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**

OR

☐ TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the transition period from to

Commission file number **001-33912**

Enterprise Bancorp, Inc.
(Exact name of registrant as specified in its charter)

Massachusetts	**04-3308902**
(State or other jurisdiction of incorporation of organization)	(IRS Employer Identification No.)
222 Merrimack Street, Lowell, Massachusetts	**01852**
(Address of principal executive offices)	(Zip code)

(978) 459-9000
Registrant's telephone number, including area code

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

Title of each class	**Trading Symbol(s)**	**Name of each exchange on which registered**
Common Stock, $0.01 par value per share	EBTC	NASDAQ Stock Market

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

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

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

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

Large accelerated filer ☐ Accelerated filer x
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 the 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 recover analysis of incentive-based compensation received by any of the registrant’s executive officers during the relevant recover 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 ý No

State the aggregate market value of the voting and non-voting common equity held by non-affiliates computed by reference to the price at which the common equity was last sold, or the average bid price and asked price of such common equity, as of the last business day of the registrant’s most recently completed second fiscal quarter: $322,190,032 ($32.19 per share) as of June 30, 2022, the last trading day of the registrant’s most recently completed second quarter.

Indicate the number of shares outstanding of each of the registrant's classes of common stock, as of the latest practicable date: February 28, 2023, Common Stock, par value $0.01, 12,148,951 shares outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant’s definitive proxy statement for its annual meeting of shareholders to be held on May 2, 2023, are incorporated by reference in Part III of this Form 10-K.

ENTERPRISE BANCORP, INC.
TABLE OF CONTENTS

PART I

Item 1. Business

Organization

Enterprise Bancorp, Inc. (the "Company," "Enterprise," "us," "we," or "our") is a Massachusetts corporation organized in 1996, which operates as the parent holding company of Enterprise Bank and Trust Company, commonly referred to as Enterprise Bank (the "Bank"), a community-focused commercial bank. Substantially all of the Company's operations are conducted through the Bank and its subsidiaries. The Bank, a Massachusetts trust company and state chartered commercial bank that commenced banking operations in 1989, has five wholly owned subsidiaries that are included in the Company's consolidated financial statements:

- Three Massachusetts security corporations, Enterprise Security Corporation (2005), Enterprise Security Corporation II (2007) and Enterprise Security Corporation III (2007), which hold various types of qualifying securities. The security corporations are limited to conducting securities investment activities that the Bank itself would be allowed to conduct under applicable laws.
- Enterprise Wealth Services, LLC, organized in 2000 in the State of Delaware for the purpose of offering non-deposit investment products and services, under the name of "Enterprise Wealth Services;" and
- Enterprise Insurance Services, LLC, organized in 2000 in the State of Delaware for the purpose of engaging in insurance sales activities;

Enterprise's headquarters are located at 222 Merrimack Street in Lowell, Massachusetts.

The community banking services offered through the Bank and its subsidiaries are managed as one strategic unit and represent the Company's only reportable operating segment.

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

The Company's common stock trades on the NASDAQ Global Market under the trading symbol "EBTC."

Market Area

The Company's primary market area is the Northern Middlesex, Northern Essex, and Northern Worcester counties of Massachusetts and the Southern Hillsborough and Southern Rockingham counties in New Hampshire. Enterprise has 27 full-service branches located in the Massachusetts communities of Acton, Andover, Billerica (2), Chelmsford (2), Dracut, Fitchburg, Lawrence, Leominster, Lexington, Lowell (2), Methuen, North Andover, Tewksbury (2), Tyngsborough and Westford and in the New Hampshire communities of Derry, Hudson, Nashua (2), Pelham, Londonderry, Salem, and Windham.

Management actively seeks to strengthen the Company's market position by capitalizing on opportunities to grow all business lines and through the continued pursuit of organic growth and strategic expansion within existing and into neighboring geographic markets.

Products and Services

The Company principally is engaged in the business of gathering deposits from the general public and investing primarily in loans and investment securities. Through the Bank and its subsidiaries, the Company offers a range of commercial, residential and consumer loan products, deposit products and cash management services, as well as wealth management and wealth services.

The integrated branch network serves all product channels with knowledgeable service providers and state-of-the-art facilities. The Bank also offers various digital banking capabilities via online and mobile platforms. Management continually examines new products and technologies in order to maintain a highly competitive mix of offerings and state-of-the-art delivery channels in order to tailor product lines to customers' needs. These products, services and delivery channels are outlined below.

The Company's business is not dependent on one, or a few customers, nor upon a particular industry, the loss of which would have a material adverse impact on the financial condition or operations of the Company.

Lending Products

General

The Company specializes in lending to business entities, non-profit organizations, professional practices, and individuals. The Company's primary lending focus is on the development of high-quality, long-term commercial relationships achieved through active business development efforts, strong community involvement, and focused marketing strategies. Commercial loans may include commercial real estate mortgage loans, construction and land development loans, secured and unsecured commercial loans and lines of credit, and letters of credit. Consumer or "retail" loans may include conventional residential mortgage loans, home equity lines, residential construction loans on owner-occupied primary and secondary residences, and secured and unsecured personal loans and lines of credit. The Company manages its loan portfolio to avoid concentration by industry, relationship size, and source of repayment to lessen its credit risk exposure.

Interest rates charged on loans may be fixed or variable; variable rate loans may have fixed initial periods before periodic rate adjustments begin. Individual rates offered are dependent on the associated degree of credit risk, term, underwriting and servicing costs, loan amount, and the extent of other banking relationships maintained with the borrower, and may be subject to interest rate floors. Rates are also subject to competitive pressures, the current interest-rate environment, availability of funds, and government regulations.

Enterprise employs a seasoned commercial lending staff, with commercial lenders supporting each of the Bank's branch locations. An internal loan review function assesses the compliance of commercial loan originations with the Company's internal policies and underwriting guidelines and monitors the ongoing credit quality of the loan portfolio. The credit risk management function monitors a wide variety of individual borrower and industry factors; and the Company's internal loan credit risk rating system classifies loans depending on risk of loss characteristics. The Company also contracts with an external loan review company to review, on a pre-determined schedule, the internal credit ratings assigned to loans in the commercial loan portfolio. The review is focused on the non-criticized segment of the commercial loan portfolio, based on the type, size, credit rating, and overall risk of the loan and generally encompasses 65% or more of the commercial loan portfolio. This same company is also contracted to perform limited stress testing on the commercial real estate loan portfolio on an annual basis.

The Company's internal residential origination and underwriting staff originate residential loans and are responsible for compliance with residential lending regulations, consumer protection and internal policy guidelines. The Company contracts with an external loan review company to complete a regular quality control review in accordance with secondary market underwriting requirements for residential mortgage loans sold. The sample reviewed is based on loan volume originated since the prior review. Additionally, the Company's internal compliance department monitors the residential loan origination activity for regulatory compliance.

A management loan review committee, consisting of senior lending officers, credit, loan workout, loan operations, risk management and accounting personnel, is responsible for setting loan policy and procedures, as well as reviewing loans on the internal "watch asset list" and classified loan report.

An internal credit review committee, consisting of senior lending officers and credit review personnel, meets to review and approve loan requests related to borrowing relationships of certain dollar levels, as well as other borrower relationships recommended for discussion by committee members.

The Loan Committee of the Company's Board of Directors (the "Board") approves loan relationships exceeding certain prescribed dollar limits. The Board's Loan Committee reviews current portfolio statistics, problem credits, construction loan reviews, watch assets, loan delinquencies, and the allowance for credit losses, as well as current market conditions and issues relating to the construction and real estate development industry and the reports from the external loan review company. The Board's Loan Committee is also responsible for approval of the loan policy and credit-related charge-offs recommended by management, subject to final approval by the full Board.

At December 31, 2022, the Bank's statutory lending limit, based on 20% of capital (capital stock plus surplus and undivided profits, but excluding other comprehensive income), to any individual borrower and related entities was approximately $87.4 million, subject to certain exceptions provided under applicable law.

Commercial Real Estate, Commercial and Industrial, and Commercial Construction Loans

Commercial real estate loans include loans secured by both owner and non-owner occupied (investor) real estate. These loans are typically secured by a variety of commercial, residential investment, and industrial property types, including one-to-four and multi-family apartment buildings, office, industrial, or mixed-use facilities, strip shopping centers, or other commercial properties, and are generally guaranteed by the principals of the borrower. Commercial real estate loans generally have repayment periods of approximately 15 to 30 years. Variable interest-rate loans have a variety of adjustment terms and underlying interest-rate indices and are generally fixed for an initial period before periodic rate adjustments begin.

Commercial and industrial loans include seasonal and formula-based revolving lines of credit, working capital loans, equipment financing and term loans. Also included in commercial and industrial loans are loans partially or fully guaranteed by the U.S. Small Business Administration ("SBA"), and loans under various other government and municipal programs and agencies. Commercial and industrial credits may be unsecured loans and lines to financially strong borrowers, loans secured in whole or in part by real estate unrelated to the principal purpose of the loan or secured by inventories, equipment, or receivables, and are generally guaranteed by the principals of the borrower. Variable rate loans and lines in this portfolio have interest rates that are periodically adjusted, with loans generally having fixed initial periods. Revolving lines of credit are written on demand and are subject to annual credit review. Commercial and industrial loans have average repayment periods of 1 to 7 years.

Commercial construction loans include the development of residential housing and condominium projects, the development of commercial and industrial use property, and loans for the purchase and improvement of raw land. These loans are secured in whole or in part by underlying real estate collateral and are generally guaranteed by the principals of the borrowers. In many cases, these loans move into the permanent commercial real estate portfolio when the construction phase is completed. The Company limits the amount of financing provided to any single developer for the construction of properties built on a speculative basis. Funds for construction projects are disbursed as pre-specified stages of construction are completed. Regular site inspections are performed, prior to advancing additional funds, at each construction phase, either by experienced construction lenders on staff or by independent outside inspection companies. Commercial construction loans generally are variable rate loans and lines with interest rates that are periodically adjusted and generally have terms of 1 to 3 years.

From time to time, the Company participates with other banks in the financing of certain commercial projects. Participating loans with other institutions provide banks the opportunity to retain customer relationships and reduce credit risk exposure among each participating bank, while providing customers with larger credit vehicles than the individual bank might be willing or able to offer independently.

Letters of credit are conditional commitments issued by the Company to guarantee the financial obligation or performance of a customer to a third party. The credit risk involved in issuing letters of credit is essentially the same as that involved in extending loan facilities to customers. If the letter of credit is drawn upon, a loan is created for the customer, generally a commercial loan, with the same criteria associated with similar commercial loans.

Residential Loans

Enterprise Bank originates conventional mortgage loans on one-to-four family residential properties. These properties may serve as the borrower's primary residence, or as vacation homes or investment properties. Loan-to-value policy limits vary, generally from 75% for multi-family, owner-occupied properties, up to 97% for single family, owner-occupied properties, with mortgage insurance coverage required for loan-to-value ratios greater than 80% based on program parameters. In addition, financing is provided for the construction of owner-occupied primary and secondary residences. Residential mortgage loans may have terms of up to 30 years at either fixed or adjustable rates of interest. Fixed and adjustable-rate residential mortgage loans are generally originated using secondary market underwriting and documentation standards.

Depending on the current interest-rate environment, management projections of future interest rates and the overall asset-liability management program of the Company, management may elect to sell fixed and adjustable-rate residential mortgage loans which are eligible for sale in the secondary market or hold some or all of this residential loan production for the Company's portfolio. Mortgage loans are generally not pooled for sale, but instead sold on an individual basis. The Company may retain or sell the servicing when selling the loans. Loans sold are subject to standard secondary market underwriting and eligibility representations and warranties over the life of the loan and are subject to an early payment default period covering the first four payments for certain loan sales. Loans classified as held for sale are carried as a separate line item on the balance sheet.

Home Equity Lines of Credit ("Home equity")

The Company originates home equity revolving lines of credit for one-to-four family residential properties with maximum original loan-to-value ratios generally up to 80% of the automated valuation or appraised value of the property securing the loan. Home equity lines generally have interest rates that adjust monthly based on changes in the Prime Lending Rate, although minimum rates may be applicable. Some home equity line rates may be fixed for a period of time and then adjusted monthly thereafter. The payment schedule for standard home equity lines requires interest only payments for the first ten years of the lines. Generally, at the end of ten years, the line may be frozen to future advances, and principal plus interest payments are collected over a 15-year amortization schedule or, for eligible borrowers meeting certain requirements, the line availability may be extended for an additional interest only period. Home equity line of credit programs are available with the ability to convert all or a portion of the home equity line of credit balance to a fixed-rate term note subject to certain requirements and limitations. Available credit on the home equity line becomes available again as principal is repaid on the converted amounts.

Consumer Loans

Consumer loans consist primarily of secured or unsecured personal loans, loans under energy efficiency financing programs in conjunction with Massachusetts public utilities, and overdraft protection lines on checking accounts extended to individual customers. The aggregate amounts of overdrawn deposit accounts are reclassified as loan balances.

Credit Risk and Allowance for Credit Losses

Information regarding the Company's credit risk and allowance for credit losses is contained in Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations," contained in the section "Financial Condition," under "Loans," in the subsections "Credit Risk," and "ACL for Loans" of this Annual Report on Form 10-K for the year ended December 31, 2022 (this "Form 10-K). See also Note 1, "Summary of Significant Accounting Polices," under Item *(h) "Credit Risk Management and ACL for Loans Methodology"* to the Company's audited consolidated financial statements, contained in Item 8 of this Form 10-K.

Deposit Products

Deposits have traditionally been the principal source of the Company's funds. Enterprise offers a broad selection of competitive commercial and retail deposit products, including checking accounts, limited-transactional savings and money market accounts, commercial sweep products, and term certificates of deposit ("CDs"). The Company's deposit products are offered to commercial businesses, professionals, municipalities, non-profit organizations, and individuals. As a member of the Federal Deposit Insurance Corporation (the "FDIC"), the Bank's depositors are provided deposit protection up to the maximum FDIC insurance coverage limits.

In addition to the deposit products noted above, the Company also provides customers the ability to automate allocation of investment sweep (commercial only), money market, and CD balances to nationwide networks of reciprocating FDIC insured banks. Deposits are placed into nationwide networks in increments that are eligible for FDIC insurance. This allows the Company to offer enhanced FDIC insurance coverage on larger deposit balances by placing the "excess" funds into participating FDIC insured accounts or term CDs. In exchange, the other institutions place dollar-for-dollar matching reciprocal and insurable deposits with the Company via the networks. Essentially, the equivalent of the original deposit comes back to the Company and is available to fund operations. The original funds placed into the networks are not carried as deposits on the Company's Consolidated Balance Sheet, however the network's reciprocal dollar deposits are carried within the appropriate product category under customer deposits on the Consolidated Balance Sheet.

Management determines the interest rates offered on deposit accounts based on current and expected economic conditions, competition, liquidity needs, the volatility of existing deposits, the asset-liability position of the Company and the overall objectives of the Company regarding the growth and retention of relationships. Low-cost checking deposits are an important component of the Company's core funding strategy.

Enterprise may also utilize brokered deposits, mainly term products, from several available sources as an alternative to borrowed funds to support asset growth in excess of internally generated deposits. The Company collectively refers to brokered deposits and borrowed funds as "wholesale funding."

Cash Management Services

In addition to the lending and deposit products discussed above, commercial banking and public sector customers may take advantage of cash management services and products that provide comprehensive reporting, streamline the processing of deposits and facilitate the use of those funds for purposes such as disbursements and automated short-term investment activities.

Cash management clients can enroll in remote check deposit capture, lockbox, Automatic Clearing House ("ACH") origination, domestic and international U.S. dollar wire transfers, foreign currency wire transfers, "Positive Pay" to reduce check fraud and unauthorized ACH received items, account reconciliation, zero balance target transfers, automated investment sweeps, and commercial card and merchant services programs offered through third parties.

Investment sweep services include third party FDIC enhanced money market or third-party non-deposit mutual funds. Management believes that commercial customers benefit from the flexibility of these products, while retaining conservative investment options of high quality and safety. The balances swept daily into mutual funds do not represent obligations of the Company and are not insured by the FDIC.

Product Delivery Channels

In addition to traditional product access channels, various digital banking capabilities are delivered through the Bank's online website and mobile apps allowing customers to view account statements, activity and images, as well as perform internal and external account transfers, pay bills, place stop payments, make person-to-person payments, and conduct mobile deposits. Digital wallet and mobile card controls provide smart phone users with additional debit card safety features to actively control and monitor their virtual debit card.

Online and mobile banking tools utilize multiple layers of customer authentication commensurate with the risk posed by the varying types of transactions and information available within each tool.

Wealth Management and Wealth Services

The Company provides a range of wealth advisory and management services delivered via two channels, Enterprise Wealth Management and Enterprise Wealth Services.

Wealth advisory and management services include customized investment management and trust services provided under the label "Enterprise Wealth Management" to individuals, family groups, commercial businesses, trusts, foundations, non-profit organizations, and endowments.

Enterprise Wealth Management utilizes an open-architecture approach to client investment management, focusing on strategic asset allocation to select independent investment management firms and individual securities on behalf of our clients. The Company partners with investment research firms and uses state of the art analytic tools to strengthen and inform the asset allocation and portfolio construction processes. The investment management process is intended to enable the Company to build and maintain investment portfolios to meet each client’s financial objectives and deliver superior long-term results.

Enterprise Wealth Services provides brokerage and management services through a third-party arrangement with Commonwealth Financial Network, a licensed securities brokerage firm, with products designed primarily for the individual investor. Retirement plan services are offered through third-party arrangements with leading 401(k) plan providers.

The Enterprise Wealth Management Committee ("EWMC") of the Board is responsible for overseeing that the fiduciary and investment activities of Enterprise Wealth Management and Enterprise Wealth Services are consistent with those powers delegated by the Board and that prudent care and discretion are followed in the management of client assets. EWMC is also responsible for reviewing investment performance of investment advisors, strategic planning initiatives and results, and proposed new products or services, among other responsibilities.

Insurance Services

Beginning in November of 2000, Enterprise Insurance Services, LLC was utilized to engage in insurance sales activities through a third-party arrangement with a full-service regional insurance agency. Under this relationship, the Company referred clients to the third-party insurance agency, assisted with servicing and shared the resulting revenue. On October 5, 2022, the

Company ended its revenue sharing relationship with the third-party insurance agency and sold the rights to the future cash flows on these insurance policies to the third-party insurance agency. The Company has no other insurance agency relationships.

Investment Activities

The Company's investment portfolio activities are an integral part of the overall asset-liability management program of the Company. The investment function provides liquidity to support loan growth, as well as to meet withdrawals and maturities of deposits, and attempts to provide maximum return consistent with liquidity constraints and general prudence, including diversification and safety of investments. In addition to the Bank, the Company holds investment securities in three Massachusetts security corporation subsidiaries, which serve to increase after tax returns in accordance with state tax policy.

The securities in which the Company may invest are limited by regulation. In addition, an internal investment policy restricts investments in debt securities to high-quality securities within prescribed categories as approved by the Board. Management utilizes an outside registered investment adviser to manage the corporate and municipal bond portfolios within prescribed guidelines set by management. The Company's internal investment policy also sets sector limits as a percentage of the total portfolio, identifies acceptable and unacceptable investment practices, and denotes approved security dealers. The effect of changes in interest rates, market values, timing of principal payments and credit risk are considered when purchasing securities.

Cash equivalents are defined as highly liquid investments with original maturities of three months or less, that are readily convertible to known amounts of cash and present insignificant risk of changes in value due to changes in interest rates. The Company's cash and cash equivalents may be comprised of cash on hand and cash items due from banks, interest-earning deposits with banks (deposit accounts, excess reserve cash balances, money markets and money market mutual fund accounts) and overnight and term federal funds sold ("fed funds") to money center banks. Balances in cash and cash equivalents will fluctuate due primarily to the timing of net cash flows from deposits, borrowings, loans and investments, and the immediate liquidity needs of the Company.

The Company primarily invests in debt securities, with a small portion of the portfolio invested in equities. As of the balance sheet dates reflected in this Form 10-K, all of the debt securities within the Company's investment portfolio were classified as available-for-sale and carried at fair value, with changes in fair value reflected in other comprehensive income. The equity securities are carried at fair value, with changes in fair value recognized in net income.

Management reports investment transactions, portfolio allocation, effective duration, fair value at risk and projected cash flows to the Board on a periodic basis. Credit risk inherent in the portfolio is closely monitored by management and presented at least annually to the Board. The Board also approves the Company's internal investment policy annually and ongoing investment strategy.

The Company is required to purchase Federal Home Loan Bank of Boston ("FHLB") stock at par value in association with the Bank's outstanding advances from the FHLB; this stock is classified as a restricted investment and carried at cost which management believes approximates fair value.

As discussed above, deposit gathering has been the Company's principal source of funds. Asset growth in excess of deposits may be funded through cash flows from our loan and investment portfolios, or the following sources:

Borrowed Funds

Total borrowing capacity includes borrowing arrangements at the FHLB, the Federal Reserve Bank of Boston ("FRB") discount window and borrowing arrangements with correspondent banks.

Membership in the FHLB provides borrowing capacity based on qualifying collateral balances pre-pledged to the FHLB, including certain residential loans, home equity lines, commercial loans, U.S. government and agency securities and certain municipal securities.

Borrowings from the FHLB typically are utilized to fund liquidity needs or specific lending projects under the FHLB's community development programs. The FHLB funding facility is an integral component of the Company's asset-liability management program.

The FRB discount window borrowing capacity is based on the pledge of qualifying collateral balances to the FRB. Collateral pledged for this FRB facility consists primarily of certain municipal and corporate securities held in the Company's investment portfolio. Additional types of collateral are available to increase borrowing capacity with the FRB if necessary.

Pre-established non-collateralized overnight borrowing arrangements with large national and regional correspondent banks provide additional overnight and short-term borrowing capacity for the Company and are classified as "other borrowings" under Borrowed Funds on the Company's balance sheets.

Capital Resources

Capital planning by the Company and the Bank considers current needs and anticipated future growth. The primary sources of capital for the Company and the Bank include proceeds from the issuance of the Company's common stock, proceeds from the issuance of subordinated debt and retention of earnings, less dividends paid. The Company believes its current capital is adequate to support ongoing operations.

The Company is subject to the regulatory capital framework known as the "Basel III Rules" which include risk-based capital ratio requirements. Management believes, as of December 31, 2022, that the Company and the Bank met all capital adequacy requirements to which they were subject under Basel III. As of December 31, 2022, the Company met the definition of "well-capitalized" under the applicable Board of Governors of the Federal Reserve System (the "Federal Reserve Board") regulations and the Bank qualified as "well-capitalized" under the prompt corrective action regulations of Basel III and the FDIC.

See also "Capital Requirements," and "Capital Requirements under Basel III," under the heading "Supervision and Regulation," contained below, for further information regarding the Company's and the Bank's regulatory capital requirements.

Subordinated Debt

The Company has issued subordinated notes as a component of its capital management strategy. As of the balance sheet dates contained in this Form 10-K, the Company's outstanding subordinated debt consisted of fixed-to-floating rate subordinated notes (the "Notes") issued July 2020, callable in whole or part beginning in 2025, due in 2030. The Notes are intended to qualify at the Company as Tier 2 capital for regulatory purposes.

Patents, Trademarks, etc.

The Company holds several registered service marks and trademarks related to product names and corporate branding. The Company holds no other patents, registered trademarks, licenses (other than licenses required to be obtained from appropriate banking regulatory agencies), franchises or concessions that are material to its business.

Human Capital Resources

The Company distinguishes itself through our strong sense of teamwork, purpose, inclusion, and equity, and through caring for each other, our customers, and our communities. We routinely engage independent third parties to conduct cultural, engagement, and inclusion surveys to assess our engagement and to act, if necessary, to address areas of improvement. Based on the feedback provided by our team members, management believes its team member relations are excellent.

At December 31, 2022, the Company employed 554 full-time equivalent team members. None of the Company's employees are presently represented by a union or covered by a collective bargaining agreement. The Company is committed to diversity, equity and inclusion. As of December 31, 2022, 68% of our team members are women and 21% are self-identified as Black, Indigenous, and persons of color. Of our managerial team members, 65% are women and 14% are self-identified as Black, Indigenous, and persons of color.

For more information about our culture, values, team member engagement, and diversity, equity and inclusion initiatives, please visit our website at enterprisebanking.com.

Company Websites

The Company currently uses outside vendors to design, support, and host its primary internet website: www.enterprisebanking.com. The information contained on or accessible from our websites does not constitute a part of this Form 10-K and is not incorporated by reference.

The Bank's website provides information on the Company and its products and services. Users have the ability to securely open various deposit accounts, as well as the ability to submit mortgage loan applications and related documentation securely online and, via a link, to access their bank accounts and perform various financial transactions, and via the wealth-management link to access various wealth account reports and statements, and the ability to consolidate all investment accounts (Enterprise or others) on one secure platform.

The Bank's website also provides the access point to a variety of specified banking services and information, various financial management tools, and Company investor and corporate information, which includes a corporate governance page. The Company's corporate governance page includes the Corporate Governance Guidelines, Code of Business Conduct and Ethics, and Whistleblower and Non-Retaliation policy, as well as the charters of the Board's Audit, Compensation and Human Resources, and Corporate Governance/Nominating committees.

In the Investor Relations section of the Bank's website, under the SEC Filings tab, the Company makes available copies of the Company's annual reports on Form 10-K, quarterly reports on Form 10-Q ("Form 10-Q"), proxy statements and current reports on Form 8-K ("Form 8-K"). Additionally, the site includes current registration statements that the Company has been required or elected to file in connection with the issuance of its shares and other securities. The Company similarly makes available all insider stock ownership and transaction reports filed with the SEC by executive officers, directors and any 10% or greater shareholders under Section 16 of the Securities Exchange Act of 1934, as amended (the "Exchange Act") (Forms 3, 4 and 5). Access to all of these reports is made available free of charge and is essentially simultaneous with the SEC's posting of these reports on its EDGAR system through the SEC's website (www.sec.gov).

Competition

The Company faces robust competition to attract and retain customers within existing and neighboring geographic markets. The Company's ability to achieve its long-term strategic growth and market share objectives will depend in part upon management's continued success in differentiating the Company in the marketplace and its ability to strengthen its competitive position. National and larger regional banks and financial institutions have a local presence in the Company's market area. These larger institutions have certain competitive advantages, including greater financial resources and the ability to make larger loans to a single borrower. Within our market area we also compete with government sponsored enterprises that can offer commercial real estate loans on apartments, multifamily and senior housing projects with a variety of competitive terms.

Numerous local savings banks, commercial banks, cooperative banks, and credit unions also compete in the Company's market area. The expanded commercial lending capabilities of credit unions and the shift to commercial lending by traditional savings banks means that both types of traditionally consumer-orientated institutions compete for the Company's targeted commercial customers. In addition, the non-taxable status of credit unions allows them an advantage as compared to taxable institutions such as Enterprise. Competition for loans, deposits and cash management services, and wealth advisory assets also comes from other businesses that provide financial services, including consumer finance companies, mortgage brokers and lenders, private lenders, insurance companies, securities brokerage firms, institutional mutual funds, and registered investment advisors.

Internet-based banks, non-bank electronic payment and funding channels, and other tech-based financial intermediaries have become a fast-growing and strong competitor in the financial services marketplace. The evolving financial technology industry ("Fintech") aims to compete with traditional banking services and delivery methods and although the industry offers opportunities for strategic partnerships, it is also a source for direct competition.

The Company faces increasing competition within its marketplace on the pricing and terms of loans. This is expected to be an ongoing competitive challenge; however, the Company is committed to maintaining asset quality and focuses its sales efforts on building long-term full relationships, rather than competing for individual transactions or easing loan terms.

The Company faces ongoing competition within its marketplace on the pricing and terms of deposit products. The Company actively seeks to increase deposit market share and strengthen its competitive position with a commitment to providing an enhanced customer experience. The Company continuously reviews it's deposit product offerings, cash management and ancillary services and delivery channels to ensure it is competitive.

Enterprise carefully plans market expansion through the addition of new branch locations, identifying markets strategically located to complement existing locations while expanding the Company's geographic market footprint. The integrated branch network serves all product channels.

The increased use and advances in technology, data analytics and storage, such as online and mobile, and non-bank electronic payment channels, electronic transaction processing, block-chain based assets including digital currency and non-fungible tokens, and cloud-computing and storage, among others are expected to have a significant impact on the future competitive landscape confronting financial service businesses.

In addition, the cost of compliance with new and existing government regulations, changes in tax legislation and the interest-rate environment continue to impact competition and consolidation within the industry in various ways, with some participants better equipped to manage these changes than others based on size, depth of resources, or competitive product positioning, among other factors.

Supervision and Regulation

General

Set forth below is a summary description of the material elements of the laws and regulations applicable to the Company and the Bank. The description is qualified in its entirety by reference to the full text of the statutes, regulations and policies that are described. Moreover, these statutes, regulations and policies are continually under review by the U.S. Congress and state legislatures and federal and state regulatory agencies. A change in statutes, regulations, or regulatory policies applicable to the Company or its principal subsidiary, the Bank, could have a material effect on our business, financial condition or results of operations.

Regulatory Agencies

As a registered bank holding company, the Company is subject to the supervision and regulation of the Federal Reserve Board and, acting under delegated authority, the FRB pursuant to the Bank Holding Company Act of 1956, as amended (the "Bank Holding Company Act"). The Massachusetts Division of Banks (the "Division") also retains supervisory jurisdiction over the Company.

As a Massachusetts state-chartered bank, the Bank is subject to the supervision and regulation of the Division and, with respect to the Bank's New Hampshire branching operations, the New Hampshire Banking Department. As a state-chartered bank that accepts deposits and is not a member of the Federal Reserve System, the Bank is also subject to the supervision and regulation of the FDIC.

Bank Holding Company Regulation

As a registered bank holding company, the Company is required to furnish to the FRB annual and quarterly reports of its financial condition and results of operations, among other information and reports may be required.

Acquisitions by Bank Holding Companies

Under the Bank Holding Company Act, the Company must obtain the prior approval of the Federal Reserve Board or, acting under delegated authority, the FRB before (i) acquiring direct or indirect ownership or control of any class of voting securities of any bank or bank holding company if, after the acquisition, the Company would directly or indirectly own or control 5% or more of such class; (ii) acquiring all or substantially all of the assets of another bank or bank holding company; or (iii) merging or consolidating with another bank holding company. These activities would also require the prior approval of the Division.

Under the Bank Holding Company Act, and the regulations promulgated by the Federal Reserve Board thereunder, any company must obtain approval of the Federal Reserve Board or, acting under delegated authority, the FRB, prior to acquiring control of the Company or the Bank. Section 2(a)(2) of the Bank Holding Company Act applies a three-prong test for determining whether a company acquires "control": (i) ownership, control, or the power to vote 25% or more of any class of voting securities of the Company or the Bank, (ii) the ability to control in any manner the election of a majority of the directors of the Company or the Bank, or (iii) the direct or indirect exercise of a controlling influence over management or policies of the Company or the Bank. "Control" is conclusively presumed to exist upon the acquisition of 25% or more of the outstanding voting securities of a bank or bank holding company.

In addition, regulations promulgated by the Federal Reserve Board related to determinations of ”control” for purposes of the Bank Holding Company Act include presumptions for use in control determinations according to a tiered methodology using 5%, 10% and 15% as the presumption thresholds. These regulations apply to questions of control under the Bank Holding Company Act but do not extend to the Change in Bank Control Act of 1978, as amended (the "Change in Bank Control Act").

Control Acquisitions

The Change in Bank Control Act and the related regulations of the Federal Reserve Board generally require any person or groups of persons acting in concert to file a written notice with the Federal Reserve Board or, acting under delegated authority, the appropriate FRB, before the person or group acquires control of the Company. The Change in Bank Control Act defines "control" as the direct or indirect power to vote 25% or more of any class of voting securities or to direct the management or policies of a bank holding company or an insured bank. A rebuttable presumption of control arises under the Change in Bank Control Act where a person or group controls 10% or more, but less than 25%, of a class of the voting stock of a company or insured bank which is a reporting company under the Exchange Act, such as the Company, or such ownership interest is greater than the ownership interest held by any other person or group.

In addition, the Change in Bank Control Act prohibits any entity from acquiring 25% (or 5% in the case of an acquirer that is a bank holding company) or more of a bank holding company's or bank's voting securities, or otherwise obtaining control or a controlling influence over a bank holding company or bank without the approval of the Federal Reserve Board. The Federal Reserve Board has issued a policy statement on equity investments in bank holding companies and banks, which allows the Federal Reserve Board to generally be able to conclude that an entity's investment is not "controlling" if the investment in the form of voting and nonvoting shares represents in the aggregate (i) less than one-third of the total equity of the banking organization (and less than one-third of any class of voting securities, assuming conversion of all convertible nonvoting securities held by the entity) and (ii) less than 15% of any class of voting securities of the banking organization.

Under the Change in Bank Control Act and applicable Massachusetts law, any person or group of persons acting in concert would also be required to file a written notice with the FDIC and the Division before acquiring any such direct or indirect control of the Bank.

Permissible Activities

The Bank Holding Company Act and the implementing regulations of the Federal Reserve Board also limit the investments and activities of bank holding companies. In general, a bank holding company is prohibited from acquiring direct or indirect ownership or control of more than 5% of the voting shares of a company that is not a bank or a bank holding company or from engaging directly or indirectly in activities other than those of banking, managing or controlling banks, providing services for its subsidiaries, and various non-bank activities that are deemed to be closely related to banking.

A bank holding company may also elect to become a "financial holding company," by which a qualified parent holding company of a banking institution may engage, directly or through its non-bank subsidiaries, in any activity that is financial in nature or incidental to such financial activity or in any other activity that is complementary to a financial activity and does not pose a substantial risk to the safety and soundness of depository institutions or the financial system generally. A bank holding company will be able to successfully elect to be regulated as a financial holding company if all of its depository institution subsidiaries meet certain prescribed standards pertaining to management, capital adequacy and compliance with the Community Reinvestment Act of 1977, as amended (the "CRA"), such as being "well-managed" and "well-capitalized," and must have a CRA rating of at least "satisfactory." Financial holding companies remain subject to regulation and oversight by the Federal Reserve Board. While the Company believes that the Bank, which is the Company's sole depository institution subsidiary, presently satisfies all of the requirements that must be met to enable the Company to successfully elect to become a financial holding company, the Company has no current intention of seeking to become a financial holding company.

Source of Strength

The Dodd-Frank Wall Street Reform and Consumer Protection Act (the "Dodd-Frank Act") codified the Federal Reserve Board's "source-of-strength" doctrine, which requires a bank holding company to act as a source of financial and managerial strength to any of its subsidiary banks. The bank holding company is expected to commit resources to support its subsidiary bank, including at times when the bank holding company may not be in a financial position to provide such support. A bank holding company's failure to meet its source-of-strength obligations may constitute an unsafe and unsound practice or a violation of the Federal Reserve Board's regulations, or both.

Imposition of Liability for "Undercapitalized" Subsidiaries

Bank regulators are required to take "prompt corrective action" to resolve problems associated with insured depository institutions whose capital declines below certain levels. In the event an institution becomes "undercapitalized," it must submit a capital restoration plan to its regulators. The capital restoration plan will not be accepted by the regulators unless each company having control of the "undercapitalized" institution guarantees the subsidiary's compliance with the capital restoration plan up to a certain specified amount. Any such guarantee from a depository institution's holding company is entitled to a priority of payment in bankruptcy.

The aggregate liability of the holding company of an "undercapitalized" bank is limited to the lesser of 5% of the institution's assets at the time it became "undercapitalized" or the amount necessary to cause the institution to be "adequately capitalized." The bank regulators have greater power in situations where an institution becomes "significantly" or "critically" "undercapitalized" or fails to submit a capital restoration plan.

Safety and Soundness

The federal banking agencies have adopted the Interagency Guidelines for Establishing Standards for Safety and Soundness, which establish general standards relating to internal controls and information systems, internal audit systems, loan documentation, credit underwriting, interest-rate exposure, asset growth, asset quality, earnings and compensation, and fees and benefits. In general, these guidelines require, among other things, appropriate systems and practices to identify and manage the risk and exposures specified in the guidelines. These guidelines also prohibit excessive compensation as an unsafe and unsound practice and describe compensation as excessive when the amounts paid are unreasonable or disproportionate to the services performed by an executive officer, employee, director or principal shareholder.

Bank holding companies are not permitted to engage in unsafe or unsound banking practices. The Federal Reserve Board has the power to order a bank holding company to terminate any activity or investment, or to terminate its ownership or control of any subsidiary, when it has reasonable cause to believe that the continuation of such activity or investment or such ownership or control constitutes a serious risk to the financial safety, soundness, or stability of any subsidiary bank of the bank holding company. The Federal Reserve Board also has the authority to prohibit activities of non-banking subsidiaries of bank holding companies which represent unsafe and unsound banking practices or which constitute violations of laws or regulations.

The Federal Reserve Board can assess civil money penalties for activities conducted on a knowing and reckless basis, if such unsafe and unsound activities caused a substantial loss to a depository institution. The Financial Institutions Reform, Recovery and Enforcement Act ("FIRREA") expanded the Federal Reserve Board's authority to prohibit activities of bank holding companies and their non-banking subsidiaries which represent unsafe and unsound banking practices, or which constitute violations of laws or regulations. FIRREA increased the amount of civil money penalties which the Federal Reserve Board can assess for activities conducted on a knowing and reckless basis if those activities caused a substantial loss to a depository institution. The penalties can be as high as $1 million for each day the activity continues.

Capital Requirements

The federal banking agencies have adopted risk-based capital guidelines for bank holding companies and banks that are expected to provide a measure of capital that reflects the degree of risk associated with a banking organization's operations for both transactions reported on the consolidated balance sheet as assets, such as loans, and those recorded as off-balance sheet items, such as commitments, letters of credit and recourse arrangements. The risk-based guidelines apply on a consolidated basis to bank holding companies with consolidated assets of $3 billion or more, such as the Company, or with a material amount of equity securities outstanding that are registered with the SEC.

Pursuant to federal regulations, banks and bank holding companies must maintain capital levels commensurate with the level of risk to which they are exposed, including the volume and severity of problem loans. The federal banking agencies may change, adopt or require new capital guidelines under certain situations such as for high growth or acquisitive bank holding companies, when banks and bank holding companies are subject to enforcement actions, and have also subjected such institutions to restrictions on various activities, including a bank's ability to accept or renew brokered deposits.

Under these capital guidelines, a banking organization is required to maintain certain minimum capital ratios, which are obtained by dividing its qualifying capital by its total risk-adjusted assets and off-balance sheet items. In general, the dollar amounts of assets and certain off-balance sheet items are "risk-adjusted" and assigned to various risk categories. In addition to such risk adjusted capital requirements, banking organizations are also required to maintain an additional minimum "leverage" capital ratio, which is calculated based on average total assets without any adjustment for risk being made to the value of the assets.

Qualifying capital is classified depending on the type of capital as follows:

"Tier 1 capital" consists of common equity, retained earnings, qualifying non-cumulative perpetual preferred stock, a limited amount of qualifying cumulative perpetual preferred stock and minority interests in the equity accounts of consolidated subsidiaries, less goodwill and certain other intangible assets. In certain limited circumstances, qualifying Tier 1 capital may count trust preferred securities.

"Tier 2 capital" includes, among other things, hybrid capital instruments, perpetual debt, mandatory convertible debt securities, qualifying term subordinated debt, preferred stock that does not qualify as Tier 1 capital, and a limited amount of allowance for credit and lease losses.

Capital Requirements under Basel III

Federal banking regulations implementing the international regulatory capital framework, referred to as the "Basel III Rules," apply to both depository institutions and (subject to certain exceptions not applicable to the Company) their holding companies. Under the Basel III Rules, a bank holding company must satisfy certain capital levels in order to comply with the prompt corrective action framework and to avoid limitations on capital distributions and discretionary bonus payments.

The Basel III Rules also establish a "capital conservation buffer" of 2.5% above the regulatory minimum risk-based capital requirements. An institution will be subject to limitations on certain activities, including payment of dividends, share repurchases and discretionary bonuses to executive officers, if its capital level is below the buffered ratio.

The Basel III minimum capital ratios with the full capital conservation buffer are summarized in the table below.

	Basel III Minimum for Capital Adequacy Purposes	**Basel III Additional Capital Conservation Buffer**	**Basel III Ratio with Capital Conservation Buffer**
Total Risk-Based Capital (total capital to risk weighted assets)	8.00%	2.50%	10.50%
Tier 1 Risk-Based Capital (tier 1 to risk weighted assets)	6.00%	2.50%	8.50%
Tier 1 Leverage Ratio (tier 1 to average assets)(1)	4.00%	N/A	4.00%
Common Equity Tier 1 Risk-Based Capital (CET1 to risk weighted assets)	4.50%	2.50%	7.00%

(1) Capital conservation buffer is not applicable to Tier 1 Leverage Ratio.

In addition, the Basel III Rules include certain exemptions to address concerns about the regulatory burden on community banks. For example, banking organizations with less than $15 billion in consolidated assets as of December 31, 2009 are permitted to include in Tier 1 capital trust preferred securities and cumulative perpetual preferred stock issued and included in Tier 1 capital prior to May 19, 2010 on a permanent basis, without any phase out. Community banks were also allowed to elect, on a one-time basis in their March 31, 2015 quarterly filings, to permanently opt-out of the requirement to include most accumulated other comprehensive income ("AOCI") components in the calculation of CET1 capital and, in effect, retain the AOCI treatment under the previous capital rules. Under the Basel III Rules, in 2015 the Company made such election to permanently exclude AOCI from capital.

Management believes that, as of December 31, 2022, the Company met all capital adequacy requirements to which it was subject under Basel III. As of December 31, 2022, the Company met the definition of "well-capitalized" under the applicable Federal Reserve Board regulations.

Community Bank Leverage Ratio

On September 17, 2019, the federal banking agencies jointly finalized a rule intending to simplify the regulatory capital requirements described above for qualifying community banking organizations that opt into the Community Bank Leverage

Ratio ("CBLR") framework, as required by Section 201 of the Economic Growth, Regulatory Relief, and Consumer Protection Act of 2018 (the "EGRRCPA"). The final rule became effective on January 1, 2020, and the CBLR framework became available for banks to use beginning with their March 31, 2020 Call Reports. Under the final rule, if a qualifying community banking organization opts into the CBLR framework and meets all requirements under the framework, it will be considered to have met the "well-capitalized" ratio requirements under the Prompt Corrective Action regulations described below and will not be required to report or calculate risk-based capital. In order to qualify for the CBLR framework, a community banking organization must have a tier 1 leverage ratio of greater than 9%, less than $10 billion in total consolidated assets, and limited amounts of off-balance-sheet exposures and trading assets and liabilities.

Although the Company and the Bank are qualifying community bank organizations, the Company and the Bank have elected not to opt into the CBLR framework at this time and will continue to follow the capital requirements under the Basel III Rules as described above.

Regulatory Restrictions on Dividends and Stock Redemptions and Repurchases

The Company is regarded as a legal entity separate and distinct from the Bank. The principal source of the Company's revenues is dividends received from the Bank. Both Massachusetts and federal law limit the payment of dividends by the Company. Under Massachusetts law, the Company is generally prohibited from paying a dividend or making any other distribution if, after making such distribution, it would be unable to pay its debts as they become due in the usual course of business, or if its total assets would be less than the sum of its total liabilities plus the amount that would be needed if it were dissolved at the time of the distribution, to satisfy any preferential rights on dissolution of holders of preferred stock ranking senior in right of payment to the capital stock on which the applicable distribution is made. The Federal Reserve Board also has authority to prohibit dividends by bank holding companies if their actions constitute unsafe or unsound practices.

The Federal Reserve Board policy statement and supervisory guidance on the payment of cash dividends by bank holding companies expresses the view that a bank holding company should pay cash dividends only to the extent that (i) the bank holding company's net income for the past year is sufficient to cover the cash dividends, (ii) the rate of earnings retention is consistent with the bank holding company's capital needs, asset quality, and overall financial condition, and (iii) the minimum regulatory capital adequacy ratios are met. The Federal Reserve Board policy statement also provides that a bank holding company should inform the Federal Reserve Board or the FRB reasonably in advance of declaring or paying a dividend that exceeds earnings for the period for which the dividend is being paid or that could result in a material adverse change to the bank holding company's capital structure. Bank holding companies also are required to consult with the Federal Reserve Board or the FRB before materially increasing dividends. It is also the Federal Reserve Board's policy that bank holding companies should not maintain dividend levels that undermine their ability to serve as a source of strength to their banking subsidiaries. The Federal Reserve Board or the FRB could prohibit or limit the payment of dividends by a bank holding company if it determines that payment of the dividend would constitute an unsafe or unsound practice.

Bank holding companies must consult with the Federal Reserve Board or the FRB before redeeming any equity or other capital instrument included in tier 1 or tier 2 capital prior to stated maturity, if (x) such redemption could have a material effect on the level or composition of the organization's capital base or (y) as a result of such repurchase, there is a net reduction of the outstanding amount of common stock or preferred stock outstanding at the beginning of the quarter in which the redemption or repurchase occurs. In addition, bank holding companies are unable to repurchase shares equal to 10% or more of their net worth if they would not be "well-capitalized" (as defined by the Federal Reserve Board) after giving effect to such repurchase. Bank holding companies experiencing financial weaknesses, or that are at significant risk of developing financial weaknesses, must consult with the Federal Reserve Board or the FRB before redeeming or repurchasing common stock or other regulatory capital instruments.

