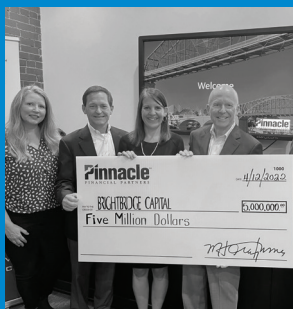
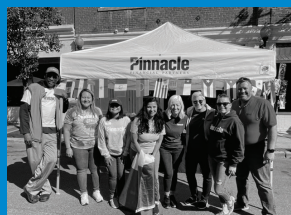




2022 ANNUAL REPORT



DIFFERENT BY DESIGN

Pinnacle is not like other banks, and we built it that way. Our advisors focus on deep relationships, effective financial guidance and a distinctive level of client service.

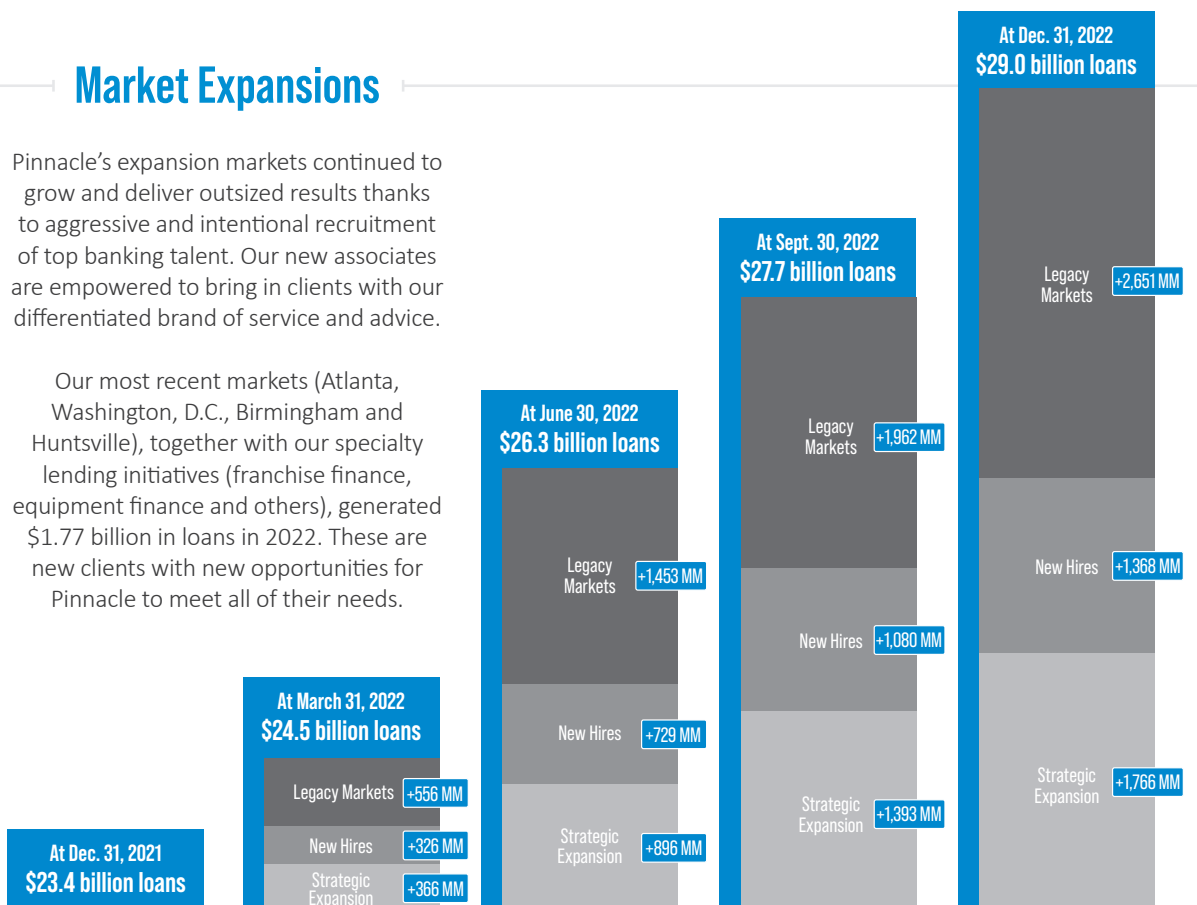
SOUTHEAST ROOTS WITH A NATIONAL FOCUS FOR SPECIALTY SERVICES

Pinnacle operates in over a dozen high-growth markets in the Southeast and in 2022 continued to build out specialty loan and deposit products that attract clients across the country.

Market Expansions

Pinnacle's expansion markets continued to grow and deliver outsized results thanks to aggressive and intentional recruitment of top banking talent. Our new associates are empowered to bring in clients with our differentiated brand of service and advice.

Our most recent markets (Atlanta, Washington, D.C., Birmingham and Huntsville), together with our specialty lending initiatives (franchise finance, equipment finance and others), generated \$1.77 billion in loans in 2022. These are new clients with new opportunities for Pinnacle to meet all of their needs.



Specialty Services

Our No. 1 objective remains developing strategies and tactics around funding our record-breaking loan growth. Several years ago, Pinnacle set out to establish a substantial and continuous source of stable, low-cost core deposits. Our goal is to create a strong foundation for deposits that thrive in virtually all rate environments and economic cycles.

