, 2021. No principal amounts were forgiven and there were no waived fees or other expenses resulting from these TDR loans.

A TDR loan is deemed to have a payment default when it becomes past due 90 days under the modified terms, goes on nonaccrual status, or is restructured again. Payment defaults, along with other qualitative indicators, are considered by management in the determination of the ACL. During the year ended December 31, 2022, there were no loans for which there was a payment default within 12 months following the modification. During the year ended December 31, 2021, there was one commercial and industrial loan with a recorded investment of $2 million for which there was a payment default within 12 months following the modification, which resulted in a charge-off of $2 million.

Collateral-Dependent Loans

The following table presents the amortized cost basis of collateral-dependent loans by loan portfolio segment:

	December 31,					
	2022			2021		
	Real Estate Collateral	Other Collateral	Total	Real Estate Collateral	Other Collateral	Total
	(in millions)					
Municipal & nonprofit	$ —	$ 7	$ 7	$ —	$ —	$ —
Tech & innovation	—	6	6	—	—	—
Other commercial and industrial	—	30	30	—	13	13
CRE - owner occupied	42	—	42	23	—	23
Hotel franchise finance	186	—	186	156	—	156
Other CRE - non-owner occupied	27	—	27	31	—	31
Construction and land development	4	—	4	4	—	4
Total	$ 259	$ 43	$ 302	$ 214	$ 13	$ 227

The Company did not identify any significant changes in the extent to which collateral secures its collateral dependent loans, whether in the form of general deterioration or from other factors during the period ended December 31, 2022.

Allowance for Credit Losses

The ACL consists of the ACL on funded loans HFI and an ACL on unfunded loan commitments. The ACL on HTM securities is estimated separately from loans, see "Note 3. Investment Securities" of these Notes to Consolidated Financial Statements for further discussion. Management considers the level of ACL to be a reasonable and supportable estimate of expected credit losses inherent within the Company's HFI loan portfolio as of December 31, 2022.

The below tables reflect the activity in the ACL on loans HFI by loan portfolio segment, which includes an estimate of future recoveries:

	Year Ended December 31, 2022				
	Balance, December 31, 2021	**Provision for (Recovery of) Credit Losses**	**Charge-offs**	**Recoveries**	**Balance, December 31, 2022**
			(in millions)		
Warehouse lending	**$ 3.0**	**$ 5.4**	**$ —**	**$ —**	**$ 8.4**
Municipal & nonprofit	**13.7**	**2.2**	**—**	**—**	**15.9**
Tech & innovation	**25.7**	**3.0**	**—**	**(2.1)**	**30.8**
Equity fund resources	**9.6**	**(3.2)**	**—**	**—**	**6.4**
Other commercial and industrial	**103.6**	**(14.4)**	**8.5**	**(5.2)**	**85.9**
CRE - owner occupied	**10.6**	**(3.6)**	**—**	**(0.1)**	**7.1**
Hotel franchise finance	**41.5**	**5.4**	**—**	**—**	**46.9**
Other CRE - non-owner occupied	**16.9**	**30.4**	**—**	**(0.1)**	**47.4**
Residential	**12.5**	**17.8**	**—**	**(0.1)**	**30.4**
Construction and land development	**12.5**	**15.3**	**0.5**	**(0.1)**	**27.4**
Other	**2.9**	**0.4**	**0.3**	**(0.1)**	**3.1**
Total	**$ 252.5**	**$ 58.7**	**$ 9.3**	**$ (7.8)**	**$ 309.7**

	Year Ended December 31, 2021				
	Balance, December 31, 2020	Provision for (Recovery of) Credit Losses	Charge-offs	Recoveries	Balance, December 31, 2021
			(in millions)		
Warehouse lending	$ 3.4	$ (0.4)	$ —	$ —	$ 3.0
Municipal & nonprofit	15.9	(2.2)	—	—	13.7
Tech & innovation	33.4	(6.2)	2.0	(0.5)	25.7
Equity fund resources	1.9	7.7	—	—	9.6
Other commercial and industrial	94.7	14.0	7.4	(2.3)	103.6
CRE - owner occupied	18.6	(8.0)	—	—	10.6
Hotel franchise finance	43.3	(2.1)	—	(0.3)	41.5
Other CRE - non-owner occupied	39.9	(22.5)	2.0	(1.5)	16.9
Residential	0.8	11.2	—	(0.5)	12.5
Construction and land development	22.0	(9.5)	—	—	12.5
Other	5.0	(2.5)	0.2	(0.6)	2.9
Total	$ 278.9	$ (20.5)	$ 11.6	$ (5.7)	$ 252.5

Accrued interest receivable on loans totaled $304 million, before the allowance on Residential-EBO loans, and $198 million at December 31, 2022 and 2021, respectively, and is excluded from the estimate of credit losses, except for accrued interest related to the Residential-EBO loan portfolio segment, which had an allowance of $9 million as of December 31, 2022.

In addition to the ACL on funded loans HFI, the Company maintains a separate ACL related to off-balance sheet credit exposures, including unfunded loan commitments. This allowance is included in Other liabilities on the Consolidated Balance Sheets.

The below table reflects the activity in the ACL on unfunded loan commitments:

	Year Ended December 31,	
	2022	2021
	(in millions)	
Balance, beginning of period	**$ 37.6**	$ 37.0
Provision for credit losses	**9.4**	0.6
Balance, end of period	**$ 47.0**	$ 37.6

The following tables disaggregate the Company's ACL on funded loans HFI and loan balances by measurement methodology:

	December 31, 2022					
	Loans			**Allowance**		
	Collectively Evaluated for Credit Loss	**Individually Evaluated for Credit Loss**	**Total**	**Collectively Evaluated for Credit Loss**	**Individually Evaluated for Credit Loss**	**Total**
	(in millions)					
Warehouse lending	**$ 5,561**	**$ —**	**$ 5,561**	**$ 8.4**	**$ —**	**$ 8.4**
Municipal & nonprofit	**1,517**	**7**	**1,524**	**13.4**	**2.5**	**15.9**
Tech & innovation	**2,280**	**13**	**2,293**	**30.3**	**0.5**	**30.8**
Equity fund resources	**3,717**	**—**	**3,717**	**6.4**	**—**	**6.4**
Other commercial and industrial	**7,754**	**39**	**7,793**	**80.4**	**5.5**	**85.9**
CRE - owner occupied	**1,612**	**44**	**1,656**	**7.1**	**—**	**7.1**
Hotel franchise finance	**3,607**	**200**	**3,807**	**44.7**	**2.2**	**46.9**
Other CRE - non-owner occupied	**5,428**	**29**	**5,457**	**47.4**	**—**	**47.4**
Residential	**13,996**	**—**	**13,996**	**30.4**	**—**	**30.4**
Residential EBO	**1,884**	**—**	**1,884**	**—**	**—**	**—**
Construction and land development	**3,991**	**4**	**3,995**	**27.4**	**—**	**27.4**
Other	**179**	**—**	**179**	**3.1**	**—**	**3.1**
Total	**$ 51,526**	**$ 336**	**$ 51,862**	**$ 299.0**	**$ 10.7**	**$ 309.7**

	December 31, 2021					
	Loans			Allowance		
	Collectively Evaluated for Credit Loss	Individually Evaluated for Credit Loss	Total	Collectively Evaluated for Credit Loss	Individually Evaluated for Credit Loss	Total
	(in millions)					
Warehouse lending	$ 5,156	$ —	$ 5,156	$ 3.0	$ —	$ 3.0
Municipal & nonprofit	1,579	—	1,579	13.7	—	13.7
Tech & innovation	1,401	17	1,418	22.9	2.8	25.7
Equity fund resources	3,830	—	3,830	9.6	—	9.6
Other commercial and industrial	6,442	23	6,465	101.1	2.5	103.6
CRE - owner occupied	1,699	24	1,723	10.6	—	10.6
Hotel franchise finance	2,378	156	2,534	30.7	10.8	41.5
Other CRE - non-owner occupied	3,917	35	3,952	16.9	—	16.9
Residential	9,243	—	9,243	12.5	—	12.5
Construction and land development	2,998	8	3,006	12.5	—	12.5
Other	169	—	169	2.9	—	2.9
Total	$ 38,812	$ 263	$ 39,075	$ 236.4	$ 16.1	$ 252.5

Loan Purchases and Sales

Loan purchases during each of the years ended December 31, 2022 and 2021 totaled $8.8 billion, which primarily consisted of residential loan purchases. There were no loans purchased with more-than-insignificant deterioration in credit quality during the years ended December 31, 2022 and 2021.

During the year ended December 31, 2022, the Company sold loans with a carrying value of $780 million and recognized a net loss of $8.4 million on these loan sales. During the year ended December 31, 2021, the Company sold loans with a carrying value of $551 million and recognized a net gain of $7.2 million on these loan sales.

6. MORTGAGE SERVICING RIGHTS

The following table presents the changes in fair value of the Company's MSR portfolio related to its mortgage banking business and other information related to its servicing portfolio:

	Year Ended December 31,	
	2022	2021 (1)
	(in millions)	
Balance, beginning of period	**$ 698**	$ —
Acquired in AmeriHome acquisition	**—**	1,347
Additions from loans sold with servicing rights retained	**720**	764
MSRs sold	**(350)**	(1,271)
Change in fair value	**192**	(2)
Realization of cash flows	**(112)**	(140)
Balance, end of period	**$ 1,148**	$ 698
Unpaid principal balance of mortgage loans serviced for others	**$ 70,849**	$ 54,348

(1) Period from April 7, 2021, the acquisition date of AmeriHome, through December 31, 2021.

Changes in the fair value of MSRs are recorded as Net loan servicing revenue in the Consolidated Income Statement. Due to the regulatory capital impact of MSRs on capital ratios, the Company sells certain MSRs and related servicing advances in the normal course of business. During the year ended December 31, 2022, MSR sales had an aggregate net sales price of $350 million and the UPB of loans underlying these sales totaled $24.1 billion. During the period from the AmeriHome acquisition date through December 31, 2021, the Company completed sales of MSRs and related servicing advances with an aggregate net sales price of $1.3 billion and UPB of loans underlying these sales of $97.2 billion. As of December 31, 2022 and 2021, the Company had a remaining receivable balance of $39 million and $83 million related to holdbacks on MSR sales for pending servicing transfer, which was recorded in Other assets on the Consolidated Balance Sheet.

The Company receives loan servicing fees, net of subservicing costs, based on the UPB of the underlying loans. Loan servicing fees are collected from payments made by borrowers. The Company may receive other remuneration from rights to various borrower contracted fees, such as late charges, collateral reconveyance charges, and non-sufficient funds fees. Contractually specified servicing fees, late fees, and ancillary income associated with the Company's MSR portfolio totaled $194.5 million for the year ended December 31, 2022, and $138.9 million for the period from the AmeriHome acquisition on April 7, 2021 through December 31, 2021, which are recorded as Net loan servicing revenue in the Consolidated Income Statement.

In accordance with its contractual loan servicing obligations, the Company is required to advance funds to or on behalf of investors when borrowers do not make payments. The Company advances property taxes and insurance premiums for borrowers who have insufficient funds in escrow accounts, plus any other costs to preserve real estate properties. The Company may also advance funds to maintain, repair, and market foreclosed real estate properties. The Company is entitled to recover all or a portion of the advances from borrowers of reinstated and performing loans, from the proceeds of liquidated properties or from the government agency or GSE guarantor of charged-off loans. Servicing advances are charged-off when they are deemed to be uncollectible. As of December 31, 2022 and 2021, net servicing advances totaled $102 million and $82 million, respectively, which are recorded as Other assets on the Consolidated Balance Sheet.

The following table presents the effect of hypothetical changes in the fair value of MSRs caused by assumed immediate changes in interest rates, discount rates, and prepayment speeds that are used to determine fair value:

	December 31, 2022
	(in millions)
Fair value of mortgage servicing rights	**$ 1,148**
Increase (decrease) in fair value resulting from:	
Interest rate change of 50 basis points	
Adverse change	**(46)**
Favorable change	**38**
Discount rate change of 50 basis points	
Increase	**(23)**
Decrease	**24**
Conditional prepayment rate change of 1%	
Increase	**(24)**
Decrease	**26**
Cost to service change of 10%	
Increase	**(15)**
Decrease	**15**

Sensitivities are hypothetical changes in fair value and cannot be extrapolated because the relationship of changes in assumptions to changes in fair value may not be linear. In addition, the offsetting effect of hedging activities are not contemplated in these results and further, the effect of a variation in a particular assumption is calculated without changing any other assumptions, whereas a change in one factor may result in changes to another. Accordingly, no assurance can be given that actual results would be consistent with the results of these estimates. As a result, actual future changes in MSR values may differ significantly from those reported.

7. PREMISES AND EQUIPMENT

The following is a summary of the major categories of premises and equipment:

	December 31,	
	2022	2021
	(in millions)	
Bank premises	**$ 95**	$ 92
Construction in progress	**60**	43
Furniture, fixtures, and equipment	**97**	59
Land and improvements	**32**	32
Leasehold improvements	**66**	41
Software	**83**	41
Total	**433**	308
Accumulated depreciation and amortization	**(157)**	(126)
Premises and equipment, net	**$ 276**	$ 182

Depreciation and amortization expense totaled $31.8 million, $20.7 million, and $15.2 million for the years ended December 31, 2022, 2021, and 2020, respectively.

8. LEASES

The Company has operating leases under which it leases its branch offices, corporate headquarters, other offices, and data facility centers. As of December 31, 2022, and 2021 the Company's operating lease ROU asset totaled $163 million and $133 million, respectively, and and operating lease liability totaled $185 million and $143 million, respectively. A weighted average discount rate of 2.81%, 2.14%, and 2.80% was used in the measurement of the ROU asset and lease liability as of December 31, 2022, 2021, and 2020 respectively.

The Company's leases have remaining lease terms of one to 11 years, with a weighted average lease term of 7.4 years, 7.5 years, and 7.7 years at December 31, 2022, 2021, 2020, respectively. Some leases include multiple five-year renewal options. The Company’s decision to exercise these renewal options is based on an assessment of its current business needs and market factors at the time of the renewal. Currently, the Company has no leases for which the option to renew is reasonably certain and therefore, options to renew were not factored into the calculation of its ROU asset and lease liability as of December 31, 2022.

The following is a schedule of the Company's operating lease liabilities by contractual maturity as of December 31, 2022:

	(in millions)
2023	**$ 18**
2024	**31**
2025	**31**
2026	**28**
2027	**24**
Thereafter	**77**
Total lease payments	**$ 209**
Less: imputed interest	**24**
Total present value of lease liabilities	**$ 185**

The Company also has an additional operating lease for an office location that will commence within the next 12 months and will have a lease term of 8 years. The aggregate future commitment related to this additional lease totals $3 million.

Total operating lease costs of $25.4 million and other lease costs of $4.0 million, which include common area maintenance, parking, and taxes during the year ended December 31, 2022, were included as part of Occupancy expense. For the year ended December 31, 2021, total operating lease costs and other lease costs were $18.8 million and $3.8 million, respectively, and for the year ended December 31, 2020, were $14.0 million and $3.9 million, respectively. Short-term lease costs were not material for the years ended December 31, 2022, 2021, and 2020.

The below table shows the supplemental cash flow information related to the Company's operating leases:

	Year Ended December 31,		
	2022	2021	2020
	(in millions)		
Cash paid for amounts included in the measurement of operating lease liabilities	**$ 15.1**	$ 16.3	$ 13.0
Right-of-use assets obtained in exchange for new operating lease liabilities	**51.6**	76.7	11.8

9. GOODWILL AND OTHER INTANGIBLE ASSETS

Goodwill represents the excess consideration paid for net assets acquired in a business combination over their fair value. Goodwill and other intangible assets acquired in a business combination that are determined to have an indefinite useful life are not subject to amortization, but are subsequently evaluated for impairment at least annually. The Company had goodwill of $527 million and $491 million as of December 31, 2022 and 2021, respectively.