Bank Regulation

The Bank is subject to the supervision and regulation of the Division and the FDIC, and, with respect to its New Hampshire branching operations, of the New Hampshire Banking Department. Federal and Massachusetts laws and regulations that specifically apply to the Bank's business and operations cover, among other matters, the scope of its business, the nature of its investments, the timing of the availability of deposited funds, its activities relating to dividends, investments, loans, the nature and amount of and collateral for certain loans, borrowings, capital requirements, certain check-clearing activities, branching, and mergers and acquisitions, as discussed below.

The FDIC and the Division may exercise extensive discretion in connection with their supervisory and enforcement activities and examination policies, including policies with respect to the classification of assets and the establishment of adequate credit loss reserves for regulatory purposes. If as a result of an examination, the Division or the FDIC should determine that the financial condition, capital resources, asset quality, earnings prospects, management, liquidity, sensitivity to market risk, or other aspects of the Bank's operations are unsatisfactory or that the Bank or its management is violating or has violated any law or regulation, the Division and the FDIC have authority to undertake a variety of enforcement measures of varying degrees of severity, including, among other things:

(i) requiring the Bank to take affirmative action to correct any conditions resulting from any violation or practice;

(ii) directing the Bank to increase capital and maintain higher specific minimum capital ratios, which may preclude the Bank from being deemed to be "well-capitalized" and restrict its ability to engage in various activities;

(iii) restricting the Bank's growth geographically, by products and services, or by mergers and acquisitions;

(iv) requiring the Bank to enter into an informal or formal enforcement action to take corrective measures and cease unsafe and unsound practices, including requesting the board of directors to adopt a binding resolution, sign a memorandum of understanding or enter into a consent order;

(v) requiring prior approval for any changes in senior management or the board of directors;

(vi) removing officers and directors and assessing civil monetary penalties; or

(vii) taking possession of, closing and liquidating the Bank or appointing the FDIC as receiver under certain circumstances.

Permissible Activities

Under the Federal Deposit Insurance Act, as amended (the "FDIA"), and applicable Massachusetts law, the Bank may generally engage in any activity that is permissible under Massachusetts law and either is permissible for national banks or the FDIC has determined does not pose a significant risk to the FDIC's Deposit Insurance Fund ("DIF"). In addition, the Bank may also form, subject to the approvals of the Division and the FDIC, "financial subsidiaries" to engage in any activity that is financial in nature or incidental to a financial activity. In order to qualify for the authority to form a financial subsidiary, the Bank is required to satisfy certain conditions, some of which are substantially similar to those that the Company would be required to satisfy in order to elect to become a financial holding company. The Company believes that the Bank would be able to satisfy all of the conditions that would be required to form a financial subsidiary, although the Bank has no current intention of doing so.

Capital Adequacy Requirements

The FDIC monitors the capital adequacy of the Bank by using a combination of risk-based guidelines and leverage ratios. The FDIC considers the Bank's capital levels when taking action on various types of applications and when conducting supervisory activities related to the safety and soundness of the Bank and the banking system. As noted above, the Basel III Rules require banks to maintain four minimum capital standards: (i) a Tier 1 capital to adjusted total assets ratio, or "leverage capital ratio," of at least 4.0%, (ii) a Tier 1 capital to risk-weighted assets ratio, or "Tier 1 risk-based capital ratio," of at least 6.0%, (iii) a total risk-based capital (Tier 1 plus Tier 2) to risk-weighted assets ratio, or "total risk-based capital ratio," of at least 8.0%, and (iv) a common equity Tier 1 ("CET1") capital ratio of 4.5%, which are the same minimum capital standards to which the Company is held on a consolidated basis. In addition, the FDIC's prompt corrective action standards discussed below, in effect, increase the minimum regulatory capital ratios for banking organizations in order to be considered "well-capitalized." Higher capital levels may be required if warranted by the particular circumstances or risk profiles of individual institutions, or if required by the banking regulators due to the economic conditions impacting our market.

Management believes that, as of December 31, 2022, the Bank exceeded its minimum capital requirements and met all capital adequacy requirements to which it was subject under the Basel III Rules.

Prompt Corrective Action

The federal banking agencies define five categories in which an insured depository institution will be placed, based on the level of its capital ratios: "well-capitalized," "adequately capitalized," "undercapitalized," "significantly undercapitalized" and "critically undercapitalized." Insured depository institutions are required to meet the following capital levels in order to qualify as "well-capitalized:" (i) a Total risk-based capital ratio of 10%; (ii) a Tier 1 risk-based capital ratio of 8%; (iii) a Tier 1 leverage ratio of 5%; and (iv) a CET1 risk-based capital ratio of 6.5%. Accordingly, a financial institution may be considered "well-capitalized" under the prompt corrective action framework, but not satisfy the capital requirements of the Basel III Rules. Generally, a financial institution must be "well-capitalized" before the Federal Reserve Board or the FRB will approve an application by a bank holding company to acquire a bank or merge with a bank holding company. The FDIC applies the same requirement in approving bank merger applications.

A bank that may otherwise meets the minimum requirements to be classified as "well-capitalized," "adequately capitalized" or "undercapitalized" may be treated instead 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. Under the prompt corrective action regulations, a bank that is deemed to be "undercapitalized" or in a lesser capital category will be required to submit to its primary federal banking regulator a capital restoration plan and to comply with the plan.

The Bank's regulatory capital ratios were in excess of the levels established for "well-capitalized" institutions as of December 31, 2022. As noted above, as of December 31, 2022, management believes the Bank satisfied all capital adequacy requirements under the Basel III Rules.

Branching

State and Federal law provides that a Massachusetts banking company may be "eligible" to submit a notice to the Division and the FDIC to establish a branch within the Commonwealth. A bank is "eligible" to submit a notice to establish a branch in the Commonwealth if: (i) the bank has received a "satisfactory" or higher CRA rating at its most recent CRA examination by the Division or federal banking regulator; (ii) the bank is "adequately capitalized" as defined under the provisions of the Federal Deposit Insurance Act and the FDIC's Capital Adequacy Regulations; and (iii) the bank has not been notified that it is in troubled condition by the Division or any federal banking regulatory agency. A bank must also make an application to the Division and FDIC to relocate or close an existing branch. The Division and the FDIC consider several factors when making a decision to approve the notice, including financial condition, capital adequacy, earnings prospects, the needs of the community, and whether competition would be adversely affected.

The Dodd-Frank Act amended the Riegle-Neal Interstate Banking and Branching Efficiency Act of 1994, (the "Riegle-Neal Act") legal framework for interstate branching to permit national banks and state banks to establish branches in any state if that state would permit the establishment of the branch by a state bank chartered in that state. The Bank may, therefore, also establish branches in any other state if that state would permit the establishment of a branch by a state bank chartered in that state. In this case, the Bank would also be required to file a notice with the Division, the FDIC and potentially the banking authority of the state into which the Bank intends to establish a branch.

Deposit Insurance

The FDIC insures the deposits of federally insured banks, such as the Bank, and thrifts, up to prescribed statutory limits of $250,000 for each depositor, through the DIF and safeguards the safety and soundness of the banking and thrift industries. The amount of FDIC assessments paid by each insured depository institution is based on its relative risk of default as measured by regulatory capital ratios and other supervisory factors.

At least semi-annually, the FDIC will update its loss and income projections for the DIF and, if needed, will increase or decrease assessment rates, following notice-and-comment rulemaking, if required. However, if there are additional bank or financial institution failures or if the FDIC otherwise determines to increase assessment rates, the Bank may be required to pay higher FDIC insurance premiums. Additionally, 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 Bank is generally unable to control the amount of premiums that it is required to pay for FDIC insurance. In connection with the Dodd-Frank Act's requirement that insurance assessments be based on assets, in July 2016, the FDIC redefined its deposit insurance premium assessment base to be an institution's average consolidated total assets minus average tangible equity and revised its deposit insurance assessment rate schedule. Assessments for institutions with assets of less than $10 billion, such as Enterprise Bank, are based on financial measures and supervisory ratings derived from statistical modeling estimating the probability of an institution's failure within three years. The FDIC is considering, and is expected to adopt, a final rule to apply the CBLR framework to the deposit insurance assessment system.

On October 18, 2022, the FDIC adopted a final rule applicable to all insured depository institutions increasing initial base deposit insurance assessment rate schedules by 2 basis points, beginning in the first quarterly assessment period of 2023. The

FDIC also issued a notice maintaining a DIF reserve ratio of 2.0% for 2023. The increase in assessment rate schedules is intended to increase the likelihood that the DIF reserve ratio reaches the statutory minimum of 1.35% by September 30, 2028, the statutory deadline set by the Dodd-Frank Act. The new assessment rate schedules will remain in effect unless and until the DIF reserve ratio meets or exceeds 2.0% in order to support growth in the DIF in progressing toward the FDIC's long-term goal of a 2.0% designated reserve ratio for the DIF. FDIC staff may in the future recommend additional assessment rate adjustments if deemed necessary.

Restrictions on Dividends and Other Capital Distributions

Both Massachusetts and federal law limit the payment of dividends by the Bank. Under FDIC regulations and applicable Massachusetts law, the dollar amount of dividends and any other capital distributions that the Bank may make depends upon its capital position and recent net income. Any dividend payment that would exceed the total of the Bank's net profits for the current year plus its retained net profits of the preceding two years would require the Massachusetts Division of Banks' approval. The statutory term "net profits" essentially equates with the accounting term "net income" and is defined under the Massachusetts banking statutes to mean the remainder of all earnings from current operations plus actual recoveries on loans and investments and other assets after deducting from such total all current operating expenses, actual losses, accrued dividends on any preferred stock and all federal and state taxes. Applicable provisions of the FDIA also prohibit a bank from paying any dividends on its capital stock if the bank is in default on the payment of any assessment to the FDIC or if the payment of dividends would otherwise cause the bank to become "undercapitalized." If the Bank's capital becomes impaired or the FDIC or Division otherwise determines that the Bank needs more than normal supervision, the Bank may be prohibited or otherwise limited from paying any dividends or making any other capital distributions to the Company. Consequently, any restrictions, regulatory or otherwise, on the ability of the Bank to pay dividends to the Company may restrict the ability of the Company to pay dividends to the holders of its common stock.

Community Reinvestment Act

The CRA and the regulations issued thereunder are intended to encourage banks to help meet the credit needs of their entire assessment area, including low- and moderate-income neighborhoods, consistent with the safe and sound operations of such banks. The CRA requires that the FDIC and the Division evaluate the record of each financial institution in meeting such credit needs. The CRA evaluation is also considered by the bank regulatory agencies in evaluating approvals for mergers, acquisitions, and applications to open, relocate or close a branch or facility. Failure to adequately meet the criteria within CRA guidelines could impose additional requirements and limitations on the Bank. Additionally, the Bank must publicly disclose the ability to request the Bank's CRA Performance Evaluation and other various related documents. The Bank received a rating of "High Satisfactory" by the Division and "Satisfactory" by the FDIC on its most recent CRA examination.

On May 5, 2022, the federal banking regulators issued a joint proposed rule to revise regulations implementing the CRA, which seeks to strengthen the purpose of the CRA, adapt to changes in the banking industry, including the expanded role of mobile and online banking, provide clarity and consistency in the application of CRA regulations, tailor performance standards to account for differences in bank size, business model, and local conditions, tailor data collection and reporting requirements, promote transparency and public engagement, confirm that CRA and fair lending are mutually reinforcing, and create a consistent regulatory approach that applies to banks regulated by all of the federal banking regulators. While the comment period for the proposed rule expired in August 2022, a final rule has not yet been implemented by the federal banking regulators. The Company and the Bank will continue to monitor these developments.

Restrictions on Transactions with Affiliates and Loans to Insiders

Transactions between the Bank and its affiliates are subject to the provisions of Section 23A and 23B of the Federal Reserve Act (the "Affiliates Act"), and the Federal Reserve Board's Regulation W, as such provisions are made applicable to state non-member banks by Section 18(i) of the Federal Deposit Insurance Act. Affiliates of a bank include, among other entities, the bank's holding company and companies that are under common control with the bank.

These provisions place limits on the amount of loans or extensions of credit and investment in affiliates; assets that may be purchased, extensions of credit to third parties collateralized by securities or obligation and the guarantee, acceptance or letter of credit issued on behalf of an affiliate.

The total amount of the above transactions is limited in amount, as to any one affiliate, to 10% of the Bank's capital and surplus and, as to all affiliates combined, to 20% of its capital and surplus. In addition to the limitation on the amount of these transactions, each of the above transactions must also meet specified collateral requirements and the types of permissible collateral may be limited. The Bank must also comply with other provisions designed to avoid the purchase or acquisition of low-quality assets from affiliates. The Dodd-Frank Act expanded the scope of Section 23A, which now includes investment funds managed by an institution as an affiliate, as well as other procedural and substantive hurdles.

The Bank is also subject to Section 23B of the Federal Reserve Act which, among other things, prohibits the Bank from engaging in any transaction with an affiliate unless the transaction is on terms substantially the same, or at least as favorable to the Bank or its subsidiaries, as those prevailing at the time for comparable transactions with non-affiliated companies. The Federal Reserve Board has also issued Regulation W which codifies prior regulations under the Affiliates Act and interpretive guidance with respect to affiliate transactions. In March 2020, the Federal Reserve Board issued to certain banks a temporary waiver of the limitations set forth under Section 23A of the Federal Reserve Act and Regulation W in order to allow such banks to purchase certain assets from affiliated broker-dealers and money market mutual funds. The relief afforded by such waivers generally will expire six months after the date of issuance.

Under both Massachusetts and federal law, the Bank is also subject to restrictions on extensions of credit to its executive officers, directors, principal shareholders and their related interests. These extensions of credit (i) must be made on substantially the same terms, including interest rates and collateral, as those prevailing at the time for comparable transactions with third parties, (ii) must follow the credit underwriting procedures at least as stringent as those applicable to comparable transactions with third parties, and (iii) must not involve more than the normal risk of repayment or present other unfavorable features. The Dodd-Frank Act expanded coverage of transactions with insiders by including credit exposure arising from derivative transactions (which are also covered by the expansion of Section 23A). The Dodd-Frank Act prohibits an insured depository institution from purchasing or selling an asset to an executive officer, director, or principal shareholder (or any related interest of such a person) unless the transaction is on market terms, and, if the transaction exceeds 10% of the institution's capital, it is approved in advance by a majority of the disinterested directors.

Concentrated Commercial Real Estate Lending Regulations

The federal banking agencies, including the FDIC, have promulgated guidance governing financial institutions with concentrations in commercial real estate lending. The guidance provides that a bank has a concentration in commercial real estate lending if (i) total reported loans for construction, land development, and other land represent 100% or more of total capital or (ii) total reported loans secured by multifamily and non-farm nonresidential properties (excluding loans secured by owner-occupied properties) and loans for construction, land development, and other land represent 300% or more of total capital and the bank's commercial real estate loan portfolio has increased 50% or more during the prior 36 months. If a concentration is present, management must employ heightened risk management practices that address the following key elements: including board and management oversight and strategic planning, portfolio management, development of underwriting standards, risk assessment and monitoring through market analysis and stress testing, and maintenance of increased capital levels as needed to support the level of commercial real estate lending. As of December 31, 2022, the Bank's concentrations of commercial real estate loans fell slightly above the established levels and the Company believes its credit risk administration to be consistent with heightened risk management regulatory guidance.

The Basel III Rules also require loans categorized as "high-volatility commercial real estate," or HVCRE, to be assigned a 150% risk weighting and require additional capital support. However, the EGRRCPA prohibits federal banking regulators from imposing this higher capital standards on HVCRE exposures unless they are for higher risk loans for acquisition, development or construction, or ADC, and clarifying ADC status.

Effective April 1, 2020, federal banking regulators implemented a final rule revising the definition of a HVCRE exposure and providing interpretations of certain aspects of Acquisition Development and Construction loans. This final rule did not have a material impact on the Banks' Consolidated Report of Condition and Income.

The Economic Growth, Regulatory Relief and Consumer Protection Act of 2018

On May 24, 2018, the EGRRCPA was enacted, which repeals or modifies certain provisions of the Dodd-Frank Act and eases regulations on all but the largest banks. The EGRRCPA's provisions—for which banking agencies have now issued certain corresponding guidance documents and/or proposed or final rules—include, among other things: (i) creating a new category of "qualified mortgages" presumed to satisfy ability-to-repay requirements for loans that meet certain criteria and are held in portfolio by banks with less than $10 billion in assets; (ii) not requiring appraisals for certain transactions valued at less than $400,000 in rural areas; (iii) exempting banks that originate fewer than 500 open-end and 500 closed-end mortgages from the

Home Mortgage Disclosure Act's expanded data disclosures; (iv) clarifying that, subject to various conditions, reciprocal deposits of another depository institution obtained using a deposit broker through a deposit placement network for purposes of obtaining maximum deposit insurance would not be considered brokered deposits subject to the FDIC's brokered-deposit regulations; and (v) simplifying capital calculations by requiring regulators to establish for institutions under $10 billion in assets a community bank leverage ratio (Tier 1 capital to average consolidated assets) at a percentage not less than 8% and not greater than 10% that such institutions may elect to replace the general applicable risk-based capital requirements for determining well-capitalized status. For those regulations that have been implemented, most will have little to no impact on the Company. However, the Company may be impacted by future agency rulemaking in connection with implementation of the EGRRCPA and it is difficult to anticipate the continued impact this expansive legislation may have on the Company, its customers and the financial industry generally.

For more information on the EGRRCPA, please see the following sections "Permissible Activities," "Community Bank Leverage Ratio," and "Concentrated Commercial Real Estate Lending Regulations," above, and "Consumer Financial Protection Bureau" and "HMDA," below.

Consumer Financial Protection Bureau

The Consumer Financial Protection Bureau (the "CFPB") was created under the Dodd-Frank Act to centralize responsibility for consumer financial protection with broad rulemaking, supervision and enforcement authority for a wide range of consumer protection laws that would apply to all banks and thrifts, including the Equal Credit Opportunity Act, Truth-in Lending Act ("TILA"), Real Estate Settlement Procedures Act ("RESPA"), Fair Credit Reporting Act, Fair Debt Collection Act, the Consumer Financial Privacy provisions of the Gramm-Leach-Bliley Act and certain other statutes. Significant recent CFPB developments include:

- continued focus on fair lending, including promoting racial and economic equity for underserved, vulnerable and marginalized communities;
- focused efforts on enforcing certain compliance obligations the CFPB deems a priority, such as automobile loan servicing, debt collection, deposit, overdraft, non-sufficient funds, representment fees and other services fees, mortgage origination and servicing, and remittances, among others; and
- rulemaking plans concerning, among others, consumers' access to their financial information and requirements for financial institutions to collect, report and make public certain information concerning credit applications made by women-owned, minority-owned and small businesses.

Banking institutions with total assets of $10 billion or less, such as the Bank, remain subject to the supervision and enforcement of their primary federal banking regulator with respect to the federal consumer financial protection laws and such additional regulations as may be adopted by the CFPB.

The "Ability-to-Repay/Qualified Mortgage" rules, which amended TILA's implementing regulation, Regulation Z generally require~~s~~ creditors to make a reasonable, good faith determination of a consumer's ability to repay for certain consumer credit transactions secured by a dwelling and establishes certain protections from liability under this requirement for "qualified mortgages." The EGRRCPA provides that for certain insured depository institutions and insured credit unions with less than $10 billion in total consolidated assets, mortgage loans that are originated and retained in portfolio will automatically be deemed to satisfy the "ability to repay" requirement. To qualify for this treatment, the insured depository institutions and credit unions must meet conditions relating to prepayment penalties, points and fees, negative amortization, interest-only features and documentation among other conditions.

The Dodd-Frank Act implemented significant increases in the regulation of mortgage lending and servicing by banks and non-banks. In particular, the Dodd-Frank Act includes, among other things, (i) requirements that mortgage originators act in the best interests of a consumer and seek to ensure that a consumer will have the capacity to repay a loan that the consumer enters into; (ii) requirements that mortgage originators be properly qualified, registered, and licensed and comply with any regulations designed by the CFPB to monitor their operations; (iii) mandates of comprehensive additional and enhanced residential mortgage loan related disclosures, both prior to loan origination and after; and (iv) mandates of additional appraisal practices for loans secured by residential dwellings, including potential additional appraisals at the banks cost.

Home Mortgage Disclosure Act ("HMDA")

On October 15, 2015, pursuant to Section 1094 of the Dodd-Frank Act, the CFPB issued amended rules in regard to the collection, reporting and disclosure of certain residential mortgage transactions under the Home Mortgage Disclosure Act (the "HMDA Rules"). The Dodd-Frank Act mandated additional loan data collection points in addition to authorizing the Bureau to require other data collection points under implementing Regulation C. Most of the provisions of the HMDA Rule went into effect on January 1, 2018 and apply to data collected in 2018 and reporting in 2019 and later years. The HMDA Rule adopts a uniform loan volume threshold for all financial institutions, modifies the types of transactions that are subject to collection and reporting, expands the loan data information being collected and reported, and modifies procedures for annual submission and annual public disclosures. EGRRCPA amended provisions of the HMDA Rule to exempt certain insured institutions from most of the expanded data collection requirements required of the Dodd-Frank Act. The CFPB further amended the HMDA Rules in April 2020 so that, effective January 1, 2022, institutions originating fewer than 100 dwelling secured closed-end mortgage loans or fewer than 200 dwelling secured open-end lines are exempt from the expanded data collection requirements. On February 1, 2023, the Office of the Comptroller of the Currency issued OCC Bulletin 2023-5 which clarified that, following a recent court decision vacating the 2020 HMDA Final Rule as to the loan volume reporting threshold for closed-end mortgage loans, the loan origination threshold for reporting HMDA data on closed-end mortgage loans reverted to the 25 loan threshold established by the 2015 HMDA Final Rule. The Bank does not receive this reporting relief based on the number of dwellings secured mortgage loans reported annually.

UDAP and UDAAP

Banking regulatory agencies have increasingly used a general consumer protection statute to address "unfair", "deceptive" or "abusive" acts and business practices that may not necessarily fall directly under the purview of a specific banking or consumer finance law. The law of choice for enforcement against such business practices has been Section 5 of the Federal Trade Commission Act, referred to as the FTC Act, which is the primary federal law that prohibits unfair or deceptive acts or practices, referred to as UDAP, and unfair methods of competition in or affecting commerce. "Unjustified consumer injury" is the principal focus of the FTC Act. UDAP laws and regulations were expanded under the Dodd-Frank Act to apply to “unfair, deceptive or abusive acts or practices,” referred to as UDAAP and were delegated to CFPB for rulemaking. The federal banking agencies have the authority to enforce such rules and regulations. Under the Dodd-Frank Act, CFPB looks to various factors to assess whether an act or practice unfair, including whether it causes or is likely to cause substantial injury to consumers, the injury is not reasonably avoidable by consumers, and the injury is not outweighed by countervailing benefits to consumers or to competition. A key focus of CFPB is whether an act or practice hinders a consumer’s decision-making.

Incentive Compensation

In June 2010, the Federal Reserve Board, the Office of the Comptroller of the Currency and the FDIC issued comprehensive final guidance on incentive compensation policies intended to ensure that the incentive compensation policies of banking organizations do not undermine the safety and soundness of such organizations by encouraging excessive risk-taking. The guidance, which covers all employees that have the ability to materially affect the risk profile of an organization, either individually or as part of a group, is based upon the key principles that a banking organization's incentive compensation arrangements should (i) provide incentives that do not encourage risk-taking beyond the organization's ability to effectively identify and manage risks, (ii) be compatible with effective internal controls and risk management, and (iii) be supported by strong corporate governance, including active and effective oversight by the organization's board of directors.

The Federal Reserve Board will review, as part of the regular, risk-focused examination process, the incentive compensation arrangements of banking organizations, such as the Company, that are not "large, complex banking organizations." The findings of the supervisory initiatives will be included in reports of examination. Enforcement actions may be taken against a banking organization if its incentive compensation arrangements, or related risk management control or governance processes, pose a risk to the organization's safety and soundness and the organization is not taking prompt and effective measures to correct the deficiencies.

In addition, publicly traded companies are required by the SEC to give shareholders 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 unless previously voted on by shareholders. Also, certain publicly traded companies are required to disclose the ratio of the compensation of its chief executive officer ("CEO") to the median compensation of its employees. The Company addresses these votes and disclosures in its annual Proxy Statement.

The Dodd-Frank Act directs the federal banking regulators to promulgate rules prohibiting excessive compensation paid to executives of depository institutions and their holding companies with assets in excess of $1 billion, regardless of whether the company is publicly traded or not. In May 2016, the federal banking regulators, joined by the SEC, proposed such a rule that is tailored based on the asset size of the institution. All covered financial institutions would be subject to a prohibition on paying compensation, fees, and benefits that are "unreasonable" or "disproportionate" to the value of the services performed by a person covered by the proposed rule (generally, senior executive officers and employees who are significant risk-takers). As of the date of this Form 10-K, the federal banking regulators have not yet implemented a final rule with respect to excessive compensation paid to executives of depository institutions and their holding companies. Finally, the Dodd-Frank Act gives the SEC authority to prohibit broker discretionary voting on elections of directors and executive compensation matters.
In August 2022, the SEC adopted the final "pay-for-performance" rule mandated by the Dodd-Frank Act. Among other disclosure requirements, the rule requires companies to disclose the relationships among named executive officer compensation "actually paid," total shareholder return and certain financial performance measures that the company uses to link compensation to company performance for its five most recent fiscal years. The rule will first apply to disclosures in the Company's proxy statement for the 2023 annual meeting of shareholders.

In October 2022, the SEC adopted a final rule directing national securities exchanges and associations, including the NASDAQ, to implement listing standards that require listed companies to adopt policies mandating the recovery or "clawback" of excess incentive-based compensation earned by a current or former executive officer during the three fiscal years preceding the date the listed company is required to prepare an accounting restatement, including to correct an error that would result in a material misstatement if the error were corrected in the current period or left uncorrected in the current period. The final rule requires the Company to adopt a clawback policy within 60 days after such listing standard becomes effective.

Technology Risk Management and Consumer Privacy

State and federal banking regulators have issued various policy statements emphasizing the importance of technology risk management and supervision in evaluating the safety and soundness of depository institutions with respect to banks that contract with third-party vendors to provide data processing and core banking functions. The use of technology-related products, services, delivery channels and processes expose a bank to various risks, particularly operational, privacy, cyber and information security, strategic, reputation and compliance risk. Banks are generally expected to prudently manage technology-related risks as part of their comprehensive risk management policies by identifying, measuring, monitoring and controlling risks associated with the use of technology.

Under Section 501 of the Gramm-Leach-Bliley Act, the federal banking agencies have established appropriate standards for financial institutions regarding the implementation of safeguards to protect the security and confidentiality of customer records and information, protection against any anticipated threats or hazards to the security or integrity of such records and protection against unauthorized access to or use of such records or information in a way that could result in substantial harm or inconvenience to a customer. Among other matters, the rules require each bank to implement a comprehensive written information security program that includes administrative, technical and physical safeguards relating to customer information. In addition, Massachusetts has established Standards for the Protection of Personal Information which create minimum standards to be met in connection with the safeguarding of personal information and outline the content and timing of disclosures required following a system breach or compromise.

Beginning May 1, 2022, a bank holding company, such as the Company, and an FDIC-supervised depository institution, such as the Bank, are required to notify the Federal Reserve or FDIC, respectively, as soon as possible and no later than 36 hours after a determination that a computer-security incident that rises to the level of a notification incident has occurred.

Under the Gramm-Leach-Bliley Act, all financial institutions must develop initial and annual privacy notices that are provided to its customers describing in general terms, the bank's information sharing practices to affiliated and non-affiliated third parties and the customer's ability to opt-out of certain information sharing practices. Limitations are placed on the extent to which a bank can disclose an account number or access code for credit card, deposit or transaction accounts to any unaffiliated third-party for use in marketing.

Bank Secrecy Act and USA PATRIOT Act

Our Company and the Bank are also subject to the Bank Secrecy Act, as amended by the Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism Act of 2001 (the "USA PATRIOT Act") and as further amended by the National Defense Authorization Act for Fiscal Year 2021 (the "National Defense Authorization Act"), which gives the federal government powers to address money laundering and terrorist threats through enhanced domestic security measures, expanded surveillance powers, and mandatory transaction reporting obligations. The Bank Secrecy Act and USA PATRIOT Act impose an affirmative obligation on the Bank to establish an anti-money laundering program designed to monitor and prohibit against certain transactions and account relationships, create due diligence standards for "know your customer;" regularly compare customer lists against lists of suspected terrorists, terrorist organizations and money launderers; report currency transactions that exceed certain thresholds; and to report other transactions determined to be suspicious. Financial institutions must take reasonable steps to conduct enhanced scrutiny of account relationships to guard against money laundering and to report any suspicious information maintained by financial institutions. The Bank Secrecy Act requires that all banking institutions develop and provide for the continued administration of a program reasonably designed to assure and monitor compliance with certain record-keeping and reporting requirements regarding both domestic and international currency transactions. These programs must, at a minimum, provide for a system of internal controls to assure ongoing compliance, provide for independent testing of such systems and compliance, designate individuals responsible for such compliance and provide appropriate personnel training.

The Financial Crimes Enforcement Network ("FinCEN") issued a final rule regarding customer due diligence requirements for covered financial institutions in connection with their Bank Secrecy Act and Anti-Money Laundering policies, that became effective in May 2018. The final rule adds a requirement to understand the nature and purpose of customer relationships and identify the "beneficial owner" (25% or more ownership interest) of legal entity customers. Bank regulators routinely examine institutions for compliance with these obligations and they must consider an institution's anti-money laundering compliance when considering regulatory applications filed by the institution, including applications for bank mergers and acquisitions. The regulatory authorities have imposed "cease and desist" orders and civil money penalty sanctions against institutions found to be violating these obligations.

Further, on January 1, 2021, Congress passed the National Defense Authorization Act, which enacted the most significant overhaul of the Bank Secrecy Act and related anti-money laundering laws since the USA PATRIOT Act. Notable amendments include (i) significant changes to the collection of beneficial ownership information and the establishment of a beneficial ownership registry placing responsibility to the corporate entities to report beneficial ownership information to FinCEN (which will be maintained by FinCEN and made available upon request to financial institutions); (ii) enhanced whistleblower provisions, which provide that one or more whistleblowers who voluntarily provide original information leading to the successful enforcement of violations of the anti-money laundering laws in any judicial or administrative action brought by the Secretary of the Treasury or the Attorney General resulting in monetary sanctions exceeding $1 million (iii) increased penalties for violations of the Bank Secrecy Act; (iv) improvements to existing information sharing provisions that permit financial institutions to share information relating to suspicious activity reports (SARs) with foreign branches, subsidiaries, and affiliates (except those located in China, Russia, or certain other jurisdictions) for the purpose of combating illicit finance risks; and (v) expanded duties and powers of FinCEN. Many of the amendments, including those with respect to beneficial ownership, require the Department of Treasury and FinCEN to promulgate rules.

Other Operations and Consumer Compliance Laws

The Bank must comply with numerous other federal anti-money laundering and consumer protection statutes and implementing regulations, including but not limited to the Truth in Savings Act, Electronic Funds Transfer Act, Expedited Funds Availability Act, the Equal Credit Opportunity Act, the Federal Housing Act, the National Flood Insurance Act and various other federal and state privacy protection laws. Failure to comply in any material respect with any of these laws could subject the Bank to lawsuits and could also result in administrative penalties, including fines and reimbursements. The Company and the Bank are also subject to federal and state laws prohibiting unfair or fraudulent business practices, untrue or misleading advertising and unfair competition. These laws and regulations mandate certain disclosure requirements and regulate the manner in which financial institutions must deal with customers when taking deposits, making loans, collecting loans, and providing other services.

Environmental Laws Potentially Impacting the Bank

We are subject to state and federal environmental laws and regulations. The Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA") is a federal statute that generally imposes strict liability on all prior and present "owners and operators" of sites containing hazardous waste. However, Congress acted to protect secured creditors by providing that the term "owner and operator" excludes a person whose ownership is limited to protecting its security interest in the site. Since the enactment of the CERCLA, this "secured creditor exemption" has been the subject of judicial interpretations which have left open the possibility that lenders could be liable for cleanup costs on contaminated property that they hold as collateral for a loan, which costs often substantially exceed the value of the property.

Other Pending and Proposed Legislation

From time to time, various legislative and regulatory initiatives are introduced in Congress, as well as by regulatory agencies. Such initiatives may include proposals to expand or contract the powers of bank holding companies and depository institutions or proposals to substantially change the financial institution regulatory system. Such legislation could change banking statutes and the operating environment of the Company or Bank 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 the company or our subsidiaries could have a material effect on the Company's business, financial condition, and results of operations.

The Company maintains a Compliance Management Program designed to meet regulatory and legislative requirements. See Key Risk Areas, below under the heading "Risk Management Framework."

Risk Management Framework

In addition to the risks discussed below, numerous other factors that could adversely affect the Company's future results of operations and financial condition, and its reputation and business model are addressed in Item 1A, "Risk Factors," of this Form 10-K. This Risk Management Framework discussion should be read in conjunction with Item 1A.

Management utilizes a comprehensive enterprise risk management framework that enables a coordinated and structured approach for identifying, assessing, and managing risks across the Company and provides reasonable assurance that management has the tools, programs, people, and processes in place to support informed decision making, anticipate risks before they materialize and maintain the Company's risk profile consistent with its strategic planning, and applicable laws and regulations.

These risks, and the decisions related thereto, include, but are not limited to: credit risk, market and interest rate risk, legal and regulatory compliance risk, corporate governance, internal control over financial reporting, reputational risk, strategic risk, capital risk, compensation risk, liquidity management, information technology and cybersecurity risk, physical security, loss and fraud prevention, policy reviews, third party risk management (direct and indirect vendors) and contract management, business continuity and succession planning, and short and long-term capital projects and facility planning.

The Company promotes proactive risk management by all Enterprise employees with clear ownership and accountability. Managers in each line of business have responsibility for identifying, assessing, and managing the risks in their areas. The Risk Management department is responsible for providing guidance, oversight, and input on remediation to business lines to provide reasonable assurance that risk assessments and mitigating controls and procedures are properly designed and functioning within their areas. The Risk Management department also independently monitors operational risk, including information security, third-party risk management, disaster recovery and business continuity planning. In addition, the Internal Audit department, which is independent of management, through reviews and testing, confirms appropriate risk management controls, processes and systems are in place and functioning effectively. The Company also maintains a package of commercial insurance policies with national insurers, which provides for a broad range of insurance coverage for a variety of risk factors, at levels deemed appropriate by management. Insurance policies are reviewed annually, or as circumstances change, by management for necessary updates and adjustments in coverage, in addition to reviews by an independent third party and the Audit Committee of the Board.

The CEO has overall responsibility for risk management and manages strategic and reputational risks. The Chief Risk Officer is responsible for establishing and maintaining oversight of the Company's enterprise risk management framework and manages operational, legal fraud and compliance risks. The Chief Financial Officer is responsible for financial risk management activities including market, interest rate, liquidity, and capital adequacy, and evaluating the effectiveness of the design of internal control over financial reporting. The Credit Director, Chief Commercial Lending and Chief Residential Lending Officers are responsible for managing credit risk. The Chief Information Officer is responsible for technology risk management including technology governance, architecture, infrastructure, data management and application support, the

Chief Information Security Officer is responsible for the bank-wide cyber and information security program, and the Chief Human Resources Officer is responsible for compensation risk management, adequate staffing levels, succession, and training and development. Periodically management reports and risk assessments are provided to the Board or its committees relating to the Bank's risk profile and the adequacy of the risk management program.

Key Risk Areas

The Company maintains a Compliance Management Program (the "CMP") designed to meet regulatory and legislative requirements. The CMP provides a framework for tracking and implementing regulatory changes, monitoring the effectiveness of policies and procedures, conducting compliance risk assessments, managing customer complaints, and educating employees in matters relating to regulatory compliance. The Audit Committee of the Board oversees the effectiveness of the CMP.

Operational risk includes the threat of loss from inadequate or failed internal processes, people, systems, or external events, due to, among other things: fraud or error; the inability to deliver products or services; failure to maintain a competitive position; lack of, or insufficient information security, cybersecurity, or physical security; inadequate procedures or controls followed by third-party service providers; or violations of ethical standards. In addition to ongoing employee training, and employee and customer awareness campaigns, controls to manage operational risk include, but are not limited to, technology administration, cyber and information security, third-party risk management, and disaster recovery and business continuity planning.

The Company's technology administration includes policies and guidelines for the design, procurement, installation, management and acceptable use of hardware, software, and network devices as well as third-party hosted and cloud-based solutions. The Company's project management standards are designed to provide risk-based oversight, coordinate and communicate ideas, and to prioritize and manage project implementation in a manner consistent with corporate objectives.
The Company has implemented layered security approaches for all electronic delivery channels to detect, prevent and respond to rising cybersecurity risks. Management utilizes a combination of third-party information security assessments, key technologies, and ongoing internal and external evaluations to provide a level of protection of non-public personal information, to continually monitor and attempt to safeguard information on its operating systems, in cloud-based solutions, and those of third-party service providers, and to prevent, quickly detect and respond to attacks. The Company also utilizes firewall technology, multi-factor authentication, complex password construction, and a combination of software and third-party monitoring to detect and prevent intrusion, and cybersecurity threats, guard against unauthorized access, and continuously identify and prevent computer viruses on the Company's information solutions. To minimize debit card losses, the Company works with a third-party provider to establish parameters for allowable transaction activity, monitor transactions, and alert customers of potentially fraudulent activity.

The Bank maintains a written Information Security Program based on a collection of information security policies, regulatory requirements, standards, guidelines, processes, procedures, third party recommendations, and industry best practices. The purpose of this Program is to establish a company-wide approach for assessing and protecting the integrity, availability, and confidentiality of the Bank’s information assets. The Chief Information Security Officer, who is a Certified Information Systems Security Professional with over ten years’ experience in managing information security, regularly reports to the Board Technology & Information Security Committee on information and cyber security strategy, testing, training, policies, procedures, cyber security insurance, and overall effectiveness of the Information Security Program and would report and discuss material incidents, and ongoing mitigation status, if any should occur.

The Company has a third-party risk management program designed to enable management to determine what risk, if any, a particular vendor and indirect vendors or subcontractors, exposes the Company to, and to rate and mitigate that risk by properly performing initial and ongoing due diligence when selecting or maintaining relationships with third-party service providers and their subcontractors, for both on-premise, cloud-based, and third-party hosted technology solutions.
The Company's Disaster Recovery and Business Continuity Program combined with the Company's Pandemic Plan (the "plans") provide the information and procedures required to enable a rapid recovery from an occurrence that would disable the Company's operations for an extended period, due to circumstances such as: loss of personnel; loss of data and/or loss of access to, or the physical destruction or damage of facilities, infrastructure or systems; or denial of access to our systems or information by outside parties. The plans, which are reviewed annually, establish responsibility for assessing a disruption of business, contains alternative strategies for the continuance of critical business functions during an emergency, assigns responsibility for restoring services, and sets recovery point and time objectives by which critical services will be restored. A bank-owned and maintained secondary data center location provides the Company with back-up network processing capabilities if needed.

The Company has developed an Incident Response Plan to guide its actions in responding to real and suspected information security incidents. This includes unlawful, unauthorized, or unacceptable actions that involve a computer system or a computer network such as Distributed Denial of Service attacks, Corporate Account Takeover schemes, or ransomware. Additionally, an event that disrupts one of the Bank's service channels, whether from a security incident or not, is also considered an incident requiring a response under this program. These disclosure controls and procedures compel the Company to make appropriate accurate and timely disclosures of material events and incidents to both customers and regulatory authorities. The reaction to an incident aims to reduce potential damage and loss and to protect and restore confidence through timely communication and the restoration of normal operating conditions for computers, services, and information. Management will work closely with its cybersecurity insurance provider when investigating and responding to cyber or ransomware attacks.

The Technology & Information Security Committee of the Board oversees the technology and cybersecurity strategies and their alignment with business strategies. The Committee also oversees the effectiveness of the information security program and monitors the results of third-party testing and risk assessments and responses to breaches of customer data, among other project management, cybersecurity, and business continuity oversight functions.

Credit risk management is reviewed in detail in Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations," in the section "Loans," under the heading "Credit Risk" of this Form 10-K. The Loan Committee of the Board oversees the effectiveness of the credit risk management.

Liquidity management is reviewed in Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations," in the section entitled "Financial Condition" under the heading "Liquidity" of this Form 10-K.
Interest rate risk is reviewed in detail under Item 7A, "Quantitative and Qualitative Disclosures About Market Risk," of this Form 10-K below.

The Board of Directors oversees the Company's asset–liability management, which includes managing interest rate risk and liquidity.

For information regarding capital planning, current capital framework requirements applicable to the Company and the Bank and their respective capital levels at December 31, 2022, see the section within Item 1, "Business," entitled "Capital Resources" and the sections within "Supervision and Regulation" entitled "Capital Requirements" and "Capital Requirements under Basel III" and for the Bank "Capital Adequacy Requirements" of this Form 10-K and also see Note 12, "Shareholders' Equity," to the consolidated financial statements contained in Item 8, "Financial Statements and Supplementary Data," of this Form 10-K.

The Company maintains a set of internal controls over financial reporting designed to provide reasonable assurance to management that the information required to be disclosed in reports it files with or furnishes to the SEC is prepared and fairly presented based on properly recorded, processed, and summarized information. The Audit Committee of the Board oversees the effectiveness of the internal control over financial reporting. See Item 9A, "Controls and Procedures," of this Form 10-K for management's reports on its evaluation of disclosure controls and internal control over financial reporting.
Any system of controls or contingency plan, however well designed and operated, is based in part on certain assumptions and has inherent limitations and may not prevent or detect all risks, and therefore can provide only reasonable, not absolute, assurances that the objectives of the system are met. An overview of these risks, among others, related to the Company are outlined in Part I, Item 1A, “Risk Factors,” in this Form 10-K, below.

Item 1A. Risk Factors

An investment in the Company's common stock is subject to a variety of risks and uncertainties including, without limitation, those set forth below, any of which could cause the Company's actual results to vary materially from recent results or from the other forward-looking statements that the Company may make from time to time in news releases, periodic reports and other written or oral communications. This Form 10-K is qualified in its entirety by these risk factors.

Realization of any of the risks outlined in the following sections, the Company's inability to identify, respond and correct a breakdown in the integrity of the design or functioning of the Company’s internal controls and contingency plan, or additional risks and uncertainties that management is not aware of, or may currently deem immaterial, may impair the Company's business in a variety of ways, including, but not limited to, any one or a combination of the following consequences: loss of assets; an interruption in the ability to conduct business and process transactions; loss of customer business; loss of key personnel; expose customers' personal information to unauthorized parties; additional regulatory scrutiny and potential enforcement actions and/or penalties against the Company or the Bank; damage the Company's reputation; expose the Company to civil litigation and possible financial liability; result in unanticipated charges against capital; increase operational costs; decrease revenue; restrict funding sources, which could adversely impact the Company's ability to meet cash needs; force the Company to liquidate investments or other assets; limit growth and branch network expansion; close locations or reduce staffing; or limit permissible activities. As a result, the Company's overall business, financial condition, results of operations, capital position, ability to pay dividends on outstanding common stock, liquidity position, and financial performance could be materially and adversely affected. If this were to happen, the value of the Company's common stock could decline significantly, and shareholders could lose some or all their investment.

The material risks and uncertainties that management believes may affect the Company are outlined below. These risks and uncertainties are not listed in any order of priority and are not necessarily the only ones facing the Company.

RISK MANAGEMENT CONTROLS

Risk Management Controls and Procedures Could Fail or Be Circumvented
Management regularly reviews and updates the Company's internal controls, corporate governance policies, compensation policies, Code of Business Conduct and Ethics and security controls to prevent and detect errors and potential monetary losses, loss of confidential information and data, and loss of physical assets by theft, malicious destruction or damage, fraud, or robbery from both internal and external sources.

The Company is at risk of ineffective design of internal controls, any circumvention of the Company's internal controls and procedures, whether intentional or unintentional, or failure to comply with regulations related to controls and procedures, or failure to adequately execute controls and procedures, whether by employees, management, directors, or external elements, or any illegal activity conducted by a Bank customer or employee.

LENDING

There are inherent risks associated with the Company's lending activities. These risks include, among other things, the impact of changes in the economic conditions in the market areas in which the Company operates and changes in interest rates. In addition, the Company may be impacted by the following risks associated with its lending activities:

Commercial Lending Generally Involves a Higher Degree of Risk than Retail Residential Mortgage Lending
The Company's loan portfolio consists primarily of commercial real estate, commercial and industrial, and commercial construction loans. These types of loans are generally viewed as having more risk of default than owner-occupied residential real estate loans or consumer loans, and typically have larger balances. The underlying commercial real estate values, a lower demand for office and retail space, the actual costs necessary to complete a construction project, or customer cash flow and payment expectations on such loans can be more easily influenced by adverse conditions in the related industries, the real estate market or in the economy and are dependent on the skills and experience of the business' management team.