Pinnacle continues to grow deposit-focused products and teams in areas such as consumer-driven healthcare, community associations, captive insurance, institutional and government banking and more with a nationwide scope. The combination of these teams plus our financial advisors (from new markets, legacy markets and recent hires) helped us grow total deposits 11.7 percent in 2022.



You can watch a video about our development of these areas at [PNFP.COM/DEPOSITGROWTH](https://pnfp.com/depositgrowth).

2022 IN REVIEW

WORKPLACE AWARDS

No. 2

Best Workplace
for Women in
the Nation

No. 6

Best Bank to Work
For in the Nation

No. 7

Best Workplace
for Millennials in
the Nation

No. 9

Best Workplace for
Financial Services
and Insurance

No. 28

Best Companies
to Work For in
the Nation

SERVICE QUALITY*

93.4%

AGREE OR STRONGLY AGREE

Listens to me and
understands my needs before
proposing a solution

93.9%

AGREE OR STRONGLY AGREE

Provides me with knowledge
and creative insights that
I would not have had

93.5%

AGREE OR STRONGLY AGREE

Delivers against
his/her commitments

93.5%

AGREE OR STRONGLY AGREE

Is recognizably better than
his/her competitors.

**According to internal client surveys*

SATISFACTION WITH RELATIONSHIP MANAGERS* | Among companies with \$1-500MM in revenue



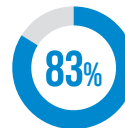
Overall
Satisfaction
Closest Competitor - 79%



Prompt Follow-up
on Requests
Closest Competitor - 82%



Proactively
Provides Advice
Closest Competitor - 63%



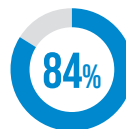
Effectively Coordinates
Product Specialists
Closest Competitor - 61%

**According to Coalition Greenwich*

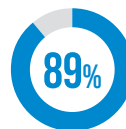
CLIENT PERCEPTION AND LOYALTY* | Among companies with \$1-500MM in revenue



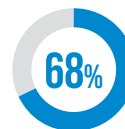
Values Long-term
Relationships
Closest Competitor - 77%