The Company performs its annual goodwill and intangibles impairment tests as of October 1 each year, or more often if events or circumstances indicate that the carrying value may not be recoverable. Based on the Company's annual goodwill and intangibles impairment tests as of October 1 during the years ended December 31, 2022, 2021, and 2020, it was determined that goodwill and intangible assets are not impaired.

The following is a summary of the Company's acquired intangible assets:

	December 31, 2022			December 31, 2021		
	Gross Carrying Amount	**Accumulated Amortization**	**Net Carrying Amount**	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
			(in millions)			
Subject to amortization						
Core deposits	**$ 14**	**$ 11**	**$ 3**	$ 14	$ 10	$ 4
Correspondent customer relationships	**76**	**7**	**69**	76	3	73
Customer relationships	**18**	**3**	**15**	3	1	2
Developed technology	**4**	**1**	**3**	—	—	—
Operating licenses	**56**	**2**	**54**	56	1	55
Trade names	**10**	**1**	**9**	9	0	9
	$ 178	**$ 25**	**$ 153**	$ 158	$ 15	$ 143

As of December 31, 2022, the Company's intangible assets had a weighted average estimated useful life of 24.2 years. Amortization expense recognized on amortizable intangibles totaled $10.4 million, $6.1 million, and $1.6 million for the years ended December 31, 2022, 2021, and 2020, respectively.

Below is a summary of future estimated aggregate amortization expense as of December 31, 2022:

	(in millions)
2023	**$ 10.5**
2024	**10.5**
2025	**9.7**
2026	**8.8**
2027	**8.0**
Thereafter	**105.4**
Total	**$ 152.9**

10. DEPOSITS

The table below summarizes deposits by type:

	December 31, 2022	December 31, 2021
	(in millions)	
Non-interest-bearing demand deposits	**$ 19,691**	$ 21,353
Interest-bearing transaction accounts	**9,507**	6,924
Savings and money market accounts	**19,397**	17,279
Time certificates of deposit ($250,000 or more)	**3,815**	523
Other time deposits	**1,234**	1,533
Total deposits	**$ 53,644**	$ 47,612

The summary of the contractual maturities for all time deposits as of December 31, 2022 is as follows:

	(in millions)
2023	**$ 4,904**
2024	**132**
2025	**11**
2026	**1**
2027	**1**
Total	**$ 5,049**

WAB is a participant in the Promontory Interfinancial Network, a network that offers deposit placement services such as CDARS and ICS, which offer products that qualify large deposits for FDIC insurance. Federal banking law and regulation places restrictions on depository institutions regarding brokered deposits because of the general concern that these deposits are not relationship-based and are at a greater risk of being withdrawn, thus posing liquidity risk for institutions that gather brokered deposits in significant amounts. At December 31, 2022 and 2021, the Company had $683 million and $729 million, respectively, of reciprocal CDARS deposits and $2.1 billion and $1.8 billion, respectively, of ICS deposits. The Company also had $4.8 billion and $1.8 billion of wholesale brokered deposits at December 31, 2022 and 2021, respectively.

In addition, deposits for which the Company provides account holders with earnings credits or referral fees totaled $12.9 billion and $10.8 billion at December 31, 2022 and 2021, respectively. The Company incurred $162.8 million, $27.4 million, and $17.0 million in deposit related costs on these deposits during the years ended December 31, 2022, 2021, and 2020 respectively.

11. OTHER BORROWINGS

The following table summarizes the Company's borrowings:

	December 31,	
	2022	2021
	(in millions)	
Short-Term:		
Federal funds purchased	**$ 640**	$ 675
FHLB advances	**4,300**	—
Repurchase agreements	**27**	17
Secured borrowings	**25**	35
Total short-term borrowings	**$ 4,992**	$ 727
Long-Term:		
AmeriHome senior notes, net of fair value adjustment	**$ 315**	$ 318
Credit linked notes, net of debt issuance costs	**992**	457
Total long-term borrowings	**$ 1,307**	$ 775
Total other borrowings	**$ 6,299**	$ 1,502

Short-Term Borrowings

Federal Funds Lines of Credit

The Company maintains overnight federal fund lines of credit totaling $4.0 billion as of December 31, 2022, which have rates comparable to the federal funds effective rate plus 0.10% to 0.20%.

FHLB Advances

The Company also maintains secured overnight lines of credit with the FHLB and the FRB. The Company's borrowing capacity is determined based on collateral pledged, generally consisting of investment securities and loans, at the time of the borrowing. As of December 31, 2022 and 2021, the Company had additional available credit with the FHLB of approximately $6.8 billion and $7.8 billion, respectively, and with the FRB of approximately $5.2 billion and $3.4 billion, respectively. The weighted average rate on FHLB advances was 4.70% as of December 31, 2022.

Repurchase Agreements

Other short-term borrowing sources available to the Company include customer and securities repurchase agreements. The weighted average rate on customer repurchase agreements was 0.15% as of December 31, 2022 and 2021.

Secured Borrowings

Secured borrowings consist of transfers of loans HFS not qualifying for sales accounting treatment. The weighted average interest rate on secured borrowings was 6.39% and 3.05% as of December 31, 2022 and 2021, respectively.

Warehouse Borrowings

Warehouse borrowing lines of credit are used to finance the acquisition of loans through the use of repurchase agreements. Repurchase agreements operate as financings under which the Company transfers loans to secure these borrowings. The borrowing amounts are based on the attributes of the collateralized loans and are defined in the repurchase agreement of each warehouse lender. The Company retains beneficial ownership of the transferred loans and will receive the loans from the lender upon full repayment of the borrowing. The repurchase agreements may require the Company to transfer additional assets to the lender in the event the estimated fair value of the existing transferred loans declines.

As of December 31, 2022, the Company had access to approximately $1.0 billion in uncommitted warehouse funding, of which no amounts were drawn.

Long-Term Borrowings

AmeriHome Senior Notes

Prior to the Company's acquisition of AmeriHome, in October 2020, AmeriHome issued senior notes with an aggregate principal amount of $300 million, maturing on October 26, 2028. The senior notes accrue interest at a rate of 6.50% per annum, paid semiannually. The senior notes contain provisions that allow for redemption of up to 40% of the original aggregate principal amount of the notes during the first three years after issuance at a price equal to 106.50%, plus accrued and unpaid interest. After this three-year period, AmeriHome may redeem some or all of the senior notes at a price equal to 103.25% of the outstanding principal amount, plus accrued and unpaid interest. In 2025, the redemption price of these senior notes declines to 100% of the outstanding principal balance. The carrying amount of the senior notes includes a fair value adjustment (premium) of $19.3 million recognized as of the acquisition date that is being amortized over the term of the notes.

Credit Linked Notes

The Company has entered into credit linked note transactions that effectively transfer the risk of first losses on certain pools of the Company's warehouse and equity fund resource loans to the purchasers of these notes. In the event of a failure to pay by the relevant obligor, insolvency of the relevant obligor, or restructuring of such loans that results in a loss on a loan that is included in any of the reference pools, the principal balance of the notes will be reduced to the extent of such loss and a gain on recovery of credit guarantees will be recognized within non-interest income in the Consolidated Income Statement. The purchasers of the notes have the option to acquire the underlying reference loan in the event of obligor default. Losses on the warehouse lines of credit and equity fund resource loans have not generally been significant.

The Company has also entered into credit linked note transactions that effectively transfer the risk of first losses on reference pools of the Company's loans purchased under its residential mortgage purchase program to the purchasers of the notes. The principal and interest payable on these notes may be reduced by a portion of the Company's loss on such loans if one of the following occurs with respect to a covered loan: (i) realized losses incurred by the Company on a loan following a liquidation of the loan or certain other events, or (ii) a modification of the loan resulting in a reduction in payments. The aggregate losses, if any, for each payment date will be allocated to reduce the class principal amount and (for modifications) the current interest of the notes in reverse order of class priority. Losses on residential mortgages have not generally been significant.

The Company's credit linked note issuances are detailed in the tables below:

		December 31, 2022			
Description	**Issuance Date**	**Maturity Date**	**Interest Rate**	**Principal**	**Debt Issuance Costs**
				(in millions)	
Residential mortgage loans (1)	December 12, 2022	October 25, 2052	SOFR + 7.80%	**$ 95**	**$ 2**
Residential mortgage loans (2)	June 30, 2022	April 25, 2052	SOFR + 6.00%	**189**	**3**
Equity fund resource loans (3)	June 23, 2022	June 30, 2028	SOFR + 6.75%	**300**	**4**
Residential mortgage loans (4)	December 29, 2021	July 25, 2059	SOFR + 4.67%	**202**	**3**
Warehouse loans (5)	June 28, 2021	December 30, 2024	LIBOR + 5.50%	**242**	**2**
Total				**$ 1,028**	**$ 14**

		December 31, 2021			
Description	Issuance Date	Maturity Date	Interest Rate	Principal	Debt Issuance Costs
				(in millions)	
Residential mortgage loans (4)	December 29, 2021	July 25, 2059	SOFR + 4.67%	$ 228	$ 3
Warehouse loans (5)	June 28, 2021	December 30, 2024	LIBOR + 5.50%	242	2
Total				$ 470	$ 5

(1) There are multiple classes of these notes, each with an interest rate of SOFR plus a spread that ranges from 2.25% to 11.00% (or, a weighted average spread of 7.80%) on a reference pool balance of $1.9 billion as of December 31, 2022.

(2) There are multiple classes of these notes, each with an interest rate of SOFR plus a spread that ranges from 2.25% to 15.00% (or, a weighted average spread of 6.00%) on a reference pool balance of $3.8 billion as of December 31, 2022.

(3) These notes had a reference pool balance of $1.6 billion as of December 31, 2022.

(4) There are six classes of these notes, each with an interest rate of SOFR plus a spread that ranges from 3.15% to 8.50% (or, a weighted average spread of 4.67%) on a reference pool balance of $4.0 billion and $4.6 billion as of December 31, 2022 and 2021, respectively.

(5) The benchmark rate on these notes will convert to SOFR upon the discontinuation of LIBOR in June 2023. These notes had a reference pool balance of $689 million and $1.9 billion as of December 31, 2022 and 2021, respectively.

12. QUALIFYING DEBT

Subordinated Debt

The Company's subordinated debt issuances are detailed in the tables below:

December 31, 2022					
Description	**Issuance Date**	**Maturity Date**	**Interest Rate**	**Principal**	**Debt Issuance Costs**
				(in millions)	
WAL fixed-to-variable-rate (1)	June 2021	June 15, 2031	3.00 %	**$ 600**	**$ 7**
WAB fixed-to-variable-rate (2)	May 2020	June 1, 2030	5.25 %	**225**	**1**
Total				**$ 825**	**$ 8**

December 31, 2021					
Description	Issuance Date	Maturity Date	Interest Rate	Principal	Debt Issuance Costs
				(in millions)	
WAL fixed-to-variable-rate (1)	June 2021	June 15, 2031	3.00 %	$ 600	$ 8
WAB fixed-to-variable-rate (2)	May 2020	June 1, 2030	5.25 %	225	2
Total				$ 825	$ 10

(1) Notes are redeemable, in whole or in part, beginning on June 15, 2026 at their principal amount plus accrued and unpaid interest and has a fixed interest rate of 3.00%. The notes also convert to a variable rate of three-month SOFR plus 225 basis points on this date.

(2) Debt is redeemable, in whole or in part, on or after June 1, 2025 at its principal amount plus accrued and unpaid interest and has a fixed interest rate of 5.25% through June 1, 2025 and then converts to a variable rate per annum equal to three-month SOFR plus 512 basis points.

The carrying value of all subordinated debt issuances totaled $817 million and $815 million at December 31, 2022 and 2021, respectively.

Junior Subordinated Debt

The Company has formed or acquired through acquisition eight statutory business trusts, which exist for the exclusive purpose of issuing Cumulative Trust Preferred Securities.

With the exception of debt issued by Bridge Capital Trust I and Bridge Capital Trust II, junior subordinated debt is recorded at fair value at each reporting date due to the FVO election made by the Company under ASC 825. The Company did not make the FVO election for the junior subordinated debt acquired in the Bridge acquisition. Accordingly, the carrying value of these trusts does not reflect the current fair value of the debt and includes a fair market value adjustment established at acquisition that is being accreted over the remaining life of the trusts.

The carrying value of junior subordinated debt was $76 million and $81 million as of December 31, 2022 and 2021, respectively, with maturity dates ranging from 2033 through 2037. The weighted average interest rate of all junior subordinated debt as of December 31, 2022 was 7.11%, which is equal to three-month LIBOR plus the contractual spread of 2.34%, compared to a weighted average interest rate of 2.55% at December 31, 2021. Subsequent to June 30, 2023, interest rates on the Company's junior subordinated debt will be based on SOFR plus a spread adjustment.

In the event of certain changes or amendments to regulatory requirements or federal tax rules, the debt is redeemable in whole. The obligations under these instruments are fully and unconditionally guaranteed by the Company and rank subordinate and junior in right of payment to all other liabilities of the Company. Based on guidance issued by the FRB, the Company's securities continue to qualify as Tier 1 Capital.

13. STOCKHOLDERS' EQUITY

Stock-Based Compensation

Restricted Stock Awards

The Incentive Plan, as amended, gives the BOD the authority to grant up to 11.8 million in stock awards consisting of unrestricted stock, stock units, dividend equivalent rights, stock options (incentive and non-qualified), stock appreciation rights, restricted stock, and performance and annual incentive awards. The Incentive Plan limits the maximum number of shares of common stock that may be awarded to any person eligible for an award to 300,000 per calendar year and also limits the total compensation (cash and stock) that can be awarded to a non-employee director to $600,000 in any calendar year. Stock awards available for grant at December 31, 2022 were 2.6 million.

Restricted stock awards granted to employees generally vest over a 3-year period and stock grants made to non-employee WAL directors generally vest over six months. The Company estimates the compensation cost for stock grants based upon the grant date fair value. Stock compensation expense is recognized on a straight-line basis over the requisite service period for the entire award. Stock compensation expense related to restricted stock awards granted to employees is included in Salaries and employee benefits in the Consolidated Income Statement. For restricted stock awards granted to WAL directors, the related stock compensation expense is included in Legal, professional, and directors' fees. For the year ended December 31, 2022, the Company recognized $28.7 million in stock-based compensation expense related to these stock grants, compared to $22.9 million and $20.3 million for the years ended December 31, 2021 and 2020, respectively.

In addition, the Company previously granted shares of restricted stock to certain members of executive management that had both performance and service conditions that affected vesting. The last of these performance-based restricted stock grants was made in 2017, however expense was still being recognized through June 30, 2021, the end of the vesting period. The Company recognized $0.6 million in stock-based compensation expense related to these stock grants in 2021, compared to $1.2 million during the year ended December 31, 2020.

A summary of the status of the Company’s unvested shares of restricted stock and changes during the years then ended is presented below:

	December 31,			
	2022		2021	
	Shares	**Weighted Average Grant Date Fair Value**	Shares	Weighted Average Grant Date Fair Value
	(in millions, except per share amounts)			
Balance, beginning of period	**0.9**	**$ 63.53**	1.0	$ 50.12
Granted	**0.5**	**97.61**	0.4	83.56
Vested	**(0.4)**	**52.00**	(0.4)	53.50
Forfeited	**(0.1)**	**79.09**	(0.1)	59.24
Balance, end of period	**0.9**	**$ 84.16**	0.9	$ 63.53

The total weighted average grant date fair value of all stock awards granted during the years ended December 31, 2022, 2021, and 2020 was $42.8 million, $35.4 million, and $22.7 million, respectively. The total fair value of restricted stock that vested during the years ended December 31, 2022, 2021, and 2020 was $35.8 million, $34.2 million, and $19.6 million, respectively.