The Company May Need to Increase its Allowance for Credit Losses
The determination of the appropriate level of the allowance for credit losses inherently involves a high degree of subjectivity and requires the Company to make significant estimates of current credit risks, non-performing trends, and reasonable and supportable forecasts, all of which may undergo material changes. In addition, bank regulatory agencies periodically review the Company's allowance for credit losses and may require an increase in the provision for credit losses or the recognition of further loan charge-offs, based on judgments that may differ from those of the Company's management.

Increases in the Company's Non-performing Assets Could Adversely Affect the Company's Results of Operations and Financial Condition in the Future
Non-performing assets adversely affect our net income in various ways. No interest income is recorded on non-accrual loans or other real estate owned, thereby adversely affecting income and returns on assets and equity. In addition, loan administration and workout costs increase, including significant time commitments from management and staff, resulting in additional reductions of earnings. When taking collateral in foreclosures and similar proceedings, the Company is required to carry the property or loan at its then-estimated fair value less estimated cost to sell, which, when compared to the carrying value of the loan, may result in a loss. In addition, any errors in documentation or previously unknown defects

in deeds may impact the Company's ability to perfect title of the collateral in foreclosure. These non-performing loans and other real estate owned assets also increase the Company's risk profile and the capital that regulators believe is appropriate in light of such risks and have an impact on the Company's FDIC risk-based deposit insurance premium rate.

The Company's Use of Appraisals in Deciding Whether to Make a Loan Does Not Ensure the Value of the Collateral
In considering whether to make a loan secured by real property or other business assets, the sale of which may provide ultimate recovery of the outstanding balance of the loan, the Company generally requires an internal evaluation or independent appraisal of the collateral supporting the loan. However, these assessment methods are only an estimate of the value of the collateral at the time the assessment is made and involve estimates and assumptions. An error in fact, estimate or judgment could adversely affect the reliability of the valuation. Furthermore, changes in those estimates due to the economic environment and events occurring after the initial assessment, may cause the value of the collateral to differ significantly from the initial valuations. As a result, the value of collateral securing a loan may be less than estimated at the time of assessment, and if a default occurs the Company may not recover the outstanding balance of the loan.

The Company is Subject to Environmental Risks Associated with Real Estate Held as Collateral or Occupied
While the Company’s lending, foreclosure and facilities policies and guidelines are intended to exclude properties with an unreasonable risk of contamination, hazardous substances could exist on some of the properties that the Company may own, acquire, manage, or occupy. Environmental laws could force the Company to clean up the properties at the Company’s expense. It may cost much more to clean a property than the property is worth, and it may be difficult or impossible to sell contaminated properties. The Company could also be liable for pollution generated by a borrower’s operations if the Company takes a role in managing those operations after a default.

Concentrations in Commercial Real Estate Loans are Subject to Heightened Risk Management and Regulatory Review
If a concentration in commercial real estate lending is present, as measured under government banking regulations, management must employ heightened risk management lending practices that address the following key elements: board and management oversight and strategic planning, portfolio management, development of underwriting standards, portfolio risk assessment and monitoring through market analysis and stress testing, and maintenance of increased capital levels as needed to support the level of commercial real estate lending. If a concentration is determined to exist, the Company may incur additional operating expenses in order to comply with additional risk management practices and increased capital requirements.

ECONOMICS & FINANCIAL MARKETS

The Company's financial results are impacted by the general economic conditions of the United States and the primary market areas in which the Company operates. Any weakening in general economic conditions in the United States or the New England region, a long-term deterioration of the regional economy, the local impact of worsening national economic conditions or continued geopolitical instability could negatively impact the Company’s financial results.

The Company's Investment Portfolio Could Incur Losses or Fair Value Could Deteriorate
There are inherent risks associated with the Company's investment activities. These risks include the impact from changes in interest rates, credit risk related to weakness in real estate values, municipalities, government sponsored enterprises, or other industries, the impact of changes in income tax rates on the value of tax-exempt securities, adverse changes in regional or national economic conditions, and general turbulence in domestic and foreign financial markets, among other things. If an investment's value is in an unrealized loss position, the Company is required to assess the security to determine if a valuation allowance for the credit exposure of the debt security is necessary, which, if necessary, is recorded as a charge to earnings. These conditions could adversely impact the ultimate collectability of the Company's investments.

Federal Reserve repeatedly raised their target benchmark interest rate in 2022, resulting in subsequent prime lending rate increases of 425 basis points between March and December of 2022, and further resulting in a significant increase in market interest rates during the year ended December 31, 2022. If market interest rates continue to rise, the fair value of the fixed income bond portfolio will decrease, resulting in additional unrealized losses, and depending on the extent of the rise in interest rates, the increase in unrealized losses could be significant. The non-credit portion of unrealized losses are recorded to Accumulated Other Comprehensive Income ("AOCI") a component of Shareholders' Equity. A significant increase in market rates may have a negative impact on book value per common share. The Company's bond portfolio is expected to mature at par and therefore the unrealized losses in the portfolio that result from higher market interest rates will decrease as the bonds become closer to maturity. However, if the Company were required to sell investment securities with an unrealized loss for any reason, including liquidity needs, the unrealized loss would become realized and reduce both net income for the reported period and regulatory capital, which as currently reported, excludes unrealized losses on investment securities.

The Company is Subject to Interest Rate Risk
The Company's earnings and cash flows are largely dependent upon its net interest income, meaning the difference or spread between interest income earned and interest expense paid. Changes in market interest rates may affect the rates on our loan, investment and deposit products at differing speed in both time and scale, which could negatively impact the spread and demand for bank products. Interest rates are highly sensitive to many factors that are beyond the Company's control, including competition, the monetary policy of the Federal Reserve, inflation and deflation, and volatility of domestic and global financial markets due to any number of factors including, among other things, the persistence of the ongoing inflationary environment in the United States and in our market area and current geopolitical tensions.

A prolonged period of volatile and unstable financial market conditions could increase our funding costs and negatively affect our asset-liability management strategies. Fluctuations in interest rates could impact both the level of income and expense recorded on most of our assets and liabilities, and the market value of all interest-earning assets and interest-bearing liabilities, any of which in turn could have a material adverse effect on our liquidity and ability to fund future growth, our operating results, and financial condition.

The Company is subject to Inflation Risk
Unlike an industrial company, virtually all assets and liabilities of the Company are monetary in nature. As a result, interest rates, which are impacted by inflation, have a more significant impact on the Company's performance than the general level of inflation. Interest rates do not necessarily move in the same direction, or at the same magnitude, as the prices of other goods and services impacted by inflation.

Inflation could result in higher interest rates and increased interest rate risk. The risks to our business from inflation depends on the durability of the current inflationary pressures in our markets. Transitory increases in inflation are unlikely to have a material impact on our business or earnings. However, more persistent inflation could lead to tighter-than-expected monetary policy and higher interest rates, which could increase the borrowings costs of our customers, making it more difficult for them to repay their loans or other obligations. High interest rates could slow loan growth and increase cost of funds for the Company, reduce net interest margin and profitability, lower asset prices and weaken economic activity. A deterioration in economic conditions in the United States and our markets could result in an increase in loan delinquencies and non-performing assets, decreases in loan collateral values and a decrease in demand for our products and services, all of which, in turn, would adversely affect our business, financial condition and results of operations.

Refer to Item 7A. "Quantitative and Qualitative Disclosures About Market Risk," below in this Form 10-K, for more information on the projected impact of interest rates on the Company’s balance sheet at December 31, 2022.

LIQUIDITY

Deposit Outflows May Increase Reliance on Borrowings and Brokered Deposits as Sources of Funds
The Company has historically funded its asset growth through customer deposits and to a lesser extent through wholesale borrowings (e.g., brokered deposits and borrowed funds). As a general matter, customer deposits are typically a lower cost source of funds than external wholesale funding. If the balance of the Company's customer deposits decrease or are less than the Company's asset growth, the Company may have to rely more heavily on higher-costing wholesale funding or other sources of external funding or may have to significantly increase deposit rates to maintain deposit levels in the future, all of which may lower the Company's net interest income, net interest margin and its profitability.

Sources of External Funding Could Become Restricted and Impact the Company's Liquidity
If, as a result of general economic conditions or other events, sources of external funding become restricted or are eliminated, the Company may not be able to raise adequate funds, may incur substantially higher funding costs, be required to sell assets, restrict operations, or restrict the payment of dividends.

INFORMATION & TECHNOLOGY RESOURCES

The use of technology related products, services, delivery channels, access points and processes expose the Company to various risks, particularly operational, privacy, cybersecurity, strategic, reputation and compliance risk. The ongoing move towards more cloud-based and third-party hosted technology solutions may subject the Bank to certain heightened cyber risks. Banks are required by regulatory agencies to prudently manage cyber, third-party, cloud-based and technology-related risks as part of their comprehensive risk management policies by identifying, measuring, monitoring, and controlling these risks.

Failure to Keep Pace with Technological Change Could Affect the Company's Profitability
The banking industry is continually undergoing rapid technological change with frequent introductions of new technology-driven products, services, data management and delivery channels. Failure to successfully plan or keep pace with technological changes affecting the banking industry, or failure to adequately train and educate staff and customers on the use and risks of new technologies, failure to capture or manage data, or failure to comply adequately with regulatory guidance regarding information and cybersecurity could have a material adverse effect on the Company's business and, in turn, the Company's financial condition and results of operations. In addition, there may be significant time and expenses associated with upgrading and implementing new technology, technology compliance, information security and cybersecurity processes.

Information Systems Could Experience an Interruption, Failure, Breach in Security, or Cyber-Attack
The Company relies heavily on public utilities infrastructures, internal information and operating systems, and cloud-based solutions and storage to conduct its business, and these systems could fail in a variety of ways. In addition, the use of network, cloud-based, or third-party hosted systems expose the Company to the increased sophistication and activity of cyber-criminals, both domestic and international. A cyber incident is considered to be any adverse event that threatens the confidentiality, integrity, or availability of the information resources of the Company. These incidents may be an intentional attack or an unintentional event and could involve blocking the Company from accessing its own systems or remote servers in exchange for a ransom payment, gaining unauthorized access directly to our information systems, or indirectly through our vendors and customers systems or servers, for purposes of misappropriating assets, stealing confidential corporate information or customers' Personally Identifiable Information, corrupting data, denying access or causing operational disruption. The Company's independent third-party service providers or their subcontractors may also have access to customers' personal information and therefore also expose the Company to cybersecurity risk. Additionally, vendors' and customers' home, business or mobile information systems and the servers they rely on, are at risk of fraudulent corporate account takeovers which the Company may not be able to detect. There is no guarantee the Company's counteractions will be successful or that the Company will have the resources or technical expertise to anticipate, detect or prevent rapidly evolving types of cyber-attacks.

The occurrence of any failures or disruptions of infrastructure, or breakdown, breach, failures or interruptions of the Company's information systems, access points, or those hosted by third-party service providers and customers, or in the cloud, or the Company's inability to detect, respond, disclose and correct such occurrence or compromise in a timely manner, could result in an interruption in our ability to conduct transactions for an indeterminable length of time, could expose customers' personal and confidential information to unauthorized parties, increase the risk of fraud or theft, subject the Company to increased operational costs to detect and rectify the situation, damage the Company's reputation and deter customers from using the Company's services, increase the Company insurance cost or the ability to obtain adequate cyber insurance coverage, subject the Company to additional regulatory scrutiny, and expose the Company to civil litigation and possible financial liability.

OPERATIONS

The Company Operates in a Competitive Industry and Market Area
The Company faces substantial competition in all areas of its operations from a variety of different competitors within its market area. Some of these competitors are larger and have more financial resources than the Company; some are not subject to the same degree of government regulation as the Company and thus may have a competitive advantage over the Company. If due to the inability to compete successfully within the Company's target banking markets, the Company encounters difficulties attracting and retaining customers or employees it would have a material adverse effect on the Company's growth and profitability.

The Company May Experience a Prolonged Interruption in its Ability to Conduct Business
The Company relies heavily on its personnel and facilities to conduct its business. A material loss of people or physical damage, destruction, or denial of access to our core operating facilities, for any number of reasons including localized natural disasters, global pandemics, demonstrations/pickets at facilities, or the local impact of geopolitical tensions, could result in prolonged business interruptions impacting customer services and our ability to conduct transactions.

The Company Relies on External Service Providers

The Company relies on independent third-party firms, including indirect vendors utilized by such third parties, to provide critical services necessary to conducting its business. These services include but are not limited to electronic funds delivery networks, check clearing houses, electronic banking services, wealth advisory, management and custodial services, correspondent banking services, information security assessments and technology support services, and loan underwriting and review services, among others. The occurrence of any failures or interruptions of the independent firms' systems or in their delivery of services, or failure to perform in accordance with contracted service level agreements, for any number of reasons could in turn impact the Company's ability to conduct business and process transactions.

The Company Relies on Financial Counterparty Relationships

The Company routinely executes transactions with counterparties in the financial services industry, in order to maintain correspondent bank relationships, liquidity, manage certain loan participations, mortgage sales activities, interest-rate swaps, engage in securities transactions, and engage in other financial activities with counterparties that are customary to our industry. Many of these transactions expose the Company to counterparty credit, liquidity and/or reputation risk in the event of default by the counterparty, or negative publicity or public complaints, whether real or perceived, about one or more of the Company's financial counterparties, or the financial services industry in general. Although the Company seeks to manage these risks through internal controls and procedures, the Company may experience loss or interruption of business as a result of unforeseen events with these counterparties.

Wealth Management and Wealth Services Expose the Company to Financial, Operational and Legal Risk

The Company's Wealth Management and Wealth Services channels derive their revenues primarily from investment management fees based on the market value of assets under management. The Company's ability to maintain or increase investment assets under management is subject to a number of factors, including changes in client investment preferences, investment decisions by us or our third-party service provider partners, and various economic conditions, among other factors. Wealth management services clients can terminate their relationships with us, reduce their aggregate assets under management, or shift their funds to other types of accounts with different rate structures for any number of reasons.

Investment performance is one of the most important factors in retaining existing clients and competing for new wealth management clients. Financial markets are affected by many factors, any of which could adversely impact the fair value of customer portfolios. Even when market conditions are generally favorable, our investment performance may be adversely affected by the investment style of our wealth management and investment advisors and the investment decisions that they make. Poor investment performance, whether real or perceived, in either relative or absolute terms, could impair our ability to attract and retain investment assets under management from existing and new clients.

The Company's Insurance Coverage May Not be Adequate to Prevent Additional Liabilities or Expenses

The Company works with an independent third-party insurance advisor to obtain insurance policies that provide coverage for a variety of business and cyber risks at coverage levels that compare favorably to bench-marked coverage for loss exposures that are faced by similarly sized financial institutions. However, there are no guarantees that the Company will be able to obtain or maintain comparable or adequate coverage levels in the future. In addition, there is no guarantee that the circumstances of an incident will meet the criteria for insurance coverage under a specific policy, and despite the insurance policies in place the Company may experience a material loss incident or event.

Lack of or Slower than Expected Growth Could Adversely Affect the Company's Profitability and its Ability to Pay Dividends

The Company operates with a long-term focus on organic growth, which requires a significant investment of both financial and personnel resources. The Company relies on its deposit and lending activities to generate the cash flow to conduct operations, expand service and product offerings, expand the branch network, and pay dividends to shareholders. Contraction or slower than expected loan and/or deposit growth and/or lower than expected fee or other income generated from these and other products and services could lower our profitability and net cash flow available for funding our growth strategies and paying dividends to shareholders.

The Company May Not be Able to Attract, Retain or Develop Key Personnel

The Company's success and growth strategy depends, in large part, on its ability to attract, retain and develop top performing banking professionals within our markets, and its ability to successfully identify and develop personnel for succession to key executive management positions and to the board of directors. The inability to do so could have a material adverse impact on the Company’s business because of the loss of their skills, knowledge of the Company's market, years of industry or business experience and the difficulty of promptly hiring qualified replacements

REGULATION

The Company is Subject to Extensive Government Regulation and Supervision

The Company and the Bank are subject to a variety of federal and state laws and regulations that are primarily intended to protect consumers in the financial marketplace, provide fair and equal availability of products and services, preserve depositors' funds and the FDIC insurance fund, and to safeguard the banking system as a whole, and not necessarily the interests of shareholders. These regulations affect the Company's lending practices, capital structure, investment practices, dividend policy, growth, and net income, among other things. Federal and state laws and regulations may not always align in principle or statue, and preemptive federal laws may be more or less restrictive than those of a state. Future legislation could increase or decrease the cost of doing business, negatively impact consumers' faith in the banking system leading them to seek out non-banking alternatives, limit or expand permissible activities or affect the competitive balance among banks, savings associations, credit unions, and other financial institutions.

Climate Change and Related Legislative and Regulatory Initiatives May Materially Affect the Company’s Business

Climate change may negatively impact the regional and local economy, increasing credit and other financial risks for the Company and our customers. The physical effects of climate change may adversely impact the value of real property securing the loans in our portfolios. Additionally, if insurance obtained by our borrowers is insufficient to cover any losses sustained to the collateral, or if insurance coverage is otherwise unavailable to our borrowers, the collateral securing our loans may be negatively impacted.

Further, the U.S. Congress, state legislatures and federal and state regulatory agencies continue to propose numerous initiatives to supplement the global effort to combat climate change. The Company cannot predict what legislation will be enacted, and, if enacted, the effect that it, or any implementing regulations, would have on the Company's business.

ESTIMATES AND ASSUMPTIONS

The Company's Financial Condition and Results of Operation Rely in Part on Management Estimates and Assumptions

In preparing the financial statements in conformity with GAAP, management is required to exercise judgment in determining many of the methodologies, estimates and assumptions to be utilized. These estimates and assumptions affect the reported values of assets and liabilities at the balance sheet date and income and expenses for the years then ended. Changes in those estimates resulting from continuing change in the economic environment and other factors will be reflected in the financial statements and results of operations in future periods. As future events and their effects cannot be determined with precision, actual results could differ significantly from these estimates and be adversely affected should the assumptions and estimates used to be incorrect or change over time due to changes in circumstances. The three most significant areas in which management applies critical assumptions and estimates are the estimates of the allowance for credit losses, impairment review of investment securities and the impairment review of goodwill.

The Net Deferred Tax Assets (“DTAs”) May be Determined to be Unrealizable in Future Periods

In making its assessment on the future realizability of net DTAs, management considers all available positive and negative evidence, including recent financial operations, projected future taxable income, and recoverable past income tax paid. If in the future, management believes based upon historical and expected future earnings that it is more likely than not that the Company will not generate sufficient taxable income to utilize the DTA balance, then a valuation allowance would be booked against the DTA, with the write down offset to current earnings. Factors beyond management's control can affect future levels of taxable income and there can be no assurances that sufficient taxable income will be generated to fully realize the DTAs in the future.

REPUTATION & LEGAL

Damage to the Company's Reputation Could Affect the Company's Profitability and Shareholders' Value

The Company is dependent on its reputation within its market area as a trusted and responsible financial company for all aspects of its business with customers, employees, vendors, third-party service providers, and others with whom the Company conducts business or potential future business. Any negative publicity or public complaints, whether real or perceived, disseminated by word of mouth, by the general media, by electronic or social networking means, or by other methods, could harm the Company's reputation.

Environmental, Social and Governance Oversight May Influence Stock Price and Increase Compliance Costs

Investors have begun to consider how corporations are addressing environmental, social and governance matters, commonly known as "ESG matters" when making investment decisions. Investor advocacy groups, investment funds and

influential investors are also increasingly focused on these practices, especially as they relate to the environment, health and safety, diversity, executive compensation, labor conditions and human rights. These shifts in investing priorities may result in adverse effects on the trading price of the Company’s common stock if investors determine, whether real or perceived, that the Company's ESG actions are not satisfactory. In addition, new government regulations could also result in new or more stringent forms of ESG oversight and expanding mandatory and voluntary reporting, diligence, and disclosure. Increased ESG related compliance costs could result in increases to our overall operational costs.

The Company is Exposed to Legal Claims and Litigation
The Company is subject to legal challenges under a variety of circumstances in the course of its normal business practices. Regardless of the scope or the merits of any claims by potential or actual litigants, the Company may have to engage in litigation that could be expensive, time-consuming, disruptive to the Company's operations, and distracting to management. Whether claims or legal action are founded or unfounded, if such claims and legal actions are not resolved in a manner favorable to the Company, they may result in significant financial liability, damage the Company's reputation, subject the Company to additional regulatory scrutiny and restrictions, and/or adversely affect the market perception of our products and services, as well as impact customer demand for those products and services.

COMMON STOCK, SHAREHOLDER’S EQUITY, CAPITAL

The Trading Volume in the Company's Common Stock is Less Than That of Larger Companies
Although the Company's common stock is listed for trading on the NASDAQ Global Market, the trading volume in the Company's common stock is substantially less than that of larger companies. Given the lower trading volume of the Company's common stock, significant purchases or sales of the Company's common stock, or the expectation of such purchases or sales, could cause significant movement in the Company's stock price.

The Company's Capital Levels Could Fall Below Regulatory Minimums
If the Company's regulatory capital levels decline, or if regulatory requirements increase, and the Company is unable to raise additional capital to offset that decline or meet the increased requirements, then its regulatory capital ratios may fall below regulatory minimum capital adequacy levels.

The Company's failure to remain "well-capitalized" for bank regulatory purposes could affect customer confidence, restrict the Company's ability to grow (both assets and branching activity), increase the Company's costs of funds and FDIC insurance expense, prohibit the Company's ability to pay dividends on common shares, and restrict its ability to make acquisitions, among other impacts. Under FDIC rules, if the Bank ceases to be a "well-capitalized" institution, its ability to accept brokered deposits and the interest rates that it pays may be restricted. The Basel III Rules establish, among other rules, a "capital conservation buffer" of 2.5% above the regulatory minimum risk-based capital requirements. An institution will be subject to limitations on certain activities, including payment of dividends, share repurchases and discretionary bonuses to executive officers, if its capital level is below the buffered ratio.

The Company's Articles of Organization, By-Laws and Shareholders Rights Plan as Well as Certain Banking and Corporate Laws Could Have an Anti-Takeover Effect
Although management believes that certain anti-takeover strategies are in the best interest of the Company and its shareholders, provisions of the Company's articles of organization, by-laws, and shareholders rights plan and certain federal and state banking laws and state corporate laws, including regulatory approval requirements for any acquisition of control of the Company, could make it more difficult for a third-party to acquire the Company, even if doing so would be perceived to be beneficial to the Company's shareholders. The combination of these provisions is intended to prohibit a non-negotiated merger, or other business combination involving an acquisition of the Company, which, in turn, could adversely affect the market price of the Company's common stock.

Directors and Executive Officers Own a Significant Portion of Common Stock
The Company's directors and executive officers, as a group, beneficially own approximately 15% of the Company's outstanding common stock as of December 31, 2022. Management views this ownership commitment by insiders as an integral component of maintaining the Company's ownership. However, as a result of this combined ownership interest, the directors and executive officers have the ability, if they vote their shares in a like manner, to significantly influence the outcome of all matters submitted to shareholders for approval, including the election of directors.

The Company Relies on Dividends from the Bank for Substantially All of its Revenue
Holders of the Company’s common stock are entitled to receive dividends only when, and if declared by our Board. Although the Company has historically declared cash dividends on our common stock, we are not required to do so, and our Board may reduce or eliminate our common stock dividend in the future.

The Company is a separate and distinct legal entity from the Bank. It receives substantially all its revenue from dividends paid by the Bank. These dividends are the principal source of funds used to pay dividends on the Company’s common stock and interest and principal on the Company’s subordinated debt. Various federal and state laws and regulations limit the amount of dividends that the Bank may pay to the Company, and certain regulators may prohibit the Bank or the Company from paying future dividends if deemed an unsafe or unsound practice. If the Bank, due to its capital position, inadequate net income levels, or otherwise, is unable to pay dividends to the Company, then the Company will be unable to service its debt, pay obligations or pay dividends on the Company’s common stock, which could have a material adverse effect on the market price of the Company’s common stock.

Item 1B. Unresolved Staff Comments

None.

Item 2. Properties

The Company's main office and operational support offices are located in Lowell, Massachusetts. The main Lowell campus consists of four closely situated buildings, three of which are owned, with ample on-site customer parking. The Company also owns and maintains a back-up operations/data facility in the Merrimack Valley region of Massachusetts. As of December 31, 2022, the Company had 27 full-service branch banking offices serving the Northern Middlesex, Northern Essex and Northern Worcester counties of Massachusetts, and Southern Hillsborough and Southern Rockingham counties in New Hampshire.

The Company believes that all of its facilities are well maintained and suitable for the purpose for which they are used.
As of December 31, 2022, the Company was the lessee under 16 active operating real estate leases.

Item 3. Legal Proceedings

There are no material pending legal proceedings to which the Company or its subsidiaries are a party or to which any of its property is subject, other than ordinary routine litigation incidental to the business of the Company. Management does not believe resolution of any present litigation will have a material adverse effect on the business, consolidated financial condition or results of operations of the Company.

Item 4. Mine Safety Disclosures

Not Applicable.

PART II

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

Market for Common Stock

The Company's common stock trades on the NASDAQ Global Market under the trading symbol "EBTC."

As of February 28, 2023, there were 12,148,951 shares of the Company's common stock outstanding held by 1,063 shareholders of record.

Dividends

During the year ended December 31, 2022, quarterly dividends of $0.205 per share were paid to the Company's shareholders in March, June, September, and December. Total dividends paid to the Company's shareholders during the year ended

December 31, 2022, equaled $0.82 per share compared to total dividends of $0.74 per share, paid to the Company's shareholders on a quarterly basis during the year ended December 31, 2021.

On January 17, 2023, the Company announced a quarterly dividend of $0.23 per share, which was paid on March 1, 2023, to shareholders of record as of February 8, 2023. The Company currently expects that comparable cash dividends will continue to be paid in the future.

In addition, the Company maintains a dividend reinvestment and direct stock purchase plan (together, the "DRSPP") which enables shareholders, at their discretion, to elect to reinvest cash dividends paid on their shares of the Company's common stock by purchasing additional shares of common stock from the Company at a purchase price equal to fair market value. Under the DRSPP, shareholders and new investors also have the opportunity to purchase shares of the Company's common stock without brokerage fees, subject to monthly minimums and maximums.

Securities Authorized for Issuance under Equity Compensation Plans

The following table provides information as of December 31, 2022, with respect to the Company's 2009 Stock Incentive Plan, as amended, and its 2016 Stock Incentive Plan, as amended, which together constitute all the Company's existing equity compensation plans that have been previously approved by the Company's shareholders. The 2009 Plan expired in 2019 and is closed for future grants, although awards previously granted under the 2009 Plan remain outstanding and may be exercised through 2028.

Plan Category	Number of Securities to be issued upon exercise of outstanding options, warrants and rights	Weighted-average exercise price of outstanding options, warrants and rights	Number of Securities remaining available for future issuance under equity compensation plans (excluding securities reflected in second column from left)
Equity compensation plans approved by security holders	197,249	$ 26.33	442,051
Equity compensation plans not approved by security holders	—	—	—
TOTAL	197,249	$ 26.33	442,051

See also Note 14, "Stock-Based Compensation" to the Company's consolidated financial statements contained in Item 8 of this Form 10-K below for further information regarding the Company's Equity Compensation Plan.

Repurchases of Common Stock

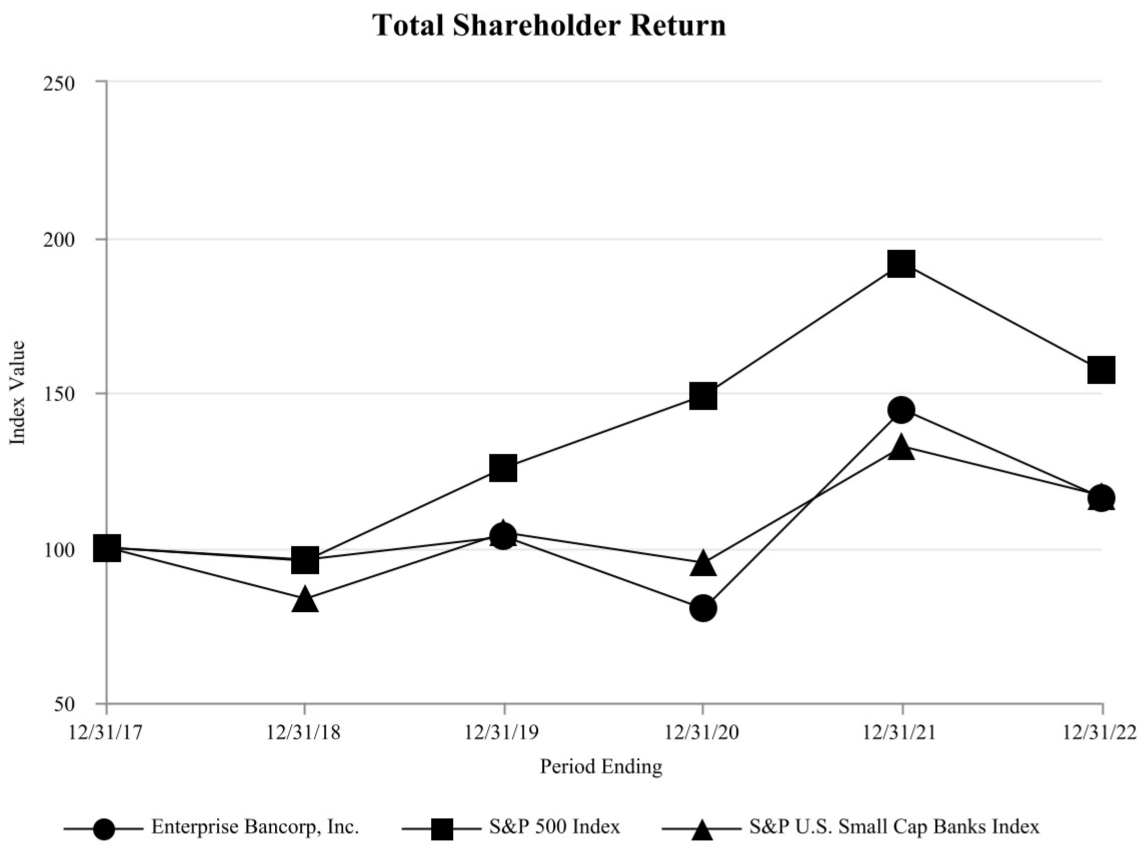
The following table represents information with respect to repurchases of common stock made by the Company during the three months ended December 31, 2022:

	Total Number of Shares Repurchased(1)	Average Price Paid Per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs Announced	Maximum Number of Shares that May Yet Be Purchased Under the Plans or Programs
October	3,413	$29.79	—	—
November	—	—	—	—
December	—	—	—	—

(1) Amounts include shares repurchased that were not part of a publicly announced repurchase plan or program. These shares were owned and tendered by employees as payment for taxes on vesting restricted stock (net settlement of shares).

Performance Graph

The following graph compares the cumulative total shareholder return (which assumes the reinvestment of all dividends) on the Company's common stock with the cumulative total return reflected by a broad-based equity market index and an appropriate published industry index. This graph shows the changes over the five-year period ended on December 31, 2022, in the value of $100 invested in (i) the Company's common stock, (ii) the Standard & Poor's 500 Index, and (iii) the Standard & Poor's U.S. Small Cap Banks Index.



Index	Period Ending 12/31/17	12/31/18	12/31/19	12/31/20	12/31/21	12/31/22
Enterprise Bancorp, Inc.	$ 100.00	$ 96.07	$ 103.37	$ 80.30	$ 144.30	$ 116.11
S&P 500 Index	100.00	95.62	125.72	148.85	191.58	156.88
S&P U.S. Small Cap Banks Index	100.00	83.44	104.69	95.08	132.36	116.69

Item 6. Selected Financial Data

The information previously required by Item 6 of this Annual Report on Form 10-K has been intentionally omitted, as permitted by the SEC in connection with its adoption of its final rules regarding the amendments to modernize, simplify, and enhance financial disclosure requirements of registrants. For more information over the Company's financial condition and results of operations, see the section entitled "Overview" contained in Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations," of this Form 10-K.

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

Management's discussion and analysis should be read in conjunction with the Company's (also referred to herein as "Enterprise," "us," "we," or "our") consolidated financial statements and notes thereto, contained in Item 8, "Financial Statements and Supplementary Data," and the other financial and statistical information contained in this Annual Report on Form 10-K for the year ended December 31, 2022 (this "Form 10-K").

Throughout this Management Discussion & Analysis, certain measures have been adjusted to provide what management believes are more meaningful comparisons between periods. The items principally impacted and reported as non-GAAP were loans (PPP loans), shareholders' equity (accumulated other comprehensive income ("AOCI")) and any related measures presented. For further discussion regarding the use of these non-GAAP measures, and a reconciliation of U.S. Generally Accepted Accounting Principles ("GAAP") to the related non-GAAP measures, see the section entitled "Non-GAAP Measures" contained in this Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations," of this Form 10-K.

Special Note Regarding Forward-Looking Statements

This Form 10-K contains forward-looking statements as defined in the Private Securities Litigation Reform Act of 1995. Such forward-looking statements about the Company and its industry involve substantial risks and uncertainties. Statements other than statements of current or historical fact, including statements regarding the Company's future financial condition, results of operations, business plans, liquidity, cash flows, projected costs, and the impact of any laws or regulations applicable to the Company, are forward-looking statements. Forward-looking statements may be identified by reference to a future period or periods or by use of forward-looking terminology such as "will," "should," "could," "anticipates," "believes," "expects," "intends," "may," "plans," "pursue," "views" and similar terms or expressions. We caution you that any such forward-looking statements are not guarantees of future performance and are subject to risks, assumptions, estimates and uncertainties that are difficult to predict. Although we believe that the expectations reflected in these forward-looking statements are reasonable as of the date made, actual results may prove to be materially different from the results expressed or implied by the forward-looking statements.

There are or will be important factors that could cause our actual results to differ materially from those indicated in these forward-looking statements, including, but not limited to, the following:

- failure of risk management controls and procedures;
- the adequacy of the allowance for credit losses;
- risk specific to commercial loans and borrowers;
- changes in the business cycle and downturns in the local, regional, or national economies, including changes in consumer spending and deterioration in the local real estate market, could negatively impact credit and/or asset quality and result in credit losses and increases in the Company's allowance for credit losses;
- the persistence of the current inflationary environment in the United States and our market areas, and its impact on market interest rates, the economy and credit quality;
- deterioration of capital markets, which could adversely affect the value or credit quality of the Company's assets and the availability of funding sources necessary to meet the Company's liquidity needs;
- changes in market interest rates could negatively impact the pricing of our loans and deposits and decrease our net interest income or net interest margin;
- increases in market interest rates could negatively impact bond market values and result in a lower net book value;
- our ability to successfully manage the current rising market interest-rate environment, our credit risk and the level of future non-performing assets and charge-offs;
- potential decreases or growth of assets, deposits, future non-interest expenditures and non-interest income;
- inability to maintain adequate liquidity;
- the inability to raise the necessary capital to fund our operations or to meet minimum regulatory capital levels would restrict our business and operations;
- material decreases in the amount of deposits we hold, or a failure to grow our deposit base as necessary to help fund our growth and operations;

- our ability to keep pace with technological change or difficulties when implementing new technologies;
- technology-related risk, including technological changes and technology service interruptions or failure could adversely impact the Company's operations and increase technology-related expenditures;
- cybersecurity risk including security breaches and identity theft could impact the Company's reputation, increase regulatory oversight, and impact the financial results of the Company;
- increasing competition from larger regional and out-of-state banking organizations as well as non-bank providers of various financial services could adversely affect the Company's competitive position within its market area and reduce demand for the Company's products and services;
- our ability to retain and increase our aggregate assets under management;
- our ability to enter new markets successfully and capitalize on growth opportunities, including the receipt of required regulatory approvals;
- damage to our reputation in the markets we serve;
- risks associated with fraudulent, negligent, or other acts by our customers, employees or vendors;
- exposure to legal claims and litigation;
- our ability to maintain an effective system of disclosure controls and procedures and internal control over financial reporting;
- inability to attract, hire and retain qualified management personnel;
- recent and future changes in laws and regulations that apply to the Company's business and operations, and any additional regulations, or repeals that may be forthcoming as a result thereof, which could cause the Company to incur additional costs and adversely affect the Company's business environment, operations and financial results;
- future regulatory compliance costs, including any increase caused by new regulations imposed by the government;
- changes in tariffs and trade barriers;
- our ability to navigate the uncertain impacts of current and future governmental monetary and fiscal policies, including the current and future policies of the Federal Reserve Board;
- our ability to comply with supervisory actions by federal and state banking agencies;
- changes in the scope and cost of Federal Deposit Insurance Corporation (the "FDIC") insurance and other coverage;
- changes in accounting and/or auditing standards, policies and practices, as may be adopted or established by the regulatory agencies, FASB, or the Public Company Accounting Oversight Board could negatively impact the Company's financial results; and
- systemic risks associated with the soundness of other financial institutions.

The foregoing factors should not be construed as exhaustive and should be read together with the other cautionary statements included in this Form 10-K, including those discussed in Item 1A, "Risk Factors," of this Form 10-K. The Company cautions readers that the forward-looking statements in this Form 10-K reflect numerous assumptions that management believes to be reasonable, but which are inherently uncertain and beyond the Company's control. Forward-looking statements involve a number of risks and uncertainties that could cause the Company's actual results to differ materially from those expressed in, or implied by, the forward-looking statement. Accordingly, we caution you that any such forward-looking statements are not guarantees of future performance and readers should not place undue reliance on such forward-looking information and statements. Any forward-looking statements in this Form 10-K are based on information available to the Company as of the date of this Form 10-K, and the Company undertakes no obligation to publicly update or otherwise revise any forward-looking statement, whether as a result of new information, future events or otherwise, except as required by applicable law.

Overview

Executive Summary

The Company strategically operates with a long-term mindset that is focused on organic growth and supports such growth by continually investing in our people, products, services, technology, and branches.

Our financial condition at December 31, 2022, as well as the results of operations for the year ended December 31, 2022, have been impacted by significant increases in market interest-rates resulting from the high inflationary environment and the related

425 basis point increase in the prime lending rate between March and December of 2022 by the Federal Reserve. The impact is addressed as applicable throughout this Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations."

Net income for the year ended December 31, 2022, amounted to $42.7 million, or $3.52 per diluted common share, compared to $42.2 million, or $3.50 per diluted common share, for the year ended December 31, 2021. The increase in net income for the year ended December 31, 2022 was attributable primarily to an increase in net interest income, excluding PPP income (non-GAAP) of $27.4 million, partially offset by increases in the provision for credit losses of $4.0 million and non-interest expense of $6.2 million as well as a decrease in PPP income of $17.1 million.

The Company’s financial results for 2022 and 2021 were impacted by multiple non-core operating transactions. The non-core operating transactions for 2022 included a net gain on sale of insurance commissions of $2.0 million and net losses on sales of debt securities of $2.0 million. The non-core operating transactions for 2021 included a gain on the sale of other real estate owned ("OREO") of $1.1 million, included in non-interest income, and losses on the extinguishment of subordinated debt and the termination of swaps of $713 thousand and $1.8 million, respectively, both of which were included in non-interest expense.

Total assets amounted to $4.44 billion at December 31, 2022, compared to $4.45 billion at December 31, 2021. Investment securities at fair value declined $137.8 million during the year ended December 31, 2022, primarily from a decline in fair value from the significant increase in market interest rates during the period. Total loans increased $259.8 million consisting of an increase in core loans (non-GAAP) of $331.3 million, offset by a decrease in PPP loans of $71.5 million. Total core loans (non-GAAP) increased 12% versus a year ago.

The non-performing loan to total loan ratio decreased to 0.19% at December 31, 2022 from 0.91% at December 31, 2021. The decrease in non-performing loans to total loans resulted primarily from two commercial relationships that were returned to accrual status due to improved financial strength and consistent payment history.

During the year ended December 31, 2022, customer deposits increased $55.6 million. Customer deposit growth in 2022 reflected a highly competitive environment in which customers have access to higher yielding money market and treasury alternatives.

Shareholders’ equity decreased $64.6 million due primarily to the decrease in the fair value of debt securities, net of tax, resulting from the significant increase in market interest rates during the period.

Selected Financial Data and Ratios

The following table sets forth selected financial data and ratios for the Company at or for the years ended as indicated:

	At or for the year ended December 31,				
(Dollars in thousands, except per share data)	2022	2021	2020	2019	2018
Balance Sheet Data					
Total cash and cash equivalents	$ 267,589	$ 436,576	$ 253,782	$ 63,794	$ 63,120
Total investment securities at fair value	820,371	958,215	583,049	505,255	432,921
Total loans	3,180,518	2,920,684	3,073,860	2,565,459	2,387,506
Allowance for credit losses	(52,640)	(47,704)	(44,565)	(33,614)	(33,849)
Total assets	4,438,333	4,447,819	4,014,324	3,235,049	2,964,358
Total deposits	4,035,806	3,980,239	3,551,263	2,786,730	2,564,782
Subordinated debt	59,182	58,979	73,744	14,872	14,860
Total shareholders' equity	282,267	346,895	334,426	296,641	255,297
Total liabilities and shareholders' equity	4,438,333	4,447,819	4,014,324	3,235,049	2,964,358
Wealth Management					
Wealth assets under management[1]	$ 891,451	$ 1,041,409	$ 976,502	$ 914,301	$ 797,895
Wealth assets under administration[1]	$ 198,586	$ 257,867	$ 210,900	$ 187,501	$ 121,440
Shareholders' Equity Ratios					
Book value per common share	$ 23.26	$ 28.82	$ 28.01	$ 25.09	$ 21.80
Dividends paid per common share	$ 0.82	$ 0.74	$ 0.70	$ 0.64	$ 0.58
Dividend payout ratio	23.23 %	21.08 %	26.52 %	22.07 %	23.48 %
Regulatory Capital Ratios					
Total capital to risk weighted assets	13.49 %	13.73 %	14.62 %	11.88 %	11.77 %
Tier 1 capital to risk weighted assets[2]	10.56 %	10.62 %	10.77 %	10.13 %	9.93 %
Tier 1 capital to average assets	8.10 %	7.56 %	7.52 %	8.86 %	8.56 %
Credit Quality Data					
Non-performing loans	$ 6,122	$ 26,522	$ 38,050	$ 14,771	$ 11,784
Non-performing loans to total loans	0.19 %	0.91 %	1.24 %	0.58 %	0.49 %
Non-performing assets to total assets	0.14 %	0.60 %	0.95 %	0.46 %	0.40 %
ACL for loans to total loans	1.66 %	1.63 %	1.45 %	1.31 %	1.42 %
Income Statement Data					
Net interest income	$ 151,798	$ 141,556	$ 130,134	$ 115,857	$ 108,835
Provision for credit losses	5,800	1,770	12,499	1,180	2,250
Total non-interest income	18,462	18,107	17,247	16,319	11,990
Total non-interest expense	108,314	102,135	93,254	86,415	80,878
Income before income taxes	56,146	55,758	41,628	44,581	37,697
Provision for income taxes	13,430	13,587	10,172	10,381	8,816
Net income	$ 42,716	$ 42,171	$ 31,456	$ 34,200	$ 28,881
Income Statement Ratios					
Diluted earnings per common share	$ 3.52	$ 3.50	$ 2.64	$ 2.89	$ 2.46
Return on average total assets	0.96 %	0.98 %	0.82 %	1.10 %	1.00 %
Return on average shareholders' equity	14.47 %	12.49 %	9.95 %	12.31 %	12.15 %
Net interest margin (tax-equivalent)[3]	3.54 %	3.44 %	3.59 %	3.95 %	3.97 %

(1) Wealth assets under management and wealth assets under administration are not carried as assets on the Company's Consolidated Balance Sheet.

(2) Ratio also represents common equity tier 1 capital to risk weighted assets as of the periods presented.

(3) Tax-equivalent net interest margin is net interest income adjusted for the tax-equivalent effect associated with tax-exempt loan and investment income, expressed as a percentage of average interest-earning assets.

Culture and Organic Growth Strategy

The Company's business model is to provide a full range of diversified financial products and services through a highly trained team of knowledgeable banking professionals, who have an in-depth understanding of our markets and a commitment to servicing the financial needs of customers. The Company is committed to fostering a culture of diversity, equity and inclusion and to investing in employee training and development. The Company's approach is people-centric (customers, shareholders, communities and team members), commercially focused and community rooted, offering traditional banking products and services including commercial and residential lending, cash management, and wealth management and trust services, delivered by a knowledgeable and dedicated team of community bankers through traditional in-person service, digital delivery channels and remote banking capabilities.

Management utilizes a disciplined credit management approach, which has served to provide consistent quality asset growth over various economic cycles. Loan growth initiatives are executed through strong business development and referral efforts, by a seasoned lending team, supported by an experienced commercial credit review function.

The Company generally looks to develop new branch locations within, and to complement, our existing footprint. New and renovated branches exhibit a modern, open-concept lobby with advanced technology. These branches are supported by our "Relationship Bankers," who are cross trained to fully serve customer needs, and each branch is supported by commercial and residential lenders dedicated to that region, and wealth management representatives.

The Company has an ongoing commitment to use technology and digitization to continually improve customer experience as well as internal operating efficiency and productivity. Our virtual branch and digital strategy efforts compliment the physical branch strategy in expanding the Company's reach to market areas where physical branches are not able to serve by providing remote services while preserving personal interaction with customers.