Ease of Doing
Business
Closest Competitor - 76%



Bank You
Can Trust
Closest Competitor - 79%



Data and Analytics-
driven Insights
Closest Competitor - 61%

**According to Coalition Greenwich*

ASSOCIATE RETENTION RATE

93.4%

ASSET QUALITY

0.16%

Non-performing
assets to total
loans and ORE

0.10%

Net
Charge-offs

2.4%

Classified
asset ratio

DEPOSIT MARKET SHARE GROWTH*

Deposit growth in
20 out of 23
MSAs measured
by the FDIC

Deposit market
share growth in
14 out of 20
MSAs with available
growth data

No. 1

Market share
in Nashville

No. 3

Market share in
Memphis and Roanoke

No. 4

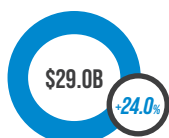
Market share in
Chattanooga, Knoxville
and Greensboro-
High Point

**As of June 30, 2022, according to FDIC data*

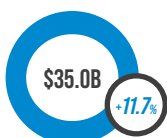


DEAR FELLOW SHAREHOLDERS

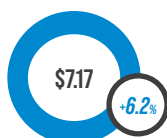
2022 was a remarkable year for Pinnacle. We grew loans and deposits at a double-digit rate of growth, in part because we attracted more revenue producing associates than ever before.



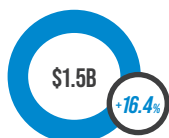
LOANS



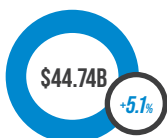
DEPOSITS



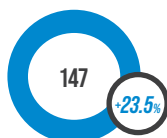
DILUTED EPS



REVENUE



TBV PER
COMMON SHARE



NEW REVENUE
PRODUCERS HIRED

FEW EXPECTED THESE KIND OF RESULTS GOING INTO 2022 GIVEN THE UNUSUAL NATURE of the last three years and recent economic headwinds. The outlook for the industry as a whole was for negative earnings growth due to slowing demand and tightening budgets.

Here at Pinnacle, we knew our results would be different because we're designed differently.

Our growth model is based on taking talent and market share from our competitors, not relying on calling a list of prospects and asking to loan them money. That makes Pinnacle substantially less dependent on things like interest rate movements, inflation and other short-term concerns that snag other banks time and again. Many respond to the same pressures with the same routines and relive the same story over and over from cycle to cycle.

Pinnacle was designed to be different. We built our firm to thrive and produce value in challenging times as well as easy ones. We believe our growth model allows us to rise above short-term turmoil and gives us a sustainable advantage in creating long-term shareholder value.

For a reconciliation of non-GAAP financial measures to their most directly comparable GAAP measures, see the Business Insights page at annualreport.pnfp.com.

Because of that, we can push forward on our mission through thick and thin. The model that got us started helped us weather the dotcom bust and 9/11, the Great Recession, COVID-19 and its lingering effects. It's a familiar refrain:

- Demonstrably different associate experience
- Demonstrably different client experience
- Consistent, sustainable shareholder returns



Those of you who have invested with us for a while know this and have experienced it. You've seen it work in bull cycles and bear. As we've grown, we've attracted thousands of new associates, clients and shareholders who haven't experienced a bear market with us.

So take a closer look at our model and how it helped Pinnacle succeed where others couldn't in 2022.

DESIGNED TO BE INSULATED AGAINST ECONOMIC VOLATILITY

No doubt the banking industry is subject to the macro-economic environment. Banks depend on the demand for loan funding, growing margins that are subject to interest rate fluctuations and the overall economic health of the markets we serve. When times get tough, bank growth often gets tough too.

We designed Pinnacle with a thick layer of insulation from those factors. We're not immune, but we're much less dependent on having an ideal economic environment to achieve our goals and reward our associates and shareholders.

Pinnacle enjoys a great deal of organic growth gathered the traditional way, driven by well-known bankers fully capable of moving new business and winning deals off the street. The reputation we've built on our value proposition of distinctive service and effective advice ensures we can compete against every size and caliber of bank and win. And when times are good, there's a lot to go around and a bigger pool everyone can draw from.