As of December 31, 2022, there was $33.6 million of total unrecognized compensation cost related to unvested share-based compensation arrangements granted under the Incentive Plan. That cost is expected to be recognized over a weighted average period of 1.9 years.

Performance Stock Units

The Company grants performance stock units to members of its executive management that do not vest unless the Company achieves a specified cumulative EPS target and a TSR performance measure over a three-year performance period. The number of shares issued will vary based on the cumulative EPS target and relative TSR performance factor that is achieved. The Company estimates the cost of performance stock units based upon the grant date fair value and expected vesting percentage over the three-year performance period. For the year ended December 31, 2022, the Company recognized $11.1 million in stock-based compensation expense related to these performance stock units, compared to $11.2 million and $7.1 million in stock-based compensation expense for such units during the years ended December 31, 2021 and 2020, respectively.

The three-year performance period for the 2020 grant ended on December 31, 2022, and based on the Company's cumulative EPS and TSR performance measure for the performance period, these shares will vest at 180% of the target award under the terms of the grant. As a result, 157,780 shares will become fully vested and distributed to executive management in the first quarter of 2023.

The three-year performance period for the 2019 grant ended on December 31, 2021, and the Company's cumulative EPS and TSR performance measure for the performance period exceeded the level required for a maximum award under the terms of the grant. As a result, 203,646 shares became fully vested and were distributed to executive management in the first quarter of 2022.

Preferred Stock

On September 15, 2021, the Company entered into an underwriting agreement, pursuant to which the Company agreed to issue and sell an aggregate of 12,000,000 depositary shares, each representing a 1/400th ownership interest in a share of the Company's 4.250% Fixed-Rate Reset Non-Cumulative Perpetual Preferred Shares, Series A, par value $0.0001 per share, with a liquidation preference of $25 per depositary share (equivalent to $10,000 per share of Series A preferred stock).

During the year ended December 31, 2022, the Company declared and paid a quarterly cash dividend of $0.27 per depositary share, for a total dividend payment to preferred shareholders of $12.8 million. The Company paid a dividend of $3.5 million to preferred shareholders during the year ended December 31, 2021.

Common Stock Issuances

Pursuant to ATM Distribution Agreement

The Company has a distribution agency agreement with J.P. Morgan Securities LLC and Piper Sandler & Co., under which the Company may sell up to 6,132,670 shares of its common stock on the NYSE. The Company pays the distribution agents a mutually agreed rate, not to exceed 2% of the gross offering proceeds of the shares sold pursuant to the distribution agency agreement. The common stock will be sold at prevailing market prices at the time of the sale or at negotiated prices and, as a result, prices will vary. Sales under the ATM program are being made pursuant to a prospectus dated May 14, 2021 and prospectus supplements filed with the SEC in an offering of shares from the Company's shelf registration statement on Form S-3 (No. 333-256120). During the year ended December 31, 2022, the Company sold 1.9 million shares under the ATM program at a weighted-average selling price of $83.89 per share for gross proceeds of $158.7 million. During the year ended December 31, 2021, the Company sold 3.1 million shares under the ATM program at a weighted-average selling price of $106.41 per share for gross proceeds of $333.4 million. Total related offering costs totaled $1.0 million for the year ended December 31, 2022, substantially all of which relates to compensation costs paid to the distribution agents, and $2.3 million for the year ended December 31, 2021, of which $2.0 million relates to compensation costs paid to the distribution agent. As of December 31, 2022, the remaining number of shares that can be sold under this agreement totaled 1,107,769.

Registered Direct Offering

The Company sold 2.3 million shares of its common stock in a registered direct offering during the year ended December 31, 2021. The shares were sold for $91.00 per share for aggregate net proceeds of $209.2 million.

Cash Dividend on Common Shares

During the year ended December 31, 2022, the Company declared and paid quarterly cash dividends of $0.35 per share for the first two quarters of the year and increased the quarterly cash dividend to $0.36 per share in the last two quarters of the year, for a total dividend payment to shareholders of $153.4 million. During the year ended December 31, 2021, the Company declared and paid a quarterly cash dividend of $0.25 per share for the first two quarters of the year and increased the quarterly cash dividend to $0.35 per share for the last two quarters of the year, for a total dividend payment to shareholders of $124.1 million.

Treasury Shares

Treasury share purchases represent shares surrendered to the Company equal in value to the statutory payroll tax withholding obligations arising from the vesting of employee restricted stock awards. During the year ended December 31, 2022, the Company purchased treasury shares of 200,745 at a weighted average price of $92.21 per share, compared to 180,607 shares at a weighted average price per share of $86.63 in 2021, and 165,489 shares at a weighted average price per share of $50.80 in 2020.

14. ACCUMULATED OTHER COMPREHENSIVE INCOME (LOSS)

The following table summarizes the changes in accumulated other comprehensive income (loss) by component, net of tax:

	Unrealized holding gains (losses) on AFS securities	Unrealized holding losses on SERP	Unrealized holding gains (losses) on junior subordinated debt	Total
		(in millions)		
Balance, December 31, 2019	$ 21.4	$ —	$ 3.6	$ 25.0
Other comprehensive income (loss) before reclassifications	70.9	(0.3)	(3.1)	67.5
Amounts reclassified from AOCI	(0.2)	—	—	(0.2)
Net current-period other comprehensive income (loss)	70.7	(0.3)	(3.1)	67.3
Balance, December 31, 2020	$ 92.1	$ (0.3)	$ 0.5	$ 92.3
Other comprehensive loss before reclassifications	(69.0)	—	(1.2)	(70.2)
Amounts reclassified from accumulated other comprehensive income	(6.4)	—	—	(6.4)
Net current-period other comprehensive loss	(75.4)	—	(1.2)	(76.6)
Balance, December 31, 2021	$ 16.7	$ (0.3)	$ (0.7)	$ 15.7
Other comprehensive (loss) income before reclassifications	**(674.9)**	**—**	**3.7**	**(671.2)**
Amounts reclassified from AOCI	**(5.5)**	**—**	**—**	**(5.5)**
Net current-period other comprehensive (loss) income	**(680.4)**	**—**	**3.7**	**(676.7)**
Balance, December 31, 2022	**$ (663.7)**	**$ (0.3)**	**$ 3.0**	**$ (661.0)**

The following table presents reclassifications out of AOCI:

	Year Ended December 31,		
Income Statement Classification	**2022**	2021	2020
		(in millions)	
Gain on sales of AFS debt securities, net	**$ 7.4**	$ 8.5	$ 0.2
Income tax expense	**(1.9)**	(2.1)	—
Net of tax	**$ 5.5**	$ 6.4	$ 0.2

15. DERIVATIVES AND HEDGING ACTIVITIES

The Company is a party to various derivative instruments. The primary types of derivatives that the Company uses are interest rate contracts, forward purchase and sale commitments, and interest rate futures. Generally, these instruments are used to help manage the Company's exposure to interest rate risk related to IRLCs and its inventory of loans HFS and MSRs and also to meet client financing and hedging needs.

Derivatives are recorded at fair value on the Consolidated Balance Sheets, after taking into account the effects of bilateral collateral and master netting agreements. These agreements allow the Company to settle all derivative contracts held with the same counterparty on a net basis, and to offset net derivative positions with related cash collateral, where applicable.

As of December 31, 2022, 2021, and 2020, the Company did not have any outstanding cash flow hedges.

Derivatives Designated in Hedge Relationships

The Company utilizes derivatives that have been designated as part of a hedge relationship in accordance with the applicable accounting guidance to minimize the exposure to changes in benchmark interest rates and volatility of net interest income and EVE to interest rate fluctuations. The primary derivative instruments used to manage interest rate risk are interest rate swaps, which convert the contractual interest rate index of agreed-upon amounts of assets and liabilities (i.e., notional amounts) from either a fixed rate to a variable rate, or from a variable rate to a fixed rate.

The Company has pay fixed/receive variable interest rate swaps designated as fair value hedges of certain fixed rate loans. As a result, the Company receives variable-rate interest payments in exchange for making fixed-rate payments over the lives of the contracts without exchanging the notional amounts. The variable-rate interest payments are based on LIBOR and will convert to SOFR plus a spread adjustment upon the discontinuation of LIBOR in June 2023.

The Company also had pay fixed/receive variable interest rate swaps, designated as fair value hedges using the last-of-layer method to manage the exposure to changes in fair value associated with fixed rate loans, resulting from changes in the designated benchmark interest rate (federal funds rate). These last-of-layer hedges provided the Company the ability to execute a fair value hedge of the interest rate risk associated with a portfolio of similar prepayable assets whereby the last dollar amount estimated to remain in the portfolio of assets was identified as the hedged item. Under these interest rate swap contracts, the Company received a variable rate and paid a fixed rate on the outstanding notional amount. During the year ended December 31, 2021, the Company completed a partial discontinuation of one of its last-of-layer hedges, which reduced the total hedged amount on these hedges from $1.0 billion to $880 million. During the year ended December 31, 2022, the Company discontinued the remaining portion of these last-of-layer hedges. The cumulative basis adjustment on the discontinued last-of-layer hedges totaled $31 million, which was allocated across the remaining loan pool upon termination of the hedges and is being amortized over the remaining term. At December 31, 2022, the remaining cumulative basis adjustment on the discontinued last-of-layer hedges totaled $21 million.

The Company had a receive fixed/pay variable interest rate swap, designated as a fair value hedge on its $175 million subordinated debentures issued on June 16, 2016. This swap was terminated during the year ended December 31, 2021 in connection with the full redemption of the debt. The Company was paying a variable rate of three-month LIBOR plus 3.25% and was receiving quarterly fixed payments of 6.25% to match the payments on the debt.

Derivatives Not Designated in Hedge Relationships

Management enters into certain foreign exchange derivative contracts, back-to-back interest rate contracts, and risk participation agreements which are not designated as accounting hedges. Foreign exchange derivative contracts include spot, forward, forward window, and swap contracts. The purpose of these derivative contracts is to mitigate foreign currency risk on transactions entered into, or on behalf of customers. Contracts with customers, along with the related derivative trades that the Company places, are both remeasured at fair value, and are referred to as economic hedges since they economically offset the Company's exposure. The Company's back-to-back interest rate contracts are used to allow customers to manage long-term interest rate risk. Risk participation agreements are entered into with lead banks in certain loan syndications to share in the risk of default on interest rate swaps on the participated loan.

As it relates to the Company's mortgage banking business, it also uses derivative financial instruments to manage exposure to interest rate risk related to IRLCs, and its inventory of loans HFS and MSRs. The Company economically hedges the changes in fair value associated with changes in interest rates generally by utilizing forward sale commitments and interest rate futures.

Fair Value Hedges

As of December 31, 2022 and 2021, the following amounts are reflected on the Consolidated Balance Sheets related to cumulative basis adjustments for outstanding fair value hedges:

	December 31, 2022		December 31, 2021	
	Carrying Value of Hedged Assets/(Liabilities)	**Cumulative Fair Value Hedging Adjustment**	Carrying Value of Hedged Assets/(Liabilities)	Cumulative Fair Value Hedging Adjustment (1)
	(in millions)			
Loans HFI, net of deferred loan fees and costs (2)	**$ 447**	**$ 17**	$ 1,391	$ 39

(1) Included in the carrying value of the hedged assets/(liabilities).

(2) As of December 31, 2021, included last-of-layer derivative instruments, with $880 million designated as the hedged amount (from a closed portfolio of prepayable fixed rate loans with a carrying value of $1.4 billion). The cumulative basis adjustment included in the carrying value of these hedged items totaled $16 million and the basis adjustment related to the discontinued portion was $1 million as of December 31, 2021.

For the Company's derivative instruments that are designated and qualify as a fair value hedge, the gain or loss on the derivative instrument as well as the offsetting loss or gain on the hedged item attributable to the hedged risk are recognized in current earnings in the same line item as the offsetting loss or gain on the related interest rate swaps. For loans, the gain or loss on the hedged item is included in interest income and for subordinated debt, the gain or loss on the hedged items was included in interest expense, as shown in the table below.

	Year Ended December 31,					
	2022		2021		2020	
Income Statement Classification	**Gain/(Loss) on Swaps**	**Gain/(Loss) on Hedged Item**	**Gain/(Loss) on Swaps**	**Gain/(Loss) on Hedged Item**	**Gain/(Loss) on Swaps**	**Gain/(Loss) on Hedged Item**
	(in millions)					
Interest income	**$ 71.7**	**$ (71.6)**	$ 44.8	$ (45.6)	$ (32.2)	$ 32.2
Interest expense	—	—	(2.7)	2.7	3.1	(3.1)

In addition to the gains and losses on the Company's outstanding fair value hedges presented in the above table, the Company recognized $9.9 million and $0.1 million in interest income related to the amortization of the cumulative basis adjustment on its discontinued last-of-layer hedges during the years ended December 31, 2022 and 2021, respectively.

Fair Values, Volume of Activity, and Gain/Loss Information Related to Derivative Instruments

The following table summarizes the fair value of the Company's derivative instruments on a gross basis as of December 31, 2022, 2021, and 2020. The change in the notional amounts of these derivatives from December 31, 2020 to December 31, 2022 indicates the volume of the Company's derivative transaction activity during these periods. The derivative asset and liability balances are presented on a gross basis, prior to the application of bilateral collateral and master netting agreements. Total derivative assets and liabilities are adjusted to take into account the impact of legally enforceable master netting agreements that allow the Company to settle all derivative contracts with the same counterparty on a net basis and to offset the net derivative position with the related cash collateral. Where master netting agreements are not in effect or are not enforceable under bankruptcy laws, the Company does not adjust those derivative amounts with counterparties.

	December 31, 2022			December 31, 2021			December 31, 2020		
		Fair Value			Fair Value			Fair Value	
	Notional Amount	**Derivative Assets**	**Derivative Liabilities**	Notional Amount	Derivative Assets	Derivative Liabilities	Notional Amount	Derivative Assets	Derivative Liabilities
					(in millions)				
Derivatives designated as hedging instruments:									
Fair value hedges									
Interest rate swaps (1)	**$ 476**	**$ 18**	**$ —**	$ 1,383	$ 14	$ 55	$ 1,690	$ 3	$ 86
Total	**476**	**18**	**—**	1,383	14	55	1,690	3	86
Derivatives not designated as hedging instruments (2):									
Foreign currency contracts	**$ 250**	**$ 1**	**$ 9**	$ 180	$ —	$ 1	$ 119	$ 1	$ 1
Forward purchase contracts	**2,709**	**1**	**13**	11,714	8	18	—	—	—
Forward sales contracts	**4,985**	**16**	**8**	17,358	16	18	—	—	—
Futures purchase contracts (3)	**150,943**	**—**	**—**	218,054	—	—	—	—	—
Futures sales contracts (3)	**159,649**	**—**	**—**	229,040	—	—	—	—	—
Interest rate lock commitments	**1,459**	**5**	**3**	3,033	11	2	—	—	—
Interest rate contracts	**1,538**	**6**	**6**	4	—	—	4	—	—
Risk participation agreements	**48**	**—**	**—**	—	—	—	—	—	—
Total	**$ 321,581**	**$ 29**	**$ 39**	$ 479,383	$ 35	$ 39	$ 123	$ 1	$ 1
Margin	**—**	**4**	**1**	—	1	6	—	—	—
Total, including margin	**$ 321,581**	**$ 33**	**$ 40**	$ 479,383	$ 36	$ 45	$ 123	$ 1	$ 1

(1) Interest rate swap amounts include a notional amount of $880 million and $1.0 billion related to the last-of-layer hedges at December 31, 2021 and 2020, respectively.

(2) Relate to economic hedging arrangements.

(3) The Company enters into forward purchase and sales contracts that are subject to daily remargining and almost all of which are based on three-month LIBOR to hedge against its MSR valuation exposure. The notional amount on these contracts is substantial as these contracts have a duration of only 0.25 years and are intended to cover the longer duration of MSR hedges.