Non-GAAP Measures

The accompanying consolidated audited financial statements have been prepared in accordance with GAAP. However, certain financial measures we present are supplemental measures that are not required by or are not presented in accordance with GAAP, which we refer to as "non-GAAP" measures. We refer to any prior period measure that excludes PPP loans as "core." At December 31, 2022, PPP loans outstanding are included in core loans (non-GAAP), as the majority of the remaining balances are no longer expected to be forgiven by the SBA. The Company also uses certain non-GAAP financial measures related to the impact of AOCI on the Company's reported book value per common share and return on average shareholders' equity.

The activity which resulted in the Company's use of non-GAAP measures consisted of: (1) the Company's origination of over $715 million in short-term PPP loans between April 2020 and May 2021; (2) forgiveness of PPP loans by the SBA, which began in November 2020 and continued through the current period, with approximately 99% of the principal balance of PPP loans originated by the Company having been forgiven by the SBA through December 31, 2022; and (3) the significant increase in market interest rates during 2022, which resulted in unrealized losses in the Company's available-for-sale debt securities portfolio at December 31, 2022 of $124.1 million and an accumulated other comprehensive loss, included in shareholder's equity, of $96.2 million at December 31, 2022.

These non-GAAP measures are intended to provide the reader with additional supplemental perspectives on operating results, performance trends, and financial condition. Non-GAAP financial measures are not a substitute for GAAP measures; they should be read and used in conjunction with the Company's GAAP financial information. In addition, the non-GAAP financial measures we present may differ from non-GAAP financial measures used by our peers or other companies; therefore, these measures may not be comparable to other similarly titled measures as presented by other companies.

The following tables summarize the reconciliation of GAAP to non-GAAP measures related to the impact of PPP loans on total loans and loan interest income:

(Dollars in thousands)	December 31, 2022	December 31, 2021
Total Core Loans		
Total loans	$ 3,180,518	$ 2,920,684
Adjustment: PPP loans[(1)]	—	(71,502)
Total core loans (non-GAAP)	$ 3,180,518	$ 2,849,182

(1) PPP loans outstanding at December 31, 2022, amounting to $2.2 million, are considered core loans (non-GAAP).

(Dollars in thousands)	Year ended December 31, 2022	Year ended December 31, 2021
Loan Interest Income Excluding PPP Income		
Loan interest income	$ 135,934	$ 133,208
Adjustment: PPP income	(2,561)	(19,691)
Loan interest income excluding PPP income (non-GAAP)	$ 133,373	$ 113,517
Net Interest Income Excluding PPP Income		
Net interest income	$ 151,798	$ 141,556
Adjustment: PPP income	(2,561)	(19,691)
Net interest income excluding PPP income (non-GAAP)	$ 149,237	$ 121,865

The following tables summarize the reconciliation of GAAP to non-GAAP measures related to the impact of AOCI on the Company's reported book value per common share and return on average shareholders' equity:

(Dollars in thousands, except per share data)	At or for the year ended December 31, 2022	At or for the year ended December 31, 2021
Shareholders' Equity		
Total shareholders' equity (as reported)	$ 282,267	$ 346,895
Less: accumulated other comprehensive (loss) income	(96,207)	4,662
Shareholders' equity excluding AOCI (non-GAAP)	$ 378,474	$ 342,233
Book Value Per Common Share		
Book value per common share (as reported)	$ 23.26	$ 28.82
Book value per common share excluding AOCI (non-GAAP)	$ 31.19	$ 28.43
Average Shareholders' Equity		
Total average shareholders' equity (as reported)	$ 295,154	$ 337,563
Less: average accumulated other comprehensive (loss) income	(68,619)	13,968
Average shareholders' equity excluding AOCI (non-GAAP)	$ 363,773	$ 323,595
Return on Average Shareholders' Equity		
Return on average shareholders' equity (as reported)	14.47 %	12.49 %
Return on average shareholders' equity excluding AOCI (non-GAAP)	11.74 %	13.03 %

Results of Operations

COMPARISON OF YEARS ENDED DECEMBER 31, 2022 AND 2021

Unless otherwise indicated, the reported results are for the year ended December 31, 2022, with the "same period," the "prior year" and "prior year period" being the year ended December 31, 2021. Average yields are presented on a tax-equivalent basis.

Net Income

Net income for the year ended December 31, 2022, amounted to $42.7 million, an increase of $545 thousand, or 1%, compared to the year ended December 31, 2021.

- The increase in net income was attributable primarily to an increase in net interest income, excluding PPP income (non-GAAP), of $27.4 million, partially offset by increases in the provision for credit losses of $4.0 million and non-interest expense of $6.2 million and a decrease in PPP income of $17.1 million.
- Net income for the years ended December 31, 2022 and 2021, was impacted by several non-core operating transactions further discussed under the headings "Non-Interest Income" and "Non-Interest Expense," below.

Net Interest Income

Net interest income for the year ended December 31, 2022, amounted to $151.8 million, an increase of $10.2 million, or 7%, compared to the year ended December 31, 2021.

- The increase in net interest income was due largely to increases in loan interest income, excluding PPP income (non-GAAP), of $19.9 million, investment security income of $3.8 million and other interest-earning asset income of $5.3 million, partially offset by a decrease in PPP income of $17.1 million and an increase in deposit interest expense of $1.8 million.
- Net interest income included PPP income of $2.6 million for the year ended December 31, 2022, compared to $19.7 million for the year ended December 31, 2021.

Net Interest Margin

Net interest margin was 3.54% and 3.44% for the years ended December 31, 2022 and December 31, 2021, respectively.

Net interest margin in 2022 was favorably impacted by significant increases in market interest rates and the prime lending rate. In particular, the yield on interest-earning deposits with banks was impacted most favorably.

- Average interest-earning deposits with banks decreased $167.9 million, or 34%, while the yield increased 166 basis points. The decrease in average balance resulted primarily from the funding of growth in the Company's investment portfolio in the second half of 2021 and core loan (non-GAAP) growth in 2021 and 2022, partially offset by funds received from the forgiveness of PPP loans by the SBA.

Other items impacting margin for the year ended December 31, 2022, compared to the prior year period included:

- Average investment securities at fair value increased $275.7 million, or 41%, while the tax-equivalent yield decreased 28 basis points. The changes in average balance and yield resulted primarily from investment security purchases in the second half of 2021, when market interest rates were lower.
- Average loans increased $64.8 million, while the tax-equivalent yield decreased 1 basis point.
    - Average core loans (non-GAAP) increased $341.3 million, or 13%, and the tax-equivalent yield increased 17 basis points. The increase in average balance resulted primarily from growth in the commercial and residential real estate portfolios. Core loan yields (non-GAAP) have benefited primarily from increases in the prime lending rate of 425 basis points between March and December of 2022.
    - Average PPP loans outstanding decreased $276.5 million, or 93%, due primarily to the continued forgiveness of PPP loans by the SBA during the period. PPP income amounted to $2.6 million for the year ended December 31, 2022, compared to $19.7 million for the year ended December 31, 2021.
- Average total deposits increased $164.5 million, or 4%, while the yield increased 4 basis points.

Interest rate risk is reviewed in detail under the heading Item 7A, "Quantitative and Qualitative Disclosures About Market Risk," of this Form 10-K, below.

Rate/Volume Analysis

The following table sets forth, on a tax-equivalent basis, the extent to which changes in interest rates and changes in the average balances of interest-earning assets and interest-bearing liabilities have affected interest income and expense for the period indicated. For each category of interest-earning assets and interest-bearing liabilities, information is provided on changes attributable to: (i) volume (change in average portfolio balance multiplied by prior year average rate); and (ii) interest rate (change in average interest rate multiplied by prior year average balance). Changes attributable to the combined impact of volume and rate have been allocated proportionately based on absolute value to the changes due to volume and the changes due to rate.

	December 31,		
	2022 vs 2021		
		Increase (Decrease) due to	
(Dollars in thousands)	**Net Change**	**Volume**	**Rate**
Interest income			
Loans and loans held for sale (tax-equivalent)	$ 2,685	$ 2,160	$ 525
Investment securities (tax-equivalent)	3,819	5,894	(2,075)
Other interest-earning assets(1)	5,332	(310)	5,642
Total interest-earning assets (tax-equivalent)	11,836	7,744	4,092
Interest expense			
Interest checking, savings, and money market	2,533	101	2,432
CDs	(80)	(23)	(57)
Brokered deposits	(664)	(332)	(332)
Borrowed funds	(8)	(47)	39
Subordinated debt	(143)	(198)	55
Total interest-bearing funding	1,638	(499)	2,137
Change in net interest income (tax-equivalent)	$ 10,198	$ 8,243	$ 1,955

(1) Income on other interest-earning assets includes interest on deposits, and fed funds sold, and dividends on FHLB stock.

The table on the following page presents the Company's average balance sheet, net interest income and average rates for the years ended December 31, 2022, 2021 and 2020:

Average Balances, Interest and Average Yields

(Dollars in thousands)	Year ended December 31, 2022 Average Balance	Interest[1]	Average Yield[1]	Year ended December 31, 2021 Average Balance	Interest[1]	Average Yield[1]	Year ended December 31, 2020 Average Balance	Interest[1]	Average Yield[1]
Assets:									
Loans and loans held for sale[2] (tax-equivalent)	$ 3,034,608	$ 136,381	4.49 %	$ 2,969,777	$ 133,696	4.50 %	$ 2,986,001	$ 131,604	4.41 %
Investment securities[3] (tax-equivalent)	955,927	19,891	2.08 %	680,261	16,072	2.36 %	488,139	14,261	2.92 %
Other interest-earning assets[4]	333,433	6,014	1.80 %	501,201	682	0.14 %	189,204	402	0.21 %
Total interest-earning assets (tax-equivalent)	4,323,968	162,286	3.75 %	4,151,239	150,450	3.62 %	3,663,344	146,267	3.99 %
Other assets	110,238			169,315			158,928		
Total assets	$ 4,434,206			$ 4,320,554			$ 3,822,272		
Liabilities and shareholders' equity:									
Interest checking, savings and money market	$ 2,381,774	4,091	0.17 %	$ 2,249,023	1,558	0.07 %	$ 1,930,628	6,308	0.33 %
CDs	221,050	1,620	0.73 %	224,627	1,700	0.76 %	279,467	4,629	1.66 %
Brokered deposits	—	—	— %	45,617	664	1.46 %	47,743	662	1.39 %
Borrowed funds	3,286	52	1.58 %	7,632	60	0.79 %	40,479	606	1.50 %
Subordinated debt[5]	59,050	3,352	5.68 %	62,546	3,495	5.59 %	43,510	2,501	5.75 %
Total interest-bearing funding	2,665,160	9,115	0.34 %	2,589,445	7,477	0.29 %	2,341,827	14,706	0.63 %
Non-interest checking	1,422,618	—		1,341,633	—		1,120,916	—	
Total deposits, borrowed funds and subordinated debt	4,087,778	9,115	0.22 %	3,931,078	7,477	0.19 %	3,462,743	14,706	0.42 %
Other liabilities	51,274			51,913			43,383		
Total liabilities	4,139,052			3,982,991			3,506,126		
Shareholders' equity	295,154			337,563			316,146		
Total liabilities and shareholders' equity	$ 4,434,206			$ 4,320,554			$ 3,822,272		
Net interest-rate spread (tax-equivalent)			3.41 %			3.33 %			3.36 %
Net interest income (tax-equivalent)		153,171			142,973			131,561	
Net interest margin (tax-equivalent)			3.54 %			3.44 %			3.59 %
Less tax-equivalent adjustment		1,373			1,417			1,427	
Net interest income		$ 151,798			$ 141,556			$ 130,134	
Net interest margin			3.51 %			3.41 %			3.55 %

(1) Average yields and interest income are presented on a tax-equivalent basis, calculated using a U.S. federal corporate income tax rate of 21% in the years ended 2022, 2021 and 2020, based on tax-equivalent adjustments associated with tax exempt loans and investments interest income.
(2) Average loans and loans held for sale include non-accrual loans and are net of average deferred loan fees.
(3) Average investment balances are presented at average amortized cost.
(4) Average other interest-earning assets includes interest-earning deposits with banks, fed funds sold, and FHLB stock.
(5) The subordinated debt is net of average deferred debt issuance costs.

Provision for Credit Losses

The provision for credit losses for the year ended December 31, 2022, amounted to $5.8 million, an increase of $4.0 million, compared to the year ended December 31, 2021.

- The provision for the year ended December 31, 2022, was driven primarily by loan growth, and increases in reserve factors due to worsening economic forecasts, and to a lesser extent, an increase in reserves for unfunded commitments (included in other liabilities), partially offset by a reduction in reserves for individually evaluated loans.
- The provision for the year ended December 31, 2021, was driven primarily by core loan growth (non-GAAP) and reserves for unfunded commitments, partially offset by reduction in reserves for individually evaluated loans and reductions in reserve factors as economic outlook improved throughout the year.
- The Company's adoption of the current expected credit losses ("CECL") methodology on January 1, 2021 increased reserves for credit losses through a charge to retained earnings. CECL may create additional volatility to our provision for credit losses as assumptions and economic forecasts change over time.

The provision for credit losses is a significant factor in the Company's operating results. For further discussion regarding the provision for credit losses and management's assessment of the adequacy of the allowance for credit losses ("ACL") for loans see "Credit Risk," and "ACL for Loans" included in the section titled "Financial Condition," contained in this Item 7 of this Form 10-K above, for further information regarding the provision for credit losses.

Non-Interest Income

Non-interest income for the year ended December 31, 2022, amounted to $18.5 million, an increase of $355 thousand, or 2%, compared to the respective prior year periods.

The following table sets forth the components of non-interest income and the related changes for the periods indicated:

	Year Ended December 31,			
(Dollars in thousands)	**2022**	**2021**	**Change**	**% Change**
Wealth management fees	$ 6,533	$ 6,787	$ (254)	(4)%
Deposit and interchange fees	8,196	6,971	1,225	18 %
Income on bank-owned life insurance, net	1,202	821	381	46 %
Net (losses) gains on sales of debt securities	(1,973)	128	(2,101)	(1,641)%
Net gains on sales of loans	30	833	(803)	(96)%
Net gain on sale of OREO	—	1,126	(1,126)	(100)%
Net gain on sale of insurance commissions	2,034	—	2,034	100 %
Loss on termination of swaps	—	(1,847)	1,847	(100)%
Gain (loss) on equity securities	(514)	246	(760)	(309)%
Other income	2,954	3,042	(88)	(3)%
Total non-interest income	$ 18,462	$ 18,107	$ 355	2 %

The increase of non-interest income for the year ended December 31, 2022, was impacted by the following core operating items:

- Deposit and interchange fees increased $1.2 million due primarily to increases in overdraft income and growth in business customer relationships resulting in greater product transaction volumes.
- Net gains on sales of loans decreased $803 thousand, resulting largely from the Company holding more residential loan production in the loan portfolio.

Non-interest income for the years ended December 31, 2022 and 2021 were impacted by the following non-core operating items:

- In the fourth quarter of 2022, the Company ended its revenue sharing relationship with an insurance agency and sold the rights to the future cash flows on these insurance policies to the agency. The transaction resulted in a one-time gain on sale of insurance commissions of $2.0 million and the Company has no other insurance agency relationships. Prior to the sale, the Company had referred clients to the agency, assisted with servicing and shared the resulting revenue.

- In 2022, the Company realized net losses on sales of debt securities of $2.0 million compared to $128 thousand in 2021. The sales in 2022 were in the first and fourth quarters as follows:
  - In the first quarter of 2022, the Company realized net gains on sales of debt securities of $1.1 million from the sale of debt securities with an amortized cost of $31.7 million.
  - In the fourth quarter of 2022, the Company realized net losses on sales of debt securities of $3.0 million after executing a bond restructure in which it sold lower-yielding debt securities with an amortized cost of $39.9 million.
- In the third quarter of 2021, $75.0 million in interest-rate swaps were terminated, resulting in a $1.8 million loss on the termination of swaps.
- In the fourth quarter of 2021, the Company realized a gain on the sale of other real estate owned ("OREO") of $1.1 million.
- Losses on equity securities decreased $760 thousand due primarily to declines in market values during the year ended December 31, 2022.

Non-Interest Expense

Non-interest expense for the year ended December 31, 2022, amounted to $108.3 million, an increase of $6.2 million, or 6%, compared to the prior year.

The following table sets forth the components of non-interest expense and the related changes for the periods indicated:

	Year Ended December 31,			
(Dollars in thousands)	**2022**	**2021**	**Change**	**% Change**
Salaries and employee benefits	$ 72,120	$ 66,633	$ 5,487	8 %
Occupancy and equipment expenses	9,299	9,650	(351)	(4)%
Technology and telecommunications expenses	10,735	10,574	161	2 %
Advertising and public relations expenses	2,758	2,373	385	16 %
Audit, legal and other professional fees	2,949	2,347	602	26 %
Deposit insurance premiums	1,783	1,910	(127)	(7)%
Supplies and postage expenses	912	819	93	11 %
Loss on extinguishment of subordinated debt	—	713	(713)	100 %
Other operating expenses	7,758	7,116	642	9 %
Total non-interest expense	$ 108,314	$ 102,135	$ 6,179	6 %

The primary components of the increase in non-interest expense during the year ended December 31, 2022, are as follows:

- Salaries and employee benefits increased $5.5 million primarily to support the Company's strategic growth and market expansion initiatives. The results were also impacted by a competitive labor market and inflationary pressures.
- The increase in non-interest expense was offset by a loss on the extinguishment of subordinated debt of $713 thousand from the early redemption of $15.0 million in subordinated notes, realized in the first quarter of 2021.

Income Tax Expense

The effective tax rate was 23.9% and 24.4% for the years ended December 31, 2022 and 2021, respectively. Refer to Note 15, "Income Taxes," to the Company's consolidated financial statements, contained in Item 8 of this Form 10-K, for additional information about the Company's tax positions.

Results of Operations Comparison of Years Ended December 31, 2021 and 2020

For a comparison of the results of operations for the years ended December 31, 2021 and 2020**,** see Part II, Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations" in our Annual Report on Form 10-K for the fiscal year ended December 31, 2021, as filed with SEC on March 10, 2022.

Financial Condition

Total assets amounted to $4.44 billion at December 31, 2022, compared to $4.45 billion at December 31, 2021, a decrease of $9.5 million. The balance sheet composition and changes since December 31, 2021, are discussed below.

Cash and cash equivalents

Cash and cash equivalents may be comprised of cash on hand and cash items due from banks, interest-earning deposits with banks (deposit accounts, excess reserve cash balances, money markets, and money market mutual funds accounts) and federal funds sold ("fed funds"). Cash and cash equivalents amounted to $267.6 million at December 31, 2022, compared to $436.6 million at December 31, 2021, a decrease of $169.0 million, or 39%. As of December 31, 2022, cash and cash equivalents represented 6% of total assets compared to 10% of total assets at December 31, 2021. The decrease in cash and cash equivalents since December 31, 2021 was related primarily to funding core loan growth (non-GAAP), partially offset by funds received from the SBA for forgiveness of PPP loans during the year ended December 31, 2021.

While balances in cash and cash equivalents will fluctuate due primarily to the timing of net cash flows from deposits, borrowings, loans and investments, and the immediate liquidity needs of the Company, management believes customers had generally maintained higher liquidity throughout 2021 in response to the pandemic and lower interest rates, contributing to the elevated balance in cash and cash equivalents at December 31, 2021.

Investments

At December 31, 2022, the fair value of the investment portfolio amounted to $820.4 million, a decrease of $137.8 million, or 14%, since December 31, 2021. As of December 31, 2022, the investment portfolio represented 18% of total assets as compared to 22% of total assets at December 31, 2021.

The change in fair value since December 31, 2021 resulted primarily from a decline in the fair value of the Company's debt securities portfolio of $130.0 million during the year ended December 31, 2022, caused primarily by significant increases in market interest rates resulting from the increase in the prime lending rate by the Federal Reserve of 425 basis points between March and December of 2022. As of December 31, 2022 and December 31, 2021, the Company's investment portfolio was comprised primarily of debt securities, classified as available-for-sale, with a small portion of the portfolio invested in equity securities.

Net unrealized losses on the debt securities portfolio amounted to $124.1 million at December 31, 2022, compared to net unrealized gains of $5.9 million at December 31, 2021. Management has concluded that the unrealized losses resulted from significant increases in market interest rates during 2022, as discussed above, and that no allowance for credit losses was considered necessary as of December 31, 2022.

During the years ended December 31, 2022, and 2021, the Company purchased debt securities totaling $145.9 million and $491.2 million, respectively. The Company also had principal pay downs, calls and maturities totaling $82.8 million during the year ended December 31, 2022, compared to $87.3 million during the year ended December 31, 2021. During the year ended December 31, 2022, the Company realized net losses of $2.0 million on sales of debt securities with an amortized cost of $71.6 million. For the year ended December 31, 2021, the Company realized net gains of $128 thousand on sales of debt securities with an amortized cost of $2.9 million.

The higher level of purchases in 2021 relative to 2022 occurred because cash and cash equivalent balances were high, overnight rates were near zero and the yield curve was upward sloping. In 2022, short term interest rates increased significantly, as discussed above, making overnight investments more attractive, and the yield curve inverted.

Debt Securities

The following table summarizes the fair value of debt securities at the dates indicated:

	December 31,					
	2022		2021		2020	
(Dollars in thousands)	Amount	Percent	Amount	Percent	Amount	Percent
Federal agency obligations	$ 4,977	1 %	$ —	— %	$ —	— %
U.S. treasury securities	43,251	5 %	62,166	6 %	—	— %
Federal agency collateralized mortgage obligations ("CMO")	406,982	50 %	486,713	51 %	215,975	37 %
Federal agency mortgage-backed securities ("MBS")	21,021	3 %	22,894	2 %	110,194	19 %
Taxable municipal securities	239,277	29 %	275,850	29 %	144,407	25 %
Tax-exempt municipal securities	83,653	10 %	92,672	10 %	95,451	16 %
Corporate bonds	6,294	1 %	9,000	1 %	11,276	2 %
Subordinated corporate bonds	10,647	1 %	7,135	1 %	5,000	1 %
Total debt securities	$ 816,102	100 %	$ 956,430	100 %	$ 582,303	100 %

We continuously monitor and evaluate our debt securities portfolio to identify and assess risks within our portfolio, including, but not limited to, the impact of the current market interest-rate environment, prepayment risk, and credit quality. The mix of debt securities at December 31, 2022, compared to December 31, 2021, remained relatively unchanged. At December 31, 2022, the Company's debt securities portfolio consisted primarily of 58% in U.S. Government or U.S. Federal Agency bonds and 40% in taxable and tax-exempt municipal bonds. The effective duration of our debt securities portfolio at December 31, 2022 was approximately 5.0 years compared to 4.9 years at December 31, 2021.

The contractual maturity distribution as of December 31, 2022, of the debt securities portfolio with the weighted average tax-equivalent yield for each category is set forth below:

	Under 1 Year		>1 – 5 Years		>5 – 10 Years		Over 10 Years	
(Dollars in thousands)	Amount	Yield	Amount	Yield	Amount	Yield	Amount	Yield
At amortized cost:								
Federal agency obligations	$ —	— %	$ 5,014	4.20 %	$ —	— %	$ —	— %
U.S. treasury securities	28,967	0.68 %	9,977	0.71 %	6,997	1.01 %	—	— %
Federal agency CMO	5,848	1.46 %	47,913	3.09 %	4,955	1.61 %	416,061	1.88 %
Federal agency MBS	—	— %	5,133	2.80 %	2,173	2.81 %	16,867	2.23 %
Taxable municipal securities	2,500	3.15 %	35,265	3.14 %	241,670	2.25 %	8,000	3.02 %
Tax-exempt municipal securities	4,376	3.84 %	30,850	3.01 %	41,524	3.28 %	7,708	3.20 %
Corporate bonds	1,648	2.88 %	4,634	3.65 %	198	3.95 %	—	— %
Subordinated corporate bonds	—	— %	—	— %	11,949	3.97 %	—	— %
Total debt securities	$ 43,339	1.33 %	$ 138,786	2.96 %	$ 309,466	2.42 %	$ 448,636	1.94 %
Total debt securities at fair value	$ 42,198		$ 133,768		$ 260,922		$ 379,214	

Scheduled contractual maturities shown above may not reflect the actual maturities of the investments. The actual MBS/CMO cash flows likely will be faster than presented above due to prepayments and amortization. Similarly, included in the table above are callable securities, comprised of municipal securities and corporate bonds, with a fair value of $157.3 million, which can be redeemed by the issuer prior to the maturity presented above. Management considers these factors when evaluating the interest-rate risk in the Company's asset-liability management program.

Loans

This discussion should be read in conjunction with the material presented in Item 1, "Business," under the heading "Lending Products" of this Form 10-K.

At December 31, 2022, total loans amounted to $3.2 billion, an increase of $259.8 million, or 9%, since December 31, 2021. Total core loans (non-GAAP) increased $331.3 million, or 12%, since December 31, 2021. As of December 31, 2022, total loans represented 72% of total assets, compared to 66% of total assets at December 31, 2021. The mix of loans within the portfolio remained relatively unchanged with the commercial loan portfolio representing approximately 87% of total loans at December 31, 2022, compared to approximately 88% at December 31, 2021.

The following table sets forth the loan balances by certain loan categories at the dates indicated and the percentage of each category to total loans:

	December 31,					
	2022		2021		2020	
(Dollars in thousands)	**Amount**	**Percent**	**Amount**	**Percent**	**Amount**	**Percent**
Commercial real estate	$ 1,921,410	61 %	$ 1,680,792	58 %	$ 1,476,236	48 %
Commercial and industrial	414,490	13 %	412,070	14 %	435,548	14 %
Commercial construction	424,049	13 %	410,443	14 %	371,856	12 %
SBA PPP(1)	—	— %	71,502	2 %	443,070	15 %
Total commercial loans	2,759,949	87 %	2,574,807	88 %	2,726,710	89 %
Residential mortgages	332,632	10 %	256,940	9 %	252,995	8 %
Home equity	79,807	3 %	80,467	3 %	85,178	3 %
Consumer	8,130	— %	8,470	— %	8,977	— %
Total retail loans	420,569	13 %	345,877	12 %	347,150	11 %
Total loans	3,180,518	100 %	2,920,684	100 %	3,073,860	100 %
Allowance for credit losses	(52,640)		(47,704)		(44,565)	
Net loans	$ 3,127,878		$ 2,872,980		$ 3,029,295	

(1) PPP loans outstanding at December 31, 2022 of $2.2 million were transferred to the commercial and industrial portfolio.

As of or for, the year ended December 31, 2022,

- Growth in the commercial real estate portfolio was strong, resulting in a slight increase in commercial real estate loans as a percentage of total loans, relative to the commercial and industrial and commercial construction portfolios.
- Commercial real estate loans increased $240.6 million, or 14%, compared to December 31, 2021, which resulted from strong customer demand.
- Commercial and industrial loans were relatively flat as compared to December 31, 2021.
- Commercial construction loans increased $13.6 million, or 3%, since December 31, 2021. The majority of the commercial construction portfolio growth was concentrated in the 4th quarter of 2022.
- PPP loan forgiveness by the SBA amounted to approximately $71.6 million compared to $587.0 million during the year ended December 31, 2021. At December 31, 2022, PPP loans outstanding are included in core loans (non-GAAP), as the majority of the remaining balances are no longer expected to be forgiven by the SBA. The Company expects that these loans will be repaid as agreed with any remaining balance guaranteed by the SBA.
- Total retail loans increased $74.7 million, or 22%, since December 31, 2021. The increase resulted from the Company retaining more residential mortgage production on its balance sheet. Residential secured one-to-four family mortgage loans continue to make up the largest portion of the retail segment.

For the year ended December 31, 2022, the Company originated $1.3 million of residential mortgage loans for sale in the secondary market, receiving gains on loan sales of $30 thousand, compared to originations of $29.1 million and gains of $833 thousand for the year ended December 31, 2021.

At December 31, 2022, commercial loan balances participated out to various banks amounted to $59.1 million, compared to $66.7 million at December 31, 2021. These balances participated out to other institutions are not carried as assets on the Company's financial statements. Commercial loans originated by other banks in which the Company is a participating institution are carried at the pro-rata share of ownership and amounted to $94.8 million and $62.6 million at December 31, 2022, and 2021, respectively.

See also Note 3, "Loans," to the Company's consolidated financial statements, contained in Item 8 of this Form 10-K below, for information on related party loans, loans serviced for others and loans pledged as collateral.

The following table sets forth the scheduled maturities of commercial real estate, commercial and industrial and commercial construction loans in the Company's portfolio at December 31, 2022. The table also sets forth the dollar amount of loans which are scheduled to mature after one year which have fixed or adjustable rates.

(Dollars in thousands)	**Commercial Real Estate**	**Commercial & Industrial**	**Commercial Construction**
Amounts due[1]:			
One year or less, and demand notes	$ 84,352	$ 185,152	$ 161,557
After one year through five years	371,517	113,960	99,966
Beyond five years	1,465,541	115,378	162,526
	$ 1,921,410	$ 414,490	$ 424,049
Interest rate terms on amounts due after one year:			
Fixed	$ 180,380	$ 109,140	$ 42,762
Adjustable[2]	$ 1,656,678	$ 120,198	$ 219,730

(1) Scheduled contractual maturities may not reflect the actual maturities of loans. The average maturity of loans may be shorter than their contractual terms principally due to prepayments and demand features.
(2) Adjustable-rate loans may have fixed initial periods before periodic rate adjustments begin.

Credit Risk

Non-performing assets are comprised of non-accrual loans (loans contractually past due, with respect to interest or principal, by 90 days, or where reasonable doubt exists as to the full and timely collection of interest or principal), and OREO. The designation of a loan or other asset as non-performing does not necessarily indicate that loan principal and interest will ultimately be uncollectible. However, management recognizes the greater risk characteristics of these assets and therefore considers the potential risk of loss on assets included in this category in evaluating the adequacy of the allowance for credit losses. The level of delinquent and non-performing assets is largely a function of economic conditions and the overall banking environment and the individual business circumstances of borrowers. Despite prudent loan underwriting, adverse changes within the Company's market area, or deterioration in local, regional, or national economic conditions, could negatively impact the Company's level of non-performing assets in the future.

See item (g) "Loans" contained in Note 1, "Summary of Significant Accounting Policies" of this Form 10-K, for additional information on the Company's loan accounting policies and Credit Risk monitoring.

The following table sets forth information regarding non-performing assets, troubled debt restructuring ("TDR") loans and delinquent loans 60-89 days past due as to interest or principal, held by the Company at the dates indicated:

	December 31,		
(Dollars in thousands)	**2022**	**2021**	**2020**
Non-accrual loan summary:			
Commercial real estate	$ 3,355	$ 22,870	$ 29,680
Commercial and industrial	730	1,542	4,574
Commercial construction	294	1,045	2,999
SBA PPP	—	—	—
Residential mortgages	1,532	794	414
Home equity	211	246	381
Consumer	—	25	2
Total non-performing loans	$ 6,122	$ 26,522	$ 38,050
Total Loans	$ 3,180,518	$ 2,920,684	$ 3,073,860
Accruing TDR loans not included above	$ 6,000	$ 8,556	$ 10,268
Delinquent loans 60-89 days past due and still accruing	$ 1,307	$ 38	$ 316
Loans 60-89 days past due and still accruing to total loans	0.04 %	— %	0.01 %
Non-performing loans to total loans	0.19 %	0.91 %	1.24 %
Non-performing assets to total assets	0.14 %	0.60 %	0.95 %
Allowance for credit losses for loans	$ 52,640	$ 47,704	$ 44,565
Allowance for credit losses for loans to non-performing loans	859.85 %	179.87 %	117.12 %
Allowance for credit losses for loans to total loans	1.66 %	1.63 %	1.45 %

The decrease in non-performing loans at December 31, 2022, compared to December 31, 2021, was due primarily to two commercial relationships, amounting to $17.9 million, which were upgraded and restored to accrual status during the second quarter of 2022, due to improved financial strength and consistent payment history, as well as pay-downs and payoffs on several other commercial relationships. At December 31, 2022 and December 31, 2021, the Company had no OREO.

At December 31, 2022, and December 31, 2021, adversely classified loans amounted to $47.0 million and $61.0 million, respectively. Adversely classified loans that were performing amounted to $40.9 million at December 31, 2022, and $34.5 million at December 31, 2021. Adversely classified loans which were included in non-accrual loans amounted to $6.1 million and $26.5 million at December 31, 2022, and December 31, 2021, respectively.

Total TDR loans as of December 31, 2022 and December 31, 2021 were $8.4 million and $16.4 million, respectively. TDR loans on accrual status amounted to $6.0 million and $8.6 million at December 31, 2022 and December 31, 2021, respectively. TDR loans included in non-accrual loans amounted to $2.4 million and $7.8 million at December 31, 2022 and December 31, 2021, respectively. The Company continues to work with customers and enters into loan modifications (which may or may not be TDRs) to the extent deemed to be necessary or appropriate while attempting to achieve the best mutual outcome given the individual financial circumstances and prospects of the borrower.

ACL for Loans

On January 1, 2021, the Company adopted the Financial Accounting Standards Board's guidance related to measuring credit losses, including the CECL methodology for estimating the ACL for loans. The CECL methodology requires earlier recognition of credit losses using a lifetime credit loss measurement approach that also requires the consideration of reasonable and supportable forecasts in the estimate.

The adoption of CECL resulted in the Company recording a net cumulative-effect adjustment, effective January 1, 2021, that decreased retained earnings by $6.5 million, net of $2.5 million in deferred income taxes. The ACL for loans increased by $6.6 million and the reserve for unfunded commitments (included in other liabilities) increased by $2.4 million.

See also Note 4, "ACL for Loans," to the Company's consolidated financial statements, contained in Item 8 of this Form 10-K, for further information regarding credit quality and the allowance for credit losses and the Company's methodology under CECL.

The following table sets forth the allocation of the Company's ACL among the categories of loans, the percentage of ACL allocated by category of loans to the total ACL, and the percentage of loans in each category to total loans for the periods ending on the respective dates indicated:

	December 31,								
	2022			2021			2020		
(Dollars in thousands)	ACL Allocation	% of ACL Allocation	% of Total Loans	ACL Allocation	% of ACL Allocation	% of Total Loans	ACL Allocation	% of ACL Allocation	% of Total Loans
Commercial real estate	$ 36,564	69 %	61 %	$ 31,847	67 %	58 %	$ 26,755	60 %	48 %
Commercial and industrial	8,896	17 %	13 %	9,574	20 %	14 %	9,516	21 %	14 %
Commercial construction	3,961	8 %	13 %	4,090	8 %	14 %	6,129	14 %	12 %
SBA PPP	—	— %	— %	—	— %	2 %	—	— %	15 %
Residential mortgages	2,255	4 %	10 %	1,405	3 %	9 %	1,530	4 %	8 %
Home equity	633	1 %	3 %	465	1 %	3 %	467	1 %	3 %
Consumer	331	1 %	— %	323	1 %	— %	168	— %	— %
Total	$ 52,640	100 %	100 %	$ 47,704	100 %	100 %	$ 44,565	100 %	100 %

The following table summarizes the activity in the ACL for loans for the periods indicated:

	Years Ended December 31,				
(Dollars in thousands)	2022	2021	2020	2019	2018
Beginning balance	$ 47,704	$ 44,565	$ 33,614	$ 33,849	$ 32,915
Day one CECL adjustment	—	6,560	—	—	—
Provision charged to operations	5,175	543	12,499	1,180	2,250
Recoveries on charged-off loans:					
Commercial real estate	—	39	—	—	51
Commercial and industrial	242	139	265	734	278
Commercial construction	—	105	—	—	—
SBA PPP	—	—	—	—	—
Residential mortgages	—	—	—	—	—
Home equity	11	71	45	9	55
Consumer	19	9	36	35	47
Total recovered	$ 272	$ 363	$ 346	$ 778	$ 431
Charged-off loans:					
Commercial real estate	250	1,825	—	—	—
Commercial and industrial	210	2,477	561	2,069	1,593
Commercial construction	—	—	1,300	—	—
SBA PPP	—	—	—	—	—
Residential mortgages	—	—	—	—	—
Home equity	—	—	—	—	—
Consumer	51	25	33	124	154
Total charged-off	$ 511	$ 4,327	$ 1,894	$ 2,193	$ 1,747
Net loans charged-off	$ 239	$ 3,964	$ 1,548	$ 1,415	$ 1,316
Ending balance	$ 52,640	$ 47,704	$ 44,565	$ 33,614	$ 33,849
Average loans outstanding	$ 3,035,012	$ 2,969,371	$ 2,984,100	$ 2,430,912	$ 2,303,708
Net charge-offs to average loans	0.01 %	0.13 %	0.05 %	0.06 %	0.06 %
Recoveries to charge-offs	53.23 %	8.39 %	18.27 %	35.48 %	24.67 %
Net loans charged-off to allowance	0.45 %	8.31 %	3.47 %	4.21 %	3.89 %

Reserve for unfunded commitments

The reserve for unfunded commitments is classified within "Other liabilities" on the Company's Consolidated Balance Sheets. The estimate of credit loss incorporates assumptions for both the likelihood and amount of funding over the estimated life of the commitments, including adjustments for current conditions and reasonable and supportable forecasts. Management periodically reviews and updates its assumptions for estimated funding rates.

The Company’s reserve for unfunded commitments amounted to $4.3 million as of December 31, 2022 and $3.7 million at December 31, 2021. The provision for unfunded commitments amounted to $625 thousand compared to $1.2 million for the years ended December 31, 2022 and December 31, 2021, respectively.

Based on the foregoing, management believes that the Company's ACL for loans and reserve for unfunded commitments is adequate as of December 31, 2022.

Deposits

As of December 31, 2022, total deposits amounted to $4.04 billion, an increase of $55.6 million, or 1%, compared to December 31, 2021. Total deposits as a percentage of total assets were 91% at December 31, 2022, and 89% at December 31, 2021.

The following table sets forth the deposit balances by certain categories as of the dates indicated and the percentage of each category to total deposits:

	December 31, 2022		December 31, 2021		December 31, 2020	
(Dollars in thousands)	**Amount**	**% of Total**	**Amount**	**% of Total**	**Amount**	**% of Total**
Non-interest checking	$ 1,361,588	34 %	$ 1,364,258	34 %	$ 1,164,908	33 %
Interest-bearing checking	678,715	17 %	743,587	19 %	599,630	17 %
Total checking	2,040,303	51 %	2,107,845	53 %	1,764,538	50 %
Savings	326,666	8 %	310,244	8 %	256,347	7 %
Money markets	1,381,645	34 %	1,355,701	34 %	1,210,414	34 %
Total savings/money markets	1,708,311	42 %	1,665,945	42 %	1,466,761	41 %
CDs	287,192	7 %	206,449	5 %	244,969	7 %
Total customer deposits	4,035,806	100 %	3,980,239	100 %	3,476,268	98 %
Brokered deposits[(1)]	—	— %	—	— %	74,995	2 %
Total deposits	$ 4,035,806	100 %	$ 3,980,239	100 %	$ 3,551,263	100 %

(1) Brokered deposits which are individually $250,000 and under.

Management believes customers generally maintained higher deposit balances in 2021 and 2020 in response to the pandemic and lower interest rates, contributing to elevated deposit balances in the respective periods. In 2022 deposit balances were impacted by customers seeking higher yield alternatives. During the year ended December 31, 2022, there was a slight shift in the deposit mix, from checking to term products, resulting from higher interest rates.

The Company offers its customers the ability to enhance FDIC insurance coverage by electing to participate a portion of their deposit balance into nationwide deposit networks, with an equal and reciprocal balance deposited to the Company through the network. The Company’s total customer deposit balances reflect the reciprocal deposits received from other banks' customers participating in the programs. Essentially, the equivalent of the original customers' deposited funds comes back to the Company and are carried within the appropriate category under total customer deposits. The Company's balances in these reciprocal products were $589.7 million, $546.7 million, and $508.4 million at December 31, 2022, December 31, 2021, and December 31, 2020, respectively. Savings accounts are not eligible for this program.

Management may, from time to time, utilize brokered deposits as a cost-effective wholesale funding source to support continued loan growth. Brokered deposits may be comprised of non-reciprocal insured overnight deposits and term funding gathered from nationwide bank networks or term deposits from large money center banks.

The following table shows the scheduled maturities of CDs greater than $250,000:

(Dollars in thousands)	**December 31, 2022**	**December 31, 2021**
Due in three months or less	$ 12,696	$ 15,943
Due in greater than three months through six months	17,092	11,137
Due in greater than six months through twelve months	46,423	12,476
Due in greater than twelve months	23,223	12,490
Total CDs greater than $250,000	$ 99,434	$ 52,046

The table below sets forth a comparison of the Company's average deposits, and average rates paid for the periods indicated, as well as the percentage of each deposit category to total average deposits. The annualized average rate on total deposits reflects both interest-bearing and non-interest-bearing deposits.

	Year ended December 31,					
	2022		2021		2020	
(Dollars in thousands)	Average Balance	Average Rate	Average Balance	Average Rate	Average Balance	Average Rate
Non-interest checking	$ 1,422,618	— %	$ 1,341,633	— %	$ 1,120,916	— %
Interest checking	696,639	0.07 %	651,985	0.03 %	520,836	0.14 %
Savings	336,881	0.05 %	293,868	0.04 %	236,549	0.08 %
Money market	1,348,254	0.25 %	1,303,170	0.09 %	1,173,243	0.46 %
Total interest-bearing non-term deposits	2,381,774	0.17 %	2,249,023	0.07 %	1,930,628	0.33 %
CDs	221,050	0.73 %	224,627	0.76 %	279,467	1.66 %
Total non-brokered deposits	4,025,442	0.14 %	3,815,283	0.09 %	3,331,011	0.33 %
Brokered deposits	—	— %	45,617	1.46 %	47,743	1.39 %
Total	$ 4,025,442	0.14 %	$ 3,860,900	0.10 %	$ 3,378,754	0.34 %

Borrowed Funds

At December 31, 2022, borrowed funds were comprised of FHLB borrowings and other borrowings, and amounted to $3.2 million with a small portion of borrowed funds from a New Hampshire Business Finance Authority borrowing under a New Hampshire community development program linked to a commercial loan. At December 31, 2021, borrowed funds consisted of only FHLB borrowings, and amounted to $5.5 million. Outstanding borrowings from the FHLB typically have been comprised of overnight or short-term borrowings and term advances linked to outstanding commercial loans under various community reinvestment programs of the FHLB, which represented the majority of the balance at December 31, 2022.

The table below shows the comparison of the Company's average borrowed funds and average rates paid for the periods indicated:

	Year ended December 31,					
	2022		2021		2020	
(Dollars in thousands)	Average Balance	Average Cost	Average Balance	Average Cost	Average Balance	Average Cost
FHLB advances	$ 3,266	1.59 %	$ 7,632	0.79 %	$ 35,762	1.65 %
FRB PPPLF advances	—	— %	—	— %	4,703	0.35 %
Other borrowed funds	20	— %	—	— %	14	1.07 %
Total borrowed funds	$ 3,286	1.58 %	$ 7,632	0.79 %	$ 40,479	1.50 %

In the table above, "Other borrowings" represent term NH BFA advances or advances from the FRB discount window or correspondent banks, advanced as part of our annual test of these external funding facilities. In April 2020, the Company established access to the FRB’s Paycheck Protection Program Liquidity Fund ("PPPLF,") which provided funding secured by the pledge of PPP loans. The FRB's PPPLF program expired on July 31, 2021.

Subordinated Debt

The Company had outstanding subordinated debt, net of deferred issuance costs, of $59.2 million at December 31, 2022, and $59.0 million at December 31, 2021, consisting of $60.0 million in fixed-to-floating rate subordinated notes issued in July 2020, callable in July 2025 and due in July 2030.

On March 31, 2021, the Company redeemed $15.0 million in subordinated notes issued January 2015. The redemption of these subordinated notes was recorded as a loss on the extinguishment of subordinated debt in the amount of $713 thousand.

Derivatives and Hedging

The Company may also, from time to time, use interest-rate swaps to hedge against adverse interest rate movements. During the first quarter of 2020, the Company entered into three pay fixed, receive float interest-rate swaps with a combined notional value, maturing from 2023 through 2025, of $75.0 million. In August 2021, all three interest rate swaps were terminated resulting in a $1.8 million loss on termination of swaps (reported as a component of non-interest income), and eliminated the related borrowing costs from 2022 through 2025.

The Company also has a "Back-to-Back Swap" program whereby the Bank enters into an interest-rate swap with qualified commercial banking customers and simultaneously enters into an equal and opposite interest-rate swap with a swap counterparty. The customer interest-rate swap agreement allows commercial banking customers to convert a floating-rate loan payment to a fixed-rate payment. The notional value of interest-rate swaps with customers decreased to $7.8 million at December 31, 2022, from $36.3 million at December 31, 2021. The fair value of assets and corresponding liabilities associated with these swaps and carried on the Company's Consolidated Balance Sheets was $782 thousand at December 31, 2022, compared to $528 thousand at December 31, 2021.