But what's driving us into the future, setting the stage for continued growth and, we believe, protecting us from significant instability, is our skill at taking the best talent from our competitors, bringing over their clients and claiming an ever-increasing market share. When the collective pool isn't getting much bigger, we're in a position to take a bigger portion of it because of our ability to hire the most experienced and capable bankers from the larger banks with whom we compete.

How did we get so good at recruiting bankers with 20, 30 or even 40 years of experience to leave their employers and work for us?

DESIGNED FOR A ONE-OF-A-KIND CULTURE

Every single person deserves a great place to work. That's not an opinion; it's a fact. Our economic system depends on everyone contributing and earning their fair share so we can all find success. And if we all need to work, it had better add joy to our lives.

Unfortunately, this is not always how banking works. In fact, it seldom works that way in the larger regional banks with whom we compete. The pressure to perform and put up good quarterly numbers has led to bureaucratic behemoths where the individual gets lost amid tick marks and call lists. That's unfortunate, but it creates great opportunity for a firm like ours that's designed differently.

Pinnacle believes that every single person is important and can make a difference. So we built our bank to focus on the individual, both inside and outside. That's the basis of the Pinnacle culture: People matter.

Everyone at Pinnacle:

- Works toward the same goals, and 100 percent of non-commissioned associates are identically incentivized to reach them together.
- Understands how their specific job contributes to those goals and how they are connected to our mission.
- Owns Pinnacle shares, which encourages everyone to act like an owner in making the right decisions and working in the firm's best interests.
- Works on a team and is encouraged to build strong personal connections. We all form relationships through everyday work and frequent activities and development opportunities designed to bring people together and build camaraderie, the kind of camaraderie that makes Pinnacle a great place to work.

Because of our focus on people, we listen to what they have to say with intentionality and incorporate their needs and feedback into our annual planning. And we empower them to serve clients in the ways they feel are best, giving decision-making power directly to the front line at the local level, where they know what's needed.

DESIGNED FOR A DIFFERENTIATED HIRING MODEL

Ours is an environment any banker would cherish, most of all those at the largest—and most vulnerable—institutions that typically dominate the major Southeastern markets we serve. That's why we've always been so successful recruiting top talent and bringing them into the Pinnacle fold. Who wouldn't want to join a team that posts wins like these?

- No. 2 Best Workplace for Women
- No. 6 Best Bank to Work For
- No. 7 Best Workplace for Millennials
- No. 28 Best Company to Work For Nationwide
- Best Workplace awards in nearly every market we serve
- 74% top box ratings on internal work environment surveys

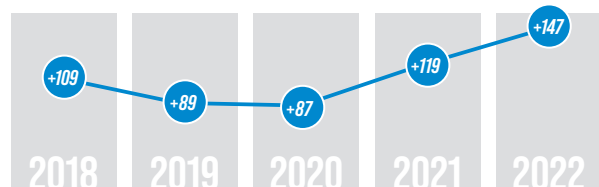
These rankings are powerful tools for attracting happy and successful veteran bankers from their longtime employers. And that's who we want. In fact, that's all we want. For most jobs, we require at least 10 years of experience, and we seek out people



See more on Pinnacle's culture, our string of awards won, which banks our new associates come from most and how they're powering our strategic growth in Excited Associates at [ANNUALREPORT.PNFP.COM](https://www.pinnaclefinancial.com/annualreport).

who are doing well where they are and aren't looking to change jobs. If they're circulating a resume, chances are high they're not getting the job done and are looking for a fresh start. We want those with proven success and a strong client book, and we're winning.