The fair value of derivative contracts, after taking into account the effects of master netting agreements, is included in other assets or other liabilities on the Consolidated Balance Sheets, as summarized in the table below:

	December 31, 2022			December 31, 2021			December 31, 2020		
	Gross amount of recognized assets (liabilities)	**Gross offset**	**Net assets (liabilities)**	Gross amount of recognized assets (liabilities)	Gross offset	Net assets (liabilities)	Gross amount of recognized assets (liabilities)	Gross offset	Net assets (liabilities)
					(in millions)				
Derivatives subject to master netting arrangements:									
Assets									
Forward purchase contracts	**$ 1**	**$ —**	**$ 1**	$ 8	$ —	$ 8	$ —	$ —	$ —
Forward sales contracts	**13**	**—**	**13**	15	—	15	—	—	—
Interest rate contracts	**18**	**—**	**18**	14	—	14	3	—	3
Margin	**4**	**—**	**4**	1	—	1	—	—	—
Netting	**—**	**(17)**	**(17)**	—	(28)	(28)	—	—	—
	$ 36	**$ (17)**	**$ 19**	$ 38	$ (28)	$ 10	$ 3	$ —	$ 3
Liabilities									
Forward purchase contracts	**$ (12)**	**$ —**	**$ (12)**	$ (18)	$ —	$ (18)	$ —	$ —	$ —
Forward sales contracts	**(8)**	**—**	**(8)**	(18)	—	(18)	—	—	—
Interest rate contracts	**—**	**—**	**—**	(54)	—	(54)	(86)	—	(86)
Margin	**(1)**	**—**	**(1)**	(6)	—	(6)	—	—	—
Netting	**—**	**17**	**17**	—	28	28	—	—	—
	$ (21)	**$ 17**	**$ (4)**	$ (96)	$ 28	$ (68)	$ (86)	$ —	$ (86)
Derivatives not subject to master netting arrangements:									
Assets									
Foreign currency contracts	**$ 1**	**$ —**	**$ 1**	$ —	$ —	$ —	$ 1	$ —	$ 1
Forward sales contracts	**3**	**—**	**3**	1	—	1	—	—	—
Interest rate lock commitments	**5**	**—**	**5**	11	—	11	—	—	—
Interest rate contracts	**6**	**—**	**6**	—	—	—	—	—	—
Options contracts	**$ —**	**$ —**	**$ —**	$ —	$ —	$ —	$ —	$ —	$ —
	$ 15	**$ —**	**$ 15**	$ 12	$ —	$ 12	$ 1	$ —	$ 1
Liabilities									
Foreign currency contracts	**$ (9)**	**$ —**	**$ (9)**	$ (2)	$ —	$ (2)	$ (1)	$ —	$ (1)
Forward purchase contracts	**(1)**	**—**	**(1)**	—	—	—	—	—	—
Forward sales contracts	**—**	**—**	**—**	—	—	—	—	—	—
Interest rate lock commitments	**(3)**	**—**	**(3)**	(2)	—	(2)	—	—	—
Interest rate contracts	**(6)**	**—**	**(6)**	—	—	—	—	—	—
	$ (19)	**$ —**	**$ (19)**	$ (4)	$ —	$ (4)	$ (1)	$ —	$ (1)
Total derivatives and margin									
Assets	**$ 51**	**$ (17)**	**$ 34**	$ 50	$ (28)	$ 22	$ 4	$ —	$ 4
Liabilities	**$ (40)**	**$ 17**	**$ (23)**	$ (100)	$ 28	$ (72)	$ (87)	$ —	$ (87)

The following table summarizes the net gain (loss) on derivatives included in income:

	Year Ended December 31,	
	2022	2021
	(in millions)	
Net gain (loss) on loan origination and sale activities:		
Interest rate lock commitments	**$ (7.4)**	$ 1.0
Forward contracts	**425.6**	(52.2)
Interest rate swaps	**(8.4)**	—
Other contracts	**(7.6)**	1.4
Total gain (loss)	**$ 402.2**	$ (49.8)
Net loan servicing revenue:		
Forward contracts	**$ (62.4)**	$ (4.2)
Options contracts	—	(0.3)
Futures contracts	**(36.2)**	(23.9)
Interest rate swaps	**(54.6)**	—
Total loss	**$ (153.2)**	$ (28.4)

Counterparty Credit Risk

Like other financial instruments, derivatives contain an element of credit risk. This risk is measured as the expected replacement value of the contracts. Management enters into bilateral collateral and master netting agreements that provide for the net settlement of all contracts with the same counterparty. Additionally, management monitors counterparty credit risk exposure on each contract to determine appropriate limits on the Company's total credit exposure across all product types, which may require the Company to post collateral to counterparties when these contracts are in a net liability position and conversely, for counterparties to post collateral to the Company when these contracts are in a net asset position. Management reviews the Company's collateral positions on a daily basis and exchanges collateral with counterparties in accordance with standard ISDA documentation and other related agreements. The Company generally posts or holds collateral in the form of cash deposits or highly rated securities issued by the U.S. Treasury or government-sponsored enterprises, such as GNMA, FNMA, and FHLMC. At December 31, 2022, and 2021 collateral pledged by the Company to counterparties for its derivatives totaled $11 million and $80 million, respectively.

16. EARNINGS PER SHARE

Diluted EPS is calculated using the weighted average outstanding common shares during the period, including common stock equivalents. Basic EPS is calculated using the weighted average outstanding common shares during the period.

The following table presents the calculation of basic and diluted EPS:

	Year Ended December 31,		
	2022	2021	2020
	(in millions, except per share amounts)		
Weighted average shares - basic	**107.2**	102.7	100.2
Dilutive effect of stock awards	**0.4**	0.6	0.3
Weighted average shares - diluted	**107.6**	103.3	100.5
Net income available to common stockholders	**$ 1,044.5**	$ 895.7	$ 506.6
Earnings per share - basic	**9.74**	8.72	5.06
Earnings per share - diluted	**9.70**	8.67	5.04

17. INCOME TAXES

The provision for income tax expense consists of the following components:

	Year Ended December 31,		
	2022	2021	2020
		(in millions)	
Current	**$ 327.4**	$ 181.8	$ 141.0
Deferred	**(68.6)**	42.0	(25.1)
Total tax expense	**$ 258.8**	$ 223.8	$ 115.9

The following table presents a reconciliation between the statutory federal income tax rate and the Company's effective tax rate:

	Year Ended December 31,		
	2022	2021	2020
		(in millions)	
Income tax at statutory rate	**$ 276.4**	$ 235.8	$ 130.7
Increase (decrease) resulting from:			
State income taxes, net of federal benefits	**45.4**	35.8	13.9
Investment tax credits	**(32.1)**	(15.9)	(13.9)
Tax-exempt income	**(26.0)**	(25.6)	(21.7)
Other, net	**(4.9)**	(6.3)	6.9
Total tax expense	**$ 258.8**	$ 223.8	$ 115.9
Effective tax rate	**19.7 %**	19.9 %	18.6 %

There was not a significant change in the effective tax rate from 2021 to 2022. The increase in the effective tax rate from 2020 to 2021 is primarily due to increases in pretax book income and state taxes associated with the AmeriHome acquisition which were not fully offset by growth in permanent tax benefit items for the year.

The cumulative tax effects of the temporary differences are shown in the following table:

	December 31,	
	2022	2021
	(in millions)	
Deferred tax assets:		
Unrealized loss on AFS securities	**$ 221**	$ —
Allowance for credit losses	**93**	81
Lease liability	**47**	38
Tax credit carryovers	**24**	—
Accrued expenses	**21**	10
Passthrough income	**19**	9
Premises and equipment	**13**	10
Other	**45**	35
Total gross deferred tax assets	**483**	183
Deferred tax asset valuation allowance	**—**	—
Total deferred tax assets	**483**	183
Deferred tax liabilities:		
Mortgage servicing rights	**(56)**	(58)
Right of use asset	**(41)**	(36)
Deferred loan costs	**(16)**	(15)
Leasing basis differences	**(13)**	(12)
Deferred REIT dividend	**(11)**	—
Other	**(35)**	(41)
Total deferred tax liabilities	**(172)**	(162)
Deferred tax assets, net	**$ 311**	$ 21

At December 31, 2022, the net DTA balance totaled $311 million, an increase of $290 million from $21 million at December 31, 2021. The overall increase in the net DTA was primarily attributable to a decrease in the fair market value of AFS securities, an increase to expected tax credit carryovers, and an increase to the ACL. Although realization is not assured, the Company believes that the realization of the recognized net DTA of $311 million at December 31, 2022 is more-likely-than-not based on expectations as to future taxable income and based on available tax planning strategies that could be implemented if necessary to prevent a carryover from expiring.

The Company had no deferred tax valuation allowance as of December 31, 2022 and 2021.

As of December 31, 2022, the Company's gross federal NOL carryovers, all of which are subject to limitations under Section 382 of the IRC, totaled $39 million, for which a DTA of $4 million has been recorded, reflecting the expected benefit of these federal NOL carryovers remaining after application of the Section 382 limitation. The Company does not currently have any remaining state NOL carryovers. The Company files income tax returns in the U.S. federal jurisdiction and in various states. With few exceptions, the Company is no longer subject to U.S. federal, state, or local income tax examinations by tax authorities for years before 2018.

When tax returns are filed, it is highly certain that most positions taken would be sustained upon examination by the taxing authorities, while others are subject to uncertainty about the merits of the position taken or the amount of the position that would be ultimately sustained. The benefit of a tax position is recognized in the Consolidated Financial Statements in the period in which, based on all available evidence, management believes it is more-likely-than-not that the position will be sustained upon examination, including the resolution of appeals or litigation processes, if any. Tax positions taken are not offset or aggregated with other positions. Tax positions that meet the more-likely-than-not recognition threshold are measured as the largest amount of tax benefit that is more than 50% likely of being realized upon settlement with the applicable taxing authority. The portion of the benefits associated with tax positions taken that exceeds the amount measured as described above is reflected as a liability for unrecognized tax benefits on the accompanying Consolidated Balance Sheet along with any associated interest and penalties payable to the taxing authorities upon examination.

The total gross activity of unrecognized tax benefits related to the Company's uncertain tax positions are shown in the following table:

	December 31,	
	2022	2021
	(in millions)	
Beginning balance	**$ 6.4**	$ 3.4
Gross increases		
Tax positions in prior periods	**—**	0.8
Current period tax positions	**0.8**	2.2
Gross decreases		
Tax positions in prior periods	**(0.6)**	—
Settlements	**—**	—
Lapse of statute of limitations	**—**	—
Ending balance	**$ 6.6**	$ 6.4

During the year ended December 31, 2022, the Company added a new position, which resulted in a tax detriment of $0.8 million.

At December 31, 2022 and 2021, unrecognized tax benefits, net of associated deferred tax benefits, totaled $5.3 million and $5.1 million, respectively, that, if recognized, would favorably impact the effective tax rate. The Company does not anticipate resolution of any unrecognized tax benefits within the next 12 months.

During the years ended December 31, 2022, 2021, and 2020, no amounts were recognized for interest and penalties and as of December 31, 2022 and 2021, there was no accrual for penalties and interest.

LIHTC and renewable energy projects

The Company holds ownership interests in limited partnerships and limited liability companies that invest in affordable housing and renewable energy projects. These investments are designed to generate a return primarily through the realization of federal tax credits and deductions. The limited liability entities are considered to be VIEs; however, as a limited partner, the Company is not the primary beneficiary and is not required to consolidate these entities.

Investments in LIHTC and renewable energy totaled $624 million and $631 million as of December 31, 2022 and 2021, respectively. Unfunded LIHTC and renewable energy obligations are included in Other liabilities on the Consolidated Balance Sheet and totaled $398 million and $361 million as of December 31, 2022 and 2021, respectively. For the years ended December 31, 2022, 2021, and 2020, $63.2 million, $49.5 million, and $49.2 million of amortization related to LIHTC investments was recognized as a component of income tax expense, respectively.

18. COMMITMENTS AND CONTINGENCIES

Unfunded Commitments and Letters of Credit

The Company is party to financial instruments with off-balance sheet risk in the normal course of business to meet the financing needs of its customers. These financial instruments include commitments to extend credit and letters of credit. They involve, to varying degrees, elements of credit risk in excess of amounts recognized on the Consolidated Balance Sheets.

Lines of credit are obligations to lend money to a borrower. Credit risk arises when the borrower's current financial condition may indicate less ability to pay than when the commitment was originally made. In the case of letters of credit, the risk arises from the potential failure of the customer to perform according to the terms of a contract. In such a situation, the third party might draw on the letter of credit to pay for completion of the contract and the Company would look to its customer to repay these funds with interest. To minimize the risk, the Company uses the same credit policies in making commitments and conditional obligations as it would for a loan to that customer.

Letters of credit and financial guarantees are commitments issued by the Company to guarantee the performance of a customer to a third party in borrowing arrangements. The Company generally has recourse to recover from the customer any amounts paid under the guarantees. Typically, letters of credit issued have expiration dates within one year.

A summary of the contractual amounts for unfunded commitments and letters of credit are as follows:

	December 31,	
	2022	2021
	(in millions)	
Commitments to extend credit, including unsecured loan commitments of $1,209 at December 31, 2022 and $1,200 at December 31, 2021	**$ 18,674**	$ 13,396
Credit card commitments and financial guarantees	**379**	307
Letters of credit, including unsecured letters of credit of $7 at December 31, 2022 and $13 at December 31, 2021	**265**	198
Total	**$ 19,318**	$ 13,901

The following table represents the contractual commitments for lines and letters of credit by maturity at December 31, 2022:

		Amount of Commitment Expiration per Period			
	Total Amounts Committed	**Less Than 1 Year**	**1-3 Years**	**3-5 Years**	**After 5 Years**
			(in millions)		
Commitments to extend credit	**$ 18,674**	**$ 4,496**	**$ 7,307**	**$ 4,902**	**$ 1,969**
Credit card commitments and financial guarantees	**379**	**379**	**—**	**—**	**—**
Letters of credit	**265**	**253**	**7**	**5**	**—**
Total	**$ 19,318**	**$ 5,128**	**$ 7,314**	**$ 4,907**	**$ 1,969**

Commitments to extend credit are agreements to lend to a customer provided that there is no violation of any condition established in the contract. Commitments generally have fixed expiration dates or other termination clauses and may require payment of a fee. The Company enters into credit arrangements that generally provide for the termination of advances in the event of a covenant violation or other event of default. Since many of the commitments are expected to expire without being drawn upon, the total commitment amounts do not necessarily represent future cash requirements. The Company evaluates each customer’s creditworthiness on a case-by-case basis. The amount of collateral obtained, if deemed necessary by the Company upon extension of credit, is based on management’s credit evaluation of the party. The commitments are collateralized by the same types of assets used as loan collateral.

The Company has exposure to credit losses from unfunded commitments and letters of credit. As funds have not been disbursed on these commitments, they are not reported as loans outstanding. Credit losses related to these commitments are included in Other liabilities as a separate loss contingency and are not included in the ACL reported in "Note 5. Loans, Leases and Allowance for Credit Losses" of these Consolidated Financial Statements. This loss contingency for unfunded loan commitments and letters of credit was $47 million and $38 million as of December 31, 2022 and 2021, respectively. Changes to this liability are adjusted through the provision for credit losses in the Consolidated Income Statement.

Commitments to Invest in Renewable Energy Projects

The Company has off-balance sheet commitments to invest in renewable energy projects, as described in "Note 17. Income Taxes" of these Consolidated Financial Statements, subject to the underlying project meeting certain milestones. These conditional commitments totaled $117 million as of December 31, 2022.