The Company has entered into a risk participation agreement ("RPA") under which the Company has assumed the credit risk for a customer's performance under an interest-rate swap agreement between the customer and the counterparty. The Company is not a direct counterparty to the interest-rate swap and received fee income commensurate with the risk assumed from entering into the RPA. The RPA and the customer's loan are secured by the same collateral. At December 31, 2022, the notional amount of the risk participation agreements sold was $24.7 million and the fair value was $73 thousand.

Shareholders' Equity

Total shareholders' equity amounted to $282.3 million at December 31, 2022, compared to $346.9 million at December 31, 2021, a decrease of $64.6 million, or 19%. The change was attributable primarily to a decrease in AOCI of $100.9 million since December 31, 2021, partially offset by an increase in retained earnings of $32.8 million over the same period. The change in AOCI resulted from a decrease in the fair value of debt securities, which is attributed to the significant increase in the prime lending rate by the Federal Reserve of 425 basis points between March and December of 2022. The Company classifies all debt securities as available-for-sale and anticipates they will mature or be called at par value.

The Company's reported book value per common share and return on average shareholders' equity ratios were impacted by the change in AOCI as follows:

- Book value per common share was $23.26 at December 31, 2022, compared to $28.82 at December 31, 2021, a decrease of 19%. Excluding AOCI (non-GAAP), book value per common share was $31.19 at December 31, 2022, compared to $28.43 at December 31, 2021, an increase of 10%.
- Return on average shareholders' equity was 14.47% and 12.49% for the years ended December 31, 2022, and December 31, 2021, respectively. Return on average shareholders' equity, excluding AOCI (non-GAAP), was 11.74% and 13.03% for the years ended December 31, 2022, and December 31, 2021, respectively.

For the years ended December 31, 2022 and December 31, 2021, the Company declared cash dividends of $9.9 million and $8.9 million, respectively, and shareholders utilized the dividend reinvestment portion of the Company's dividend reinvestment and direct stock purchase plan to purchase aggregate shares of the Company's common stock amounting to 40,640 shares and 36,651 shares, totaling $1.4 million and $1.3 million, respectively.

Liquidity

Liquidity is the ability to meet cash needs arising from, among other things, fluctuations in loans, investments, deposits, and borrowings. Liquidity management is the coordination of activities so that cash needs are anticipated and met readily and efficiently. The Company's liquidity policies are set and monitored by the Company's Board. The duties and responsibilities related to asset-liability management matters are also covered by the Board. The Company's asset-liability objectives are to engage in sound balance sheet management strategies, maintain liquidity, provide and enhance access to a diverse and stable source of funds, provide competitively priced and attractive products to customers and conduct funding at a low-cost relative to current market conditions. Funds gathered are used to support current commitments, to fund earning asset growth, and to take advantage of selected leverage opportunities.

The Company's liquidity is maintained by projecting cash needs, balancing maturing assets with maturing liabilities, monitoring various liquidity ratios, monitoring deposit flows, maintaining cash flow within the investment portfolio, and maintaining wholesale funding resources.

The Company's wholesale funding sources included primarily borrowing capacity at the FHLB and brokered deposits. In addition, the Company's secondary funding sources include uncommitted overnight fed fund purchase arrangements with correspondent banks and access to the FRB discount window. At December 31, 2022, the Bank had the capacity to borrow additional funds from the FHLB and FRB discount window of up to approximately $780.0 million and $305.0 million, respectively.

Management believes that the Company has adequate liquidity to meet its obligations. However, if general economic conditions, the pandemic, or other events, cause these sources of external funding to become restricted or are eliminated, the Company may not be able to raise adequate funds or may incur substantially higher funding costs or operating restrictions in order to raise the necessary funds to support the Company's operations and growth.

The Company has in the past also increased capital and liquidity by offering for sale shares of the Company's common stock and through the issuance of subordinated debt.

Capital Resources

The Company is subject to various regulatory capital requirements administered by the federal banking agencies. The Company's capital policies and capital levels are monitored internally on a quarterly basis and capital planning is reviewed at least annually by the Board.

Failure to meet minimum capital requirements can initiate or result in certain mandatory and possible additional discretionary supervisory actions by regulators, which if undertaken, could have a material adverse effect on the Company's consolidated financial condition. At December 31, 2022, the capital levels of both the Company and the Bank complied with all applicable minimum capital requirements of the Federal Reserve Board and the FDIC, respectively. Additionally, the Company met the definition of "well-capitalized" under the applicable Federal Reserve Board regulations and the Bank qualified as "well-capitalized" under the prompt corrective action regulations of Basel III and the FDIC.

The Company's total capital and tier 1 capital to risk weighted assets amounted to 13.49% and 10.56%, respectively, at December 31, 2022, compared to 13.73% and 10.62%, respectively, at December 31, 2021. The decrease in each ratio was due primarily to strong core loan growth (non-GAAP) over the respective periods, which required higher capital reserves than interest-earning deposits with banks.

Tier 1 capital to average assets amounted to 8.10% at December 31, 2022, compared to 7.56% at December 31, 2021. The increase was driven primarily by the increase in retained earnings noted above, partially offset by an increase in average assets.

See also Note 12, "Shareholders' Equity," to the Company's consolidated financial statements, contained in Item 8 of this Form 10-K below, for additional information regarding the capital requirements applicable to the Company and the Bank and their respective capital levels at December 31, 2022. For additional information on the Company's capital planning, see the section entitled "Capital Resources" contained in Item 1, "Business," of this Form 10-K.

Contractual Obligations and Commitments

The Company is required to make future cash payments under various contractual obligations. The following table summarizes the contractual cash obligations at December 31, 2022:

	Payments Due by Period				
(Dollars in thousands)	**Total**	**With-in 1 Year**	**>1 – 3 Years**	**>3 – 5 Years**	**After 5 Years**
Contractual cash obligations:					
CDs	$ 287,192	$ 227,658	$ 58,311	$ 1,019	$ 204
FHLB borrowings	2,913	—	—	—	2,913
Other borrowings	303	—	—	—	303
Subordinated debt	60,000	—	—	—	60,000
Supplemental retirement plans	1,663	276	552	551	284
Operating lease obligations	39,535	1,406	2,876	2,907	32,346
Vendor contracts	18,019	9,718	6,740	1,561	—
Total contractual obligations	$ 409,625	$ 239,058	$ 68,479	$ 6,038	$ 96,050

The Company is also party to financial instruments with off-balance sheet risk in the normal course of business to meet the financing needs of its customers. The instruments involve, to varying degrees, elements of credit risk in excess of the amount recognized in the Consolidated Balance Sheets. The contractual amounts of these instruments reflect the extent of involvement the Company has in the particular classes of financial instruments.

The following table summarizes the contractual commitments at December 31, 2022:

	Commitment Expiration — By Period				
(Dollars in thousands)	**Total**	**With-in 1 Year**	**>1 – 3 Years**	**>3 – 5 Years**	**After 5 Years**
Other Commitments:					
Unadvanced loans and lines	$ 1,233,889	$ 752,013	$ 309,808	$ 55,834	$ 116,234
Commitments to originate loans	27,148	27,148	—	—	—
Letters of credit	25,081	19,021	2,943	—	3,117
Commitments to originate loans for sale	170	170	—	—	—
Commitments to sell loans	170	170	—	—	—
Customer related interest-rate swaps notional amount[(1)]	7,777	—	—	—	7,777
Risk participation agreement notional amount	24,660	—	—	—	24,660
Total commitments	$ 1,318,895	$ 798,522	$ 312,751	$ 55,834	$ 151,788

(1) Offsetting positions to these interest-rate swaps are entered into with a counterparty. Notional principal amounts are not actually exchanged.

Wealth Management

Wealth assets under management and wealth assets under administration are not carried as assets on the Company's consolidated balance sheets. The Company provides a wide range of wealth management services, including investment management, brokerage, annuities, trust, and 401(k) administration.

Wealth assets under management and wealth assets under administration amounted to $891.5 million and $198.6 million, respectively, at December 31, 2022, representing decreases of $150.0 million, or 14%, and $59.3 million, or 23%, respectively, compared to December 31, 2021. The decreases in wealth assets under management and wealth assets under administration were attributable primarily to declines in market values during the year ended December 31, 2022.

Impact of Inflation and Changing Prices

The Company's asset and liability structure is substantially different from that of an industrial company in that virtually all assets and liabilities of the Company are monetary in nature. Management believes the impact of inflation on financial results depends upon the Company's ability to react to changes in interest rates and by such reaction, reduce the inflationary impact on performance. Interest rates do not necessarily move in the same direction, or at the same magnitude, as the prices of other goods and services. As discussed previously, management seeks to manage the relationship between interest rate-sensitive assets and liabilities in order to protect against wide net interest income fluctuations, including those resulting from inflation.

Various information shown elsewhere in this annual report will assist in the understanding of how well the Company is positioned to react to changing interest rates and inflationary trends. In particular, additional information related to the net interest margin sensitivity analysis is contained in Item 7A of this Form 10-K below and other maturity and repricing information of the Company's interest rate-sensitive assets and liabilities is contained in this Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations" of this Form 10-K under the heading "Financial Condition" in this report.

Accounting Policies/Critical Accounting Estimates

The Company's significant accounting policies are described in Note 1, "Summary of Significant Accounting Policies," to the consolidated financial statements contained in Item 8, "Financial Statements and Supplementary Data," of this Form 10-K. In applying these accounting policies, management is required to exercise judgment in determining many of the methodologies, assumptions and estimates to be utilized. Certain of the critical accounting estimates are more dependent on such judgment and in some cases may contribute to volatility in the Company's reported financial performance should the assumptions and estimates used be incorrect or change over time due to changes in circumstances. The most significant areas in which management applies critical assumptions and estimates are: the estimates of the allowance for credit losses for loans, and available-for-sale securities, the reserve for unfunded commitments and the impairment review of goodwill.

ACL for Loans

On January 1, 2021, the Company adopted ASU 2016-13, including the CECL methodology for estimating the ACL for loans. The CECL methodology requires early recognition of credit losses using an estimated lifetime credit loss measurement that takes into consideration reasonable and supportable forecasts. The ACL for loans is established through a provision for credit losses, a direct charge to earnings. The ACL for loans is a valuation account that is deducted from the amortized cost to present the net amount of the loan portfolio expected to be collected. Credit losses are charged against the ACL for loans when management believes that the collectability of the amortized cost of the loan principal is unlikely. Recoveries on loans previously charged-off are credited to the ACL for loans, generally at the time cash is received on a charged-off account.

Arriving at an appropriate level of ACL for loans involves a high degree of management judgement. The underlying assumptions, estimates and assessments used to estimate the ACL for loans reflects the Company’s best estimate of model assumptions and forecasted conditions at that time. Changes in such estimates can significantly affect the ACL for loans and the provision for credit losses. In addition, various regulatory agencies, as an integral part of their examination process, periodically review the Company's ACL for loans. Such agencies may require the Company to recognize additions to the ACL for loans based on judgments different from those of management. It is possible and likely that the Company will experience credit losses that are different from the current estimates.

The Company uses a systematic methodology to measure the amount of estimated credit losses. The methodology uses a two-tiered approach that applies general reserves for larger groups of homogeneous loans, segmented by loan type or by internal risk rating, and specific reserves for loans individually evaluated.

In making its assessment on the adequacy of the general reserves of ACL for loans, management considers several quantitative and qualitative factors from internal and external sources relating to past events, current conditions, and reasonable and supportable forecasts, including: the expected duration of the loans segments, the trends in risk classification of individual loans; individual review of larger and higher risk problem assets; the level of delinquent loans and non-performing loans; impaired and restructured loans; the level of foreclosure activity; net charge-offs; commercial concentrations by industry, property type and real estate location; the growth and composition of the loan portfolio; as well as trends in the general levels of these indicators. In addition, management monitors expansion in the Company's geographic market area, the experience level of lenders and any changes in underwriting criteria, the strength of the local and national economy, including general conditions in the multi-family, commercial real estate and development and construction markets in the Company's local region. As well as changes in current and forecasted economic conditions, such as changes in gross domestic product, the unemployment rate and new jobs created, real estate values, commercial vacancy rates, recession risk estimates and other relevant economic factors. Management also performs a qualitative assessment beyond model estimates and applies qualitative adjustments as management deems necessary, acknowledging that it can take time for economic results to work through the loan portfolio with charge-offs often occurring years after the economic downturn.

For loans individually evaluated, the Company generally requires an internal evaluation or independent appraisal of the collateral supporting the loan. However, these assessment methods are only an estimate of the value of the collateral at the time the assessment is made and involve estimates and assumptions. An error in fact, estimate or judgment could adversely affect the reliability of the valuation. Furthermore, changes in those estimates due to the economic environment and events occurring after the initial assessment, may cause the value of the collateral to differ significantly from the initial valuations.

Reserve for unfunded commitments

The reserve for unfunded commitments is included in the line item "Accrued expenses and other liabilities" on the Company’s Consolidated Balance Sheets. The estimate of credit loss incorporates assumptions for both the likelihood and amount of funding over the estimated life of the commitments, including adjustments for current conditions and reasonable and supportable forecasts. Management periodically reviews and updates its assumptions for estimated funding rates.

ACL for Available-for-Sale Securities

There are inherent risks associated with the Company's investment activities that could adversely impact the fair value and the ultimate collectability of the Company's investments. The Company primarily invests in debt securities. At December 31, 2022, the Company also held immaterial amounts of equity securities and FHLB stock.

The Company measures expected credit losses on available-for-sale securities based upon the unrealized gain or loss position of the security. For available-for-sale debt securities in an unrealized loss position, the Company evaluates qualitative criteria to determine any expected loss unless the Company intends to sell, or it is more likely than not that the Company will be required to sell before recovery of the amortized cost. In the latter two circumstances, the Company recognizes the entire difference between the security’s amortized cost basis and its fair value as a write-down of the investment balance with a charge to earnings. Otherwise, management’s analysis considers various factors, which include among other considerations (1) the present value of the cash flows expected to be collected compared to the amortized cost of the security, (2) duration and magnitude of the decline in value, (3) the financial condition of the issuer or issuers, and (4) structure of the security. If the Company does not expect to recover the entire amortized cost basis of the security, an allowance for credit losses for available-for-sale securities would be recorded, with a related charge to earnings, limited by the amount of the fair value of the security less its amortized cost.

Impairment Review of Goodwill

In accordance with GAAP, the Company does not amortize goodwill and instead, at least annually, evaluates whether the carrying value of goodwill has become impaired. A determination that goodwill has become impaired results in an immediate write-down of goodwill to its determined value with a resulting charge to the Company's Consolidated Statement of Income. Goodwill is evaluated at the reporting unit level. In the case of the Company, the services offered through the Bank and subsidiaries are managed as one strategic unit and represent the Company's only reportable operating segment.
The Company has the option to perform either (i) a qualitative assessment of whether it is "more likely than not" that the reporting unit's fair value is less than its book value, or (ii) a quantitative assessment.

1. Management's qualitative assessment would take into consideration, among other items, macroeconomic conditions, industry and market considerations, cost or margin factors, financial performance and share price. Based on the qualitative assessment, if the Company were to conclude: (a) it is "more likely than not" that the fair value of a reporting unit exceeds its book value, goodwill is deemed not impaired, or (b) it is "more likely than not" that the fair value of a reporting unit is less than its book value, a quantitative goodwill analysis must be performed.
2. The Company may elect to forgo the qualitative assessment and perform the quantitative analysis even if management does not believe that is "more likely than not" that goodwill is impaired. The quantitative goodwill analysis compares the fair value of the reporting unit with its book value, including goodwill. If the fair value of the reporting unit equals or exceeds its book value, goodwill is deemed not impaired. If the book value of the reporting unit exceeds its fair

value, a goodwill impairment loss is recognized for the difference between these amounts, not exceeding the goodwill carrying amount.

At December 31, 2022, based on the Company's qualitative analysis, goodwill was deemed not to be impaired.

Recent Accounting Pronouncements

See Note 1, "Summary of Significant Accounting Policies," Item (w) "Recent Accounting Pronouncements," to the Company's consolidated financial statements, contained in Item 8 of this Form 10-K below, for information regarding recent accounting pronouncements.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

Interest Margin Sensitivity Analysis

The Company's primary market risk is interest-rate risk. Oversight of interest-rate risk management is the responsibility of the Board. Annually, the Board reviews and approves the Company's asset-liability management policy, which provides management with guidelines for controlling interest-rate risk, as measured through net interest income sensitivity to changes in interest rates, within certain tolerance levels. The Board also establishes and monitors guidelines for the Company's liquidity, capital ratios and asset-liability management.

The Company's asset-liability management strategies and guidelines are reported to the Board on a periodic basis. These strategies and guidelines are revised based on changes in interest-rate levels, general economic conditions, competition in the marketplace, the current interest-rate risk position of the Company, anticipated growth and other factors.

One of the principal factors in maintaining planned levels of net interest income is the ability to design effective strategies to manage the impact of interest rate changes on future net interest income. Quarterly, management completes a net interest income sensitivity analysis and reports the results to the Board. This analysis includes a simulation of the Company's net interest income under various interest-rate scenarios and assumes no future growth (i.e., static balance sheet). Variations in the interest-rate environment affect numerous factors, including prepayment speeds, reinvestment rates, maturities of investments (due to call provisions), ability to attract deposits and other funding, and interest rates on various asset and liability accounts. Results of this analysis are also impacted by changes in liquidity, such as fluctuations in the balances of short-term investments and overnight borrowings.

The Company can be subject to margin compression depending on the economic environment, the shape of the yield curve and a mismatch in timing for yield changes on interest-earning assets and interest-bearing liabilities. Generally, the Company's margin generally performs better over time in a rising rate environment, while it decreases in a declining rate environment and when the yield curve is flattening or inverted.

In a flattening yield curve scenario, margin compression occurs as the spread between the cost of funding and the yield on interest-earning assets narrows. Under this scenario, the degree of margin compression is highly dependent on the Company's ability to fund asset growth through lower cost deposits. However, if the curve is flattening, while short-term rates are rising, the adverse impact on margin may be somewhat delayed, as increases in the Prime Lending Rate may initially result in the Company's asset yields re-pricing more quickly than funding costs.

In an inverted yield curve situation, shorter-term rates exceed longer-term rates, and the impact on margin is similar but more adverse than the flat curve scenario. However, the extent of the impact on margin is highly dependent on the Company's balance sheet mix.

In a declining rate environment, margin compression will eventually occur when the yield on interest-earning assets decreases more than funding costs. The primary causes would be the impact of interest rate decreases (including decreases in the Prime Lending Rate) on adjustable rate loans and the fact that decreases in deposit rates may be limited or lag decreases in the Prime Lending Rate.

In 2022, the Federal Reserve Bank increased the Prime Lending Rate 425 basis points and the Company’s net interest margin benefited as increases in asset yields exceeded increases in the costs of funds, which often lag asset yield increases over the short term in a rising rate environment. Absent further increases in the Prime Lending Rate and assuming a static balance, future increases in the cost of funds may exceed increases in asset yields and reduce net interest margin.

Refer to the heading "Results of Operations" contained within Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations," of this Form 10-K for further discussion of margin.

The table below summarizes the results from the Company’s net interest income simulation model and compares the percent change in net interest income to the rates unchanged scenario, assuming a static balance sheet for a 24-month period at December 31, 2022, 2021 and 2020.

As shown in the table, the Company's net interest income sensitivity has decreased at December 31, 2022 compared to December 31, 2021 and 2020, resulting primarily from a decrease in the Company’s net short-term liquidity, which is defined as interest-earning deposits in banks less short-term wholesale borrowings consisting of brokered deposits and FHLB borrowings, and an increase in loans originated with slightly longer initial fixed terms.

Additionally, in the 200 and 400 basis point rising rate scenarios noted, net interest income is projected to increase in the first 24 months primarily due to loan yields increasing more significantly than funding costs. In the declining rate scenario noted, net interest income is projected to decrease as funding costs do not decline as significantly as asset yields. Additionally, the percentage change is lower in the declining rate scenario at December 31, 2022 partially due to deposit rates being higher, allowing for a larger decline in interest expense compared to December 31, 2021 and 2020.

(Dollars in thousands, except for percentage data)	**December 31, 2022**	**December 31, 2021**	**December 31, 2020**
Net short-term liquidity	$ 227,472	$ 397,525	$ 133,377
Changes in interest rates	**Percentage Change**	**Percentage Change**	**Percentage Change**
Rates Rise 400 Basis Points	1.20 %	9.73 %	6.40 %
Rates Rise 200 Basis Points	0.45 %	5.37 %	3.57 %
Rates Unchanged	— %	— %	— %
Rates Decline 200 Basis Points	(5.34)%	(9.54)%	(7.17)%

Item 8. Financial Statements and Supplementary Data

Index to Consolidated Financial Statements

ENTERPRISE BANCORP, INC.
Consolidated Balance Sheets
As of December 31,

(Dollars in thousands, except per share data)	2022	2021
Assets		
Cash and cash equivalents:		
Cash and due from banks	$ 36,901	$ 33,572
Interest-earning deposits with banks	230,688	403,004
Total cash and cash equivalents	267,589	436,576
Investments:		
Debt securities at fair value (amortized cost of $940,227 and $950,523, respectively)	816,102	956,430
Equity securities at fair value	4,269	1,785
Total investment securities at fair value	820,371	958,215
Federal Home Loan Bank ("FHLB") stock	2,343	2,164
Loans:		
Total loans	3,180,518	2,920,684
Allowance for credit losses	(52,640)	(47,704)
Net loans	3,127,878	2,872,980
Premises and equipment, net	44,228	44,689
Lease right-of-use asset	24,923	24,295
Accrued interest receivable	17,117	13,354
Deferred income taxes, net	51,981	19,644
Bank-owned life insurance	64,156	62,954
Prepaid income taxes	683	279
Prepaid expenses and other assets	11,408	7,013
Goodwill	5,656	5,656
Total assets	$ 4,438,333	$ 4,447,819
Liabilities and Shareholders' Equity		
Liabilities		
Deposits	$ 4,035,806	$ 3,980,239
Borrowed funds	3,216	5,479
Subordinated debt	59,182	58,979
Lease liability	24,415	23,627
Accrued expenses and other liabilities	31,442	31,063
Accrued interest payable	2,005	1,537
Total liabilities	4,156,066	4,100,924
Commitments and Contingencies		
Shareholders' Equity		
Preferred stock $0.01 par value per share; 1,000,000 shares authorized; no shares issued	—	—
Common stock $0.01 par value per share; 40,000,000 shares authorized; 12,133,516 and 12,038,382 shares issued and outstanding, respectively	121	120
Additional paid-in capital	103,793	100,352
Retained earnings	274,560	241,761
Accumulated other comprehensive income	(96,207)	4,662
Total shareholders' equity	282,267	346,895
Total liabilities and shareholders' equity	$ 4,438,333	$ 4,447,819

See accompanying notes to consolidated financial statements.

ENTERPRISE BANCORP, INC.
Consolidated Statements of Income
Years Ended December 31,

(Dollars in thousands, except per share data)	2022	2021	2020
Interest and dividend income:			
Loans and loans held for sale	$ 135,934	$ 133,208	$ 131,091
Investment securities	18,965	15,143	13,347
Other interest-earning assets	6,014	682	402
Total interest and dividend income	160,913	149,033	144,840
Interest expense:			
Deposits	5,711	3,922	11,599
Borrowed funds	52	60	606
Subordinated debt	3,352	3,495	2,501
Total interest expense	9,115	7,477	14,706
Net interest income	151,798	141,556	130,134
Provision for credit losses	5,800	1,770	12,499
Net interest income after provision for credit losses	145,998	139,786	117,635
Non-interest income:			
Wealth management fees	6,533	6,787	5,815
Deposit and interchange fees	8,196	6,971	6,426
Income on bank-owned life insurance, net	1,202	821	587
Net (losses) gains on sales of debt securities	(1,973)	128	227
Net gains on sales of loans	30	833	1,409
Net gain on sale of OREO	—	1,126	—
Net gain on sale of insurance commissions	2,034	—	—
Loss on termination of swaps	—	(1,847)	—
Gain (loss) on equity securities	(514)	246	(44)
Other income	2,954	3,042	2,827
Total non-interest income	18,462	18,107	17,247
Non-interest expense:			
Salaries and employee benefits	72,120	66,633	61,580
Occupancy and equipment expenses	9,299	9,650	8,546
Technology and telecommunications expenses	10,735	10,574	9,197
Advertising and public relations expenses	2,758	2,373	2,151
Audit, legal and other professional fees	2,949	2,347	2,273
Deposit insurance premiums	1,783	1,910	2,124
Supplies and postage expenses	912	819	898
Loss on extinguishment of subordinated debt	—	713	—
Other operating expenses	7,758	7,116	6,485
Total non-interest expense	108,314	102,135	93,254
Income before income taxes	56,146	55,758	41,628
Provision for income taxes	13,430	13,587	10,172
Net income	$ 42,716	$ 42,171	$ 31,456
Basic earnings per share	$ 3.53	$ 3.51	$ 2.64
Diluted earnings per share	$ 3.52	$ 3.50	$ 2.64
Basic weighted average common shares outstanding	12,103,033	12,005,838	11,897,813
Diluted weighted average common shares outstanding	12,149,777	12,051,293	11,919,508

See accompanying notes to consolidated financial statements.

ENTERPRISE BANCORP, INC.
Consolidated Statements of Comprehensive Income
Years Ended December 31,

(Dollars in thousands)	**2022**	**2021**	**2020**
Net income	$ 42,716	$ 42,171	$ 31,456
Other comprehensive (loss) income, net of taxes:			
Net change in fair value of debt securities	(100,869)	(19,554)	13,706
Net change in fair value of cash flow hedges	—	2,023	(2,023)
Total other comprehensive (loss) income, net	(100,869)	(17,531)	11,683
Total comprehensive (loss) income, net	$ (58,153)	$ 24,640	$ 43,139

See accompanying notes to consolidated financial statements.

ENTERPRISE BANCORP, INC.
Consolidated Statements of Changes in Shareholders' Equity
Years Ended December 31, 2022, 2021 and 2020

(Dollars in thousands, except share data)	Common Stock Shares	Common Stock Amount	Additional Paid-in Capital	Retained Earnings	Accumulated Other Comprehensive Income/(Loss)	Total Shareholders' Equity
Balance at December 31, 2019	11,825,331	$ 118	$ 94,170	$ 191,843	$ 10,510	$ 296,641
Net income				31,456		31,456
Other comprehensive income, net					11,683	11,683
Common stock dividend declared ($0.70 per share)				(8,322)		(8,322)
Common stock issued under dividend reinvestment plan	50,506	—	1,217			1,217
Common stock issued, other	3,816	—	91			91
Stock-based compensation, net	65,417	1	1,871			1,872
Net settlement for employee taxes on restricted stock and options	(8,315)	—	(233)			(233)
Stock option exercised, net	1,040	—	21			21
Balance at December 31, 2020	11,937,795	$ 119	$ 97,137	$ 214,977	$ 22,193	$ 334,426
Net income				42,171		42,171
Cumulative effect adjustment for CECL adoption				(6,510)		(6,510)
Other comprehensive loss, net					(17,531)	(17,531)
Common stock dividend declared ($0.74 per share)				(8,877)		(8,877)
Common stock issued under dividend reinvestment plan	36,651	—	1,250			1,250
Common stock issued, other	1,766	—	59			59
Stock-based compensation, net	63,329	1	2,093			2,094
Net settlement for employee taxes on restricted stock and options	(10,029)	—	(346)			(346)
Stock options exercised, net	8,870	—	159			159
Balance at December 31, 2021	12,038,382	$ 120	$ 100,352	$ 241,761	$ 4,662	$ 346,895
Net income				42,716		42,716
Other comprehensive loss, net					(100,869)	(100,869)
Common stock dividend declared ($0.82 per share)				(9,917)		(9,917)
Common stock issued under dividend reinvestment plan	40,640	—	1,396			1,396
Common stock issued, other	1,378	—	47			47
Stock-based compensation, net	59,338	1	2,313			2,314
Net settlement for employee taxes on restricted stock and options	(11,713)	—	(433)			(433)
Stock options exercised, net	5,491	—	118			118
Balance at December 31, 2022	12,133,516	$ 121	$ 103,793	$ 274,560	$ (96,207)	$ 282,267

See accompanying notes to consolidated financial statements.

ENTERPRISE BANCORP, INC.
Consolidated Statements of Cash Flows
Years Ended December 31,

(Dollars in thousands)	2022	2021	2020
Cash flows from operating activities:			
Net income	$ 42,716	$ 42,171	$ 31,456
Adjustments to reconcile net income to net cash provided by operating activities:			
Provision for credit losses	5,800	1,770	12,499
Depreciation and amortization	7,036	7,809	6,784
Stock-based compensation expense	2,316	2,060	1,905
Income on bank-owned life insurance, net	(1,202)	(821)	(587)
Net losses (gains) on sales of debt securities	1,973	(128)	(227)
Net losses (gains) on equity securities	514	(246)	44
Mortgage loans originated for sale	(1,263)	(29,123)	(59,570)
Proceeds from mortgage loans sold	1,293	30,327	61,209
Net gains on sales of loans	(30)	(833)	(1,409)
Net gains on sales of OREO	—	(1,126)	—
Loss on termination of swaps	—	1,847	—
Changes in:			
Net (increase) decrease in other assets	(11,322)	9,324	(16,997)
Net increase (decrease) in other liabilities	169	(798)	5,223
Net cash provided by operating activities	48,000	62,233	40,330
Cash flows from investing activities:			
Proceeds from sales of debt securities	69,620	3,059	5,907
Purchase of debt securities	(145,868)	(491,213)	(145,319)
Proceeds from maturities, calls and pay-downs of debt securities	82,834	87,347	77,534
Net purchases of equity securities	(2,998)	(793)	(323)
Net purchases of FHLB capital stock	(179)	(259)	2,579
Net (increase) decrease in loans	(260,073)	146,812	(509,949)
Additions to premises and equipment, net	(4,838)	(4,187)	(6,679)
Proceeds from OREO sales	—	3,526	—
Purchase of bank-owned life insurance	—	(30,770)	—
Net cash used in investing activities	(261,502)	(286,478)	(576,250)
Cash flows from financing activities:			
Net increase in deposits	55,567	428,976	764,533
Net (decrease) increase in borrowed funds	(2,263)	705	(91,399)
Repayment of subordinated debt	—	(15,600)	—
Loss on extinguishment of subordinated debt	—	713	—
Proceeds from the issuance of subordinated debt	—	—	60,000
Cash dividends paid, net of dividend reinvestment plan	(8,521)	(7,627)	(7,105)
Proceeds from issuance of common stock	47	59	91
Net settlement for employee taxes on restricted stock and options	(433)	(346)	(233)
Net proceeds from stock option exercises	118	159	21
Net cash provided by financing activities	44,515	407,039	725,908
Net (decrease) increase in cash and cash equivalents	(168,987)	182,794	189,988
Cash and cash equivalents at beginning of year	436,576	253,782	63,794
Cash and cash equivalents at end of year	$ 267,589	$ 436,576	$ 253,782

See accompanying notes to consolidated financial statements.

(1) Summary of Significant Accounting Policies

(a) Organization of the Company and Basis of Presentation

The accompanying consolidated financial statements of Enterprise Bancorp, Inc. (the "Company," "Enterprise," "we," or "our"), a Massachusetts corporation, include the accounts of the Company and its wholly owned subsidiary, Enterprise Bank and Trust Company, commonly referred to as Enterprise Bank (the "Bank"). The Bank is a Massachusetts trust company and state chartered commercial bank organized in 1989. Substantially all the Company's operations are conducted through the Bank and its subsidiaries.

The Bank's subsidiaries include Enterprise Wealth Services, LLC, organized under the laws of the State of Delaware, to offer non-deposit investment products and services. In addition, the Bank has the following subsidiaries that are incorporated in the Commonwealth of Massachusetts and classified as security corporations in accordance with applicable Massachusetts General Laws: Enterprise Security Corporation; Enterprise Security Corporation II; and Enterprise Security Corporation III. The security corporations, which hold various types of qualifying securities, are limited to conducting investment activities that the Bank itself would be allowed to conduct under applicable laws.

The Company's headquarters and the Bank's main office are located at 222 Merrimack Street in Lowell, Massachusetts. At December 31, 2022, the Company had 27 full-service branch banking offices serving the Northern Middlesex, Northern Essex and Northern Worcester counties of Massachusetts and Southern Hillsborough and Southern Rockingham counties in New Hampshire.

Through the Bank and its subsidiaries, the Company offers a range of commercial, residential and consumer loan products, deposit products and cash management services, electronic and digital banking options. The Company also provides a range of wealth management services. The services offered through the Bank and its subsidiaries are managed as one strategic unit and represent the Company's only reportable operating segment.

The Federal Deposit Insurance Corporation (the "FDIC") and the Massachusetts Division of Banks (the "Division") have regulatory authority over the Bank. The Bank is also subject to certain regulatory requirements of the Board of Governors of the Federal Reserve System (the "Federal Reserve Board") and, with respect to its New Hampshire branch operations, the New Hampshire Banking Department. The business and operations of the Company are subject to the regulatory oversight of the Federal Reserve Board. The Division also retains supervisory jurisdiction over the Company.

The accompanying audited consolidated financial statements and notes thereto have been prepared in accordance with U.S. Generally Accepted Accounting Principles ("GAAP") and the instructions for SEC Form 10-K through the rules and interpretive releases of the SEC under federal securities law. In the opinion of management, the accompanying audited consolidated financial statements reflect all necessary adjustments consisting of normal recurring accruals for a fair presentation. All significant intercompany balances and transactions have been eliminated in the accompanying consolidated financial statements. Certain previous years' amounts in the consolidated financial statements, and notes thereto, have been reclassified to conform to the current year's presentation.

The Company has evaluated subsequent events and transactions from December 31, 2022, through the filing date of this Annual Report on Form 10-K with the SEC for potential recognition or disclosure as required by GAAP and determined that there were no material subsequent events requiring recognition or disclosure.

(b) Uses of Estimates

In preparing the consolidated financial statements in conformity with GAAP, management is required to exercise judgment in determining many of the methodologies, assumptions and estimates to be utilized. These assumptions and estimates affect the reported values of assets and liabilities as of the balance sheet dates and income and expenses for the years then ended. As future events and their effects cannot be determined with precision, actual results could differ significantly from these estimates should the assumptions and estimates used be incorrect or change over time due to changes in circumstances. Changes in those estimates resulting from continuing changes in the economic environment and other factors will be reflected in the consolidated financial statements and results of operations in future periods. The most significant areas in which management applies critical assumptions and estimates are the estimates of the allowance for credit losses for loans and available for sale securities, the reserve for unfunded commitments, and the impairment review of goodwill, which are each discussed below.

(c) Cash and Cash Equivalents

Cash equivalents are defined as highly liquid investments with original maturities of three months or less, that are readily convertible to known amounts of cash and present insignificant risk of changes in value due to changes in interest rates. The Company's cash and cash equivalents may be comprised of cash on hand and cash items due from banks, interest-earning deposits with banks (deposit accounts, excess reserve cash balances, money markets, and money market mutual fund accounts) and overnight and term federal funds ("fed funds") sold to money center banks. Balances in cash and cash equivalents will fluctuate due primarily to the timing of net cash flows from deposits, borrowings, loans and investments, and the immediate liquidity needs of the Company.

(d) Restricted Cash and Investments

Certain of the Company's derivative agreements contain provisions for collateral to be posted if the derivative exposure exceeds a threshold amount. When the Company has pledged cash as collateral in relation to certain derivatives, the cash is carried as restricted cash within "Interest-earning deposits with banks." See Note 9, "Derivatives and Hedging Activities," to the Company's consolidated financial statements of this Form 10-K below for more information about the Company's collateral related to its derivatives.
As a member of the FHLB, the Company is required to purchase certain levels of FHLB capital stock at par value in association with outstanding advances from the FHLB. From time-to-time, the FHLB may initiate the repurchase, at par value, of "excess" levels of its capital stock held by member banks. This stock is classified as a restricted investment and is carried at cost, which management believes approximates fair value. FHLB stock represents the only restricted investment held by the Company.

Management regularly reviews its holdings of FHLB stock for impairment, and as of December 31, 2022, the Company has determined that no allowance for credit losses on FHLB stock was necessary.

(e) Investment Securities

Investments in debt securities that are intended to be held for indefinite periods of time, but which may not be held to maturity or on a long-term basis are considered to be "available-for-sale" and are carried at fair value.

Included as available-for-sale are debt securities that are purchased in connection with the Company's asset-liability risk management strategy and that may be sold in response to changes in interest rates, prepayment risk and other related factors. In instances where the Company has the positive intent to hold debt securities to maturity, these securities will be classified as held-to-maturity and carried at amortized cost. As of the balance sheet dates, all the Company's debt securities were classified as available-for-sale and carried at fair value.

Net unrealized appreciation and depreciation on debt securities available-for-sale, net of applicable income taxes, are recorded in the Company's Consolidated Statement of Comprehensive Income as a component of "Accumulated other comprehensive (loss) income." The net unrealized gain or loss in the Company's debt security portfolio fluctuates as market interest rates rise and fall. Due to the fixed rate nature of this portfolio, as market rates fall, the value of the portfolio rises, and as market rates rise, the value of the portfolio declines. The unrealized gains or losses on debt securities will also decline as the securities approach maturity.

The Company's equity securities are carried at fair value with changes in fair value recognized in the Company's Consolidated Income Statement as a component of "Other income." The net gains and losses on equity securities that will be recognized as a component of "Other income" in the future will depend on the amount of dollars invested in equities, the magnitude of changes in equity markets and the amount of gains or losses realized through equity sales.

Investment securities' discounts are accreted and premiums are amortized over the period of estimated principal repayment using methods that approximate the interest method. Gains or losses on the sale of investment securities are recognized on the trade date on a specific identification basis.

ACL for Available-for-Sale Securities Methodology

In accordance with Accounting Standards Codification (ASC) "Financial Instruments—Credit Losses (Topic 326), the Company's expected credit losses on available-for-sale debt securities are presented as an allowance rather than as a write-down. The Company measures expected credit losses on available-for-sale securities based upon the unrealized gain or loss position of the security. For available-for-sale debt securities in an unrealized loss position, the Company evaluates qualitative criteria to determine any expected loss unless the Company intends to sell, or it is more likely than not that the Company will be required to sell before recovery of the amortized cost. In the latter two circumstances, the Company recognizes the entire difference between the security’s amortized cost basis and its fair value as a write-down of the investment balance with a charge to earnings. Otherwise, management’s analysis considers various factors, which include among other considerations (1) the present value of the cash flows expected to be collected compared to the amortized cost of the security, (2) duration and magnitude of the decline in value, (3) the financial condition of the issuer or issuers, and (4) structure of the security. If the Company does not expect to recover the entire amortized cost basis of the security, an allowance for credit losses for available-for-sale securities would be recorded, with a related charge to earnings, limited by the difference of the amortized cost of the security to its fair value. The Company has elected to exclude accrued interest from the measurement of the allowance for credit losses for available-for-sale debt securities and to continue to write-off uncollectible accrued interest receivable by reversing interest income.

At December 31, 2022, management performed its quarterly analysis of all securities with unrealized losses and determined that all were attributable to increases in market yields. Management concluded that no ACL for available-for-sale securities was considered necessary as of December 31, 2022.

(f) Loans Held for Sale

Depending on the current interest-rate environment, management projections of future interest rates and the overall asset-liability management program of the Company, management may elect to sell those fixed and adjustable rate residential mortgage loans which are eligible for sale in the secondary market or hold some or all of this residential loan production for the Company's portfolio. Mortgage loans are generally not pooled for sale, but instead sold on an individual basis. Enterprise may retain or sell the servicing when selling the loans. Loans sold are subject to standard secondary market underwriting and eligibility representations and warranties over the life of the loan and are subject to an early payment default period covering the first four payments for certain loan sales. Loans held for sale are carried at the lower of aggregate amortized cost or fair value on a separate line on the balance sheet. Fair value is based on comparable market prices for loans with similar rates and terms. When loans are sold, a gain or loss is recognized to the extent that the sales proceeds plus unamortized fees and costs exceed, or are less than, the carrying value of the loans. Gains and losses are determined using the specific identification method.

(g) Loans

Loans made by the Company to businesses, non-profits and professional practices include commercial real estate mortgage loans, construction and land development loans, secured and unsecured commercial loans and lines of credit, and letters of credit. Loans made to individuals include conventional residential mortgage loans, home equity lines, residential construction loans on owner-occupied primary and secondary residences, and secured and unsecured personal loans and lines of credit. Most loans granted by the Company are collateralized by real estate, equipment, or receivables and/or are guaranteed by the principals of the borrower. The ability and willingness of borrowers to honor their repayment commitments is generally dependent on the health of the real estate sector in the borrowers' geographic areas and the general economy, among other factors.

Loans are reported at the principal amount outstanding, net of deferred origination fees and costs. The aggregate amounts of overdrawn deposit accounts are reclassified as loan balances. Loan origination fees received, offset by direct loan origination costs, are deferred and amortized using the straight-line method over three years to five years for lines of credit and demand notes or over the life of the related loans using the level-yield method for all other types of loans. When loans are paid off, the unamortized fees and costs are recognized as an adjustment to interest income.

Certain of the Company's directors, officers, principal shareholders, and their associates are credit customers of the Company in the ordinary course of business. In addition, certain directors are also directors, trustees, officers or shareholders of corporations and non-profit entities or members of partnerships that are customers of the Bank and that enter into loan and other transactions with the Bank in the ordinary course of business. All loans and commitments included in such transactions are on such terms, including interest rates, repayment terms and collateral, as those prevailing at the time for comparable transactions with persons who are not affiliated with the Bank and do not involve more than a normal risk of collectability or present other features unfavorable to the Bank.

From time to time, the Company participates with other banks in the financing of certain commercial projects. In each case in which the Company participates in a loan, the rights and obligations of each participating bank are divided proportionately among the participating banks in an amount equal to their share of ownership and with equal priority among all banks. Each participation is governed by individual participation agreements executed by the lead bank and the participants at loan origination. When the participation qualifies as a sale under GAAP, the balances participated out to other institutions are not carried as assets on the Company's consolidated financial statements. The Company performs an independent credit analysis of each commitment and a review of the participating institution prior to participation in the loan, and an annual review thereafter of each participating institution. Loans originated by other banks in which the Company is the participating institution are carried in the loan portfolio at the Company's pro rata share of ownership. Participating loans with other institutions provide banks the opportunity to retain customer relationships and reduce credit risk exposure among each participating bank, while providing customers with larger credit vehicles than the individual bank might be willing or able to offer independently.

The Company seeks to lessen its credit risk exposure by managing its loan portfolio to avoid concentration by industry, relationship size and source of repayment, and through sound underwriting practices and the credit risk management function; however, management recognizes that credit losses will occur and that the amount of these losses will fluctuate depending on the risk characteristics of the loan portfolio and economic conditions.

(h) Credit Risk Management and ACL for Loans Methodology

Inherent in the lending process is the risk of loss due to customer non-payment, or "credit risk." The Company's commercial lending focus may entail significant additional credit risks compared to long-term financing on existing, owner-occupied residential real estate. The credit risk management function focuses on a wide variety of factors and early detection of credit issues is critical to minimize credit losses. Accordingly, management regularly monitors these factors, among others, through ongoing credit reviews by the Company's Credit Department, an external loan review service, reviews by members of senior management as well as reviews by the Board's Loan Committee and the Board. This review includes the assessment of internal credit quality indicators such as, among others, the risk classification of loans, past due and non-accrual loans, individually evaluated and troubled debt restructured loans, and the level of foreclosure activity.

Credit Risk Management

The Company's loan risk rating system classifies loans depending on risk of loss characteristics. The classifications range from "substantially risk free" for the highest quality loans and loans that are secured by cash collateral, through a satisfactory range of "minimal," "moderate," "better than average," and "average" risk, all of which are considered "pass" rated credits. The adverse classifications range from "special mention," for loans that may need additional monitoring, to the more severe classifications of "substandard," "doubtful," and "loss" based on criteria established under banking regulations. Loans which are evaluated to be of weaker credit quality are classified as adverse and placed on the "watch asset list" and reviewed on a more frequent basis by management. Loans classified as "substandard" include those characterized by the distinct possibility that the Company will sustain some loss if the deficiencies are not corrected. Loans classified as "doubtful" have all the weaknesses inherent in a substandard rated loan with the added characteristic that the weaknesses make collection or full payment from liquidation, based on existing facts, conditions, and values, highly questionable and improbable. Loans classified as "loss" are generally considered uncollectible at present, although long term recovery of part or all of loan proceeds may be possible. These "loss" loans would require a specific loss reserve or charge-off. Adversely classified loans may be accruing or in non-accrual status and may be additionally designated as impaired or restructured, or some combination thereof.

Loans on which the accrual of interest has been discontinued are designated as non-accrual loans and the classified portions are credit downgraded to one of the adversely classified categories noted above. Accrual of interest on loans is generally discontinued when a loan becomes contractually past due, with respect to interest or principal, by 90 days, or when reasonable doubt exists as to the full and timely collection of interest or principal. When a loan is placed on non-accrual status, all interest previously accrued but not collected is reversed against current period interest income. Interest accruals are resumed on such loans only when payments are brought current and have remained current for a period of 180 days or when, in the judgment of management, the collectability of both principal and interest is reasonably assured. Interest payments received on loans in a non-accrual status are generally applied to principal on the books of the Company.