Revenue Producers Growth



DESIGNED TO TAKE THE BEST CLIENTS

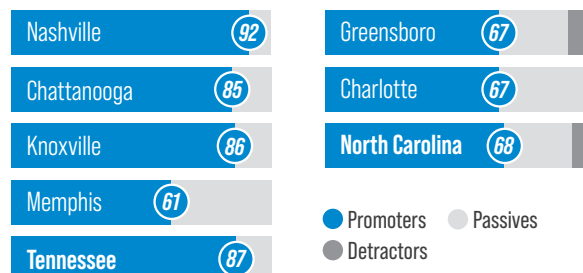
When new associates arrive, they work quickly to bring over their best clients. That's a boon to our balance sheet and, we believe, also enhances our credit quality. They target high-value clients with large amounts of sticky deposits, fee drivers like treasury and wealth management and a strong credit position, seeking to leave more risky assets and low-impact clients behind.

Once clients are here, they typically don't leave. How could they when we offer the best banking experience they've ever had? When we give them distinctive service, effective advice and extraordinary convenience from someone they've known and trusted for years?

Everyone deserves a great place to do business, and by every available metric, Pinnacle provides one. We're not out just to serve our clients. We aim to create raving fans who become vocal advocates for our firm and help bring their colleagues, customers, friends and neighbors with them.

Coalition Greenwich quantifies that advocacy in their Net Promoter Scores, which measure the percentage of clients who are most enthusiastic about our brand and are willing to recommend us to their networks.

Greenwich Net Promoter Scores



Source: 2022 Coalition Greenwich Associates Market Tracking Program (Pinnacle Financial - \$1-500MM - Q3 2022 R4Q - Banking.)

DESIGNED TO CAPITALIZE ON VULNERABLE COMPETITORS

Pinnacle was designed to do away with the bureaucratic and impersonal, which is the best description we can muster for how many big banks operate. They didn't start like we did, with a focus on people and the individual, so their systems are set up without their associates' best interests at heart.

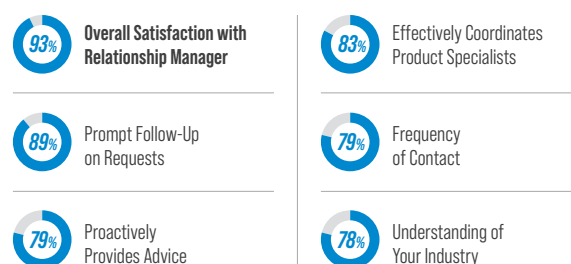
That creates substantial and long-lasting vulnerabilities for our top competitors in every market. Seldom in our existence have we seen a time when the banks who have the bulk of the share in our markets were more likely to give it up than now.

It's nearly impossible for them to match our client or associate experience because it has to be foundational to the way the business is built. If it starts as a square peg, it can't be reshaped to fit into a round hole later on—especially at institutions with decades or even a century of forming their cultures.

How many of our competitors' clients would advocate for them in the same way our clients promote Pinnacle?

And if their favorite banker leaves the national or regional megabank to come work for us, will they be happy enough with their current bank to stay there? Or will they follow the path to Pinnacle?

Pinnacle's Relationship Manager Performance



Source: 2022 Coalition Greenwich Associates Market Tracking Program (Pinnacle Financial - Footprint - \$1-500MM - Q3 2022 R4Q - Banking.)

DESIGNED FOR RAPID AND SUSTAINABLE GROWTH IN HIGH-VALUE MARKETS

Ours is a powerful model for multiple modes of growth. Pinnacle's track record of organic growth speaks for itself. We started in 2000 with \$0 in assets and one office in Nashville, TN. Today we're in 18 major markets, 23 MSAs in total, across seven states with \$42 billion in assets. Of course, over the years we have made several acquisitions, but the truth is, roughly 75 percent of our growth since we founded the firm has been organic.

Since our last merger in 2017, we've had incredible success with de novo startups in some of the biggest and fastest-growing MSAs in the Southeast, which happens to be the hottest and fastest-growing region in the United States. The pattern of hiring top talent and earning their clients' business has fueled successful entries into:

- Atlanta, GA
- Washington, D.C. and the National Capital Region
- Birmingham, AL
- Huntsville, AL

This brand of organic expansion isn't unusual, but it most typically comes in the form of a loan production office for limited commercial banking or flooding the market with branches to harvest deposits that could be sent anywhere. Ours is a more careful approach with a goal of being among the top banks in the market. We start with a dynamic leader who has the drive and talent to build a full-service bank and who can recruit a team to get them there.