Concentrations of Lending Activities

The Company does not have a single external customer from which it derives 10% or more of its revenues. The Company monitors concentrations of lending activities at the product and borrower relationship level. Commercial and industrial loans made up 40% and 47% of the Company's HFI loan portfolio as of December 31, 2022 and December 31, 2021, respectively. The Company's loan portfolio includes significant credit exposure to the CRE market. As of December 31, 2022 and 2021, CRE related loans accounted for approximately 29% of total loans. Approximately 16% and 13% of the Company's CRE investor portfolio consisted of office loans as of December 31, 2022 and 2021, respectively. These office loans are primarily shorter-term bridge loans that enable borrowers to reposition or redevelop projects and are geographically well diversified, with the vast majority located in midtown or suburban locations. At the time of origination, these loans have an initial loan-to-value ratio of less than 55% and a weighted average loan-to-cost of less than 60%. The properties underlying these loans have stable business trends and low vacancy rates. Substantially all of the Company's remaining CRE loans are secured by first liens with an initial loan-to-value ratio of generally not more than 75%. Approximately 16% and 23% of these CRE loans, excluding construction and land loans, were owner-occupied as of December 31, 2022 and 2021, respectively. No borrower relationships at both the commitment and funded loan level exceeded 5% of total loans HFI as of December 31, 2022 and December 31, 2021.

Contingencies

The Company is involved in various lawsuits of a routine nature that are being handled and defended in the ordinary course of the Company’s business. Expenses are being incurred in connection with these lawsuits, but in the opinion of management, based in part on consultation with outside legal counsel, the resolution of these lawsuits and associated defense costs will not have a material impact on the Company’s financial position, results of operations, or cash flows.

19. FAIR VALUE ACCOUNTING

The fair value of an asset or liability is the price that would be received to sell that asset or paid to transfer that liability in an orderly transaction occurring in the principal market (or most advantageous market in the absence of a principal market) for such asset or liability. In estimating fair value, the Company utilizes valuation techniques that are consistent with the market approach, the income approach, and/or the cost approach. Such valuation techniques are consistently applied. Inputs to valuation techniques include the assumptions that market participants would use in pricing an asset or liability. ASC 825 establishes a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value. The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1 measurements) and the lowest priority to unobservable inputs (Level 3 measurements). The three levels of the fair value hierarchy under ASC 825 are described in "Note 1. Summary of Significant Accounting Policies" of these Notes to Consolidated Financial Statements.

In general, fair value is based upon quoted market prices, where available. If such quoted market prices are not available, fair value is based upon internally-developed models that primarily use, as inputs, observable market-based parameters. Valuation adjustments may be made to ensure that financial instruments are recorded at fair value. These adjustments may include amounts to reflect counterparty credit quality and the Company’s creditworthiness, among other things, as well as unobservable parameters. Any such valuation adjustments are applied consistently over time. The Company’s valuation methodologies may produce a fair value calculation that may not be indicative of net realizable value or reflective of future fair values. While management believes the Company’s valuation methodologies are appropriate and consistent with other market participants, the use of different methodologies or assumptions to determine the fair value of certain financial instruments could result in a different estimate of fair value at the reporting date. Furthermore, the reported fair value amounts have not been comprehensively revalued since the presentation dates, and therefore, estimates of fair value after the balance sheet date may differ significantly from the amounts presented herein. A more detailed description of the valuation methodologies used for assets and liabilities measured at fair value is set forth below.

Under ASC 825, the Company elected the FVO treatment for junior subordinated debt issued by WAL. This election is irrevocable and results in the recognition of unrealized gains and losses on the debt at each reporting date. These unrealized gains and losses are recognized in OCI rather than earnings. The Company did not elect FVO treatment for the junior subordinated debt assumed in the Bridge Capital Holdings acquisition.

The following table presents unrealized gains and losses from fair value changes on junior subordinated debt:

	Year Ended December 31,		
	2022	2021	2020
	(in millions)		
Unrealized gains (losses)	**$ 4.9**	$ (1.5)	$ (4.2)
Changes included in OCI, net of tax	**3.7**	(1.2)	(3.1)

Fair value on a recurring basis

Financial assets and financial liabilities measured at fair value on a recurring basis include the following:

AFS debt securities: Securities classified as AFS are reported at fair value utilizing Level 1 and Level 2 inputs. For these securities, the Company obtains fair value measurements from an independent pricing service. The fair value measurements consider observable data that may include quoted prices in active markets, dealer quotes, market spreads, cash flows, the U.S. Treasury yield curve, live trading levels, trade execution data, market consensus prepayment speeds, credit information, and the bond's terms and conditions, among other things.

Equity securities: Preferred and common stock and CRA investments are reported at fair value primarily utilizing Level 1 inputs.

Independent pricing service: The Company's independent pricing service provides pricing information on the majority of the Company's Level 1 and Level 2 AFS debt securities. For a small subset of securities, other pricing sources are used, including observed prices on publicly-traded securities and dealer quotes. Management independently evaluates the fair value measurements received from the Company's third-party pricing service through multiple review steps. First, management reviews what has transpired in the marketplace with respect to interest rates, credit spreads, volatility, and mortgage rates, among other things, and develops an expectation of changes to the securities' valuations from the previous quarter. Then, management selects a sample of investment securities and compares the values provided by its primary third-party pricing service to the market values obtained from secondary sources, including other pricing services and safekeeping statements, and evaluates those with notable variances. In instances where there are discrepancies in pricing from various sources and management expectations, management may manually price securities using currently observed market data to determine whether they can develop similar prices or may utilize bid information from broker dealers. Any remaining discrepancies between management's review and the prices provided by the vendor are discussed with the vendor and/or the Company's other valuation advisors.

Loans HFS: Government-insured or guaranteed and agency-conforming loans HFS are salable into active markets. Accordingly, the fair value of these loans is based on quoted market or contracted selling prices or a market price equivalent, which are categorized as Level 2 in the fair value hierarchy.

The fair value of EBO loans, non-agency loans, and loans that are delinquent or have an underwriting defect are valued using Level 3 inputs since they lack active markets.

Mortgage servicing rights: MSRs are measured based on valuation techniques using Level 3 inputs. The Company uses a discounted cash flow model that incorporates assumptions that market participants would use in estimating the fair value of servicing rights, including, but not limited to, option adjusted spread, conditional prepayment rate, servicing fee rate, recapture rate, and cost to service.

Derivative financial instruments: Forward purchase and sales contracts are measured based on valuation techniques using Level 2 inputs, such as quoted market price, contracted selling price, or market price equivalent. Interest rate and foreign currency contracts are reported at fair value utilizing Level 2 inputs. The Company obtains dealer quotations to value its interest rate contracts. IRLCs are measured based on valuation techniques that consider loan type, underlying loan amount, maturity date, note rate, loan program, and expected settlement date, with Level 3 inputs for the servicing release premium and pull-through rate. These measurements are adjusted at the loan level to consider the servicing release premium and loan pricing adjustment specific to each loan. The base value is then adjusted for the pull-through rate. The pull-through rate and servicing fee multiple are unobservable inputs based on historical experience.

Junior subordinated debt: The Company estimates the fair value of its junior subordinated debt using a discounted cash flow model which incorporates the effect of the Company's own credit risk in the fair value of the liabilities (Level 3). The Company's cash flow assumptions are based on contractual cash flows as the Company anticipates that it will pay the debt according to its contractual terms.

The fair value of assets and liabilities measured at fair value on a recurring basis was determined using the following inputs:

	Fair Value Measurements at the End of the Reporting Period Using:			
	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Fair Value
	(in millions)			
December 31, 2022				
Available-for-sale debt securities				
CLO	$ —	$ 2,706	$ —	$ 2,706
Commercial MBS issued by GSEs	—	97	—	97
Corporate debt securities	—	390	—	390
Private label residential MBS	—	1,199	—	1,199
Residential MBS issued by GSEs	—	1,740	—	1,740
Tax-exempt	—	891	—	891
Other	24	45	—	69
Total AFS debt securities	$ 24	$ 7,068	$ —	$ 7,092
Equity securities				
Common Stock	$ 3	$ —	$ —	$ 3
CRA investments	24	25	—	49
Preferred stock	108	—	—	108
Total equity securities	$ 135	$ 25	$ —	$ 160
Loans HFS	$ —	$ 1,172	$ 1	$ 1,173
MSRs	—	—	1,148	1,148
Derivative assets (1)	—	46	5	51
Liabilities:				
Junior subordinated debt (2)	$ —	$ —	$ 63	$ 63
Derivative liabilities (1)	—	37	3	40

(1) See "Note 15. Derivatives and Hedging Activities." In addition, the carrying value of loans is increased by $17 million as of December 31, 2022 for the effective portion of the hedge, which relates to the fair value of the hedges put in place to mitigate against fluctuations in interest rates.

(2) Includes only the portion of junior subordinated debt that is recorded at fair value at each reporting period pursuant to the election of FVO treatment.

	Fair Value Measurements at the End of the Reporting Period Using:			
	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Fair Value
	(in millions)			
December 31, 2021				
Assets:				
Available-for-sale debt securities				
CLO	$ —	$ 926	$ —	$ 926
Commercial MBS issued by GSEs	—	69	—	69
Corporate debt securities	—	383	—	383
Private label residential MBS	—	1,508	—	1,508
Residential MBS issued by GSEs	—	1,993	—	1,993
Tax-exempt	—	1,215	—	1,215
U.S. treasury securities	13	—	—	13
Other	28	54	—	82
Total AFS debt securities	$ 41	$ 6,148	$ —	$ 6,189
Equity securities				
CRA investments	$ 28	$ 17	$ —	$ 45
Preferred stock	114	—	—	114
Total equity securities	$ 142	$ 17	$ —	$ 159
Loans - HFS	$ —	$ 3,894	$ 46	$ 3,940
Mortgage servicing rights	—	—	698	698
Derivative assets (1)	—	39	11	50
Liabilities:				
Junior subordinated debt (2)	$ —	$ —	$ 67	$ 67
Derivative liabilities (1)	—	98	2	100

(1) See "Note 15. Derivatives and Hedging Activities." In addition, the carrying value of loans is increased by $39 million as of December 31, 2021 for the effective portion of the hedge, which relates to the fair value of the hedges put in place to mitigate against fluctuations in interest rates.

(2) Includes only the portion of junior subordinated debt that is recorded at fair value at each reporting period pursuant to the election of FVO treatment.

The change in Level 3 liabilities measured at fair value on a recurring basis included in OCI was as follows:

	Junior Subordinated Debt		
	Year Ended December 31,		
	2022	2021	2020
	(in millions)		
Beginning balance	**$ (67.4)**	$ (65.9)	$ (61.7)
Change in fair value (1)	**4.9**	(1.5)	(4.2)
Ending balance	**$ (62.5)**	$ (67.4)	$ (65.9)

(1) Unrealized gains/(losses) attributable to changes in the fair value of junior subordinated debt are recorded in OCI, net of tax, and totaled $3.7 million, $(1.2) million, and $(3.1) million for the years ended December 31, 2022, 2021, and 2020, respectively.

The significant unobservable inputs used in the fair value measurements of these Level 3 liabilities were as follows:

	December 31, 2022	**Valuation Technique**	**Significant Unobservable Inputs**	**Input Value**
	(in millions)			
Junior subordinated debt	**$ 63**	**Discounted cash flow**	**Implied credit rating of the Company**	**8.13 %**

	December 31, 2021	Valuation Technique	Significant Unobservable Inputs	Input Value
	(in millions)			
Junior subordinated debt	$ 67	Discounted cash flow	Implied credit rating of the Company	2.61 %

The significant unobservable inputs used in the fair value measurement of the Company’s junior subordinated debt as of December 31, 2022 and 2021 was the implied credit risk for the Company. As of December 31, 2022 and 2021, the implied credit risk spread was calculated as the difference between the average of the 15-year 'BB' and 'BBB' rated financial indexes over the corresponding swap index.

As of December 31, 2022, the Company estimates the discount rate at 8.13%, which represents an implied credit spread of 3.36% plus three-month LIBOR (4.77%). As of December 31, 2021, the Company estimated the discount rate at 2.61%, which was a 2.40% credit spread plus three-month LIBOR (0.21%).

The change in Level 3 assets and liabilities measured at fair value on a recurring basis included in income was as follows:

	Year Ended December 31,					
	2022			2021		
	Loans HFS	MSRs	Net IRLCs (1)	Loans HFS	MSRs	Net IRLCs (1)
	(in millions)					
Balance, beginning of period	$ 46	$ 698	$ 9	$ —	$ —	$ —
Acquired in Amerihome acquisition	—	—	—	1	1,347	24
Purchases and additions	1,294	720	19,513	132	765	23,044
Sales and payments	(1,363)	(350)	—	(93)	(1,271)	—
Transfers from Level 2 to Level 3	42	—	—	7	—	—
Transfers from Level 3 to Level 2	(18)	—	—	(1)	—	—
Settlement of IRLCs upon acquisition or origination of loans HFS	—	—	(19,481)	—	—	(23,054)
Change in fair value	—	192	(39)	—	(3)	(5)
Realization of cash flows	—	(112)	—	—	(140)	—
Balance, end of period	$ 1	$ 1,148	$ 2	$ 46	$ 698	$ 9
Changes in unrealized gains (losses) for the period (2)	$ —	$ 135	$ 2	$ —	$ (20)	$ 9

(1) IRLC asset and liability positions are presented net.

(2) Amounts included in income that are attributable to Level 3 assets or liabilities held at period end.

The significant unobservable inputs used in the fair value measurements of these Level 3 assets and liabilities were as follows:

		December 31, 2022	
Asset/liability	**Key inputs**	**Range**	**Weighted average**
MSRs:	Option adjusted spread (in basis points)	190 - 621	378
	Conditional prepayment rate (1)	8.5% - 18.5%	13.4 %
	Recapture rate	20.0% - 20.0%	20.0 %
	Servicing fee rate (in basis points)	25.0 - 56.5	33.2
	Cost to service	$87 - $94	$90
Loans HFS:	Whole loan spread to TBA price (in basis points)	(0.6) - (0.6)	(0.6)
IRLCs:	Servicing fee multiple	2.9 - 5.5	4.3
	Pull-through rate	69% - 100%	89 %

		December 31, 2021	
Asset/liability	Key inputs	Range	Weighted average
MSRs:	Option adjusted spread (in basis points)	553 - 735	600
	Conditional prepayment rate (1)	9.9% - 20.7%	15.2%
	Recapture rate	20.0% - 20.0%	20.0%
	Servicing fee rate (in basis points)	25.0 - 50.0	29.5
	Cost to service	$84 - $91	$86
Loans HFS:	Whole loan spread to TBA price (in basis points)	(3.7) - (2.9)	(3.3)
IRLCs:	Servicing fee multiple	3.6 - 5.4	4.6
	Pull-through rate	75% - 100%	90%

(1) Lifetime total prepayment speed annualized.