Loans individually evaluated consist primarily of loans for which management considers it probable that not all amounts due (principals and interest) will be collected in accordance with the original contractual terms and loans designated as TDRs and to a lesser extent, if applicable, loans that management deems as individually significant or with unique risk characteristics or for some other reason based on management’s judgement. Management considers the individual payment status, net worth and

earnings potential of the borrower, and the value and cash flow of the collateral as factors to determine if a loan will be paid in accordance with its contractual terms.

Loans are designated as a TDR when, as part of an agreement to modify the original contractual terms of the loan as a result of financial difficulties of the borrower, the Bank grants the borrower a concession on the terms that would not otherwise be considered. Typically, such concessions may consist of one or a combination of the following: a reduction in interest rate to a below market rate, taking into account the credit quality of the note, extension of additional credit based on receipt of adequate collateral, or a deferment or reduction of payments (principal or interest), which materially alters the Bank's position or significantly extends the note's maturity date, such that the present value of cash flows to be received is materially less than those contractually established at the loan’s origination. All loans that are modified are reviewed by the Company to identify if a TDR has occurred. TDR loans are included in the individually evaluated loan category and as such, these loans are individually reviewed and evaluated for specific reserves.

Individually evaluated adversely classified loans will be considered for upgrade based on the borrower's sustained performance over time and their improving financial condition. Consistent with the criteria for returning non-accrual loans to accrual status, the borrower must demonstrate the ability to continue to service the loan in accordance with the original or modified terms and, in the judgment of management, the collectability of the remaining balances, both principal and interest, are reasonably assured.
A specific allowance is assigned to the loan for the amount of estimated credit loss. Individually evaluated loans are charged-off, in whole or in part, when management believes that the recorded investment in the loan is uncollectible.

ACL for Loans Methodology

In accordance with ASC "Financial Instruments—Credit Losses (Topic 326)," the CECL methodology requires early recognition of credit losses using a lifetime credit loss measurement approach that also requires the consideration of reasonable and supportable forecasts in the estimate. The measurement of expected credit losses under the CECL methodology is applicable to financial assets measured at amortized cost, which for the Company is primarily the loan portfolio. It also applies to off-balance sheet credit exposures such as loan commitments, standby letters of credit, financial guarantees, and other similar instruments, which are not unconditionally cancellable. Additionally, the Company has elected to continue to present the accrued interest receivable balance on loans separate from amortized costs, exclude accrued interest from the measurement of the allowance for credit losses for loans and to continue to write-off uncollectible accrued interest receivable by reversing interest income.

The ACL for loans is established through a provision for credit losses, recorded as a direct charge to earnings. The ACL for loans is a valuation account that is deducted from the amortized cost to present the net amount of the loan portfolio expected to be collected. Credit losses are charged against the ACL for loans when management believes that the collectability of the amortized cost of a loan's principal balance is unlikely. Recoveries on loans previously charged-off are credited to the ACL for loans, generally at the time cash is received on a charged-off account.

Arriving at an appropriate level of ACL for loans involves a high degree of management judgement. The underlying assumptions, estimates and assessments used to estimate the ACL for loans reflects the Company’s best estimate of model assumptions and forecasted conditions at that time. Changes in such estimates can significantly affect the ACL for loans and the provision for credit losses. It is possible and likely that the Company will experience credit losses that are different from the current estimates and future additions to the ACL for loans may be necessary.

On a quarterly basis, the Company makes an assessment to estimate the ACL for loans necessary to cover expected credit losses from the loan portfolio as of the specified balance sheet dates. The adequacy of the ACL for loans is reviewed and evaluated on a regular basis by an internal management committee, a sub-committee of the Company's Board of Directors (the "Board") and the full Board.

In addition, various regulatory agencies, as an integral part of their examination process, periodically review the Company's ACL for loans. Such agencies may require the Company to recognize additions to the ACL for loans based on judgments different from those of management.

In making its assessment on the adequacy of the ACL for loans, management considers several quantitative and qualitative factors from internal and external sources relating to past events, current conditions, and reasonable and supportable forecasts.

The Company uses a systematic methodology to measure the amount of estimated loan losses. The methodology uses a two-tiered approach that applies general reserves for larger groups of pass-rated homogeneous loans, segmented by loan type and for adversely classified loans not individually evaluated, segmented by internal risk rating, and specific reserves for loans individually evaluated.

Loans collectively evaluated

The general loss allocation factors consider the quantitative historic loss experience, qualitative or environmental factors such as those identified above, forecasts over the estimated life of the loan pools, as well as regulatory guidance and industry data.

I. Pass-rated loans by loan type:

Management segments pass-rated loans using the Open Pool method by first calculating each segment's loss rate as net charge-offs over the expected average life of each segment, divided by the average loan balance over that same period. The historic loss factor is an average of the loss rate over each segment's look-back period, which is defined as the average age of charged-off loans, specific to each segment. These historic loss factors are then adjusted up or down based on management's assessment of quantitative and qualitative factors. These key factors including quantitative facts about the loan portfolio such as: commercial concentrations by industry, property type and real estate location; the growth and composition of the loan portfolio; trends in risk classification of individual loans and higher risk problem assets; the level of delinquent loans and non-performing loans; individually evaluated and restructured loans; the level of foreclosure activity; net charge-offs; as well as trends in the general levels of these indicators. In addition, management monitors qualitative factors such as: expansion in the Company's geographic market area; the experience level of lenders and any changes in underwriting criteria; including general conditions in the multi-family, commercial real estate and construction and development markets in the Company's local region as well as changes in current and forecasted economic conditions, such as changes in gross domestic product, the unemployment rate and new jobs created, real estate values, commercial vacancy rates, recession risk estimates and other relevant economic factors. Management generally uses a two-year reasonable and supportable forecast, and for periods beyond the forecast period, reverts immediately to historical loss rates.
Management weighs the current effect of each of these areas on each particular pass-rated loan segment in determining the allowance allocation factors. Management must exercise significant judgment when evaluating the effect of these quantitative and qualitative factors on the amount of the ACL for loans because data may not be reasonably available or directly applicable to determine the precise impact of a factor on the collectability of the loan segment as of the evaluation date. The methodology contemplates a range of acceptable levels for these factors due to the subjective nature of the factors and the qualitative considerations related to the credit risk in the portfolio.

II. Adversely classified loan by credit rating:

For determining the reserve percentages for adversely classified loans, management has segmented the portfolio by risk rating: Special mention; Substandard; Doubtful; or Loss, after excluding loans that are individually evaluated for impairment. The historic loss factor for adverse loan segments was determined by first tracking a sampling of these loans over a period of time, to determine their ultimate resolution. Those balances resulting in charge-offs were calculated as a percentage of the segment's loan balance and an average was calculated over that same period. This average period may be changed from time to time to be reflective of the most appropriate corresponding conditions (market, economic, etc.). These historic loss factors are then adjusted up or down based on management's assessment of qualitative factors that are likely to cause estimated credit losses as of the evaluation date to differ from the segment's historical loss experience. Management also utilizes regulatory guidance and industry data in relation to the Company's own portfolio statistics as a basis for assessing the reasonableness of the allocation factors for each class of problem-assets.

Management recognizes that additional issues may also impact the estimate of expected credit losses to some degree. From time to time management will re-evaluate the qualitative factors, regulatory guidance, and industry data in use in order to consider the impact of other issues which, based on changing circumstances, may become more significant in the future.

Loans individually evaluated

For loans that are individually evaluated, management estimates the credit loss by comparing the loan's carrying value against either (i) the present value of the expected future cash flows discounted at the loan's effective interest-rate; (ii) the loan's observable market price; or (iii) the expected realizable fair value of the collateral, in the case of collateral dependent loans. A specific allowance is assigned to the loan for the amount of estimated credit loss. Individually evaluated loans are charged-off, in whole or in part, when management believes that the recorded investment in the loan is uncollectible.

Reserve for unfunded commitments

The reserve for unfunded commitments is included in the line item "Accrued expenses and other liabilities" on the Company's Consolidated Balance Sheets. Management applies the CECL methodology to off-balance sheet commitments in a manner consistent with on balance sheet pass-rated loans. Additionally, the estimate of credit loss incorporates assumptions for both the likelihood and amount of funding over the estimated life of the commitments, including adjustments for current conditions and reasonable and supportable forecasts. Management periodically reviews and updates its assumptions for estimated funding rates.

(i) Other Real Estate Owned

Real estate acquired by the Company through foreclosure proceedings or the acceptance of a deed in lieu of foreclosure is classified as other real estate owned ("OREO"). When property is acquired, it is recorded at the estimated fair value of the property acquired, less estimated costs to sell, establishing a new cost basis and carried on the Consolidated Balance Sheet in the line item "Prepaid expenses and other assets." The estimated fair value is based on market appraisals and the Company's internal analysis. Any loan balance more than the estimated realizable fair value on the date of transfer is charged to the allowance for credit losses on that date. All costs incurred thereafter in maintaining the property, as well as subsequent declines in fair value are charged to non-interest expense.

(j) Premises and Equipment

Land is carried at cost. All other premises and equipment costs are stated at cost less accumulated depreciation and amortization. Depreciation or amortization is computed on a straight-line basis over the lesser of the estimated useful lives of the asset or the respective lease term (including renewal options reasonably certain to be exercised) for leasehold improvements generally as follows:

Bank premises, land improvements, and leasehold improvements	10 to 39 years
Computer software and equipment	3 to 5 years
Furniture, fixtures, and equipment	3 to 10 years

(k) Leases

Lessees are recognized as right-of-use ("ROU") lease assets and lease liabilities on the balance sheet for all leases with terms longer than 12 months. The lease liability represents the present value of the future lease payments. The ROU asset includes the lease liability, lease prepayments and initial direct costs, less fixed payment lease liabilities. For the Company, leases consist mainly of operating leases on our facilities, mainly branch leases.

The Company excludes leases with a term of 12 months or less from the recorded lease liability and ROU asset and accounts for lease and non-lease components (such as common area maintenance) separately. To calculate the lease liability, the Company uses its incremental borrowing rate as the discount rate to determine the net present value of the lease liability. In determining the term of a lease, the Company included option renewal periods that it considered reasonably certain to be exercised.

The Company recognizes lease expense on a straight-line basis in the "Occupancy and equipment expenses" line item within the non-interest expense section of the Consolidated Statement of Income.

(l) Bank Owned Life Insurance

The Company has purchased bank-owned life insurance ("BOLI") as an investment vehicle, on certain current and former senior and executive officers, utilizing the earnings on BOLI to offset the cost of the Company's benefit plans. There are no associated surrender charges under the outstanding policies.

(m) Impairment of Long-Lived Assets Other than Goodwill

The Company reviews long-lived assets, including premises, equipment, and lease right of use assets for impairment on an ongoing basis or whenever events or changes in business circumstances indicate that the remaining useful life may warrant revision or that the carrying amount of the long-lived asset may not be fully recoverable. If impairment is determined to exist, any related impairment loss is recognized through a charge to earnings. Impairment losses on assets disposed of, if any, are based on the estimated proceeds to be received, less cost of disposal.

(n) Goodwill

Goodwill is carried on the Company's consolidated financial statements and is related to the Company's acquisition of two branch offices in July 2000.

In accordance with GAAP, the Company does not amortize goodwill and instead, at least annually, evaluates whether the carrying value of goodwill has become impaired. A determination that goodwill has become impaired results in an immediate write-down of goodwill to its determined value with a resulting charge to the Company's Consolidated Statement of Income. Goodwill is evaluated at the reporting unit level. In the case of the Company, the services offered through the Bank and subsidiaries are managed as one strategic unit and represent the Company’s only reportable operating segment.

The Company has the option to perform either (i) a qualitative assessment of whether it is "more likely than not" that the reporting unit's fair value is less than its book value, or (ii) a quantitative assessment.

1. Management's qualitative assessment would take into consideration, among other items, macroeconomic conditions, industry and market considerations, cost or margin factors, financial performance and share price. Based on the qualitative assessment, if the Company were to conclude: a) it is "more likely than not" that the fair value of a reporting unit exceeds its book value, goodwill is deemed not impaired, or b) it is "more likely than not" that the fair value of a reporting unit is less than its book value, a quantitative goodwill analysis must be performed.

2. The Company may elect to forgo the qualitative assessment and perform the quantitative analysis even if management believes that is "more likely than not" that goodwill is not impaired. The quantitative goodwill analysis compares the fair value of the reporting unit with its book value, including goodwill. If the fair value of the reporting unit equals or exceeds its book value, goodwill is deemed not impaired. If the book value of the reporting unit exceeds its fair value, a goodwill impairment loss is recognized for the difference between these amounts, not exceeding the goodwill carrying amount.

At December 31, 2022, based on the Company's quantitative analysis, goodwill was deemed not impaired.

(o) Wealth Assets Under Management and Administration

Wealth assets under management consist of assets managed through Enterprise Wealth Management and Enterprise Wealth Services. Wealth assets under administration consist of 401(k) plans, trust, and custodial accounts. Wealth assets under management and administration are not included in the Consolidated Balance Sheets because they are not assets of the Company.

(p) Derivatives and Hedging

The Company records all derivatives on the balance sheet at fair value. Asset derivatives are included in the line item "Prepaid expenses and other assets," and liability derivatives are included in the "Accrued expenses and other liabilities" line item on the Consolidated Balance Sheets.

The accounting for changes in the fair value of derivatives depends on the intended use of the derivative. On the date the derivative instrument is entered into, the Company designates whether the derivative is part of a hedging relationship (i.e., cash flow or fair value hedge). The Company also assesses, both at the hedge’s inception and on an ongoing basis, whether the derivatives used in hedging transactions are highly effective in offsetting the changes in cash flows or fair values of hedged items.

Fair value hedges are considered a hedge of the exposure to changes in the fair value of an asset, liability or firm commitment attributable to a particular risk, such as interest rate risk. For derivatives designated and qualifying as fair value hedges, changes in the fair value are recognized in earnings.

Cash flow hedges are considered a hedge of the exposure to the variability in expected future cash flows, or other types of forecasted transactions. For derivatives designated and qualifying as cash flow hedges, changes in the fair value of derivative instruments that are highly effective are recorded in other comprehensive income (loss), net of tax and subsequently reclassified into earnings in the same period during which the hedged transaction affects earnings. Any hedge ineffectiveness is recognized directly in earnings.

For derivative instruments not designated as hedging instruments, such as back-to-back interest rate swaps and risk participation agreements, changes in fair value are recognized in earnings.

See Note 9, "Derivatives and Hedging Activities," to the Company's consolidated financial statements of this Form 10-K, contained below, for further information on the Company's derivative and hedging activities.

(q) Revenue Recognition

Interest and dividend income (primarily loan interest income from customers) are our primary sources of revenue and are outside of the scope of ASC 606, "Revenue from Contracts with Customers," and are accounted for under other ASC topics. The core principles of this standard require an entity to recognize revenue on the transfer of goods and services to customers as performance obligations are satisfied.

The primary areas of income for the Company within the scope of ASC 606 are wealth management fees and deposit and interchange fees which are components of non-interest income on the Company's Consolidated Statements of Income and are discussed below.

Wealth management fees consist of income generated through our wealth management services. Wealth management income is generated primarily by managing customers' financial assets. Revenue is recognized as our performance obligation is completed each month. Revenue earned through our wealth services platform is generated through a third-party arrangement to refer, manage and service customers. For new sales and referrals along with transactional type charges, the performance obligation is based on a point in time and the payment is received and revenue is recognized in the same month as the revenue generating activity. For managing and servicing customers, revenue is recognized when our performance obligation is completed each month.

Deposit and interchange fees are comprised of deposit account related charges and income generated from electronic payment interchanges. Deposit account charges consist of certain transactional analysis fees net of earning balance credits, monthly account service fees, and transactional fees such as overdraft fees. Analysis and monthly account services fees are recognized over the period the service is performed. For transactional fees, the performance obligation and the revenue are recognized at a point of time and payment is typically received as the service is rendered. Interchange income is generated primarily from retail debit card transactions processed through the card payment network. The performance obligation and the revenue are recognized when the service is performed.

The following non-interest income components are not subject to ASC 606: income on BOLI, net gains/losses on investment securities, and net gains on sales of loans, and are covered under other ASC topics. The remaining revenue items in non-interest income are not material.

(r) Stock-Based Compensation

The Company currently has one active stock incentive plan: The Enterprise Bancorp, Inc. 2016 Stock Incentive Plan, as amended (the "2016 Plan"). The 2016 Plan permits the Board to grant, under various terms, both incentive and non-qualified stock options (for the purchase of newly issued shares of common stock), restricted stock, restricted stock units and stock appreciation rights to officers and other employees, and to non-employee directors and consultants. The 2016 Plan also allows for newly issued shares of common stock to be issued without restrictions to officers and other employees, and non-employee directors and consultants.

As of December 31, 2022, 442,051 common shares remained available for future grants under the 2016 Plan. Awards previously granted under an earlier, now expired plan remain outstanding and may be exercised through 2028.

Under terms of the 2016 Plan, option exercised and restricted stock awards vested may be net settled to cover payment for option costs and employee tax obligations, resulting in shares of common stock being reacquired by the Company and returned to the pool of shares reserved for issuance under the incentive plans. In accordance with Massachusetts law, shares reacquired by the Company will be treated as authorized but unissued shares.

The non-employee members of the Company's Board may opt to receive newly issued shares of the Company's common stock in lieu of cash compensation for attendance at Board and Board Committee meetings. These shares are issued annually each January for Board meetings held in the previous year. Directors must make an irrevocable election to receive shares of common stock in lieu of cash fees prior to December 31st of the preceding year. Directors are granted shares of common stock in lieu of cash fees based on an average quarterly close price of the Company's common stock on the NASDAQ Global Market during the year.

From time to time, the Company issues shares to community members for consulting on regional advisory councils and grants shares of fully vested stock as employee anniversary awards. These shares vest immediately and the cost, which is based on the market price on the date of grant and deemed to be immaterial, is expensed in the period in which the services are rendered.

The Company's consolidated financial statements include stock-based compensation expense for the portion of stock option awards and stock awards for which the requisite service has been rendered during the period or the estimate of achieving certain predefined performance objectives. The compensation expense has been recorded based on the estimated grant-date fair value of the stock option awards with no adjustment for estimated forfeitures, or in the case of stock awards, the market value of the common stock on the date of grant. Expense adjustments are made for actual forfeitures as they occur.

The Company will recognize the remaining estimated compensation expense for the portion of outstanding awards and compensation expense for any future awards, net of actual forfeitures, as the requisite service is rendered (i.e., on a straight-line basis over the remaining vesting period of each award) or as performance objectives are met. Stock awards that do not require future service ("vested awards") will be expensed immediately. Stock-based compensation also includes director stock compensation for stock awards and stock in lieu of cash fees, both included in other operating expenses.

See Note 14, "Stock-Based Compensation," to the Company's consolidated financial statements of this Form 10-K, contained below, for further information on the Company's stock incentive plans and terms of outstanding awards and the Company's stock-based compensation.

(s) Income Taxes

The Company and its subsidiaries file income tax returns in the U.S. federal jurisdiction and various states, within the directives of the respective enacted tax legislation. The Company uses the asset and liability method of accounting for income taxes. Under this method, deferred tax assets and liabilities are recognized for the future tax expense or benefit attributable to differences between the financial statement carrying amounts and the tax basis of assets and liabilities. The deferred tax assets and liabilities are reflected at currently enacted income tax rates applicable to the period in which the deferred tax assets or liabilities are expected to be realized or settled. As changes in tax laws or rates are enacted, deferred tax assets and liabilities will be adjusted accordingly through the provision for income taxes in the period that includes the enactment date.

The Company's policy is to classify interest resulting from underpayment of income taxes as income tax expense in the first period the interest would begin accruing according to the provisions of the relevant tax law. The Company classifies penalties resulting from underpayment of income taxes as income tax expense in the period for which the Company claims or expects to claim an uncertain tax position or in the period in which the Company's judgment changes regarding an uncertain tax position.

The income tax provisions will differ from the expense that would result from applying the federal statutory rate to income before taxes, due primarily to the impact of state tax expense, tax-exempt interest from certain investment securities, loans and BOLI and the tax impact from equity compensation activity.

Deferred income taxes are recognized based on the expected future tax consequences of differences between the financial statement and tax basis of assets and liabilities, calculated using currently enacted tax rates. Management records net deferred tax assets to the extent we believe these assets will more likely than not be realized. In making this determination, we consider all available positive and negative evidence, including recent financial operations and projected future taxable income.

(t) Earnings per Share

Basic earnings per share are calculated by dividing net income available to common shareholders by the weighted average number of common shares outstanding (including participating securities) during the year. The Company's only participating securities are unvested restricted stock awards that contain non-forfeitable rights to dividends. Diluted earnings per share reflects the effect on weighted average shares outstanding of the number of additional shares outstanding if dilutive stock options were converted into common stock using the treasury stock method.

(u) Reporting Comprehensive Income

Comprehensive income is defined as all changes to shareholders' equity except investments by and distributions to shareholders. Net income is one component of comprehensive income, with other components referred to in the aggregate as other comprehensive income. The Company's other comprehensive income components are the changes in fair value of debt securities and cash flow hedges, both net of income taxes. Pursuant to GAAP, the Company initially excludes the unrealized holding gains and losses from net income; however, they are later reported as reclassifications out of accumulated other comprehensive income into net income when circumstances warrant.

When debt securities are sold, the reclassification of realized gains and losses on available-for-sale securities are included on the Consolidated Statements of Income under the "Non-interest income" subheading on the line item "Net gains (losses) on sales of available-for-sale debt securities" and the related income tax expense is included in the line item "Provision for income taxes."

For cash flow hedges of interest rate risk, the change in fair value will be reclassified in the same period during which the hedged transaction affects earnings, to either interest expense as interest is incurred on the Company's hedge liability, or to interest income as interest is earned on the Company's hedge asset. The reclassification of gain or loss on the derivatives are included on the Consolidated Statements of Income under "Interest income" or "Interest expense" line item and the related income tax expense is included in the line item "Provision for income taxes," both of which are also detailed in Note 11, "Comprehensive Income (Loss)," of this Form 10-K.

See Note 11, "Comprehensive Income (Loss)," of this Form 10-K for additional information related to the reconciliation of changes in the components of other comprehensive income / loss and accumulated other comprehensive income / loss.

(v) Dividends

Neither the Company nor the Bank may declare or pay dividends on its stock if the effect thereof would cause shareholders' equity to be reduced below applicable regulatory capital requirements or if such declaration and payment would otherwise violate regulatory requirements.

As the principal asset of the Company, the Bank currently provides the only source of cash for the payment of dividends by the Company. Under Massachusetts law, trust companies such as the Bank may pay dividends only out of "net profits" and only to the extent that such payments will not impair the Bank's capital stock. Any dividend payment that would exceed the total of the Bank's net profits for the current year plus its retained net profits of the preceding two years would require the Massachusetts Division of Banks' approval. Applicable provisions of the FDIC Improvement Act also prohibit a bank from paying any dividends on its capital stock if the bank is in default on the payment of any assessment to the FDIC or if the payment of dividends would otherwise cause the bank to become "undercapitalized." Any restrictions, regulatory or otherwise, on the ability of the Bank to pay dividends to the Company may restrict the ability of the Company to pay dividends to the holders of its common stock.

The statutory term "net profits" essentially equates with the accounting term "net income" and is defined under the Massachusetts banking statutes to mean the remainder of all earnings from current operations plus actual recoveries on loans and investments and other assets after deducting from such total all current operating expenses, actual losses, accrued dividends on any preferred stock and all federal and state taxes.

In addition, the Company maintains a dividend reinvestment and direct stock purchase plan (together, the "DRSPP") which enables shareholders, at their discretion, to elect to reinvest cash dividends paid on their shares of the Company's common stock by purchasing additional shares of common stock from the Company at a purchase price equal to fair market value. Under the DRSPP, shareholders and new investors also have the opportunity to purchase shares of the Company's common stock without brokerage fees, subject to monthly minimums and maximums.

(w) Recent Accounting Pronouncements

Accounting pronouncements not yet adopted by the Company

In March 2022, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") 2022-01, Derivatives and Hedging (Topic 815): Fair Value Hedging—Portfolio Layer Method. This ASU clarifies the guidance on fair value hedge accounting of interest rate risk for portfolios of financial assets. The ASU amends the guidance in ASU 2017-12 Derivatives and Hedging (Topic 815): Targeted Improvements to Accounting for Hedging Activities, that, among other things, established the "last-of-layer" method for making the fair value hedge accounting for these portfolios more accessible. ASU 2022-01 renames that method the "portfolio layer" method and addresses feedback from stakeholders regarding its application. For the Company, ASU 2022-01 is effective for fiscal years beginning after December 15, 2022, including interim periods within those fiscal years. The Company is currently assessing the impact of this ASU and expects that this ASU will not have a material impact to the consolidated financial statements.

In March 2022, the FASB issued ASU 2022-02, Financial Instruments—Credit Losses (Topic 326), Troubled Debt Restructurings and Vintage Disclosures. This ASU eliminates the accounting guidance for troubled debt restructurings by creditors that have adopted the current expected credit loss ("CECL") methodology for estimating allowances for credit losses and enhances the disclosure requirements for loan restructurings made with borrowers experiencing financial difficulty. In addition, the amendments require a public business entity to disclose current-period gross charge-offs for financing receivables and net investment in leases by year of origination in the vintage disclosures. For the Company, ASU 2022-02 is effective for fiscal years beginning after December 15, 2022, including interim periods within those fiscal years. The Company is currently assessing the impact of this ASU and expects that implementation will not have a material impact to the consolidated financial statements.

Accounting pronouncements adopted by the Company

In August 2021, the FASB issued ASU 2021-06, Presentation of Financial Statements (Topic 205), Financial Services—Depository and Lending (Topic 942), and Financial Services—Investment Companies (Topic 946). This ASU incorporates recent SEC rule changes into the FASB Codification, including SEC Final Rule Releases No. 33-10786, Amendments to Financial Disclosures about Acquired and Disposed Businesses, and No. 33-10835, Update of Statistical Disclosures for Bank and Savings and Loan Registrants. The rules reduce the required reporting periods to align them with the relevant financial statement periods required by SEC rules and requires certain statistical disclosures for annual periods, and interim disclosures if a material change in the information, or trend, has occurred. The amendments in this update are effective upon addition to the FASB Codification and apply to fiscal years ending on or after December 15, 2021. However, voluntary early compliance is permitted upon the effective date, provided that the rules are applied in their entirety. The amended disclosures did not have a material impact on the consolidated financial statements.

(2) Investment Securities

As of December 31, 2022, and 2021, the investment portfolio was comprised primarily of debt securities, with a small portion of the investment portfolio invested in equity securities.

Debt Securities

All of the Company's debt securities were classified as available-for-sale and carried at fair value as of the dates specified in the tables below. The amortized cost and fair values of debt securities at the dates specified are summarized as follows:

	2022			
(Dollars in thousands)	Amortized Cost	Unrealized Gains	Unrealized Losses	Fair Value
Federal agency obligations	$ 5,014	$ —	$ 37	$ 4,977
U.S. treasury securities	45,942	—	2,691	43,251
Federal agency CMO	474,777	3	67,798	406,982
Federal agency MBS	24,172	27	3,178	21,021
Taxable municipal securities	287,435	29	48,187	239,277
Tax-exempt municipal securities	84,457	66	870	83,653
Corporate bonds	6,480	—	186	6,294
Subordinated corporate bonds	11,950	—	1,303	10,647
Total debt securities, at fair value	$ 940,227	$ 125	$ 124,250	$ 816,102

	2021			
(Dollars in thousands)	Amortized Cost	Unrealized Gains	Unrealized Losses	Fair Value
U.S. treasury securities	$ 62,850	$ —	$ 684	$ 62,166
Federal agency CMO	489,789	5,672	8,748	486,713
Federal agency MBS	22,794	517	417	22,894
Taxable municipal securities	272,507	5,607	2,264	275,850
Tax-exempt municipal securities	87,024	5,648	—	92,672
Corporate bonds	8,559	441	—	9,000
Subordinated corporate bonds	7,000	135	—	7,135
Total debt securities, at fair value	$ 950,523	$ 18,020	$ 12,113	$ 956,430

At December 31, 2022, management performed its quarterly analysis of all securities with unrealized losses and determined that the losses were primarily attributable to significant increases in market interest rates experienced during 2022. Management concluded that no ACL for available-for-sale securities was necessary as of December 31, 2022 and anticipates they will mature or be called at par value.

Accrued interest receivable on available-for-sale debt securities, included in the "Accrued Interest Receivable" line item on the Company’s Consolidated Balance Sheets, amounted to $4.0 million and $3.2 million at December 31, 2022 and December 31, 2021, respectively.

The following tables summarize the duration of unrealized losses for debt securities at December 31, 2022 and 2021:

	2022						
	Less than 12 months		12 months or longer		Total		
(Dollars in thousands)	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses	# of Holdings
Federal agency obligations	$ 4,977	$ 37	$ —	$ —	$ 4,977	$ 37	1
U.S. treasury securities	2,878	109	40,374	2,582	43,252	2,691	6
Federal agency CMO	164,391	13,004	233,051	54,794	397,442	67,798	102
Federal agency MBS	9,923	797	9,165	2,381	19,088	3,178	11
Taxable municipal securities	93,345	10,411	144,903	37,776	238,248	48,187	273
Tax-exempt municipal securities	66,277	870	—	—	66,277	870	112
Corporate bonds	6,294	186	—	—	6,294	186	31
Subordinated corporate bonds	6,206	743	4,440	560	10,646	1,303	6
Total temporarily impaired debt securities	$ 354,291	$ 26,157	$ 431,933	$ 98,093	$ 786,224	$ 124,250	542

	2021						
	Less than 12 months		12 months or longer		Total		
(Dollars in thousands)	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses	# of Holdings
U.S. treasury securities	$ 62,166	$ 684	$ —	$ —	$ 62,166	$ 684	9
Federal agency CMO	266,313	6,627	51,281	2,121	317,594	8,748	43
Federal agency MBS	11,447	417	—	—	11,447	417	2
Taxable municipal securities	117,388	2,023	6,727	241	124,115	2,264	118
Total temporarily impaired debt securities	$ 457,314	$ 9,751	$ 58,008	$ 2,362	$ 515,322	$ 12,113	172

The contractual maturity distribution at December 31, 2022 of debt securities was as follows:

(Dollars in thousands)	Amortized Cost	Fair Value
Due in one year or less	$ 43,339	$ 42,198
Due after one, but within five years	138,786	133,768
Due after five, but within ten years	309,466	260,922
Due after ten years	448,636	379,214
Total debt securities	$ 940,227	$ 816,102

Scheduled contractual maturities shown above may not reflect the actual maturities of the investments. The actual MBS/CMO cash flows likely will be faster than presented above due to prepayments and amortization. Similarly, included in the table above are callable securities, comprised of municipal securities and corporate bonds, with a fair value of $157.3 million at December 31, 2022, which can be redeemed by the issuers prior to the maturity presented above. Management considers these factors when evaluating the interest-rate risk in the Company's asset-liability management program.

From time to time the Company may pledge debt securities as collateral for deposit account balances of municipal customers, and for borrowing capacity with the FHLB and the Federal Reserve Bank of Boston ("FRB"). The fair value of debt securities pledged as collateral for these purposes was $804.2 million and $949.3 million at December 31, 2022 and 2021, respectively.

Sales of debt securities, for the years ended December 31, 2022, 2021 and 2020 are summarized as follows:

(Dollars in thousands)	2022	2021	2020
Amortized cost of debt securities sold[(1)]	$ 71,593	$ 2,931	$ 5,680
Gross realized gains on sales	1,061	128	227
Gross realized losses on sales	(3,034)	—	—
Total proceeds from sales of debt securities	$ 69,620	$ 3,059	$ 5,907

(1) Amortized cost of investments sold is determined on a specific identification basis and includes pending trades based on trade date, if applicable.

Tax-exempt interest earned on the municipal securities portfolio was $3.4 million for the years ended December 31, 2022 and 2021, and $3.5 million for the year ended December 31, 2020.

The average balance of tax-exempt investments was $86.0 million and $87.8 million for the years ended December 31, 2022 and December 31, 2021, respectively.

Equity Securities

As of December 31, 2022, the Company held equity securities with a fair value of $4.3 million, compared to $1.8 million at December 31, 2021. At December 31, 2022, the equity securities portfolio consisted of investments market index funds and common stock of entities in the financial services industry. Included in the equity securities portfolio were mutual funds with a fair value of $1.4 million and $924 thousand at December 31, 2022 and December 31, 2021, respectively, held in conjunction with the Company's supplemental executive retirement and deferred compensation plan.

Gains and losses on equity securities at December 31, 2022 and December 31, 2021 are summarized as follows:

(Dollars in thousands)	2022	2021
Net (losses) gains recognized during the period on equity securities	$ (514)	$ 246
Less: Net (losses) gains realized on equity securities sold during the period	(17)	57
Unrealized gains (losses) recognized during the reporting period on equity securities still held at the end of the period	$ (497)	$ 189

(3) Loans

Loan Portfolio Classifications

Major classifications of loans at amortized cost at the periods indicated were as follows:

(Dollars in thousands)	December 31, 2022	December 31, 2021
Commercial real estate	$ 1,921,410	$ 1,680,792
Commercial and industrial[1]	414,490	412,070
Commercial construction	424,049	410,443
SBA PPP[1]	—	71,502
Total commercial loans	2,759,949	2,574,807
Residential mortgages	332,632	256,940
Home equity	79,807	80,467
Consumer	8,130	8,470
Total retail loans	420,569	345,877
Total loans	3,180,518	2,920,684
Allowance for credit losses	(52,640)	(47,704)
Net loans	$ 3,127,878	$ 2,872,980

(1) PPP loans outstanding at December 31, 2022 of $2.2 million were transferred to the commercial and industrial portfolio.

Net deferred loan origination fees, included in the amortized costs of loans reflected in the table above, amounted to $5.2 million, including $34 thousand of deferred PPP fees, at December 31, 2022 and $7.5 million, including $2.4 million of deferred PPP fees, at December 31, 2021. Accrued interest receivable on loans amounted to $13.1 million and $10.2 million at December 31, 2022 and December 31, 2021, respectively, and was included in the "Accrued interest receivable" line item on the Company's Consolidated Balance Sheets.

Commercial loans originated by other banks in which the Company is a participating institution are carried at the pro-rata share of ownership and amounted to $94.8 million at December 31, 2022 and $62.6 million at December 31, 2021. See also "Loans serviced for others" below for information related to commercial loans participated out to various other institutions.

At December 31, 2022, the majority of PPP loans outstanding are no longer expected to be forgiven by the SBA. The Company expects that loans that were originated under the PPP and remained outstanding at December 31, 2022 will be repaid as agreed with any remaining balance guaranteed by the SBA.

Related Party Loans

As of December 31, 2022 and 2021, the outstanding loan balances to directors, officers, principal shareholders, and their associates were $33.5 million and $37.7 million, respectively. All loans to these related parties were current and accruing as of those dates. Unadvanced portions of lines of credit available to these individuals were $12.5 million and $14.5 million, as of December 31, 2022 and 2021, respectively. During 2022, new loans and net increases in loan balances or lines of credit under existing commitments of $5.2 million were made and principal pay-downs of $11.4 million were received. During 2021, new loans and net increases in loan balances or lines of credit under existing commitments of $2.1 million were made and principal pay-downs of $21.8 million were received.

Loans serviced for others

At December 31, 2022 and 2021, the Company was servicing residential mortgage loans owned by investors amounting to $8.9 million and $10.4 million, respectively. Additionally, the Company was servicing commercial loans originated by the Company and participated out to various other institutions amounting to $59.1 million and $66.7 million at December 31, 2022 and 2021, respectively.

Loans serving as collateral

Loans designated as qualified collateral and pledged to the FHLB for borrowing capacity for the periods indicated are summarized below:

(Dollars in thousands)	December 31, 2022	December 31, 2021
Commercial real estate	$ 113,830	$ 143,056
Residential mortgages	309,023	235,744
Home equity	39,724	5,055
Total loans pledged to FHLB	$ 462,577	$ 383,855

Tax-Exempt Interest

Tax-exempt interest earned on qualified commercial loans was $1.7 million for the year ended December 31, 2022, $1.8 million for the year ended December 31, 2021 and $2.0 million for the year ended and December 31, 2020. Average tax-exempt loan balances were $63.9 million and $54.5 million for the years ended December 31, 2022 and 2021, respectively.

(4) Credit Risk Management and ACL for Loans

On January 1, 2021, the Company adopted CECL under the modified retrospective approach. Upon adoption, the Company recorded a reduction to retained earnings of $6.5 million, net of $2.5 million in deferred income taxes. The ACL for loans increased by $6.6 million and the reserve for unfunded commitments (included in other liabilities) increased by $2.4 million.

See item (g) "Loans" contained in Note 1, "Summary of Significant Accounting Policies" of this Form 10-K, for additional information on the Company's loan accounting policies, Credit Risk monitoring, and ACL methodology.

The following tables present the amortized cost basis of the Company's loan portfolio risk ratings within portfolio classifications, by origination date, or revolving status as of the dates indicated:

	Balance at December 31, 2022								
	Term Loans By Origination Year								
(Dollars in thousands)	2022	2021	2020	2019	2018	Prior	Revolving Loans	Revolving Loans Converted to Term	Total
Commercial real estate									
Pass	$ 391,515	$ 381,771	$ 204,125	$ 218,664	$ 114,175	$ 577,354	$ 1,347	$ 200	$ 1,889,151
Special mention	—	—	—	507	2,041	16,248	—	—	18,796
Substandard	—	289	—	1,160	1,404	10,610	—	—	13,463
Total commercial real estate	391,515	382,060	204,125	220,331	117,620	604,212	1,347	200	1,921,410
Commercial and industrial(1)									
Pass	59,824	53,059	33,027	29,293	13,364	43,724	171,670	3,235	407,196
Special mention	—	—	—	11	66	278	3,132	—	3,487
Substandard	—	19	—	8	138	325	2,964	353	3,807
Total commercial and industrial	59,824	53,078	33,027	29,312	13,568	44,327	177,766	3,588	414,490
Commercial construction									
Pass	151,107	169,549	35,651	31,189	7,729	3,379	19,778	1,473	419,855
Special mention	—	—	—	3,900	—	—	—	—	3,900
Substandard	—	294	—	—	—	—	—	—	294
Total commercial construction	151,107	169,843	35,651	35,089	7,729	3,379	19,778	1,473	424,049
Residential mortgages									
Pass	112,804	73,955	49,549	20,140	18,799	54,620	—	—	329,867
Special mention	—	—	—	—	—	325	—	—	325
Substandard	—	—	—	1,060	—	1,380	—	—	2,440
Total residential mortgages	112,804	73,955	49,549	21,200	18,799	56,325	—	—	332,632
Home equity									
Pass	328	596	456	345	—	1,220	75,324	1,054	79,323
Substandard	—	273	—	—	—	211	—	—	484
Total home equity	328	869	456	345	—	1,431	75,324	1,054	79,807
Consumer									
Pass	3,144	1,852	1,063	1,045	606	420	—	—	8,130
Total consumer	3,144	1,852	1,063	1,045	606	420	—	—	8,130
Total loans	$ 718,722	$ 681,657	$ 323,871	$ 307,322	$ 158,322	$ 710,094	$ 274,215	$ 6,315	$ 3,180,518

	Balance at December 31, 2021								
	Term Loans by Origination Year								
(Dollars in thousands)	2021	2020	2019	2018	2017	Prior	Revolving Loans	Revolving Loans Converted to Term	Total
Commercial real estate									
Pass	$ 402,838	$ 220,942	$ 239,248	$ 120,286	$ 173,652	$ 479,298	$ 3,019	$ —	$ 1,639,283
Special mention	—	—	989	802	—	7,626	—	—	9,417
Substandard	—	—	2,628	3,111	12,842	13,336	—	—	31,917
Doubtful	—	—	—	175	—	—	—	—	175
Total commercial real estate	402,838	220,942	242,865	124,374	186,494	500,260	3,019	—	1,680,792
Commercial and industrial									
Pass	64,555	40,333	36,177	19,754	14,983	44,835	174,320	1,243	396,200
Special mention	—	644	2,173	958	59	1,431	4,053	18	9,336
Substandard	—	—	15	100	25	3,845	2,440	109	6,534
Total commercial and industrial	64,555	40,977	38,365	20,812	15,067	50,111	180,813	1,370	412,070
Commercial construction									
Pass	175,069	106,165	54,907	24,343	4,561	19,489	24,864	—	409,398
Substandard	—	—	—	—	—	—	—	1,045	1,045
Total commercial construction	175,069	106,165	54,907	24,343	4,561	19,489	24,864	1,045	410,443
SBA PPP(1)	66,232	5,270	—	—	—	—	—	—	71,502
Residential mortgages									
Pass	79,130	56,948	27,343	22,743	12,886	55,571	—	—	254,621
Special mention	—	—	—	—	—	590	—	—	590
Substandard	—	—	—	—	—	1,729	—	—	1,729
Total residential mortgages	79,130	56,948	27,343	22,743	12,886	57,890	—	—	256,940
Home equity									
Pass	486	478	498	—	—	1,727	76,619	414	80,222
Substandard	—	—	—	—	—	245	—	—	245
Total home equity	486	478	498	—	—	1,972	76,619	414	80,467
Consumer									
Pass	2,843	1,498	1,619	1,005	617	390	—	473	8,445
Doubtful	25	—	—	—	—	—	—	—	25
Total consumer	2,868	1,498	1,619	1,005	617	390	—	473	8,470
Total loans	$ 791,178	$ 432,278	$ 365,597	$ 193,277	$ 219,625	$ 630,112	$ 285,315	$ 3,302	$ 2,920,684

(1) All SBA PPP loans were pass-rated at December 31, 2022 and December 31, 2021, as these loans are 100% guaranteed by the SBA. At December 31, 2022, PPP loans outstanding were transferred to the commercial and industrial portfolio.

The total amortized cost basis of adversely classified loans amounted to $47.0 million, or 1.48% of total loans, at December 31, 2022, and $61.0 million, or 2.09% of total loans, at December 31, 2021.

Past due and non-accrual loans

The following table presents an age analysis of past due loans by portfolio classification as of the date indicated:

	Balance at December 31, 2022					
(Dollars in thousands)	30-59 Days Past Due	60-89 Days Past Due	Past Due 90 Days or More	Total Past Due Loans(1)	Current Loans(1)	Total Loans
Commercial real estate	$ 2,818	$ 1,268	$ 1,631	$ 5,717	$ 1,915,693	$ 1,921,410
Commercial and industrial	786	39	217	1,042	413,448	414,490
Commercial construction	412	—	294	706	423,343	424,049
SBA PPP	—	—	—	—	—	—
Residential mortgages	1,119	55	149	1,323	331,309	332,632
Home equity	163	—	73	236	79,571	79,807
Consumer	21	—	—	21	8,109	8,130
Total loans	$ 5,319	$ 1,362	$ 2,364	$ 9,045	$ 3,171,473	$ 3,180,518

	Balance at December 31, 2021					
(Dollars in thousands)	30-59 Days Past Due	60-89 Days Past Due	Past Due 90 days or More	Total Past Due Loans(1)	Current Loans(1)	Total Loans
Commercial real estate	$ 1,917	$ —	$ 1,719	$ 3,636	$ 1,677,156	$ 1,680,792
Commercial and industrial	564	678	194	1,436	410,634	412,070
Commercial construction	—	—	—	—	410,443	410,443
SBA PPP	162	19	—	181	71,321	71,502
Residential mortgages	182	—	432	614	256,326	256,940
Home equity	45	—	—	45	80,422	80,467
Consumer	7	27	—	34	8,436	8,470
Total loans	$ 2,877	$ 724	$ 2,345	$ 5,946	$ 2,914,738	$ 2,920,684

(1) The loan balances in the table above include loans designated as non-accrual despite their payment due status.

At December 31, 2022 and December 31, 2021, non-accrual loans included all loans past due 90 days or more, in addition to those loans that were less than 90 days past due where reasonable doubt existed as to the full and timely collection of interest or principal that have also been designated as non-accrual, despite their payment due status.

The following table presents the amortized cost of non-accrual loans (including TDR loans) by portfolio classification as of the date indicated:

	Balance at December 31, 2022			
(Dollars in thousands)	Total Non-accrual Loans	Non-accrual Loans without a Specific Reserve	Non-accrual Loans with a Specific Reserve	Related Specific Reserve
Commercial real estate	$ 3,355	$ 2,317	$ 1,038	$ 298
Commercial and industrial	730	348	382	382
Commercial construction	294	294	—	—
SBA PPP	—	—	—	—
Residential mortgages	1,532	1,532	—	—
Home equity	211	211	—	—
Consumer	—	—	—	—
Total loans	$ 6,122	$ 4,702	$ 1,420	$ 680

	Balance at December 31, 2021			
(Dollars in thousands)	Total Non-accrual Loans	Non-accrual Loans without a Specific Reserve	Non-accrual Loans with a Specific Reserve	Related Specific Reserve
Commercial real estate	$ 22,870	$ 7,144	$ 15,726	$ 896
Commercial and industrial	1,542	1,337	205	185
Commercial construction	1,045	1,045	—	—
SBA PPP	—	—	—	—
Residential mortgages	794	633	161	161
Home equity	246	246	—	—
Consumer	25	—	25	25
Total loans	$ 26,522	$ 10,405	$ 16,117	$ 1,267

The ratio of non-accrual loans to total loans amounted to 0.19% and 0.91% at December 31, 2022 and December 31, 2021, respectively. The decline in non-accrual loans at December 31, 2022 compared to December 31, 2021 was due primarily to two commercial relationships that were returned to accrual status due to improved financial strength and consistent payment history.

Non-accrual loans that were not adversely classified were immaterial at December 31, 2022 and December 31, 2021, respectively.

At December 31, 2022 and December 31, 2021, additional funding commitments for non-accrual loans were not material.

The reduction in interest income for the years ended December 31, associated with non-accruing loans is summarized as follows:

(Dollars in thousands)	2022	2021	2020
Income that would have been recognized if non-accrual loans had been current	$ 1,083	$ 2,028	$ 1,946
Less income recognized	1,050	633	472
Reduction in interest income	$ 33	$ 1,395	$ 1,474

Collateral dependent loans

The carrying value of collateral dependent loans amounted to $25.2 million at December 31, 2022 compared to $34.6 million at December 31, 2021. Total accruing collateral dependent loans amounted to $19.5 million, while non-accrual collateral dependent loans amounted to $5.7 million as of December 31, 2022. As of December 31, 2021, total accruing collateral dependent loans amounted to $8.4 million while non-accrual collateral dependent loans amounted to $26.2 million.

Loans that have been individually evaluated and repayment is expected substantially from the operations or ultimate sale of the underlying collateral are deemed to be collateral dependent loans. Collateral dependent loans are adversely classified loans. These loans may be accruing or on non-accrual status. Collateral dependent loans are carried at the lower of the recorded investment in the loan or the estimated fair value. Underlying collateral will vary by type of loan, as discussed below.

Commercial real estate loans include loans secured by both owner and non-owner occupied (investor) real estate. These loans are typically secured by a variety of commercial, residential investment, and industrial property types, including one-to-four and multi-family apartment buildings, office, industrial, or mixed-use facilities, strip shopping centers, or other commercial properties.

Commercial and industrial credits may be unsecured loans and lines to financially strong borrowers, loans secured in whole or in part by real estate unrelated to the principal purpose of the loan or secured by inventories, equipment, or receivables.

Commercial construction loans include the development of residential housing and condominium projects, the development of commercial and industrial use property, and loans for the purchase and improvement of raw land. These loans are secured in whole or in part by underlying real estate collateral.

Residential mortgage loans and home equity lines may be secured by one-to-four family residential properties serving as the borrower's primary residence, or as vacation homes or investment properties.

Consumer loans consist primarily of secured or unsecured personal loans, loans under energy efficiency financing programs in conjunction with Massachusetts public utilities, and overdraft protection lines on checking accounts.

Management does not set any minimum delay of payments as a factor in reviewing for individual evaluation. Management considers the individual payment status, net worth and earnings potential of the borrower, and the value and cash flow of the collateral as factors to determine if a loan will be paid in accordance with its contractual terms.

The following table presents the recorded investment in collateral dependent individually evaluated loans (including TDR loans) and the related specific allowance by portfolio allocation as of the date indicated:

	Balance at December 31, 2022				
(Dollars in thousands)	**Unpaid Contractual Principal Balance**	**Total Recorded Investment in Collateral Dependent Loans**	**Recorded Investment without a Specific Reserve**	**Recorded Investment with a Specific Reserve**	**Related Specific Reserve**
Commercial real estate	$ 24,530	$ 21,916	$ 20,878	$ 1,038	$ 298
Commercial and industrial	3,210	863	863	—	—
Commercial construction	294	294	294	—	—
SBA PPP	—	—	—	—	—
Residential mortgages	2,096	1,914	1,914	—	—
Home equity	386	211	211	—	—
Consumer	—	—	—	—	—
Total	$ 30,516	$ 25,198	$ 24,160	$ 1,038	$ 298

	Balance at December 31, 2021				
(Dollars in thousands)	**Unpaid Contractual Principal Balance**	**Total Recorded Investment in Collateral Dependent Loans**	**Recorded Investment without a Specific Reserve**	**Recorded Investment with a Specific Reserve**	**Related Specific Reserve**
Commercial real estate	$ 29,562	$ 27,617	$ 11,891	$ 15,726	$ 896
Commercial and industrial	8,880	4,699	4,191	508	128
Commercial construction	1,181	1,045	1,045	—	—
SBA PPP	—	—	—	—	—
Residential mortgages	1,165	1,033	1,033	—	—
Home equity	347	246	246	—	—
Consumer	—	—	—	—	—
Total	$ 41,135	$ 34,640	$ 18,406	$ 16,234	$ 1,024

The Company's obligation to fulfill the additional funding commitments on individually evaluated loans is generally contingent on the borrower's compliance with the terms of the credit agreement. If the borrower is not in compliance, additional funding commitments may or may not be made at the Company's discretion. At December 31, 2022 and December 31, 2021, additional funding commitments for individually evaluated collateral dependent loans were not material.

Troubled debt restructurings

Total TDR loans as of December 31, 2022 amounted to $8.4 million compared to $16.4 million at December 31, 2021. At December 31, 2022 and December 31, 2021, TDR loans on accrual status amounted to $6.0 million and $8.6 million, respectively, and TDR loans included in non-accrual loans amounted to $2.4 million and $7.8 million, respectively.

The Company continues to work with customers and enters into loan modifications (which may or may not be TDRs) to the extent deemed to be necessary or appropriate while attempting to achieve the best mutual outcome given the individual financial circumstances and future prospects of the borrower.

At December 31, 2022 and December 31, 2021, additional funding commitments for TDR loans were not material. The Company's obligation to fulfill the additional funding commitments on TDR loans is generally contingent on the borrower's compliance with the terms of the credit agreement. If the borrower is not in compliance, additional funding commitments may or may not be made at the Company's discretion.

The following table presents the number and balance of loans modified as TDRs, by portfolio classification, during the periods indicated:

	December 31, 2022			December 31, 2021		
(Dollars in thousands)	**Number of Restructurings**	**Pre-modification Outstanding Recorded Investment**	**Post-modification Outstanding Recorded Investment**	**Number of restructurings**	**Pre-modification outstanding recorded investment**	**Post-modification outstanding recorded investment**
Commercial real estate	6	$ 3,342	$ 2,563	3	$ 3,591	$ 3,267
Commercial and industrial	2	225	246	3	96	85
Commercial construction	—	—	—	—	—	—
SBA PPP	—	—	—	—	—	—
Residential mortgages	—	—	—	1	224	222
Home equity	—	—	—	—	—	—
Consumer	—	—	—	—	—	—
Total	8	$ 3,567	$ 2,809	7	$ 3,911	$ 3,574

There were no subsequent charge-offs of new TDRs noted in the table above during the years ended 2022 and 2021.

Interest payments received on non-accruing 2022 and 2021 TDR loans which were applied to principal and not recognized as interest income were not material.

Payment defaults by portfolio classification, during the years indicated, on loans modified as TDRs within the preceding twelve months are detailed below:

	December 31, 2022		December 31, 2021	
(Dollars in thousands)	**Number of TDRs that Defaulted**	**Post-modification Outstanding Recorded Investment**	**Number of TDRs that defaulted**	**Post-modification outstanding recorded investment**
Commercial real estate	3	$ 1,044	1	$ 663
Commercial and industrial	—	—	2	33
Total	3	$ 1,044	3	$ 696

The following table sets forth the post modification balances of TDRs listed by type of modification for TDRs that occurred during the periods indicated:

(Dollars in thousands)	December 31, 2022 Number of Restructurings	December 31, 2022 Amount	December 31, 2021 Number of restructurings	December 31, 2021 Amount
Extended maturity date	—	$ —	3	$ 71
Temporary payment reduction and payment re-amortization of remaining principal over extended term	—	—	2	885
Temporary interest-only payment plan	3	138	1	14
Other payment concessions	5	2,671	1	2,604
Total	8	$ 2,809	7	$ 3,574
Allowance for credit losses associated with TDR loans listed above		$ 298		$ 33

ACL for loans and provision for credit loss activity

The following table presents changes in the provision for credit losses on loans and unfunded commitments during the years ended December 31 as indicated:

(Dollars in thousands)	2022	2021	2020
Provision for credit losses on loans	$ 5,175	$ 543	$ 12,499
Provision for unfunded commitments	625	1,227	—
Total provision for credit losses	$ 5,800	$ 1,770	$ 12,499

The allowance for credit losses amounted to $52.6 million and $47.7 million at December 31, 2022 and December 31, 2021, and the ACL for loans to total loans ratio was 1.66% and 1.63% at December 31, 2022 and December 31, 2021, respectively.

Changes in the allowance for credit losses for the years ended December 31, 2022, 2021 and 2020 are summarized as follows:

(Dollars in thousands)	2022	2021	2020
Balance at beginning of year	$ 47,704	$ 44,565	$ 33,614
CECL adjustment upon adoption	—	6,560	—
Provision	5,175	543	12,499
Recoveries	272	363	346
Less: Charge-offs	511	4,327	1,894
Balance at end of year	$ 52,640	$ 47,704	$ 44,565

The following tables present changes in the ACL for loans by portfolio classification, during the periods presented below:

(Dollars in thousands)	Commercial Real Estate	Commercial and Industrial	Commercial Construction	Residential Mortgage	Home Equity	Consumer	Total
Beginning Balance at December 31, 2021	$ 31,847	$ 9,574	$ 4,090	$ 1,405	$ 465	$ 323	$ 47,704
Provision for credit losses for loans	4,967	(710)	(129)	850	157	40	5,175
Recoveries	—	242	—	—	11	19	272
Less: Charge-offs	250	210	—	—	—	51	511
Ending Balance at December 31, 2022	$ 36,564	$ 8,896	$ 3,961	$ 2,255	$ 633	$ 331	$ 52,640

(Dollars in thousands)	Commercial Real Estate	Commercial and Industrial	Commercial Construction	Residential Mortgage	Home Equity	Consumer	Total
Beginning Balance at December 31, 2020	$ 26,755	$ 9,516	$ 6,129	$ 1,530	$ 467	$ 168	$ 44,565
CECL adjustment upon adoption	7,664	1,988	(2,416)	(695)	(158)	177	6,560
Provision for credit losses for loans	(786)	408	272	570	85	(6)	543
Recoveries	39	139	105	—	71	9	363
Less: Charge-offs	1,825	2,477	—	—	—	25	4,327
Ending Balance at December 31, 2021	$ 31,847	$ 9,574	$ 4,090	$ 1,405	$ 465	$ 323	$ 47,704

Reserve for unfunded commitments

The Company’s reserve for unfunded commitments amounted to $4.3 million as of December 31, 2022 and $3.7 million at December 31, 2021.

Other real estate owned ("OREO")

The Company carried no OREO at December 31, 2022 or December 31, 2021. During the years ended December 31, 2022 and 2020, there were no additions to or sales of OREO. During the year ended December 31, 2021, there was one addition to OREO, which was subsequently sold in the same year. For the years ended December 31, 2022, 2021 and 2020, there were no write-downs of OREO.

At December 31, 2022 and December 31, 2021, the Company had no consumer mortgage loans secured by residential real estate properties for which formal foreclosure proceedings were in process according to local requirements of the applicable jurisdictions.

(5) Premises and Equipment

Premises and equipment at December 31, 2022, and 2021, are summarized as follows:

(Dollars in thousands)	2022	2021
Land and land improvements	$ 9,090	$ 9,090
Bank premises and leasehold improvements	56,266	53,857
Computer software and equipment	15,636	14,600
Furniture, fixtures, and equipment	25,118	23,734
Total premises and equipment, before accumulated depreciation	106,110	101,281
Less accumulated depreciation	(61,882)	(56,592)
Total premises and equipment, net of accumulated depreciation	$ 44,228	$ 44,689

Total depreciation expense related to premises and equipment amounted to $5.3 million, $6.2 million, and $5.4 million for the years ended December 31, 2022, 2021 and 2020, respectively.

(6) Leases

For the Company, material leases consist of operating leases on our facilities, mainly branch leases; leases 12-months or less and immaterial equipment leases have been excluded.

As of December 31, 2022, the Company had 16 active operating real estate leases. The Company's leased facilities are contracted under various non-cancelable operating leases, most of which provide options to the Company to extend the lease periods and include periodic rent adjustments. While the Company typically exercises its option to extend lease terms, the lease contains provisions that allow the Company, upon notification, to terminate the lease at the end of the lease term, or any option period. Several real estate leases also provide the Company the right of first refusal should the property be offered for sale.

Lease expenses for the years ended December 31, 2022, 2021 and 2020 amounted to $1.6 million, $1.5 million and $1.3 million, respectively. Variable lease costs and short-term lease expenses included in lease expense during this period were immaterial.

The weighted average remaining lease term for operating leases at December 31, 2022 and 2021 was 29.4 years and 29.8 years, respectively. The weighted average discount rate was 3.51% and 3.48% at December 31, 2022 and 2021, respectively.

At December 31, 2022, the remaining undiscounted cash flows by year of these lease liabilities were as follows:

(Dollars in thousands)	Operating Leases
2023	$ 1,406
2024	1,435
2025	1,441
2026	1,452
2027	1,455
Thereafter	32,346
Total lease payments	$ 39,535
Less: Imputed interest	15,120
Total lease liability	$ 24,415

In addition, the Company currently collects rent through non-cancellable leases for a small portion of the overall square-footage within its Lowell, Massachusetts campus headquarters and at one of its branch locations. These leases are deemed immaterial.

(7) Deposits

Deposits at December 31, are summarized as follows:

(Dollars in thousands)	2022	2021
Non-interest checking	$ 1,361,588	$ 1,364,258
Interest-bearing checking	678,715	743,587
Savings	326,666	310,244
Money market	1,381,645	1,355,701
CDs $250,000 or less	187,758	154,403
CDs greater than $250,000	99,434	52,046
Deposits	$ 4,035,806	$ 3,980,239

The Company had no brokered deposits at December 31, 2022 or 2021. Total customer deposits include reciprocal balances from checking, money market deposits and CDs received from participating banks in nationwide deposit networks as a result of our customers electing to participate in Company offered programs which allow for enhanced FDIC insurance. Essentially, the equivalent of the customers' original deposited funds are reciprocated back through the network to the Company and are carried within the appropriate category under deposits. The Company's balances in these reciprocal products were $589.7 million and $546.7 million at December 31, 2022 and December 31, 2021, respectively.

The aggregate amounts of overdrawn deposits that have been reclassified as loan balances were $490 thousand and $472 thousand at December 31, 2022 and 2021, respectively.

The following table presents the scheduled maturities of CDs as of December 31, of the years indicated:

(Dollars in thousands)	2022	2021
Due in less than twelve months	$ 227,658	$ 154,465
Due in over one year through two years	51,392	43,302
Due in over two years through three years	6,919	6,882
Due in over three years through four years	400	1,078
Due in over four years through five years	619	491
Due in over five years	204	231
Total CDs	$ 287,192	$ 206,449

(8) Borrowed Funds and Subordinated Debt

Borrowed funds and subordinated debt outstanding at December 31, for the years indicated are summarized as follows:

	2022		2021		2020	
(Dollars in thousands)	Amount	Average Rate	Amount	Average Rate	Amount	Average Rate
FHLB advances	$ 2,913	1.71 %	$ 5,479	1.07 %	$ 4,774	0.30 %
Other borrowings	303	— %	—	— %	—	— %
Total borrowed funds	$ 3,216	1.55 %	$ 5,479	1.07 %	$ 4,774	0.30 %
Subordinated debt	$ 59,182	5.66 %	$ 58,979	5.54 %	$ 73,744	5.69 %

At December 31, 2022, 2021 and 2020, FHLB advances were comprised of term borrowings primarily related to specific lending projects under the FHLB's community development program. At December 31, 2022, "Other borrowings" consisted of a New Hampshire Business Finance Authority (the "NH BFA") borrowing under a New Hampshire community development program, currently a zero rate advance, linked to a commercial loan. The NH BFA program is design to encourage community development with a tiered rate of zero in year one, 50% of the customer's loan rate in year two and equivalent to the loan rate in year three and beyond.

At December 31, 2022, 2021 and 2020, the contractual maturity distribution of borrowed funds with the weighted average cost for each category is set forth below:

	2022		2021		2020	
(Dollars in thousands)	Balance	Rate	Balance	Rate	Balance	Rate
Within 12 months	$ —	— %	$ 2,485	0.29 %	$ 4,316	0.33 %
Over 5 years	3,216	1.55 %	2,994	1.70 %	458	— %

Maximum FHLB and other borrowings outstanding at any month-end period during 2022 was $4.2 million, $8.6 million for 2021 and $96.2 million for 2020.

The following table summarizes the average balance and average cost of borrowed funds for the years indicated:

	Year ended December 31,					
	2022		2021		2020	
(Dollars in thousands)	Average Balance	Average Cost	Average Balance	Average Cost	Average Balance	Average Cost
FHLB advances	$ 3,266	1.59 %	$ 7,632	0.79 %	$ 35,762	1.65 %
FRB PPPLF advances	—	— %	—	— %	4,703	0.35 %
Other borrowings	20	— %	—	— %	14	1.07 %
Total borrowed funds	$ 3,286	1.58 %	$ 7,632	0.79 %	$ 40,479	1.50 %

In the table above, the "Other borrowings" average balances represent term NH BFA advances or advances from the FRB discount window or correspondent banks, advanced as part of our annual test of these external funding facilities. In April 2020, the Company established access to the FRB's PPPLF, which provided funding secured by the pledge of PPP loans. The FRB's PPPLF program expired on July 31, 2021.

As a member of the FHLB, the Bank has the potential capacity to borrow an amount up to the value of its discounted qualified collateral. Borrowings from the FHLB are secured by certain securities from the Company's investment portfolio not otherwise pledged and certain residential and commercial real estate loans. At December 31, 2022, based on qualifying collateral less outstanding advances, the Bank had the capacity to borrow additional funds from the FHLB of up to approximately $780.0 million. In addition, based on qualifying corporate and municipal bond collateral, the Bank had the capacity to borrow funds from the FRB discount window up to approximately $305.0 million at December 31, 2022. The Bank also has pre-approved borrowing arrangements with large correspondent banks to provide overnight and short-term borrowing capacity.

The Company had outstanding subordinated debt, net of deferred issuance costs, of $59.2 million, and $59.0 million at December 31, 2022, and December 31, 2021, respectively. The debt consists of fixed-to-floating rate notes, due in 2030, and callable at the Company's option on or after July 15, 2025. The subordinated notes are intended to qualify as Tier 2 capital for regulatory purposes.

The subordinated notes pay interest at a fixed rate of 5.25% per annum through October 15, 2025, after which floating quarterly rates apply. Original debt issuance costs were $1.2 million and have been netted against the subordinated debt on the consolidated balance sheet in accordance with accounting guidance. These costs are being amortized to interest expense over the life of the subordinated notes.

On March 31, 2021, the Company redeemed $15.0 million in notes that were due in 2030. The redemption was recorded as a loss on the extinguishment of subordinated debt in the amount of $713 thousand.

(9) Derivatives and Hedging Activities

The tables below present a summary of the Company's derivative financial instruments, notional amounts and fair values for the periods presented:

	As of December 31, 2022			
(Dollars in thousands)	**Asset Notional Amount**	**Asset Derivatives[(1)(2)]**	**Liability Notional Amount**	**Liability Derivatives[(1)(2)]**
Derivatives not subject to hedge accounting				
Interest-rate contracts - pay floating, receive fixed	$ —	$ —	$ 7,777	$ 782
Interest-rate contracts - pay fixed, receive floating	7,777	782	—	—
Risk participation agreements sold	—	—	24,660	73
Total derivatives not subject to hedge accounting	$ 7,777	$ 782	$ 32,437	$ 855

	As of December 31, 2021			
(Dollars in thousands)	**Asset Notional Amount**	**Asset Derivatives[(1)(2)]**	**Liability Notional Amount**	**Liability Derivatives[(1)(2)]**
Derivatives not subject to hedge accounting				
Interest-rate contracts - pay floating, receive fixed	$ 36,263	$ 528	$ —	$ —
Interest-rate contracts - pay fixed, receive floating	—	—	36,263	528
Total back-to-back interest-rate swaps	$ 36,263	$ 528	$ 36,263	$ 528

(1) Accrued interest balances related to the Company's interest rate swaps are not included in the fair values above and are immaterial.
(2) The assets and liabilities related to the pay fixed, receive floating interest-rate contracts are subject to a master netting agreement and are presented net in the Consolidated Balance Sheet.

The Company had no derivative fair value hedges at either December 31, 2022 or December 31, 2021.

Cash flow Hedges

In August 2021, the Company terminated three pay fixed, receive float interest rate swaps with notional values totaling $75.0 million resulting in a $1.8 million loss on termination of swaps, which was reported as a component of non-interest income. The Company terminated these interest-rate swaps and accelerated the reclassification of the loss from other comprehensive income to earnings as a result of hedged forecasted transactions becoming probable not to occur.

Back-to-Back Swaps

The Company has a "Back-to-Back Swap" program whereby the Bank enters into an interest-rate swap with qualified commercial banking customers and simultaneously enters into equal and opposite interest-rate swap with a swap counterparty. The customer interest-rate swap agreement allows commercial banking customers to convert a floating-rate loan payment to a fixed-rate payment.

Each Back-to-Back swap consists of two interest-rate swaps (a customer swap and offsetting counterparty swap) and amounted to a total number of four interest-rate swaps outstanding at December 31, 2022 and ten at December 31, 2021. As a result of this offsetting relationship, there were no net gains or losses recognized in income on Back-to-Back swaps during the years ended December 31, 2022, December 31, 2021, or December 31, 2020.

Interest-rate swaps with the counterparty are subject to master netting agreements, while interest-rate swaps with customers are not. At December 31, 2022, all the back-to-back swaps with the counterparty were in asset positions and at December 31, 2021, all the back-to-back swaps with the counterparty were in liability positions, therefore there was no netting reflected in the Company's Consolidated Balance Sheets as of the respective dates.

Risk Participation Agreements

The Company has entered into a risk participation agreement ("RPA") under which the Company has assumed the credit risk for a customer's performance under an interest-rate swap agreement between the customer and the counterparty. The Company is not a direct counterparty to the interest-rate swap and received fee income commensurate with the risk assumed from entering into the RPA. The RPA and the customer's loan are secured by the same collateral. At December 31, 2022, the notional amount of the risk participation agreements sold was $24.7 million.

Credit Risk

By using derivative financial instruments, the Company exposes itself to counterparty credit risk. Credit risk is the risk of failure by the counterparty to perform under the terms of the derivative contract. When the fair value of a derivative contract is positive, the counterparty owes the Company, which creates credit risk for the Company. When the fair value of a derivative is negative, the Company owes the counterparty and, therefore, it does not possess credit risk. The credit risk in derivative instruments is mitigated by entering into transactions with highly rated counterparties that management believes to be creditworthy. Additionally, counterparty interest-rate swaps contain provisions for collateral to be posted if the derivative exposure exceeds a threshold amount.

The Company had one interest-rate swap counterparty that was rated A and A2 by Standard & Poor's and Moody's, respectively, at December 31, 2022. When the Company has credit risk exposure, cash collateral is posted by the counterparty. Collateral posted by counterparties is restricted and not considered an asset of the Company, therefore, it is not carried on the Company's Consolidated Balance Sheets. If the Company posts collateral, the restricted cash is carried on the Company's Consolidated Balance Sheets. At December 31, 2022, the Company had credit risk exposure relating to interest-rate swaps with counterparties of $782 thousand and counterparties posted cash collateral of $27 thousand. At December 31, 2021, the Company had no credit risk exposure relating to interest-rate swaps with counterparties and posted restricted cash collateral of $840 thousand.

Credit-risk-related Contingent Features

The Company's interest-rate swaps with counterparties contain credit-risk-related contingent provisions. These provisions provide the counterparty with the right to terminate its derivative positions and require the Company to settle its obligations under the agreements if the Company defaults on certain of its indebtedness.

As of December 31, 2022, the fair value of derivatives related to these agreements was at a net asset position of $782 thousand, which excludes any adjustment for nonperformance risk. The Company has minimum collateral posting thresholds with certain of its derivative counterparties and as of December 31, 2022, has not posted collateral related to these agreements.

Other Derivative Related Activity

The Company also participates in loans originated by third party banks, where the originating bank utilizes a back-to-back interest-rate swap structure; however, the Company is not a party to the swap agreements. Under the terms of the loan participations, the Company has accepted contingent liabilities that would only be realized if the swaps were terminated early and there were outstanding losses not covered by the underlying borrowers and the borrowers' pledged collateral. If applicable, the Company's swap-loss exposure would be equal to a percentage of the originating bank's swap loss based on the ratio of the Company's loan participation to the underlying loan. At both December 31, 2022 and December 31, 2021, the Company had one participation loan where the originating bank utilizes a back-to-back interest-rate swap structure. At December 31, 2022, management considers the risk of material swap loss exposure related to this participation loan to be unlikely based the borrower's financial and collateral strength.

Interest-rate lock commitments related to the origination of mortgage loans that will be sold are considered derivative instruments. The commitments to sell loans are also considered derivative instruments. At December 31, 2022 and December 31, 2021, the estimated fair value of the Company's interest-rate lock commitments and commitments to sell these mortgage loans were deemed immaterial.

(10) Commitments, Contingencies and Financial Instruments with Off-Balance Sheet Risk and Concentrations of Credit Risk

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 originate loans, letters of credit, and unadvanced portions of loans and lines of credit.

The instruments involve, to varying degrees, elements of credit risk in excess of the amount recognized in the Consolidated Balance Sheets. The contractual amounts of these instruments reflect the extent of involvement the Company has in the particular classes of financial instruments.

The Company's exposure to credit loss in the event of nonperformance by the other party to the financial instrument for loan commitments and letters of credit is represented by the contractual amounts of those instruments. The Company uses the same credit policies in making commitments and conditional obligations as it does for on-balance sheet instruments.

Financial instruments with off-balance sheet credit risk at December 31, 2022 and 2021 are as follows:

(Dollars in thousands)	2022	2021
Commitments to originate loans	$ 27,148	$ 38,653
Commitments to originate residential mortgages loans for sale	170	—
Commitments to sell residential mortgage loans	170	—
Letters of credit	25,081	23,164
Unadvanced portions of commercial real estate loans	43,938	22,035
Unadvanced portions of commercial loans and lines	629,531	565,921
Unadvanced portions of construction loans (commercial & residential)	409,803	325,348
Unadvanced portions of home equity lines	146,558	126,651
Unadvanced portions of consumer loans	4,059	4,263

Commitments to originate loans are agreements to lend to a customer provided 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 by the customer. Since some 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 credit worthiness 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 borrower.

The Company originates residential mortgage loans intended for sale under agreements to sell such loans on an individual loan basis and may retain or sell the servicing when selling the loans. Loans sold are subject to standard secondary market underwriting and eligibility representations and warranties over the life of the loan and are subject to an early payment default period covering the first four payments for certain loan sales.

Letters of credit are conditional commitments issued by the Company to guarantee the financial obligation or performance of a customer to a third party. The credit risk involved in issuing letters of credit is essentially the same as that involved in extending loan facilities to customers. If the letter of credit is drawn upon, a loan is created for the customer, generally a commercial loan, with the same criteria associated with similar commercial loans.

Unadvanced portions of loans and lines of credit represent credit extended to customers but not yet drawn upon and are secured or guaranteed under preexisting loan agreements and credit evaluations having taken into consideration the full commitment amount.

See also Note 9, "Derivatives and Hedging Activities," and Note 1, "Summary of Significant Accounting Policies," under Item (p), "Derivatives," to the Company's consolidated financial statements of this Form 10-K, contained above, for information on the Company's interest-rate lock commitments, interest-rate swaps, and participation in loans originated by third-party banks with potential contingent liabilities.

There are no material pending legal proceedings to which the Company or its subsidiaries are a party or to which any of its property is subject, other than ordinary and routine litigation incidental to the business of the Company. Management does not believe resolution of any present litigation will have a material adverse effect on the consolidated financial condition or results of operations of the Company.

(11) Comprehensive (Loss) Income

The following table presents a reconciliation of the changes in the components of other comprehensive income (loss) for the dates indicated, including the amount of income tax (expense) benefit allocated to each component of other comprehensive income (loss):

	Year ended December 31, 2022			Year ended December 31, 2021		
(Dollars in thousands)	**Pre-Tax**	**Tax Benefit**	**After Tax Amount**	**Pre-Tax**	**Tax Benefit (Expense)**	**After Tax Amount**
Change in fair value of debt securities	$ (132,005)	$ 29,782	$ (102,223)	$ (25,077)	$ 5,622	$ (19,455)
Less: net security (losses) gains reclassified into non-interest income	(1,973)	619	(1,354)	128	(29)	99
Net change in fair value of debt securities	(130,032)	29,163	(100,869)	(25,205)	5,651	(19,554)
Change in fair value of cash flow hedges	—	—	—	378	(106)	272
Less: net cash flow hedges losses reclassified into interest expense	—	—	—	(2,436)	685	(1,751)
Net change in fair value of cash flow hedges	—	—	—	2,814	(791)	2,023
Total other comprehensive (loss) income, net	$ (130,032)	$ 29,163	$ (100,869)	$ (22,391)	$ 4,860	$ (17,531)

Information on the Company's accumulated other comprehensive income (loss), net of tax, is comprised of the following components as of the periods indicated:

	Year ended December 31, 2022			Year ended December 31, 2021		
(Dollars in thousands)	Unrealized Gains (Losses) on Debt Securities	Unrealized Gains (Losses) on Cash Flow Hedges	Total	Unrealized Gains (Losses) on Debt Securities	Unrealized Gains (Losses) on Cash Flow Hedges	Total
Accumulated other comprehensive income - beginning balance	$ 4,662	$ —	$ 4,662	$ 24,216	$ (2,023)	$ 22,193
Total other comprehensive (loss) income, net	(100,869)	—	(100,869)	(19,554)	2,023	(17,531)
Accumulated other comprehensive (loss) income - ending balance	$ (96,207)	$ —	$ (96,207)	$ 4,662	$ —	$ 4,662

(12) Shareholders' Equity

Shares Authorized and Share Issuance

The Company's authorized capital is divided into common stock and preferred stock. The Company is authorized to issue 40,000,000 shares of common stock, with a par value of $0.01 per share, and as of December 31, 2022 had 12,133,516 shares issued and outstanding. Holders of common stock are entitled to one vote per share and are entitled to receive dividends if, as and when declared by the Board. Dividend and liquidation rights of the common stock may be subject to the rights of any outstanding preferred stock. The Company is also authorized to issue 1,000,000 shares of preferred stock, with a par value of $0.01 per share. No preferred stock has been issued as of the date of this Form 10-K.

The Company has a shareholders' rights plan. Under the plan, each share of common stock includes a right to purchase under certain circumstances one one-hundredth of a share of the Company's Series A Junior Participating Preferred Stock, par value $0.01 per share, at a purchase price of $122.50 per one one-hundredth of a preferred share, subject to adjustment, or, in certain circumstances, to receive cash, property, shares of common stock or other securities of the Company. The rights are not presently exercisable and remain attached to the shares of common stock until the occurrence of certain triggering events that would ordinarily be associated with an unsolicited acquisition or attempted acquisition of 10% or more of the Company's outstanding shares of common stock. The rights have no voting or dividend privileges, and unless and until they become exercisable, have no dilutive effect on the earnings of the Company. The rights will expire, unless earlier redeemed, exchanged, or otherwise rescinded by the Company, on January 13, 2028.

The Company's stock incentive plans permit the Board to grant, under various terms, stock options (for the purchase of newly issued shares of common stock), common stock, restricted stock awards, restricted stock units and stock appreciation rights to officers and other employees, non-employee directors and consultants. See Note 14, "Stock-Based Compensation," to the Company's consolidated financial statements of this Form 10-K, contained below, for additional information regarding the Company's stock incentive plans.

Capital Raised and Capital Adequacy Requirements

Capital planning by the Company and the Bank considers current needs and anticipated future growth. Ongoing sources of capital include the retention of earnings, less dividends paid, proceeds from the exercise of employee stock options and proceeds from purchases of shares pursuant to the DRSPP. Additional sources of capital for the Company and the Bank have been proceeds from the issuance of common stock and proceeds from the issuance of subordinated debt. The Company believes its current capital is adequate to support ongoing operations.

Management believes, as of December 31, 2022, that the Company and the Bank met all capital adequacy requirements to which they were subject. As of December 31, 2022 and December 31, 2021, the Company met the definition of "well-capitalized" under the applicable Federal Reserve Board regulations and the Bank qualified as "well-capitalized" under the prompt corrective action regulations of Basel III and the FDIC.

The Company's and the Bank's actual capital amounts and ratios are presented as of December 31, 2022 and December 31, 2021 in the tables below:

	Actual		Minimum Capital for Capital Adequacy Purposes[1]		Minimum Capital to be Well-Capitalized[2]	
(Dollars in thousands)	**Amount**	**Ratio**	**Amount**	**Ratio**	**Amount**	**Ratio**
As of December 31, 2022						
The Company						
Total Capital to risk-weighted assets	$ 476,307	13.49 %	$ 282,567	8.00 %	N/A	N/A
Tier 1 Capital to risk-weighted assets	372,817	10.56 %	211,926	6.00 %	N/A	N/A
Tier 1 Capital to average assets (or Leverage Ratio)	372,817	8.10 %	184,194	4.00 %	N/A	N/A
Common Equity Tier 1 Capital to risk-weighted assets	372,817	10.56 %	158,944	4.50 %	N/A	N/A
The Bank						
Total Capital to risk-weighted assets	$ 475,668	13.47 %	$ 282,567	8.00 %	$ 353,209	10.00 %
Tier 1 Capital to risk-weighted assets	431,359	12.21 %	211,926	6.00 %	282,567	8.00 %
Tier 1 Capital to average assets (or Leverage Ratio)	431,359	9.37 %	184,194	4.00 %	230,243	5.00 %
Common Equity Tier 1 Capital to risk-weighted assets	431,359	12.21 %	158,944	4.50 %	229,586	6.50 %

	Actual		Minimum Capital for Capital Adequacy Purposes[1]		Minimum Capital to be Well-Capitalized[2]	
(Dollars in thousands)	**Amount**	**Ratio**	**Amount**	**Ratio**	**Amount**	**Ratio**
As of December 31, 2021						
The Company						
Total Capital to risk-weighted assets	$ 435,328	13.73 %	$ 253,610	8.00 %	N/A	N/A
Tier 1 Capital to risk-weighted assets	336,577	10.62 %	190,208	6.00 %	N/A	N/A
Tier 1 Capital to average assets (or Leverage Ratio)	336,577	7.56 %	177,978	4.00 %	N/A	N/A
Common Equity Tier 1 Capital to risk-weighted assets	336,577	10.62 %	142,656	4.50 %	N/A	N/A
The Bank						
Total Capital to risk-weighted assets	$ 434,430	13.70 %	$ 253,610	8.00 %	$ 317,013	10.00 %
Tier 1 Capital to risk-weighted assets	394,658	12.45 %	190,208	6.00 %	253,610	8.00 %
Tier 1 Capital to average assets (or Leverage Ratio)	394,658	8.87 %	177,978	4.00 %	222,473	5.00 %
Common Equity Tier 1 Capital to risk-weighted assets	394,658	12.45 %	142,656	4.50 %	206,058	6.50 %

(1) Before application of the capital conservation buffer of 2.50%. See discussion below.
(2) For the Bank to qualify as "well-capitalized," it must maintain at least the minimum ratios listed under the regulatory prompt corrective action framework. This framework does not apply to the Company.

The Company is subject to the Basel III capital ratio requirements, which include a "capital conservation buffer" of 2.50% above the regulatory minimum risk-based capital adequacy requirements shown above. If a banking organization dips into its capital conservation buffer it may be restricted in its activities, including its ability to pay dividends and discretionary bonus payments to its executive officers. Both the Company's and the Bank's actual ratios, as outlined in the table above, exceeded the Basel III risk-based capital requirement with the capital conservation buffer as of December 31, 2022.

The Basel III minimum capital ratio requirements as applicable to the Company and the Bank with the capital conservation buffer are summarized in the table below:

	Basel III Minimum for Capital Adequacy Purposes	**Basel III Additional Capital Conservation Buffer**	**Basel III "Adequate" Ratio with Capital Conservation Buffer**
Total Capital to RWA	8.00%	2.50%	10.50%
Tier 1 Capital to RWA	6.00%	2.50%	8.50%
Tier 1 Capital to AA, or Leverage Ratio	4.00%	N/A	4.00%
Common equity tier 1 capital to RWA	4.50%	2.50%	7.00%

Failure to meet minimum capital requirements can initiate or result in certain mandatory and possibly additional discretionary supervisory actions by regulators that, if undertaken, could have a material adverse effect on the Company's consolidated financial statements. Under applicable capital adequacy requirements and the regulatory framework for prompt corrective action applicable to the Bank, the Company must meet specific capital guidelines that involve quantitative measures of the Company's assets, liabilities, and certain off-balance sheet items as calculated under regulatory accounting practices. The Company's capital amounts and classifications are also subject to qualitative judgments by the regulators about components, risk weightings, and other factors.

See also "Supervision and Regulation," contained in Item 1, "Business," of this Form 10-K for further information on the Company's Basel III and capital requirements.

Dividends

For the year ended December 31, 2022, the Company declared $9.9 million in cash dividends and shareholders utilized the dividend reinvestment portion of the DRSPP to purchase an aggregate of 40,640 shares of the Company's common stock totaling $1.4 million. During the year ended December 31, 2021, the Company declared $8.9 million in cash dividends and shareholders utilized the dividend reinvestment portion of the DRSPP to purchase 36,651 shares of the Company's common stock totaling $1.3 million. In 2020, the Company declared $8.3 million in cash dividends and shareholders utilized the dividend reinvestment portion of the DRSPP to purchase 50,506 shares of the Company's common stock totaling $1.2 million. See "Shares Authorized and Share Issuance" above in this Note 12 of this Form 10-K for more information on the DRSPP, including the direct stock purchase component of the plan.

(13) Employee Benefit Plans

Defined Contribution Plans

The Company has a 401(k) defined contribution employee benefit plan. The 401(k) plan allows eligible employees to contribute a percentage of their earnings to the plan. A portion of an employee's contribution, as determined by the Compensation and Human Resources Committee of the Board of Directors, is matched by the Company. During the years ended December 31, 2022, 2021 and 2020 the Company's percentage match was 70% up to the first 6% contributed by the employee.

All eligible employees, at least 18 years of age and completing 1 hour of service, may participate in the 401(k) plan. Vesting for the Company's 401(k) retirement plan matching contribution is based on years of service with participants becoming 25% vested on the anniversary of their hire date and each subsequent year until they are 100% vested following four years of service. Unvested amounts not distributed to an employee following termination of employment are used to offset plan expenses and the Company's matching contributions.

The Company's expense for the 401(k) plan match was $1.9 million, $1.7 million, and $1.6 million, respectively, for the years ended December 31, 2022, 2021 and 2020.

Additionally, the Company maintains the Enterprise Bank Supplemental Executive Retirement and Deferred Compensation Plan. The plan is unfunded and is maintained for the purpose of providing deferred compensation to a certain group of management employees. Total expenses for the deferred compensation plan were $787 thousand and $611 thousand for the years ended December 31, 2022 and 2021, respectively.

Supplemental Employee Retirement Plan ("SERP")

The Company has salary continuation agreements with two of its current executive officers and one former executive officer. These salary continuation agreements provide for predetermined fixed-cash supplemental retirement benefits to be provided for a period of 20 years after each individual reaches a defined "benefit age." The individuals covered under the SERP have reached the defined benefit age and are receiving payments under the SERP. Additionally, the Company has not recognized service costs in the current or prior year as each officer had previously attained their individually defined benefit age and was fully vested under the SERP.

This non-qualified plan represents a direct liability of the Company, and as such, the Company has no specific assets set aside to settle the benefit obligation. The aggregate amount accrued, or the "accumulated benefit obligation," is equal to the present value of the benefits to be provided to the employee or any beneficiary. Because the Company's benefit obligations provide for predetermined fixed-cash payments, the Company does not have any unrecognized costs to be included as a component of accumulated other comprehensive income.

The amounts charged to expense for the SERP are included in the table below. The Company anticipates accruing an additional $64 thousand to the SERP for the year ending December 31, 2023.

The following table provides a reconciliation of the changes in the supplemental retirement benefit obligation and the net periodic benefit cost for the years ended December 31:

(Dollars in thousands)	**2022**	**2021**	**2020**
Reconciliation of benefit obligation:			
Benefit obligation at beginning of year	$ 1,708	$ 1,923	$ 2,064
Net periodic benefit cost:			
Interest cost	74	61	61
Actuarial loss (gain)	(86)	—	74
Net periodic benefit costs	$ (12)	$ 61	$ 135
Benefits paid	(276)	(276)	(276)
Benefit obligation at end of year	$ 1,420	$ 1,708	$ 1,923
Funded status:			
Accrued liability as of December 31	$ (1,420)	$ (1,708)	$ (1,923)
Discount rate used for benefit obligation(1)	4.75 %	3.25 %	3.25 %

(1) Management utilizes the Moody's 20-year AA corporate bond rates to establish the reasonableness of the discount rate used. The Company reviews and periodically updates the discount rate to reflect changes in bond market rates. The impact of the discount rate change is reflected as the actuarial gain or loss.

SERP benefits expected to be paid in each of the next five years and in the aggregate five years thereafter:

(Dollars in thousands)	**Payments**
2023	$ 276
2024	276
2025	276
2026	276
2027	275
2028-2032	284

Supplemental Life Insurance

The Company has provided supplemental life insurance through split-dollar life insurance arrangements for certain executive and senior officers on whom the Bank owns BOLI. See Item (l), "Bank Owned Life Insurance," in Note 1, "Summary of Significant Accounting Policies," to the Company's consolidated financial statements of this Form 10-K, contained above, for further information regarding BOLI.

These arrangements provide a death benefit to the officer's designated beneficiaries that extend to post-retirement periods for some of the supplemental life insurance plans. The Company has recognized a liability for these future post-retirement benefits.

These non-qualified plans represent a direct liability of the Company, and, as such, the Company has no specific assets set aside to settle the benefit obligation. The funded status is the aggregate amount accrued, or the "accumulated post-retirement benefit obligation," which is the present value of the post-retirement benefits associated with this arrangement.

The following table provides a reconciliation of the changes in the post-retirement supplemental life insurance plan obligation and the net periodic benefit cost for the years ended December 31:

(Dollars in thousands)	2022	2021	2020
Reconciliation of benefit obligation:			
Benefit obligation at beginning of year	$ 2,620	$ 2,631	$ 2,424
Net periodic benefit cost:			
Service cost	(26)	(23)	(21)
Interest cost	105	83	87
Actuarial loss (gain)	(341)	(71)	141
Total net period cost	$ (262)	$ (11)	$ 207
Benefit obligation at end of year	$ 2,358	$ 2,620	$ 2,631
Funded status:			
Accrued liability as of December 31	$ (2,358)	$ (2,620)	$ (2,631)
Discount rate used for benefit obligation[1]	4.75 %	3.25 %	3.25 %

(1) Management utilizes the Moody's 20-year AA corporate bond rates to establish the reasonableness of the discount rate used. The Company reviews and periodically updates the discount rate to reflect changes in bond market rates. The impact of the discount rate change is reflected as the actuarial gain or loss.

The amounts charged to expense for supplemental life insurance are included in the table above. The Company anticipates accruing an additional $128 thousand to the plan for the year ending December 31, 2023.

(14) Stock-Based Compensation

The Company currently has one active stock incentive plan: The Enterprise Bancorp, Inc. 2016 Stock Incentive Plan, as amended.

The Company's stock-based compensation expense related to these plans includes stock options and stock awards to officers and other employees included in salary and benefits expense, and stock awards and stock compensation in lieu of cash fees to non-employee directors both included in other operating expenses. Total stock-based compensation expense was $2.3 million, $2.1 million and $1.9 million for the years ended December 31, 2022, 2021 and 2020. The total tax benefit recognized related to the stock-based compensation expense was $651 thousand, $579 thousand, and $535 thousand for the years ended December 31, 2022, 2021 and 2020, respectively.

Tax benefits associated with employee exercises and vesting of stock compensation amounted to $147 thousand and $85 thousand for the years ended December 31, 2022 and December 31, 2021, respectively, compared with a tax expense of $25 thousand for the year ended December 31, 2020.

Stock Option Awards

Stock options granted generally vest 50% in year two and 50% in year four, on or about the anniversary date of the awards. Under the terms of the plans, stock options may not be granted at less than 100% of the fair market value of the shares on the date of grant and may not have a term of more than 10 years.

The Company utilizes the Black-Scholes option valuation model in order to determine the per share grant date fair value of stock option grants.

The table below provides a summary of the stock options granted, including the weighted average fair value, the fair value as a percentage of the market value of the underlying stock at the date of grant and the average assumptions used in the model for the years indicated:

Stock Option Awards	2022	2021	2020
Stock options granted	17,060	17,580	24,208
Term in years	10	10	10
Weighted average assumptions used in the fair value model:			
Expected volatility	44 %	44 %	37 %
Expected dividend yield	3.05 %	3.01 %	3.43 %
Expected life in years	6.5	6.5	6.5
Risk-free interest rate	2.20 %	1.28 %	1.02 %
Weighted average market price on date of grants	$ 38.57	$ 32.73	$ 28.22
Per share weighted average fair value	$ 14.40	$ 11.95	$ 8.41
Fair value as a percentage of market value at grant date	37 %	36 %	30 %

The expected volatility is the anticipated variability in the Company's share price over the expected life of the stock option and is based on the Company's historical volatility.