The following is a summary of the difference between the aggregate fair value and the aggregate UPB of loans HFS for which the FVO has been elected:

	December 31,					
	2022			2021		
	Fair value	UPB	Difference	Fair value	UPB	Difference
	(in millions)					
Loans HFS:						
Current through 89 days delinquent	$ 1,172	$ 1,138	$ 34	$ 3,938	$ 3,808	$ 130
90 days or more delinquent	1	1	—	2	2	—
Total	$ 1,173	$ 1,139	$ 34	$ 3,940	$ 3,810	$ 130

Fair value on a nonrecurring basis

Certain assets are measured at fair value on a nonrecurring basis. That is, the assets are not measured at fair value on an ongoing basis, but are subject to fair value adjustments in certain circumstances (for example, when there is evidence of credit deterioration). The following table presents such assets carried on the Consolidated Balance Sheet by caption and by level within the ASC 825 hierarchy:

	Fair Value Measurements at the End of the Reporting Period Using			
	Total	Quoted Prices in Active Markets for Identical Assets (Level 1)	Active Markets for Similar Assets (Level 2)	Unobservable Inputs (Level 3)
	(in millions)			
As of December 31, 2022				
Loans HFI	$ 295	$ —	$ —	$ 295
Other assets acquired through foreclosure	11	—	—	11
As of December 31, 2021				
Loans HFI	$ 216	$ —	$ —	$ 216
Other assets acquired through foreclosure	12	—	—	12

For Level 3 assets measured at fair value on a nonrecurring basis as of period end, the significant unobservable inputs used in the fair value measurements were as follows:

	December 31, 2022	Valuation Technique(s)		Significant Unobservable Inputs	Range
	(in millions)				
Loans HFI	$ 295	Collateral method	Third party appraisal	Costs to sell	6.0% to 10.0%
		Discounted cash flow method	Discount rate	Contractual loan rate	3.0% to 8.0%
			Scheduled cash collections	Probability of default	0% to 20.0%
			Proceeds from non-real estate collateral	Loss given default	0% to 70.0%
Other assets acquired through foreclosure	11	Collateral method	Third party appraisal	Costs to sell	4.0% to 10.0%

	December 31, 2021	Valuation Technique(s)		Significant Unobservable Inputs	Range
	(in millions)				
Loans HFI	$ 216	Collateral method	Third party appraisal	Costs to sell	6.0% to 10.0%
		Discounted cash flow method	Discount rate	Contractual loan rate	3.0% to 6.0%
			Scheduled cash collections	Probability of default	0% to 20.0%
			Proceeds from non-real estate collateral	Loss given default	0% to 70.0%
Other assets acquired through foreclosure	12	Collateral method	Third party appraisal	Costs to sell	4.0% to 10.0%

Loans HFI: Loans measured at fair value on a nonrecurring basis include collateral dependent loans. The specific reserves for these loans are based on collateral value, net of estimated disposition costs and other identified quantitative inputs. Collateral value is determined based on independent third-party appraisals or internally-developed discounted cash flow analyses. Appraisals may utilize a single valuation approach or a combination of approaches, including comparable sales and the income approach. Fair value is determined, where possible, using market prices derived from an appraisal or evaluation, which are considered to be Level 2. However, certain assumptions and unobservable inputs are often used by the appraiser, therefore qualifying the assets as Level 3 in the fair value hierarchy. In addition, when adjustments are made to an appraised value to reflect various factors such as the age of the appraisal or known changes in the market or the collateral, such valuation inputs are considered unobservable and the fair value measurement is categorized as a Level 3 measurement. Internal discounted cash flow analyses are also utilized to estimate the fair value of these loans, which considers internally-developed, unobservable inputs such as discount rates, default rates, and loss severity.

Total Level 3 collateral dependent loans had an estimated fair value of $295 million and $216 million at December 31, 2022 and 2021, respectively, net of a specific ACL of $7 million and $11 million at December 31, 2022 and 2021, respectively.

Other assets acquired through foreclosure: Other assets acquired through foreclosure consist of properties acquired as a result of, or in-lieu-of, foreclosure. These assets are initially reported at the fair value determined by independent appraisals using appraised value less estimated cost to sell. Such properties are generally re-appraised every 12 months. Costs relating to the development or improvement of the assets are capitalized and costs relating to holding the assets are charged to expense.

Fair value is determined, where possible, using market prices derived from an appraisal or evaluation, which are considered to be Level 2. However, certain assumptions and unobservable inputs are often used by the appraiser, therefore qualifying the assets as Level 3 in the fair value hierarchy. When significant adjustments are based on unobservable inputs, such as when a current appraised value is not available or management determines the fair value of the collateral is further impaired below the appraised value and there is no observable market price, the resulting fair value measurement has been categorized as a Level 3 measurement. The Company had $11 million and $12 million of such assets at December 31, 2022 and 2021, respectively.

Fair Value of Financial Instruments

The estimated fair value of the Company's financial instruments is as follows:

	December 31, 2022				
		Fair Value			
	Carrying Amount	Level 1	Level 2	Level 3	Total
	(in millions)				
Financial assets:					
Investment securities:					
HTM	$ 1,289	$ —	$ 1,112	$ —	$ 1,112
AFS	7,092	24	7,068	—	7,092
Equity securities	160	135	25	—	160
Derivative assets	51	—	46	5	51
Loans HFS	1,184	—	1,172	1	1,173
Loans HFI, net	51,552	—	—	47,679	47,679
Mortgage servicing rights	1,148	—	—	1,148	1,148
Accrued interest receivable	357	—	357	—	357
Financial liabilities:					
Deposits	$ 53,644	$ —	$ 53,698	$ —	$ 53,698
Other borrowings	6,299	—	6,261	—	6,261
Qualifying debt	893	—	735	75	810
Derivative liabilities	40	—	37	3	40
Accrued interest payable	35	—	35	—	35

	December 31, 2021				
		Fair Value			
	Carrying Amount	Level 1	Level 2	Level 3	Total
			(in millions)		
Financial assets:					
Investment securities:					
HTM	$ 1,107	$ —	$ 1,146	$ —	$ 1,146
AFS	6,189	41	6,148	—	6,189
Equity securities	159	142	17	—	159
Derivative assets	50	—	39	11	50
Loans HFS	5,635	—	3,894	1,760	5,654
Loans HFI, net	38,823	—	—	39,218	39,218
Mortgage servicing rights	698	—	—	698	698
Accrued interest receivable	228	—	228	—	228
Financial liabilities:					
Deposits	$ 47,612	$ —	$ 47,616	$ —	$ 47,616
Other borrowings	1,502	—	1,518	—	1,518
Qualifying debt	896	—	858	81	939
Derivative liabilities	100	—	98	2	100
Accrued interest payable	9	—	9	—	9

Interest rate risk

The Company assumes interest rate risk (the risk to the Company's earnings and capital from changes in interest rate levels) as a result of its normal operations. As a result, the fair values of the Company's financial instruments, as well as its future net interest income, will change when interest rate levels change and that change may be either favorable or unfavorable to the Company.

Interest rate risk exposure is measured using interest rate sensitivity analysis to determine the Company's change in EVE and net interest income resulting from hypothetical changes in interest rates. If potential changes to EVE and net interest income resulting from hypothetical interest rate changes are not within the limits established by the BOD, the BOD may direct management to adjust the asset and liability mix to bring interest rate risk within BOD-approved limits.

WAB has an ALCO charged with managing interest rate risk within the BOD-approved limits. Limits are structured to preclude an interest rate risk profile that does not conform to both management and BOD risk tolerances without ALCO approval. There is also ALCO reporting at the Parent level for reviewing interest rate risk for the Company, which gets reported to the BOD and its Finance and Investment Committee.

Fair value of commitments

The estimated fair value of letters of credit outstanding at December 31, 2022 and 2021 approximates zero as there have been no significant changes in borrower creditworthiness. Loan commitments on which the committed interest rates are less than the current market rate are insignificant at December 31, 2022 and 2021.

20. REGULATORY CAPITAL REQUIREMENTS

The Company and the Bank are subject to various regulatory capital requirements administered by the federal banking agencies. Failure to meet minimum capital requirements could trigger certain mandatory or discretionary actions that, if undertaken, could have a direct material effect on the Company's business and financial statements. Under capital adequacy guidelines and the regulatory framework for prompt corrective action, the Company and the Bank must meet specific capital guidelines that involve quantitative measures of their assets, liabilities, and certain off-balance sheet items as calculated under regulatory accounting practices. The capital amounts and classification are also subject to qualitative judgments by the regulators about components, risk weightings, and other factors.

As permitted by the regulatory capital rules, the Company elected the CECL transition option that delays the estimated impact on regulatory capital resulting from the adoption of CECL over a five-year transition period ending December 31, 2024. Beginning in 2022, capital ratios and amounts include a 25% reduction to the capital benefit that resulted from the increased ACL related to the adoption of ASC 326.

As of December 31, 2022 and 2021, the Company and the Bank's capital ratios exceeded the well-capitalized thresholds, as defined by the federal banking agencies. The actual capital amounts and ratios for the Company and the Bank are presented in the following tables:

	Total Capital	Tier 1 Capital	Risk-Weighted Assets	Tangible Average Assets	Total Capital Ratio	Tier 1 Capital Ratio	Tier 1 Leverage Ratio	Common Equity Tier 1
	(dollars in millions)							
December 31, 2022								
WAL	**$ 6,586**	**$ 5,449**	**$ 54,461**	**$ 69,814**	**12.1 %**	**10.0 %**	**7.8 %**	**9.3 %**
WAB	**6,280**	**5,737**	**54,411**	**69,762**	**11.5**	**10.5**	**8.2**	**10.5**
Well-capitalized ratios					**10.0**	**8.0**	**5.0**	**6.5**
Minimum capital ratios					**8.0**	**6.0**	**4.0**	**4.5**
December 31, 2021								
WAL	$ 5,499	$ 4,444	$ 44,697	$ 56,973	12.3 %	9.9 %	7.8 %	9.1 %
WAB	5,120	4,658	44,726	56,962	11.4	10.4	8.2	10.4
Well-capitalized ratios					10.0	8.0	5.0	6.5
Minimum capital ratios					8.0	6.0	4.0	4.5

With the acquisition of AmeriHome, the Company is also required to maintain specified levels of capital to remain in good standing with certain government sponsored entities and government agencies, including FNMA, FHLMC, GNMA, and HUD. These capital requirements are generally tied to the unpaid balances of loans included in the Company's servicing portfolio or loan production volume. Noncompliance with these capital requirements can result in various remedial actions up to, and including, removing the Company's ability to sell loans to and service loans on behalf of the respective agency. The Company believes that it is in compliance with these requirements as of December 31, 2022.

21. EMPLOYEE BENEFIT PLANS

The Company has a qualified 401(k) employee benefit plan for all eligible employees. Participants are able to defer between 1% and 75% (up to a maximum of $20,500 for those under 50 years of age and up to a maximum of $27,000 for those over 50 years of age in 2022) of their annual compensation. The Company may elect to match a discretionary amount each year, which was 100% of the first 5% of the participant's compensation deferred into the plan during the year ended December 31, 2022. The Company's contributions to this plan totaled $15.9 million, $12.0 million, and $7.1 million for the years ended December 31, 2022, 2021, and 2020, respectively.

In addition, the Company has a SERP, which is an unfunded noncontributory defined benefit pension plan. The SERP provides retirement benefits to certain Bridge officers based on years of service and final average salary. The projected benefit obligation was $14 million and $13 million as of December 31, 2022 and 2021, respectively, all of which was unfunded. Net periodic benefit cost totaled $1.0 million for the year ended December 31, 2022 and $1.1 million for the years ended December 31, 2021 and 2020.

22. RELATED PARTY TRANSACTIONS

Principal stockholders, directors, and executive officers of the Company, their immediate family members, and companies they control or own more than a 10% interest in, are considered to be related parties. In the ordinary course of business, the Company engages in various related party transactions, including extending credit and bank service transactions. All related party transactions are subject to review and approval pursuant to the Company's related party transactions policy.

The increase in related party transactions during the year ended December 31, 2022 is due to changes in composition of the Company's BOD.

Federal banking regulations require that any extensions of credit to insiders and their related interests not be offered on terms more favorable than would be offered to non-related borrowers of similar creditworthiness. The following table summarizes the aggregate activity for such loans:

	Year Ended December 31,	
	2022	2021
	(in millions)	
Balance, beginning	**$ —**	$ 3
New loans	**231**	—
Advances	**2,144**	—
Repayments and other	**(2,203)**	(3)
Balance, ending	**$ 172**	$ —

None of these loans are past due, on non-accrual status or have been restructured to provide a reduction or deferral of interest or principal because of deterioration in the financial position of the borrower. There were no loans to a related party that were considered classified loans at December 31, 2022 or 2021. The interest income associated with these loans was approximately $2.5 million, $0.1 million, and $0.2 million for the years ended December 31, 2022, 2021 and 2020, respectively. In addition, the Company purchased $914 million of residential loans from related parties during the year ended December 31, 2022. There were no such loan purchases during the years ended December 31, 2021 and 2020.

Loan commitments outstanding with related parties totaled $476 million and $7 million at December 31, 2022 and 2021, respectively.

The Company also accepts deposits from related parties, which totaled $398 million and $101 million at December 31, 2022 and 2021, respectively, with related interest expense of approximately $0.2 million during each of the years ended December 31, 2022, 2021, and 2020 and earnings credits of $1.9 million for the year ended December 31, 2022. There were no earnings credits on deposits from related parties for the years ended December 31, 2021 and 2020.

Long-term borrowings with related parties totaled $1 million and zero at December 31, 2022 and 2021, respectively.

Loan servicing fees paid to related parties totaled $1.5 million for the year ended December 31, 2022, with $2.1 billion of residential loans serviced by related parties at December 31, 2022. There were no loan servicing fees paid to related parties for the years ended December 31, 2021 and 2020 and no loans serviced by related parties at December 31, 2021. Donations, sponsorships, and other payments to related parties totaled less than $1.0 million during each of the years ended December 31, 2022, 2021, and 2020.

23. PARENT COMPANY FINANCIAL INFORMATION

The condensed financial statements of the holding company are presented in the following tables:

WESTERN ALLIANCE BANCORPORATION

Condensed Balance Sheets

	December 31,	
	2022	2021
	(in millions)	
ASSETS:		
Cash and cash equivalents	**$ 85**	$ 79
Investment securities - AFS	—	1
Investment securities - equity	**34**	41
Investment in subsidiaries	**5,862**	5,500
Other assets	**66**	23
Total assets	**$ 6,047**	$ 5,644
LIABILITIES AND STOCKHOLDERS' EQUITY:		
Qualifying debt	**$ 669**	$ 673
Accrued interest and other liabilities	**22**	8
Total liabilities	**691**	681
Total stockholders' equity	**5,356**	4,963
Total liabilities and stockholders' equity	**$ 6,047**	$ 5,644

WESTERN ALLIANCE BANCORPORATION

Condensed Income Statements

	Year Ended December 31,		
	2022	2021	2020
		(in millions)	
Income:			
Dividends from subsidiaries	**$ 261.8**	$ 50.0	$ 160.0
Interest income	**3.8**	3.2	3.1
Non-interest (loss) income	**(0.9)**	13.4	4.7
Total income	**264.7**	66.6	167.8
Expense:			
Interest expense	**22.6**	19.5	10.6
Non-interest expense	**26.5**	31.9	19.7
Total expense	**49.1**	51.4	30.3
Income before income taxes and equity in undistributed earnings of subsidiaries	**215.6**	15.2	137.5
Income tax benefit	**11.0**	7.4	4.5
Income before equity in undistributed earnings of subsidiaries	**226.6**	22.6	142.0
Equity in undistributed earnings of subsidiaries	**830.7**	876.6	364.6
Net income	**1,057.3**	899.2	506.6
Dividends on preferred stock	**12.8**	3.5	—
Net income available to common stockholders	**$ 1,044.5**	$ 895.7	$ 506.6

Western Alliance Bancorporation

Condensed Statements of Cash Flows

	Year Ended December 31,		
	2022	2021	2020
		(in millions)	
Cash flows from operating activities:			
Net income	**$ 1,057.3**	$ 899.2	$ 506.6
Adjustments to reconcile net income to net cash provided by operating activities:			
Equity in net undistributed earnings of subsidiaries	**(830.7)**	(876.6)	(364.6)
Change in fair value of assets and liabilities measured at fair value	**8.7**	(0.1)	—
Loss on extinguishment of debt	**—**	5.9	—
Other operating activities, net	**(16.8)**	(1.4)	8.0
Net cash provided by operating activities	**218.5**	27.0	150.0
Cash flows from investing activities:			
Purchases of securities	**(0.4)**	(16.0)	(6.9)
Principal pay downs, calls, maturities, and sales proceeds of securities	**1.8**	28.6	7.7
Capital contributions to subsidiaries	**(193.0)**	(1,139.3)	—
Other investing activities, net	**(12.1)**	—	1.2
Net cash (used in) provided by investing activities	**(203.7)**	(1,126.7)	2.0
Cash flows from financing activities:			
Net proceeds from issuance of subordinated debt	**—**	591.9	—
Common stock repurchases	**—**	—	(71.6)
Redemption of subordinated debt	**—**	(176.0)	—
Proceeds from issuance of common stock in offerings, net	**157.7**	540.3	—
Cash dividends paid on common and preferred stock	**(166.2)**	(127.6)	(101.3)
Proceeds from issuance of preferred stock, net	**—**	294.5	—
Other financing activities, net	**—**	0.1	0.5
Net cash (used in) provided by financing activities	**(8.5)**	1,123.2	(172.4)
Net increase (decrease) in cash and cash equivalents	**6.3**	23.5	(20.4)
Cash and cash equivalents at beginning of year	**79.0**	55.5	75.9
Cash and cash equivalents at end of year	**$ 85.3**	$ 79.0	$ 55.5

24. SEGMENTS

The Company's reportable segments are aggregated with a focus on products and services offered and consist of three reportable segments:

- Commercial: provides commercial banking and treasury management products and services to small and middle-market businesses, specialized banking services to sophisticated commercial institutions and investors within niche industries, as well as financial services to the real estate industry.
- Consumer Related: offers both commercial banking services to enterprises in consumer-related sectors and consumer banking services, such as residential mortgage banking and beginning on January 25, 2022, includes the financial results of DST.
- Corporate & Other: consists of the Company's investment portfolio, Corporate borrowings and other related items, income and expense items not allocated to other reportable segments, and inter-segment eliminations.

The Company's segment reporting process begins with the assignment of all loan and deposit accounts directly to the segments where these products are originated and/or serviced. Equity capital is assigned to each segment based on the risk profile of their assets and liabilities. With the exception of goodwill, which is assigned a 100% weighting, equity capital allocations ranged from 0% to 20% during the year. Any excess or deficient equity not allocated to segments based on risk is assigned to the Corporate & Other segment.

Net interest income, provision for credit losses, and non-interest expense amounts are recorded in their respective segments to the extent that the amounts are directly attributable to those segments. Net interest income is recorded in each segment on a TEB with a corresponding increase in income tax expense, which is eliminated in the Corporate & Other segment.

Further, net interest income of a reportable segment includes a funds transfer pricing process that matches assets and liabilities with similar interest rate sensitivity and maturity characteristics. Using this funds transfer pricing methodology, liquidity is transferred between users and providers. A net user of funds has lending/investing in excess of deposits/borrowings and a net provider of funds has deposits/borrowings in excess of lending/investing. A segment that is a user of funds is charged for the use of funds, while a provider of funds is credited through funds transfer pricing, which is determined based on the average life of the assets or liabilities in the portfolio. Residual funds transfer pricing mismatches are allocable to the Corporate & Other segment and presented in net interest income.

The net income amount for each reportable segment is further derived by the use of expense allocations. Certain expenses not directly attributable to a specific segment are allocated across all segments based on key metrics, such as number of employees, number of transactions processed for loans and deposits, and average loan and deposit balances. These types of expenses include information technology, operations, human resources, finance, risk management, credit administration, legal, and marketing.

Income taxes are applied to each segment based on the effective tax rate for the geographic location of the segment. Any difference in the corporate tax rate and the aggregate effective tax rates in the segments are adjusted in the Corporate & Other segment.

The following is a summary of operating segment balance sheet information:

	Consolidated Company	Commercial	Consumer Related	Corporate & Other
At December 31, 2022:		*(in millions)*		
Assets:				
Cash, cash equivalents, and investment securities	**$ 9,803**	**$ 12**	**$ —**	**$ 9,791**
Loans HFS	**1,184**	**—**	**1,184**	**—**
Loans HFI, net of deferred fees and costs	**51,862**	**31,414**	**20,448**	**—**
Less: allowance for credit losses	**(310)**	**(262)**	**(48)**	**—**
Net loans HFI	**51,552**	**31,152**	**20,400**	**—**
Other assets acquired through foreclosure, net	**11**	**11**	**—**	**—**
Goodwill and other intangible assets, net	**680**	**293**	**387**	**—**
Other assets	**4,504**	**435**	**2,180**	**1,889**
Total assets	**$ 67,734**	**$ 31,903**	**$ 24,151**	**$ 11,680**
Liabilities:				
Deposits	**$ 53,644**	**$ 29,494**	**$ 18,492**	**$ 5,658**
Borrowings and qualifying debt	**7,192**	**27**	**340**	**6,825**
Other liabilities	**1,542**	**83**	**656**	**803**
Total liabilities	**62,378**	**29,604**	**19,488**	**13,286**
Allocated equity:	**5,356**	**2,684**	**1,691**	**981**
Total liabilities and stockholders' equity	**$ 67,734**	**$ 32,288**	**$ 21,179**	**$ 14,267**
Excess funds provided (used)	**—**	**385**	**(2,972)**	**2,587**
At December 31, 2021:				
Assets:				
Cash, cash equivalents, and investment securities	$ 8,057	$ 13	$ 82	$ 7,962
Loans HFS	5,635	—	5,635	—
Loans HFI, net of deferred fees and costs	39,075	25,092	13,983	—
Less: allowance for credit losses	(252)	(226)	(26)	—
Net loans HFI	38,823	24,866	13,957	—
Other assets acquired through foreclosure, net	12	12	—	—
Goodwill and other intangible assets, net	635	295	340	—
Other assets	2,821	254	1,278	1,289
Total assets	$ 55,983	$ 25,440	$ 21,292	$ 9,251
Liabilities:				
Deposits	$ 47,612	$ 30,467	$ 15,363	$ 1,782
Borrowings and qualifying debt	2,398	17	353	2,028
Other liabilities	1,010	216	138	656
Total liabilities	51,020	30,700	15,854	4,466
Allocated equity:	4,963	2,588	1,597	778
Total liabilities and stockholders' equity	$ 55,983	$ 33,288	$ 17,451	$ 5,244
Excess funds provided (used)	—	7,848	(3,841)	(4,007)

The following is a summary of operating segment income statement information:

	Consolidated Company	Commercial	Consumer Related	Corporate & Other
		(in millions)		
Year Ended December 31, 2022:				
Net interest income	**$ 2,216.3**	**$ 1,546.3**	**$ 854.1**	**$ (184.1)**
Provision for (recovery of) credit losses	**68.1**	**47.2**	**21.1**	**(0.2)**
Net interest income (expense) after provision for credit losses	**2,148.2**	**1,499.1**	**833.0**	**(183.9)**
Non-interest income	**324.6**	**59.7**	**247.2**	**17.7**
Non-interest expense	**1,156.7**	**463.5**	**630.1**	**63.1**
Income (loss) before provision for income taxes	**1,316.1**	**1,095.3**	**450.1**	**(229.3)**
Income tax expense (benefit)	**258.8**	**260.5**	**107.1**	**(108.8)**
Net income (loss)	**$ 1,057.3**	**$ 834.8**	**$ 343.0**	**$ (120.5)**
Year Ended December 31, 2021:				
Net interest income	$ 1,548.8	$ 1,181.7	$ 603.4	$ (236.3)
(Recovery of) provision for credit losses	(21.4)	(30.6)	11.0	(1.8)
Net interest income (expense) after provision for credit losses	1,570.2	1,212.3	592.4	(234.5)
Non-interest income	404.2	65.1	317.6	21.5
Non-interest expense	851.4	415.9	413.9	21.6
Income (loss) before provision for income taxes	1,123.0	861.5	496.1	(234.6)
Income tax expense (benefit)	223.8	206.6	120.1	(102.9)
Net income (loss)	$ 899.2	$ 654.9	$ 376.0	$ (131.7)
Year Ended December 31, 2020:				
Net interest income	$ 1,166.9	$ 999.7	$ 302.5	$ (135.3)
Provision for (recovery of) credit losses	123.6	128.6	(9.0)	4.0
Net interest income (expense) after provision for credit losses	1,043.3	871.1	311.5	(139.3)
Non-interest income	70.8	50.5	1.6	18.7
Non-interest expense	491.6	308.9	92.6	90.1
Income (loss) before provision for income taxes	622.5	612.7	220.5	(210.7)
Income tax expense (benefit)	115.9	147.6	52.3	(84.0)
Net income (loss)	$ 506.6	$ 465.1	$ 168.2	$ (126.7)

25. REVENUE FROM CONTRACTS WITH CUSTOMERS

Revenue streams within the scope of ASC 606 include service charges and fees, interchange fees on credit and debit cards, success fees, and legal settlement service fees.

Performance Obligations

Many of the services the Company performs for its customers are ongoing, and either party may cancel at any time. The fees for these contracts are dependent upon various underlying factors, such as customer deposit balances, and as such may be considered variable. The Company's performance obligations for these services are satisfied as the services are rendered and payment is collected on a monthly, quarterly, or semi-annual basis. For services provided at a point in time, fees are recognized at the time such services are rendered. The Company had no material unsatisfied performance obligations as of December 31, 2022 or 2021.

Service Charges and Fees

The Company performs deposit account services for its customers, which include analysis and treasury management services, use of safe deposit boxes, check upcharges, and other ancillary services. The depository arrangements the Company holds with its customers are considered day-to-day contracts with ongoing renewals and optional purchases, and as such, the contract duration does not extend beyond the services performed. Due to the short-term nature of such contracts, the Company generally recognizes revenue for deposit related fees as services are rendered. From time to time, the Company may waive certain fees for its customers. The Company considers historical experience when recognizing revenue from contracts with customers, and may reduce the transaction price to account for fee waivers or refunds.

Debit and Credit Card Interchange

When a credit or debit card issued by the Company is used to purchase goods or services from a merchant, the Company earns an interchange fee. Interchange fees on credit and debit cards are included in Commercial banking related income in the Consolidated Income Statements. The Company considers the merchant to be its customer in these transactions as nightly settlement services between the payment network and the merchant are being provided to the merchant. This transmission of data and funds represents the Company's performance obligation and is performed nightly. As the payment network is in direct control of setting the rates, the Company acts as an agent. Interchange fees are recorded net of expenses as the services are provided.

Success Fees

Success fees are one-time fees detailed as part of certain loan agreements and are earned upon occurrence of a triggering event. Examples of triggering events include: a borrower obtaining its next round of funding, an acquisition, or completion of a public offering. Success fees are variable as the transaction price can vary and is contingent on the occurrence or non-occurrence of a triggering event. These fees are included in Income from equity investments in the Consolidated Income Statements.

Legal Settlement Services

The Company provides payment services for claim administrators responsible for distributing funds from legal settlements, such as class action lawsuits. Claimants access the Company's platform, select their preferred method of payment, and funds are transferred to the claimant. Upon the transfer of funds, the Company is entitled to a fee paid by the claim administrator. Revenue is recognized upon each transfer of funds to a claimant.

Revenues within the scope of ASC 606 totaled $44.1 million, $37.6 million, and $29.9 million for the years ended December 31, 2022, 2021, and 2020, respectively.

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure.

None.

Item 9A. Controls and Procedures.

As of the end of the period covered by this Annual Report on Form 10-K, an evaluation was carried out by the Company’s management, with the participation of its CEO and CFO, of the effectiveness of the Company’s disclosure controls and procedures (as defined in Rule 13a-15(e), under the Exchange Act). Based upon that evaluation, the Company’s CEO and CFO concluded that the disclosure controls and procedures were effective as of the end of the period covered by this report. No changes were made to the Company’s internal control over financial reporting (as defined in Rule 13a-15(f) under the Exchange Act) during the last fiscal quarter that materially affected, or are reasonably likely to materially affect, the Company’s internal control over financial reporting.

MANAGEMENT'S REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING

The management of WAL is responsible for establishing and maintaining adequate internal control over financial reporting. The Company’s internal control over financial reporting is a process designed under the supervision of the Company’s CEO and CFO to provide reasonable assurance regarding the reliability of financial reporting and the preparation of the Company’s financial statements for external purposes in accordance with U.S. generally accepted accounting principles.

As of December 31, 2022, management assessed the effectiveness of the Company’s internal control over financial reporting based on the criteria for effective internal control over financial reporting established in “*Internal Control-Integrated Framework”* issued by the COSO in 2013. Based on this assessment, management determined that the Company maintained effective internal control over financial reporting as of December 31, 2022, based on those criteria.

RSM US LLP, the independent registered public accounting firm that audited the Consolidated Financial Statements of the Company included in this Annual Report on Form 10-K, has audited the effectiveness of the Company’s internal control over financial reporting as of December 31, 2022. Their report, which expresses an unqualified opinion on the effectiveness of the Company’s internal control over financial reporting as of December 31, 2022, is included herein.

Report of Independent Registered Public Accounting Firm

To the Stockholders and Board of Directors of Western Alliance Bancorporation

Opinion on the Internal Control Over Financial Reporting

We have audited Western Alliance Bancorporation and its subsidiaries' (the Company) internal control over financial reporting as of December 31, 2022, based on criteria established in *Internal Control—Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission in 2013. In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2022, based on criteria established in *Internal Control—Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission in 2013.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets as of December 31, 2022 and 2021, and the related consolidated statements of income, comprehensive income, stockholders' equity and cash flows for each of the three years in the period ended December 31, 2022 of the Company and our report, dated February 23, 2023, expressed an unqualified opinion.

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 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 U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, 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/ RSM US LLP

San Francisco, California
February 23, 2023

Item 9B. Other Information.

Not applicable.

Item 9C. Disclosure Regarding Foreign Jurisdictions that Prevent Inspections

Not applicable.

PART III

Item 10. Directors, Executive Officers and Corporate Governance

The information in the Company's Definitive Proxy Statement prepared for the 2023 Annual Meeting of Stockholders to be held on June 14, 2023, which contains information concerning this item under the captions Corporate Governance, Executive Officers, Delinquent Section 16(a) Reports and Legal Proceedings, is incorporated herein by reference.

The Company has adopted a Code of Business Conduct and Ethics (the "Code") that applies to its directors, officers and employees and is available in the Governance Documents section of the Investor Relations page of the Company's website at www.westernalliancebancorporation.com or, for print copies, by writing to the Company at One E. Washington Street, Suite 1400, Phoenix, Arizona 85004, Attention: Corporate Secretary. The Company intends to provide any required disclosure of any amendment to or waiver of the Code that applies to its principal executive officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions, in the Governance Documents section of the Investor Relations page of the Company's website at www.westernalliancebancorporation.com promptly following the amendment or waiver. The information contained on or connected to the Company's website is not incorporated by reference in this Annual Report on Form 10-K and should not be considered part of this or any other report or document that we file or furnish to the SEC.

Item 11. Executive Compensation

The information in the Company's Definitive Proxy Statement prepared for the 2023 Annual Meeting of Stockholders to be held on June 14, 2023, which contains information concerning this item under the captions Compensation of Directors, Executive Compensation - Compensation Discussion and Analysis, Compensation Tables, CEO Pay Ratio, Potential Payments Upon Termination or Change in Control, Compensation Committee Interlocks and Insider Participation and Compensation Committee Report is incorporated herein by reference.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

The information in the Company's Definitive Proxy Statement prepared for the 2023 Annual Meeting of Stockholders to be held on June 14, 2023, which contains information concerning this item under the caption Equity Compensation Plan Information and Security Ownership of Certain Beneficial Owners, Directors and Executive Officers, is incorporated herein by reference.

Item 13. Certain Relationships and Related Transactions, and Director Independence

The information in the Company's Definitive Proxy Statement prepared for the 2023 Annual Meeting of Stockholders to be held on June 14, 2023, which contains information concerning this item under the caption Certain Transactions with Related Parties, Policies and Procedures Regarding Transactions with Related Persons and Director Independence, is incorporated herein by reference.

Item 14. Principal Accountant Fees and Services

The information in the Company's Definitive Proxy Statement prepared for the 2023 Annual Meeting of Stockholders to be held on June 14, 2023, which contains information concerning this item under the caption Independent Auditors - Fees and Services and Audit Committee Pre-Approval Policy, is incorporated herein by reference.