The expected dividend yield is the Company's projected dividends based on historical annualized dividend yield to coincide with volatility divided by its share price at the date of grant.

The expected life represents the period of time that the stock option is expected to be outstanding. The Company utilized the simplified method, under which the expected term equals the vesting term plus the contractual term divided by 2.

The risk-free interest rate is based on the U.S. Department of the Treasury rate in effect at the time of grant for a period equivalent to the expected life of the stock option.

Stock option transactions during the year ended December 31, 2022 are summarized as follows:

(Dollars in thousands, except per share data)	Options	Weighted Average Exercise Price Per Share	Weighted Average Remaining Life in Years	Aggregate Intrinsic Value
Outstanding December 31, 2021	186,892	$ 25.10	4.9	$ 3,704
Granted	17,060	38.57		
Exercised	6,327	22.64		
Forfeited/Expired	376	32.45		
Outstanding December 31, 2022	197,249	$ 26.33	4.4	$ 1,824
Vested and Exercisable at December 31, 2022	140,992	$ 23.67	3.0	$ 1,640

The intrinsic value of stock options vested and exercisable represents the total pretax value that would have been received by the stock option holders had all in-the-money vested stock option holders exercised their options on December 31, 2022. At December 31, 2022, 140,887 of the vested and exercisable stock options were in-the money.

Cash received from stock option exercises amounted to $118 thousand, $159 thousand, and $21 thousand during the years ended December 31, 2022, 2021 and 2020, respectively. The total intrinsic value of stock options exercised amounted to $93 thousand, $173 thousand and $8 thousand during the years ended December 31, 2022, 2021 and 2020, respectively. Cash paid by the Company for the net settlement of stock options to cover employee tax obligations amounted to $8 thousand and $16 thousand during the years ended December 31, 2022 and 2021, respectively. The Company made no such cash payments during the year ended December 31, 2020.

Stock option activity during the year ended December 31, 2022 for unvested options are summarized as follows:

Unvested Options	Options	Weighted Average Grant Date Fair Value
Unvested December 31, 2021	58,689	$ 9.93
Granted	17,060	14.40
Vested	19,116	9.75
Forfeited	376	10.88
Unvested December 31, 2022	56,257	$ 11.34

The total fair value of stock options vested (based on grant date fair value) during the years ended December 31, 2022, December 31, 2021 and December 31, 2020 was $186 thousand, $171 thousand, and $216 thousand, respectively.

Compensation expense recognized in association with the stock option awards amounted to $206 thousand, $187 thousand and $190 thousand for the years ended December 31, 2022, 2021 and 2020, respectively. The total tax benefit recognized related to the stock option expense was $58 thousand, $52 thousand and $53 thousand for the years ended December 31, 2022, 2021 and 2020, respectively.

As of December 31, 2022, there was $377 thousand of unrecognized stock-based compensation expense related to non-vested stock options. That cost is expected to be recognized over the remaining weighted average vesting period of 2.5 years.

Restricted Stock Awards

Restricted stock awards are granted at the market price of the Company's common stock on the date of the grant. Employee restricted stock awards generally vest over four years in equal portions beginning on or about the first anniversary date of the restricted stock award or are performance based restricted stock awards that vest upon the Company achieving certain predefined performance objectives. Non-employee director restricted stock awards generally vest over two years in equal portions beginning on or about the first anniversary date of the restricted stock award.

The table below provides a summary of restricted stock awards granted during the years indicated:

Restricted Stock Awards (number of underlying shares)	2022	2021	2020
Two-year vesting	8,823	8,109	8,295
Four-year vesting	22,147	24,307	26,015
Performance-based vesting	22,254	21,559	25,001
Total restricted stock awards	53,224	53,975	59,311
Weighted average grant date fair value	$ 38.57	$ 32.73	$ 28.22

The restricted stock awards allow for the non-forfeitable receipt of dividends, and the voting of all shares, whether or not vested, throughout the vesting periods at the same proportional level as common shares outstanding.

Upon vesting, restricted stock awards may be net settled to cover payment for employee tax obligations, resulting in shares of common stock being reacquired by the Company. During the years ended December 31, 2022, 2021 and 2020 the Company paid $425 thousand, $330 thousand and $233 thousand, respectively, to net settle the vesting of restricted stock awards to cover employee tax obligations.

Any shares that are returned to the Company prior to vesting or as payment for employee tax obligations upon vesting shall remain available for issuance under such plan, while the plan is still effective.

The following table sets forth a summary of the activity for the Company's restricted stock awards:

	Restricted Stock	Weighted Average Grant Price Per Share
Unvested December 31, 2021	113,871	$ 30.61
Granted	53,224	38.57
Vested/released	58,930	30.33
Forfeited	1,507	34.48
Unvested December 31, 2022	106,658	$ 34.68

Stock-based compensation expense recognized in association with the restricted stock awards amounted to $1.9 million, $1.6 million and $1.4 million for the years ended December 31, 2022, 2021 and 2020, respectively. The total tax benefit recognized related to restricted stock award compensation expense was $522 thousand, $456 thousand and $402 thousand for the years ended December 31, 2022, 2021 and 2020, respectively.

As of December 31, 2022, there remained $2.1 million of unrecognized compensation expense related to the restricted stock awards. That cost is expected to be recognized over the remaining weighted average vesting period of 2.1 years.

The total fair value of restricted stock awards vested (based on grant date fair value) during the years ended December 31, 2022, 2021 and 2020 was $1.8 million, $1.7 million and $1.3 million, respectively.

Stock in Lieu of Directors' Fees

In addition to the restricted stock awards discussed above, non-employee members of the Company's Board may opt to receive newly issued shares of the Company's common in stock in lieu of cash compensation for attendance at Board and Board Committee meetings. These shares are valued based on the Company's average quarterly close and are issued in January of the following year.

Stock in lieu of directors' fees expense was $254 thousand for the year ended December 31, 2022, which represented 7,265 shares issued in January of 2023, compared to $252 thousand for the year ended December 31, 2021, which represented 7,375 shares issued in January of 2022, and $286 thousand for the year ended December 31, 2020, which represented 11,532 shares issued in January of 2021. The total tax benefit recognized related to the stock in lieu of directors' fees for meeting attendance was $71 thousand for both of the years ended December 31, 2022, 2021, and $80 thousand, for the year ended December 31, 2020.

(15) Income Taxes

The components of income tax expense for the years ended December 31, were calculated using the asset and liability method as follows:

(Dollars in thousands)	2022	2021	2020
Current expense:			
Federal	$ 11,996	$ 10,786	$ 11,305
State	4,606	3,771	4,542
Total current expense	16,602	14,557	15,847
Deferred benefit:			
Federal	(2,027)	(945)	(3,940)
State	(1,145)	(25)	(1,735)
Total deferred benefit	(3,172)	(970)	(5,675)
Total income tax expense	$ 13,430	$ 13,587	$ 10,172

The provision for income taxes differs from the amount computed by applying the statutory U.S. federal income tax rate of 21% for 2022, 2021 and 2020 to income before taxes as follows:

(Dollars in thousands)	2022	2021	2020
Computed income tax expense at statutory rate	$ 11,791	$ 11,709	$ 8,742
State income taxes, net of federal tax benefit	2,734	2,959	2,218
Tax-exempt income, net of disallowance	(804)	(832)	(865)
Bank-owned life insurance income, net	(252)	(172)	(123)
Tax (benefit) expense from stock compensation	(147)	(85)	25
Other	108	8	175
Total income tax expense	$ 13,430	$ 13,587	$ 10,172
Effective income tax rate	23.9 %	24.4 %	24.4 %

At December 31, the tax effects of each type of income and expense item that give rise to deferred taxes are as follows:

(Dollars in thousands)	2022	2021
Deferred tax asset:		
Allowance for Credit Losses	$ 15,822	$ 14,277
Depreciation	3,270	2,454
Net unrealized losses on equity securities	53	—
Net unrealized losses on debt securities	27,918	—
Supplemental employee retirement plans	932	794
Deferred compensation and benefits	3,042	2,799
Non-accrual interest	1,425	699
Stock-based compensation expense	389	667
Lease liability	6,781	6,562
Deferred fees on PPP loans	37	689
Other	1,347	820
Total	61,016	29,761
Deferred tax liability:		
Goodwill	1,571	1,571
Net unrealized gains on equity securities	—	80
Net unrealized gains on debt securities	—	1,245
Deferred origination costs	616	612
Lease ROU asset	6,781	6,562
Other	67	47
Total	9,035	10,117
Net deferred tax asset	$ 51,981	$ 19,644

Management believes based upon positive historical and expected future earnings that it is more likely than not the Company will generate sufficient taxable income to realize the deferred tax asset existing at December 31, 2022. However, factors beyond management's control, such as the general state of the economy, can affect future levels of taxable income and there can be no assurances that sufficient taxable income will be generated to fully realize the deferred tax assets in the future.

The Company paid total income taxes during the years ended December 31, 2022, 2021 and 2020 of $17.0 million, $12.3 million and $17.7 million, respectively.

The Company did not have unrecognized tax benefits accrued as income tax liabilities or receivables or as deferred tax items at December 31, 2022 or December 31, 2021. The Company is generally subject to examinations by taxing authorities for prior three tax years. In addition, the Company's income tax returns for the 2015 and 2016 tax years, as amended in 2019, are also subject to examination by taxing authorities.

The Company invests in qualified affordable housing projects as a limited partner. During the year ended December 31, 2022, the Company recognized $36 thousand in Federal Low Income Housing tax credits and $71 thousand for both of the years ended December 31, 2021 and 2020. As of December 31, 2022, there are no remaining tax credits related to these Federal Low Income Housing Tax Credit program expected to be realized.

(16) Earnings per Share

The table below presents the increase in average shares outstanding, using the treasury stock method, for the diluted earnings per share calculation for the years indicated:

	2022	2021	2020
Basic weighted average common shares outstanding	12,103,033	12,005,838	11,897,813
Dilutive shares	46,744	45,455	21,695
Diluted weighted average common shares outstanding	12,149,777	12,051,293	11,919,508

There were 34,291, 31,677 and 75,870 stock options outstanding at December 31, 2022, 2021 and 2020, respectively, that were determined to be anti-dilutive and therefore excluded from the calculation of dilutive shares for the years ended December 31, 2022, 2021 and 2020. These stock options, which were not dilutive at that date, may potentially dilute earnings per share in the future.

The Company issues stock options and restricted stock awards to officers and other employees and restricted stock awards and stock compensation in lieu of cash fees to non-employee directors. The restricted stock awards allow for the non-forfeitable receipt of dividends, and the voting of all shares, whether or not vested, throughout the vesting periods at the same proportional level as common shares outstanding. The unvested restricted stock awards are the Company's only participating securities and are included in shares outstanding. Unvested participating restricted awards amounted to 106,658 shares and 113,871 shares as of December 31, 2022 and December 31, 2021, respectively.

(17) Fair Value Measurements

The FASB defines the fair value of an asset or liability to be the price which a seller would receive in an orderly transaction between market participants (an exit price) and also establishes a fair value hierarchy segregating fair value measurements using three levels of inputs: (Level 1) quoted market prices in active markets for identical assets or liabilities; (Level 2) significant other observable inputs, including quoted prices for similar items in active markets, quoted prices for identical or similar items in markets that are not active, inputs such as interest rates and yield curves, volatilities, prepayment speeds, credit risks and default rates which provide a reasonable basis for fair value determination or inputs derived principally from observed market data; and (Level 3) significant unobservable inputs for situations in which there is little, if any, market activity for the asset or liability. Unobservable inputs must reflect reasonable assumptions that market participants would use in pricing the asset or liability, which are developed based on the best information available under the circumstances.

The following tables summarize significant assets and liabilities carried at fair value and placement in the fair value hierarchy at the dates specified:

	December 31, 2022			
		Fair Value Measurements Using:		
(Dollars in thousands)	**Fair Value**	**(Level 1)**	**(Level 2)**	**(Level 3)**
Assets measured on a recurring basis:				
Debt securities	$ 816,102	$ —	$ 816,102	$ —
Equity securities	4,269	4,269	—	—
FHLB stock	2,343	—	2,343	—
Interest-rate swaps	782	—	782	—
Assets measured on a non-recurring basis:				
Individually evaluated loans (collateral dependent)	740	—	—	740
Liabilities measured on a recurring basis:				
Interest-rate swaps	$ 782	$ —	$ 782	$ —
RPA sold	73	—	73	—

	December 31, 2021			
		Fair Value Measurements Using:		
(Dollars in thousands)	**Fair Value**	**(Level 1)**	**(Level 2)**	**(Level 3)**
Assets measured on a recurring basis:				
Debt securities	$ 956,430	$ —	$ 956,430	$ —
Equity securities	1,785	1,785	—	—
FHLB stock	2,164	—	2,164	—
Interest-rate swaps	528	—	528	—
Assets measured on a non-recurring basis:				
Individually evaluated loans (collateral dependent)	15,210	—	—	15,210
Liabilities measured on a recurring basis:				
Interest-rate swaps	$ 528	$ —	$ 528	$ —

The Company did not transfer any assets between the fair value measurement levels during the years ended December 31, 2022 or December 31, 2021.

All of the Company's debt securities are considered "available-for-sale" and are carried at fair value. The debt security category above may include federal agency obligations, U.S. treasury securities, commercial and residential federal agency MBS, municipal securities, corporate bonds, and CDs, as held at those dates. The Company utilizes third-party pricing vendors to provide valuations on its debt securities. Fair values provided by the vendors were generally determined based upon pricing matrices utilizing observable market data inputs for similar or benchmark securities in active markets and/or based on a matrix pricing methodology which employs The Bond Market Association's standard calculations for cash flow and price/yield analysis, live benchmark bond pricing and terms/condition data available from major pricing sources. Therefore, management regards the inputs and methods used by third-party pricing vendors to be "Level 2 inputs and methods" as defined in the "fair value hierarchy." The Company periodically obtains a second price from an impartial third-party on debt securities to assess the reasonableness of prices provided by the primary independent pricing vendor.

The Company's equity securities portfolio fair value is measured based on quoted market prices for the shares; therefore, these securities are categorized as Level 1 within the fair value hierarchy.

The Bank is required to purchase FHLB stock at par value in association with advances from the FHLB. The stock is issued, redeemed, repurchased, and transferred by the FHLB only at their fixed par value. This stock is classified as a restricted investment and carried at FHLB par value which management believes approximates fair value; therefore, these securities are categorized as Level 2 measures.

The fair values of derivative assets and liabilities, which are comprised of back-to-back swaps and risk participation agreements, represent a Level 2 measurement and are based on settlement values adjusted for credit risks and observable market interest-rate curves. The settlement values are determined using widely accepted valuation techniques including discounted cash flow analysis on the expected cash flows of each derivative, reflecting the contractual terms of the derivatives, including the period to maturity, and uses observable market-based inputs, including interest-rate curves. Credit risk adjustments consider factors such as the likelihood of default by the Company and its counterparties, its net exposures and remaining contractual life. The change in value of derivative assets and liabilities attributable to credit risk was not significant during the reported periods.

The fair value of individually evaluated collateral dependent loan balances in the table above represent those collateral dependent commercial loans where management has estimated the probable credit loss by comparing the loan's carrying value against the expected realizable fair value of the collateral (appraised value, or internal analysis, less estimated cost to sell, adjusted as necessary for changes in relevant valuation factors subsequent to the measurement date). Certain inputs used in these assessments, and possible subsequent adjustments, are not always observable, and therefore, collateral dependent loans are categorized as Level 3 within the fair value hierarchy. A specific allowance is assigned to the collateral dependent loan for the amount of management's estimated probable credit loss. The specific allowances assigned to the collateral dependent individually evaluated loans amounted to $298 thousand at December 31, 2022 compared to $1.0 million at December 31, 2021.

Letters of credit are conditional commitments issued by the Company to guarantee the financial obligation or performance of a customer to a third party. The fair value of these commitments was estimated to be the fees charged to enter into similar agreements, and accordingly these fair value measures are deemed to be FASB Level 2 measurements. In accordance with the FASB, the estimated fair values of these commitments are carried on the Consolidated Balance Sheet as a liability and amortized to income over the life of the letters of credit, which are typically one year. The estimated fair value of these commitments carried on the Consolidated Balance Sheets at December 31, 2022 and December 31, 2021 were deemed immaterial.

Interest-rate lock commitments related to the origination of mortgage loans that will be sold are considered derivative instruments. The commitments to sell loans are also considered derivative instruments. The Company generally does not pool mortgage loans for sale, but instead sells the loans on an individual basis. To reduce the net interest rate exposure arising from its loan sale activity, the Company enters into the commitment to sell these loans at essentially the same time that the interest-rate lock commitment is quoted on the origination of the loan. The Company estimates the fair value of these derivatives based on current secondary mortgage market prices. These commitments are accounted for in accordance with FASB guidance. The fair values of the Company's derivative instruments are deemed to be FASB Level 2 measurements. At December 31, 2022 and December 31, 2021, the estimated fair value of the Company's interest-rate lock commitments and commitments to sell these mortgage loans were deemed immaterial.

The following table presents additional quantitative information about assets measured at fair value on a non-recurring basis for which the Company utilized Level 3 inputs (significant unobservable inputs for situations in which there is little, if any, market activity for the asset or liability) to determine fair value as of December 31, 2022 and December 31, 2021:

	Fair Value				
(Dollars in thousands)	**December 31, 2022**	**December 31, 2021**	**Valuation Technique**	**Unobservable Input**	**Unobservable Input Value or Range**
Assets measured on a non-recurring basis:					
Individually evaluated loans (collateral dependent)	$ 740	$ 15,210	Appraisal of collateral	Appraisal adjustments[1]	15% - 50%

(1) Appraisals may be adjusted by management for qualitative factors such as economic conditions and estimated liquidation expenses.

Estimated Fair Values of Assets and Liabilities

In addition to disclosures regarding the measurement of assets and liabilities carried at fair value on the Consolidated Balance Sheet, the Company is also required to disclose fair value information about financial instruments for which it is practicable to estimate that value, whether or not recognized on the Consolidated Balance Sheet.

The carrying values, estimated fair values and placement in the fair value hierarchy of the Company's financial instruments for which fair value is only disclosed but not recognized on the Consolidated Balance Sheets at the dates indicated are summarized as follows:

	December 31, 2022				
			Fair Value Measurement		
(Dollars in thousands)	**Carrying Amount**	**Fair Value**	**Level 1 Inputs**	**Level 2 Inputs**	**Level 3 Inputs**
Financial assets:					
Loans, net	$ 3,127,878	$ 2,952,778	$ —	$ —	$ 2,952,778
Financial liabilities:					
CDs	287,192	281,800	—	281,800	—
Borrowed funds	3,216	2,006	—	2,006	—
Subordinated debt	59,182	55,407	—	55,407	—

	December 31, 2021				
			Fair Value Measurement		
(Dollars in thousands)	**Carrying Amount**	**Fair Value**	**Level 1 Inputs**	**Level 2 Inputs**	**Level 3 Inputs**
Financial assets:					
Loans, net	$ 2,872,980	$ 2,922,947	$ —	$ —	$ 2,922,947
Financial liabilities:					
CDs	206,449	206,450	—	206,450	—
Borrowed funds	5,479	5,121	—	5,121	—
Subordinated debt	58,979	58,460	—	58,460	—

Excluded from the tables above are certain financial instruments with carrying values that approximated their fair value at the dates indicated, as they were short-term in nature or payable on demand. These include cash and cash equivalents, accrued interest and non-term deposit accounts. The respective carrying values of these instruments would all be classified within Level 1 of their fair value hierarchy.

Also excluded from these tables are the fair values of commitments for unused portions of lines of credit and commitments to originate loans that were short-term, at current market rates and estimated to have no significant change in fair value.

(18) Supplemental Cash Flow Information

The supplemental cash flow information for the years indicated is as follows:

(Dollars in thousands)	**2022**	**2021**	**2020**
Supplemental financial data:			
Cash paid for: interest	$ 8,647	$ 7,880	$ 13,612
Cash paid for: income taxes	16,983	12,335	17,672
Cash paid for: lease liability	1,380	1,251	1,242
Supplemental schedule of non-cash activity:			
Transfer from loans to other real estate owned	—	2,400	—
ROU lease assets: operating leases[(1)]	31	6,608	27

(1) Represents net new right of use ("ROU") lease assets added in the periods indicated.

(19) Condensed Parent Company Only Financial Statements

Balance Sheets

(Dollars in thousands, except per share data)	December 31, 2022	December 31, 2021
Assets		
Cash	$ 1,929	$ 1,981
Investment in subsidiaries	340,966	404,975
Other assets	—	365
Total assets	$ 342,895	$ 407,321
Liabilities and Shareholders' Equity		
Liabilities		
Subordinated debt	$ 59,182	$ 58,979
Accrued interest payable	1,444	1,444
Other liabilities	2	3
Total liabilities	60,628	60,426
Shareholders' equity:		
Preferred stock, $0.01 par value per share; 1,000,000 shares authorized; no shares issued	—	—
Common stock $0.01 par value per share; 40,000,000 shares authorized; 12,133,516 and 12,038,382 shares issued, respectively	121	120
Additional paid-in capital	103,793	100,352
Retained earnings	274,560	241,761
Accumulated other comprehensive income	(96,207)	4,662
Total shareholders' equity	282,267	346,895
Total liabilities and shareholders' equity	$ 342,895	$ 407,321

Statements of Income

(Dollars in thousands)	For the years ended December 31, 2022	2021	2020
Equity in undistributed net income of subsidiaries	$ 36,701	$ 22,985	$ 30,309
Dividends distributed by subsidiaries	8,900	22,350	3,100
Total income	45,601	45,335	33,409
Interest expense	3,352	3,495	2,502
Other operating expenses	270	891	215
Total operating expenses	3,622	4,386	2,717
Income before income taxes	41,979	40,949	30,692
Benefit from income taxes	(737)	(1,222)	(764)
Net income	$ 42,716	$ 42,171	$ 31,456

Parent Company Only Financial Statements

Statements of Cash Flows

(Dollars in thousands)	For the years ended December 31, 2022	2021	2020
Cash flows from operating activities:			
Net income	$ 42,716	$ 42,171	$ 31,456
Adjustments to reconcile net income to net cash provided by operating activities:			
Equity in undistributed net income of subsidiaries	(36,701)	(22,985)	(30,309)
Payment from subsidiary bank for stock compensation expense	2,315	2,094	1,872
Changes in:			
Net decrease (increase) in other assets	205	66	(229)
Net increase(decrease) in other liabilities	202	(25)	385
Net cash provided by operating activities	8,737	21,321	3,175
Cash flows from investing activities:			
Investment in subsidiary	—	—	(53,000)
Net cash used in investing activities	—	—	(53,000)
Cash flows from financing activities:			
Repayment of subordinated debt	—	(14,887)	—
Proceeds from the issuance of subordinated debt	—	—	60,000
Cash dividends paid, net of dividend reinvestment plan	(8,521)	(7,627)	(7,105)
Proceeds from issuance of common stock	47	59	91
Net settlement for employee tax withholding on restricted stock and options	(433)	(346)	(233)
Net proceeds from exercise of stock options	118	159	21
Net cash (used in) provided by financing activities	(8,789)	(22,642)	52,774
Net (decrease) increase in cash and cash equivalents	(52)	(1,321)	2,949
Cash at beginning of year	1,981	3,302	353
Cash at end of year	$ 1,929	$ 1,981	$ 3,302

The Parent Company's Statements of Comprehensive Income and Statements of Changes in Shareholders' Equity are identical to the Consolidated Statements of Comprehensive Income and the Consolidated Statements of Changes in Shareholders' Equity and therefore are not presented here.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Shareholders and the Board of Directors of Enterprise Bancorp, Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Enterprise Bancorp, Inc. and its subsidiaries (the Company) as of December 31, 2022 and 2021, the related consolidated statements of income, comprehensive income, changes in shareholders' 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 March 8, 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 Matter

The critical audit matter communicated below is a matter arising from the current period audit of the financial statements that was communicated or required to be communicated to the audit committee and that: (1) relates to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective or complex judgments. The communication of critical audit matter 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 matter below, providing separate opinions on the critical audit matter or on the accounts or disclosures to which it relates.

Allowance for Credit Losses for Loans

As described in Notes 1 and 4 of the consolidated financial statements, the Company's allowance for credit losses for loans totaled $52.6 million as of December 31, 2022. The general reserve for larger groups of homogeneous loans collectively evaluated is evaluated on a pool basis. The Company has segmented the loan portfolio for groups of loans with similar risk characteristics by 1) loan type for pass-rated loans and 2) by internal risk rating for adversely classified loans not individually evaluated. The general reserve is comprised of a quantitative reserve based on the Company's historical loss experience, a qualitative reserve based on management's evaluation of several judgmental qualitative or environmental factors, and economic forecasts over the estimated life of the loan pools. The qualitative or environmental factors used by the Company include considerations such as commercial concentrations by industry, property type and real estate location; the growth and composition of the loan portfolio; the growth and composition of the loan portfolio; trends in risk classification of individual loans and higher risk problem assets; the level of delinquent loans and non-performing loans; individually evaluated and restructured loans; the level of foreclosure activity; net charge-offs; and trends in the general levels of these indicators. In addition, the Company monitors expansion in the geographic market area; the experience level of lenders and any changes in underwriting criteria; and general conditions and development markets in the Company's local region as well as changes in the current and forecasted economic conditions, such as changes in gross domestic product, the unemployment rate and new jobs created, real estate values, commercial vacancy rates, recession risk estimates and other relevant economic factors. The

Company generally uses a two-year reasonable and supportable forecast, and for periods beyond the forecast period, reverts to historical loss rates. The evaluation and measurement of the qualitative or environmental and economic forecasts requires management to apply a high degree of judgment and involves assumptions that are sensitive to change, for which future adjustments to the allowance may be necessary.

We identified the qualitative component of the general reserve for loans collectively evaluated in the allowance for credit losses for loans as a critical audit matter because auditing the underlying qualitative or environmental factors and economic forecasts used in establishing the general reserve involved a high degree of auditor judgment given the high degree of subjectivity exercised by management.

Our audit procedures related to management's evaluation and establishment of the qualitative component of the general reserve for loans collectively evaluated in the allowance for credit losses for loans included the following, among others:

- We obtained an understanding of the relevant controls related to the qualitative or environmental factors and economic forecasts applied to the general reserve for loans collectively evaluated in the allowance for credit losses for loans and tested such controls for design and operating effectiveness, including controls over management's establishment, review and approval of the qualitative or environmental factors and economic forecasts, including the data used in determining the qualitative or environmental factors and economic forecasts.
- We tested management's process and significant judgments in the evaluation and establishment of the qualitative or environmental factors and economic forecasts used in the general reserve for loans collectively evaluated in the allowance for credit losses for loans, which included:
    - Validating the source of information used by management by comparing to the relevant internal or external information from which it was derived, as well as testing the completeness and accuracy of the source data used by management.
    - Evaluating the reasonableness of management's judgments related to the qualitative or environmental factors and the correlation to potential losses by evaluating the adjustments in terms of magnitude and directional consistency based on the data utilized in the determination of the qualitative or environmental factors.
    - Evaluating the reasonableness of management's indicators of current and forecasted economic factors, which include changes in gross domestic product, the unemployment rate and new jobs created, real estate values, commercial vacancy rates, recession risk estimates, among others, by comparing these forecasts to external and internal information sources.

/s/ RSM US LLP

We have served as the Company's auditor since 2015.

Boston, Massachusetts
March 8, 2023

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Shareholders and the Board of Directors of Enterprise Bancorp, Inc.

Opinion on the Internal Control Over Financial Reporting

We have audited Enterprise Bancorp, Inc.'s (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 financial statements of the Company and our report dated March 8, 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

Boston, Massachusetts
March 8, 2023

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

None.

Item 9A. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

The Company maintains a set of disclosure controls and procedures and internal controls designed to ensure that the information required to be disclosed in reports that it files or furnishes to the SEC under the Securities Exchange Act of 1934, as amended (the "Exchange Act"), is recorded, processed, summarized, and reported within the time periods specified in the SEC's rules and forms.

The Company carried out an evaluation as of the end of the period covered by this Form 10-K, under the supervision and with the participation of the Company's management, including its principal executive officer and principal financial officer, of the effectiveness of the design and operation of the Company's disclosure controls and procedures pursuant to Exchange Act Rule 13a-15(b). Based upon that evaluation, the Company's principal executive officer and principal financial officer concluded that the Company's disclosure controls and procedures are effective as of December 31, 2022.

Management's Report on Internal Control Over Financial Reporting

The Company's management is responsible for establishing and maintaining adequate internal control over financial reporting. The Company's internal control system was designed to provide reasonable assurance to the Company's management and Board regarding the preparation and fair presentation of published financial statements. All internal control systems, however, no matter how well designed, have inherent limitations and may not prevent or detect misstatement. 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. Therefore, even those systems determined to be effective can provide only reasonable assurance with respect to financial statement preparation and presentation.

The Company's management assessed the effectiveness of the Company's internal control over financial reporting as of December 31, 2022. In making this assessment, it used the 2013 criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission in "Internal Control-Integrated Framework." Based on management's assessment, the Company believes that, as of December 31, 2022, the Company's internal control over financial reporting is effective based on these criteria.

The Company's independent registered public accounting firm has issued a report on the effectiveness of the Company's internal control over financial reporting, which appears on page 118 of this Form 10-K.

Changes in Internal Control Over Financial Reporting

There have been no significant changes in the Company's internal control over financial reporting that has occurred during the Company's most recent fiscal quarter (i.e., the three months ended December 31, 2022) that materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting.

Item 9B. Other Information

None.

Item 9C. Disclosure Regarding Foreign Jurisdictions that Prevent Inspections.

Not applicable.

Part III

Items 10, 11, 12, 13 and 14.

The information required in Items 10, 11, 12, 13 and 14 of this Part III of this Form 10-K is incorporated herein by reference to the Company's definitive proxy statement for its annual meeting of shareholders to be held on May 2, 2023, which it expects to file with the SEC within 120 days of the end of the fiscal year covered by this Form 10-K. For additional information on availability of the Company's corporate governance guidelines, see the section titled "Company Website," contained in Item 1, "Business," of this Form 10-K.

Part IV

Item 15. Exhibits, Financial Statement Schedules

(a) The following documents are filed as part of this annual report:

(1) Financial Statements

See Index to Consolidated Financial Statements contained in Item 8 of this Form 10-K above.

(2) Financial Statement Schedules

None (information included in consolidated financial statements)

(3) Exhibits

Exhibit No. and Description

3.1.1 Amended and Restated Articles of Organization of the Company, as amended as of June 4, 2013, incorporated by reference to Exhibit 3.1 to the Company's Current Report on Form 8-K filed June 10, 2013 (File No. 001-33912).

3.1.2 Articles of Amendment to the Restated Articles of Organization of the Company, as amended as of May 16, 2017, incorporated by reference to Exhibit 3.1 to the Company's Current Report on Form 8-K filed May 18, 2017 (File No. 001-33912).

3.1.3 Articles of Amendment to the Restated Articles of Organization of the Company, as amended January 5, 2018, incorporated by reference to Exhibit 3.1 to the Company's Current Report on Form 8-K filed January 11, 2018 (File No. 001-33912).

3.2 Second Amended and Restated Bylaws of the Company, as amended as of January 19, 2021, incorporated by reference to Exhibit 3.1 to the Company's Current Report on Form 8-K filed on January 22, 2021 (File No. 001-33912).

4.1 Renewal Rights Agreement dated as of December 11, 2007 by and between the Company and Computershare Trust Company, N.A., as Rights Agent, including Terms of Series A Junior Participating Preferred Stock, Summary of Rights to Purchase Shares of Series A Junior Participating Preferred Stock, and Form of Rights Certificate attached as Exhibits A, B and C thereto, incorporated by reference to Exhibit 4.5 to the Company's Current Report on Form 8-K filed on December 13, 2007 (File No. 001-33912).

4.2 Amendment No. 1 to Renewal Rights Agreement dated as of January 5, 2018, incorporated by reference to Exhibit 4.2 to the Company's Current Report on Form 8-K dated January 11, 2018 (File No. 001-33912).

4.3 Description of the Company's Common Stock Registered under Section 12 of the Exchange Act of 1934, incorporated by reference to Exhibit 4.3 to the Company's Annual Report on Form 10-K for the year ended December 31, 2020 (File No. 001-33912).

4.4 Description of the Company's Preferred Share Purchase Rights Registered under Section 12 of the Exchange Act of 1934, incorporated by reference to Exhibit 4.4 to the Company's Annual Report on Form 10-K for the year ended December 31, 2019 (File No. 001-33912).

4.5 Indenture, dated as of July 7, 2020, by and between Enterprise Bancorp, Inc. and UMB Bank, National Association, as trustee, incorporated by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K, filed on July 7, 2020 (File No.001-33912).

4.6 Form of Fixed to Floating Rate Subordinated Note due July 15, 2030 (included as Exhibit A-2 to the Indenture incorporated by reference to Exhibit 4.5 hereto).

10.1 Enterprise Bancorp, Inc. Employee Stock Purchase Plan, incorporated by reference to Exhibit 4 to the Company's Registration Statement on Form S-8 filed on August 17, 2006 (Reg. No. 333-136700).

10.2.1 Salary Continuation Agreement dated as of July 15, 2005 by and between the Bank and George L. Duncan, incorporated by reference to Exhibit 10.39.1 to the Company’s Current Report on Form 8-K filed on July 20, 2005, as amended by Form 8-K/A filed on February 23, 2006 (File No. 333-79135).

10.2.2 Salary Continuation Agreement dated as of July 15, 2005 by and between the Bank and Richard W. Main, incorporated by reference to Exhibit 10.39.2 to the Company’s Current Report on Form 8-K filed on July 20, 2005, as amended by Form 8-K/A filed on February 23, 2006 (File No. 333-79135).

10.3.1 First Amendment dated as of December 19, 2008 to Salary Continuation Agreement dated as of July 15, 2005 by and between the Bank and George L. Duncan, incorporated by reference to Exhibit 10.1.1 to the Company’s Current Report on Form 8-K filed on December 24, 2008 (File No. 001-33912).

10.3.2 First Amendment dated as of December 19, 2008 to Salary Continuation Agreement dated as of July 15, 2005 by and between the Bank and Richard W. Main, incorporated by reference to Exhibit 10.1.2 to the Company's Current Report on Form 8-K filed on December 24, 2008 (File No. 001-33912).

10.4.1 Change in Control/Noncompetition Agreement dated as of December 18, 2008 by and among the Company, the Bank and Stephen J. Irish, incorporated by reference to Exhibit 10.12 to the Company's Annual Report on Form 10-K for the year ended December 31, 2008 (File No. 001-33912).

10.4.2 Change in Control/Noncompetition Agreement dated as of May 19, 2014 by and among the Company, the Bank and Joseph R. Lussier, incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on June 20, 2019 (File No. 001-33912).

10.5.1 Employment Agreement dated July 9, 2015 by and among the Company, the Bank and George L. Duncan, incorporated by reference to Exhibit 10.1.1 to the Company's Current Report on Form 8-K filed on July 9, 2015 (File No. 001-33912).

10.5.2 Employment Agreement dated July 9, 2015 by and among the Company, the Bank and Richard W. Main, incorporated by reference to Exhibit 10.1.2 to the Company's Current Report on Form 8-K filed on July 9, 2015 (File No. 001-33912).

10.5.3 Employment Agreement dated July 9, 2015 by and among the Company, the Bank and John P. Clancy, Jr., incorporated by reference to Exhibit 10.1.3 to the Company's Current Report on Form 8-K filed on July 9, 2015 (File No. 001-33912).

10.6.1 Supplemental Life Insurance Agreement dated as of July 15, 2005 by and between the Bank and George L. Duncan, incorporated by reference to Exhibit 10.40.1 to the Company's Current Report on Form 8-K filed on July 20, 2005 (File No. 333-79135).

10.6.2 Supplemental Life Insurance Agreement dated as of July 15, 2005 by and between the Bank and Richard W. Main, incorporated by reference to Exhibit 10.40.2 to the Company's Current Report on Form 8-K filed on July 20, 2005 (File No. 333-79135).

10.7.1 Enterprise Bank and Trust Company Supplemental Life Insurance Plan adopted April 5, 2006, incorporated by reference to Exhibit 10.52 to the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2006 (File No. 333-79135).

10.8.1 Enterprise Bancorp, Inc. 2009 Stock Incentive Plan, as amended on May 1, 2012, June 16, 2015 and October 16, 2018, incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on October 22, 2018 (File No. 001-33912).

10.8.2 Enterprise Bancorp, Inc. 2016 Stock Incentive Plan, as amended on October 16, 2018, incorporated by reference to the Exhibit 10.2 to the Company's Current Report on Form 8-K filed on October 22, 2018 (File No. 001-33912).

10.8.3 Amendment No. 1 to the Enterprise Bancorp, Inc. 2016 Stock Incentive Plan, dated January 19, 2021, incorporated by reference to the Exhibit 10.1 to the Company's Current Report on Form 8-K filed on May 6, 2021 (File No. 001-33912).

10.9.1 Specimen Nonqualified Stock Option Agreement dated as of March 19, 2013 under Enterprise Bancorp, Inc. 2009 Stock Incentive Plan, as amended, incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K filed on March 25, 2013 (File No. 001-33912).

10.9.2 Specimen Restricted Stock Agreement under Enterprise Bancorp, Inc. 2009 Stock Incentive Plan, as amended, incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on March 24, 2014 (File No. 001-33912).

10.10.1 Specimen 2019 Nonqualified Stock Option Agreement under Enterprise Bancorp, Inc. 2016 Stock Incentive Plan, as amended, incorporated by reference to exhibit 10.12.1 to the Company's Annual Report on Form 10-K filed on March 13, 2019 (File No.001-33912).

10.10.2 Specimen 2019 Restricted Stock Agreement under Enterprise Bancorp, Inc. 2016 Stock Incentive Plan, as amended, incorporated by reference to exhibit 10.12.2 to the Company's Annual Report on Form 10-K filed on March 13, 2019 (File No.001-33912).

10.10.3 Specimen 2019 Director Restricted Stock Agreement under Enterprise Bancorp, Inc. 2016 Stock Incentive Plan, as amended, incorporated by reference to exhibit 10.12.3 to the Company's Annual Report on Form 10-K filed on March 13, 2019 (File No.001-33912).

10.10.4 Specimen Nonqualified Stock Option Agreement under Enterprise Bancorp, Inc. 2016 Stock Incentive Plan, as amended, incorporated by reference to Exhibit 10.2 to the Company’s Current Report on Form 8-K filed on March 20, 2020 (File No. 001-33912).

10.11.1.1 Enterprise Bank and Trust Company 2020 Variable Compensation Inventive Plan, incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on March 20, 2020 (File No. 001-33912).

10.11.1.2 Amendment to the Enterprise Bank and Trust Company 2020 Variable Compensation Inventive Plan, incorporated by reference to the Company's Current Report on Form 8-K filed on November 16, 2020 (File No. 001-33912).

10.11.2 Enterprise Bank and Trust Company 2021 Variable Compensation Incentive Plan, incorporated by reference to Exhibit 10.1 to the Company’s Current Report on Form 8-K filed on April 23, 2021 (File No. 001-33912).

10.11.3 Enterprise Bank and Trust Company 2022 Variable Compensation Incentive Plan, incorporated by reference to Exhibit 10.1 to the Company’s Current Report on Form 8-K filed on March 18, 2022 (File No. 001-33912).

10.12 Enterprise Bancorp, Inc. Annual Executive Incentive Plan, incorporated by reference to Appendix A of the Company's Definitive Proxy Statement on Schedule 14A dated April 3, 2017, and filed on April 3, 2017 (File No. 001-33912).

10.13 Enterprise Bancorp, Inc. Dividend Reinvestment and Direct Stock Purchase Plan, incorporated by reference to the section of the Company's Registration Statement on Form S-3 filed on August 13, 2020 (Reg. No. 333-219879), appearing under the heading "The Plan."

10.14.1 Form of Subordinated Note Purchase Agreement dated January 30, 2015, incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on February 3, 2015 (File No. 001-33912).

10.14.2 Form of Subordinated Note Purchase Agreement dated July 7, 2020, incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on July 7, 2020 (File No. 001-33912).

10.15.1 Enterprise Bank Supplemental Executive Retirement and Deferred Compensation Plan, incorporated by reference to Exhibit 10.17 to the Company's Annual Report on Form 10-K filed on March 3, 2019 (File No.001-33912).

10.15.2 First Addendum to the Enterprise Bank Supplemental Executive Retirement and Deferred Compensation Plan, incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K filed on March 22, 2019 (File No.001-33912).

10.15.3 Second Addendum to the Enterprise Bank Supplemental Executive Retirement and Deferred Compensation Plan, incorporated by reference to Exhibit 10.3 to the Company's Current Report on Form 8-K filed on March 20, 2020 (File No.001-33912).

10.15.4 Third Addendum to the Enterprise Bank Supplemental Executive Retirement and Deferred Compensation Plan, incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K filed on April 23, 2021 (File no. 001-33912).

10.15.5 Fourth Addendum to the Enterprise Bank Supplemental Executive Retirement and Deferred Compensation Plan, incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K filed on March 18, 2022 (File no. 001-33912).

21.0* Subsidiaries of the Registrant.

23.0* Consent of RSM US LLP.

31.1* Certification of principal executive officer under Securities and Exchange Act Rule 13a—14(a).

31.2* Certification of principal financial officer under Securities and Exchange Act Rule 13a—14(a).

32.0* Certification of principal executive officer and principal financial officer under 18 U.S.C § 1350 furnished pursuant to Securities and Exchange Act Rule 13a—14(b).

101* Interactive data files pursuant to Rule 405 of Regulation S-T: The following materials from Enterprise Bancorp, Inc.'s Annual Report on Form 10-K for the year ended December 31, 2022 were formatted in XBRL (eXtensible Business Reporting Language):
(i) Consolidated Balance Sheets as of December 31, 2022 and December 31, 2021,
(ii) Consolidated Statements of Income for the years ended December 31, 2022, 2021 and 2020,
(iii) Consolidated Statements of Comprehensive Income for the years ended December 31, 2022, 2021 and 2020,
(iv) Consolidated Statements of Changes in Equity for the years ended December 31, 2022, 2021 and 2020,
(v) Consolidated Statements of Cash Flows for the years ended December 31, 2022, 2021 and 2020, and
(vi) Notes to Consolidated Financial Statements.

* Filed herewith

(b) Exhibits required by Item 601 of Regulation S-K

The exhibits listed above either have been previously filed and are incorporated herein by reference to the applicable prior filing or are filed herewith.

(c) Additional Financial Statement Schedules

None.

Item 16. Form 10-K Summary

None.

ENTERPRISE BANCORP, INC.

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.

	ENTERPRISE BANCORP, INC.
March 8, 2023	By: /s/ Joseph R. Lussier
	Joseph R. Lussier Executive Vice President, Chief Financial Officer and Treasurer

Pursuant to the requirements of the Securities Exchange Act of 1934, as amended, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

/s/ George L. Duncan George L. Duncan	Chairman	March 8, 2023
/s/ Kenneth S. Ansin Kenneth S. Ansin	Director	March 8, 2023
/s/ Gino J. Baroni Gino J. Baroni	Director	March 8, 2023
/s/ John P. Clancy, Jr. John P. Clancy, Jr.	Director, Chief Executive Officer	March 8, 2023
/s/ John R. Clementi John R. Clementi	Director	March 8, 2023
/s/ James F. Conway, III James F. Conway, III	Lead Director, Vice Chairman	March 8, 2023
/s/ Carole A. Cowan Carole A. Cowan	Director	March 8, 2023
/s/ Normand E. Deschene Normand E. Deschene	Director	March 8, 2023
/s/ John T. Grady, Jr. John T. Grady, Jr.	Director	March 8, 2023
/s/ Mary Jane King Mary Jane King	Director	March 8, 2023
/s/ John A. Koutsos John A. Koutsos	Director, Secretary	March 8, 2023

/s/ Joseph C. Lerner Joseph C. Lerner	Director	March 8, 2023
/s/ Shelagh E. Mahoney Shelagh E. Mahoney	Director	March 8, 2023
/s/ Richard W. Main Richard W. Main	Director, President	March 8, 2023
/s/ Jacqueline F. Moloney Jacqueline F. Moloney	Director	March 8, 2023
/s/ Michael T. Putziger Michael T. Putziger	Director	March 8, 2023
/s/ Carol L. Reid Carol L. Reid	Director	March 8, 2023
/s/ Nickolas Stavropoulos Nickolas Stavropoulos	Director	March 8, 2023
/s/ Anita R. Worden Anita R. Worden	Director	March 8, 2023
/s/ Joseph R. Lussier Joseph R. Lussier	Executive Vice President, Chief Financial Officer and Treasurer	March 8, 2023
/s/ Michael K. Sullivan Michael K. Sullivan	Accounting Director	March 8, 2023