PART IV

Item 15. Exhibits and Financial Statement Schedules

(1) The following financial statements are incorporated by reference from Item 8 hereto:

(2) *Financial Statement Schedules*

Not applicable.

EXHIBITS

1.1	Distribution Agreement, dated June 3, 2021, by and between Western Alliance Bancorporation and J.P. Morgan Securities LLC (incorporated by reference to Exhibit 1.1 of Western Alliance's Form 8-K filed with the SEC on June 3, 2021).
1.2	Amendment to the Distribution Agreement, dated November 18, 2021, by and between Western Alliance Bancorporation, J.P. Morgan Securities LLC and Piper Sandler & Co. (incorporated by reference to Exhibit 1.1 of Western Alliance's Form 8-K filed with the SEC on November 19. 2021).
1.3	Amendment No. 2 to the Distribution Agreement, dated February 28, 2022, by and between Western Alliance Bancorporation, J.P. Morgan Securities LLC and Piper Sandler & Co. (incorporated by reference to Exhibit 1.1 of Western Alliance's Form 8-K filed with the SEC on February 28, 2022).
3.1	Amended and Restated Certificate of Incorporation of Western Alliance, effective as of May 19, 2015 (incorporated by reference to Exhibit 3.1 of Western Alliance's Form 10-K filed with the SEC on March 1, 2019).
3.2	Amended and Restated Bylaws of Western Alliance, effective as of June 14, 2022 (incorporated by reference to Exhibit 3.1 of Western Alliance's Form 8-K filed with the SEC on June 16, 2022).
3.3	Articles of Conversion, as filed with the Nevada Secretary of State on May 29, 2014 (incorporated by reference to Exhibit 3.1 of Western Alliance's Form 8-K filed with the SEC on June 3, 2014).
3.4	Certificate of Conversion, as filed with the Delaware Secretary of State on May 29, 2014 (incorporated by reference to Exhibit 3.2 of Western Alliance's Form 8-K filed with the SEC on June 3, 2014).
3.5	Certificate of Designation of Non-Cumulative Perpetual Preferred Stock, Series B, as filed with the Delaware Secretary of State on May 29, 2014 (incorporated by reference to Exhibit 3.4 of Western Alliance's Form 8-K filed with the SEC on June 3, 2014).
3.6	Certificate of Amendment designating the 4.250% Fixed-Rate Reset Non-Cumulative Perpetual Preferred Stock, Series A, effective September 22, 2021 (incorporated by reference to Exhibit 3.1 of Western Alliance's Form 8-K filed with the SEC on September 22, 2021).
4.1	Description of Securities of the Registrant (incorporated by reference to Exhibit 4.1 of Western Alliance's Form 10-K filed with the SEC on February 25, 2022).
4.2	Form of Common Stock Certificate (incorporated by reference to Exhibit 4.1 of Western Alliance's Form 8-K filed with the SEC on June 3, 2014).
4.3	Form of Senior Debt Indenture (incorporated by reference to Exhibit 4.2 of Western Alliance's Form S-3 filed with the SEC on May 7, 2015).
4.4	Form of Subordinated Debt Indenture (incorporated by reference to Exhibit 4.3 of Western Alliance's Form S-3 filed with the SEC on May 7, 2015).
4.5	Form of 5.00% Fixed to Floating Rate Subordinated Bank Note due July 15, 2025 (incorporated by reference to Exhibit 4.1 of Western Alliance's Form 8-K filed with the SEC on July 2, 2015).
4.6	Form of 5.25% Fixed to Floating Rate Subordinated Bank Note due June 1, 2030 (incorporated by reference to Exhibit 4.1 of Western Alliance's Form 8-K filed with the SEC on May 22, 2020).
4.7	Subordinated Debt Indenture, dated as of June 7, 2021, by and between Western Alliance Bancorporation and U.S. Bank National Association, as trustee (incorporated by reference to Exhibit 4.1 of Western Alliance's Form 8-K filed with the SEC on June 7, 2021).
4.8	First Supplemental Indenture to the Subordinated Indenture for the 3.00% Fixed to Floating Rate Subordinated Notes due 2031, dated June 7, 2021, by and between Western Alliance Bancorporation and U.S. Bank National Association, as trustee (incorporated by reference to Exhibit 4.2 of Western Alliance's Form 8-K filed with the SEC on June 7, 2021).
4.9	Form of Global Note for the 3.00% Fixed to Floating Rate Subordinated Notes due 2031 (incorporated by reference to Exhibit 4.3 of Western Alliance's Form 8-K filed with the SEC on June 7, 2021).
4.10	Deposit Agreement (including the Form of Depositary Receipt), dated September 22, 2021, by and among Western Alliance Bancorporation, Computershare Inc. and Computershare Trust Company, N.A., and the holders from time to time of Depositary Receipts described therein (incorporated by reference to Exhibit 4.1 of Western Alliance's Form 8-K filed with the SEC on September 22, 2021).
10.1	Western Alliance 2005 Stock Incentive Plan, as amended and restated (incorporated by reference to Exhibit 10.1 of Western Alliance's Form 8-K filed with the SEC on June 1, 2020). ±
10.2	Bridge Capital Holdings 2006 Equity Incentive Plan (incorporated by reference to Exhibit 4.11 of Western Alliance's Form S-8 filed with the SEC on July 2, 2015). ±
10.3	Form of BankWest Nevada Corporation Incentive Stock Option Plan Agreement (incorporated by reference to Exhibit 10.3 of Western Alliance's Registration Statement on Form S-1 filed with the SEC on April 28, 2005). ±
10.4	Form of Western Alliance Incentive Stock Option Plan Agreement (incorporated by reference to Exhibit 10.4 of Western Alliance's Registration Statement on Form S-1 filed with the SEC on April 28, 2005). ±

10.5	Form of Western Alliance 2002 Stock Option Plan Agreement (incorporated by reference to Exhibit 10.5 of Western Alliance's Registration Statement on Form S-1 filed with the SEC on April 28, 2005). ±
10.6	Form of Western Alliance 2002 Stock Option Plan Agreement (with double trigger acceleration clause) (incorporated by reference to Exhibit 10.6 of Western Alliance's Registration Statement on Form S-1 filed with the SEC on April 28, 2005). ±
10.7	Form of Non-Competition Agreement (incorporated by reference to Exhibit 10.8 of Western Alliance's Registration Statement on Form S-1 filed with the SEC on April 28, 2005). ±
10.8	Severance and Change in Control Plan, as amended and restated effective as of July 28, 2021 (incorporated by reference to Exhibit 10.2 of Western Alliance's Form 10-Q filed with the SEC on July 30, 2022). ±
10.9	Form of Executive Participation Agreement under the Severance and Change in Control Plan (CEO) (incorporated by reference to Exhibit 10.3 of Western Alliance's Form 10-Q filed with the SEC on July 30, 2022). ±
10.10	Form of Executive Participation Agreement under the Severance and Change in Control Plan (non-CEO) (incorporated by reference to Exhibit 10.4 of Western Alliance's Form 10-Q filed with the SEC on July 30, 2022). ±
10.11	Form of Indemnification Agreement, by and between Western Alliance and each of Western Alliance's directors and executive officers (incorporated by reference to Exhibit 10.10 of Western Alliance's Form 10-K/A filed with the SEC on March 1, 2017). ±
10.12	Letter Agreement, dated as of April 6, 2022, between Western Alliance Bancorporation and Kenneth A. Vecchione (incorporated by reference to Exhibit 10.1 of Western Alliance's Current Report on Form 8-K filed with the SEC on April 7, 2022). ±
10.13	Employment Letter Agreement, dated February 7, 2018, by and between Barbara J. Kennedy and Western Alliance (incorporated by reference to Exhibit 10.1 of Western Alliance's Form 10-Q filed with the SEC on April 30, 2019). ±
10.14	Form of Performance-Based Stock Unit Agreement pursuant to the Company's 2005 Stock Incentive Plan (incorporated by reference to Exhibit 10.14 of Western Alliance's Form 10-K filed with the SEC on March 2, 2020). ±
10.15	Form of Executive Restricted Stock Agreement pursuant to the Company's 2005 Stock Incentive Plan (incorporated by reference to Exhibit 10.15 of Western Alliance's Form 10-K filed with the SEC on March 2, 2020). ±
10.16	Form of Amendment to Executive Restricted Stock Agreement pursuant to the Company's 2005 Stock Incentive Plan (incorporated by referenced to Exhibit 10.1 of Western Alliance's Form 10-Q filed with the SEC on November 1, 2022). ±
21.1*	List of Subsidiaries of Western Alliance.
23.1*	Consent of RSM US LLP.
24.1*	Power of Attorney (see signature page).
31.1*	CEO Certification Pursuant Rule 13a-14(a)/15d-14(a).
31.2*	CFO Certification Pursuant Rule 13a-14(a)/15d-14(a).
32**	CEO and CFO Certification Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to section 906 of the Sarbanes Oxley Act of 2002.
101*	The following materials from Western Alliance's Annual Report on Form 10-K Report for the year ended December 31, 2020, formatted in Inline XBRL: (i) the Consolidated Balance Sheets, (ii) the Consolidated Income Statements, (iii) the Consolidated Statements of Comprehensive Income, (iv) the Consolidated Statements of Stockholders' Equity, (v) the Consolidated Statements of Cash Flows, and (vi) the Notes to Consolidated Financial Statements.
104*	The cover page of Western Alliance's Annual Report on Form 10-K for the year ended December 31, 2021, formatted in Inline XBRL (contained in Exhibit 101).

* Filed herewith.

** Furnished herewith.

± Management contract or compensatory arrangement.

Certain instruments defining the rights of holders of AmeriHome's 6.5% senior notes (principal amount of $300 million) due 2028 are omitted pursuant to Item 601(b)(4)(iii) of Regulation S-K. The Company hereby undertakes to furnish to the SEC, upon request, copies of any such instruments.

Stockholders may obtain copies of exhibits by writing to: Dale Gibbons, Western Alliance Bancorporation, One East Washington Street Suite 1400, Phoenix, AZ 85004.

Item 16. Form 10-K Summary.

Not applicable.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

WESTERN ALLIANCE BANCORPORATION

February 23, 2023	By:	/s/ Kenneth A. Vecchione
		Kenneth A. Vecchione
		Chief Executive Officer

KNOW ALL MEN BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Kenneth A. Vecchione and Dale Gibbons, and each of them, his or her true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign any and all amendments to this Annual Report on Form 10-K, and to file the same, with all exhibits thereto and other documents in connection therewith the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully and to all intents and purposes as he or she might or could do in person hereby ratifying and confirming all that said attorneys-in-fact and agents, or his or her 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 by the following persons on behalf of the registrant in their listed capacities on February 23, 2023.

Name	Title
/s/ Kenneth A. Vecchione Kenneth A. Vecchione	President and Chief Executive Officer (Principal Executive Officer)
/s/ Dale Gibbons Dale Gibbons	Vice Chairman and Chief Financial Officer (Principal Financial Officer)
/s/ J. Kelly Ardrey Jr. J. Kelly Ardrey Jr.	Chief Accounting Officer (Principal Accounting Officer)
/s/ Bruce D. Beach Bruce D. Beach	Board Chairman
/s/ Patricia Arvielo Patricia Arvielo	Director
/s/ Kevin Blakely Kevin Blakely	Director
/s/ Juan Figuereo Juan Figuereo	Director
/s/ Paul Galant Paul Galant	Director
/s/ Howard Gould Howard Gould	Director
/s/ Marianne Boyd Johnson Marianne Boyd Johnson	Director
/s/ Robert Latta Robert Latta	Director
/s/ Adriane C. McFetridge Adriane C. McFetridge	Director
/s/ Michael Patriarca Michael Patriarca	Director
/s/ Bryan Segedi Bryan Segedi	Director
/s/ Donald D. Snyder Donald D. Snyder	Director
/s/ Sung Won Sohn Sung Won Sohn	Director

Exhibit 21.1

WESTERN ALLIANCE BANCORPORATION

LIST OF SUBSIDIARIES

(As of December 31, 2022)

Name	Doing Business As	Jurisdiction of Incorporation or Organization
Western Alliance Bank	Alliance Bank of Arizona Bridge Bank First Independent Bank Bank of Nevada Torrey Pines Bank Alliance Association Bank Western Alliance Corporate Finance Western Alliance Public Finance Western Alliance Resort Finance Western Alliance Warehouse Lending	Arizona
CS Insurance Co.	Not applicable	Arizona
Las Vegas Sunset Properties	Not applicable	Nevada
BES Comp Services Co.	Not applicable	Delaware
Digital Settlement Technologies, LLC	Digital Disbursements	Delaware
Helios Prime, Inc.	Not applicable	Delaware
Western Alliance Business Trust	Not applicable	Delaware
WA PWI, LLC	Not applicable	Arizona
Western Alliance Trust Company, National Association	Not applicable	Arizona
Western One, LLC	Not applicable	Arizona
Western Two, LLC	Not applicable	Arizona
Western Finance Company	Not applicable	Arizona
Western Alliance Mortgage Holding Company, LLC	Not applicable	Arizona
AmeriHome Mortgage Company, LLC	Not applicable	Delaware
Western Alliance Equipment Finance, LLC	Not applicable	Arizona
BW Real Estate, Inc.	Not applicable	Nevada
BankWest Nevada Capital Trust II	Not applicable	Delaware
Intermountain First Statutory Trust I	Not applicable	Connecticut
First Independent Statutory Trust I	Not applicable	Delaware
WAL Trust No. 1	Not applicable	Delaware
WAL Statutory Trust No. 2	Not applicable	Connecticut
WAL Statutory Trust No. 3	Not applicable	Connecticut
Bridge Capital Holdings Trust I	Not applicable	Delaware
Bridge Capital Holdings Trust II	Not applicable	Delaware

Exhibit 23.1

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the Registration Statements (Nos. 333-239570, 333-205437, 333-199727, 333-127032, 333-145548, 333-162107, and 333-183574) on Forms S-8 and the Registration Statement (No. 333-256120) on Form S-3 of Western Alliance Bancorporation of our reports dated February 23, 2023, relating to the consolidated financial statements and the effectiveness of internal control over financial reporting of Western Alliance Bancorporation, appearing in this Annual Report on Form 10-K of Western Alliance Bancorporation for the year ended December 31, 2022.

/s/ RSM US LLP

San Francisco, California
February 23, 2023

Exhibit 31.1

CERTIFICATION OF PRINCIPAL EXECUTIVE OFFICER
Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002

I, Kenneth A. Vecchione, certify that:

1. I have reviewed this Annual Report on Form 10-K of Western Alliance Bancorporation;

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.

/s/ Kenneth A. Vecchione
Kenneth A. Vecchione
President and Chief Executive Officer
Western Alliance Bancorporation

Date: February 23, 2023

Exhibit 31.2

CERTIFICATION OF PRINCIPAL FINANCIAL OFFICER
Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002

I, Dale Gibbons, certify that:

1. I have reviewed this Annual Report on Form 10-K of Western Alliance Bancorporation;

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.

/s/ Dale Gibbons

Dale Gibbons
Vice Chairman and Chief Financial Officer
Western Alliance Bancorporation

Date: February 23, 2023

Exhibit 32

CERTIFICATION OF CHIEF EXECUTIVE OFFICER AND CHIEF FINANCIAL OFFICER
PURSUANT TO 18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

This certification is given by the undersigned Chief Executive Officer and Chief Financial Officer of Western Alliance Bancorporation (the “Registrant”) pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002. Each of the undersigned hereby certifies, with respect to the Registrant's annual report on Form 10-K for the year ended December 31, 2022, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), that, to each of their knowledge:

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

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

Date:	February 23, 2023	/s/ Kenneth A. Vecchione President and Chief Executive Officer Western Alliance Bancorporation
Date:	February 23, 2023	/s/ Dale Gibbons Vice Chairman and Chief Financial Officer Western Alliance Bancorporation

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Western Alliance Bancorporation®

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