See how our recruiting and hiring model fuels strategic expansion into the hottest markets in the Southeast at [PNFP.COM/EXPANSION](https://pnfp.com/expansion).

DESIGNED FOR RELENTLESS DRIVE TOWARD SUSTAINABLE SHAREHOLDER VALUE

That same drive and talent exists in each of our 3,200 associates. We fight to win, and everyone is on the same page for what winning looks like. For us, it's top-quartile performance in the metrics we believe are most highly correlated with long-term shareholder value.

Our pursuit of top-quartile performance is relentless. All of our associates meet every January to look at our goals for the year and carefully connect them to the daily job of every single associate. We meet quarterly to review them and monthly, bi-monthly or weekly as individual teams to track our progress and adjust our tactics.

And we don't stop until we reach our goals, because we all want to be rewarded.

The common incentive system at Pinnacle is unlike any we have ever encountered or heard of at another bank of a similar size as us. 100 percent of non-commissioned associates get a cash payment when we reach our firmwide goals. Likewise, 100 percent of associates are granted shares of common stock on their first day and annually every January, with many building substantial portfolios of a stock that has outperformed its peers over long stretches in the last 20 years.

	Since IPO	10 Year	5 Year	3 Year
PNFP	1,368%	290%	11%	107%
KRX	150%	224%	3%	6%
Out-Performance	1,218%	66%	8%	9%

As of Dec. 30, 2022



Read more about what we deliver for shareholders and how we do it in Enriched Shareholders at [ANNUALREPORT.PNFP.COM](https://annualreport.pnfp.com).

DESIGNED FOR 2023

Where will that drive take us next? In 2023, our focus is squarely on these five priorities:

1. Gather low-cost deposits to profitably fund loan growth.

There's no bigger goal for us than capturing outsized deposit share. When you can grow loans by 24 percent in a year that's supposed to be slow, as we did in 2022, you also have to be great at funding that growth. Our typical tactics are still at work, hiring high-value revenue producers and winning new clients. We're also seeing solid success with our specialty deposit products, including captive insurance, community associations, health and benefits accounts and government and institutional banking. Targeting users of these products with our differentiated service and advice

gives us access to large pools of traditionally sticky deposits, with opportunities for greater share of wallet among these clients.

2. Increase risk management disciplines.

Our model gives us a great deal of protection from cyclical fluctuations, but discipline is one of our values, so our formal practices are incredibly important to us. As we have rapidly grown our firm, we've spent a great deal of time and resources over the last several years to increase our control infrastructure, and we intend to use it to protect our firm from economic instability.

3. Ensure the engagement of every single associate.

It's proven that if you produce high levels of associate engagement, you see better sales outcomes, profitability and share price performance. We engage every associate so they come to Pinnacle, stay at Pinnacle and give us their best—their discretionary effort to drive toward our goals. It's also the right thing to do, which is why we've put a great deal of intentional emphasis on our diversity, equity and inclusion strategies. Every associate at Pinnacle deserves to feel like a dyed-in-the-wool member of our team.

4. Create raving fans.

Those engaged associates pass their joy along to clients, who get so excited about our company that they go out and tell everyone about us. Coalition Greenwich calls them net promoters. We call them raving fans.

5. Leverage technology to improve the associate and client experience.

Everyone's chasing the same high-tech rabbit: Increase efficiency and make it easier for clients to do business. Those are certainly our goals, too, along with greater data aggregation so we can offer better and more proactive advice to our clients. We have several projects in the works to accomplish that, as well as more tools to automate repetitive internal processes and perfect our blend of convenient technology and high-touch service from real people who love serving our clients.

2022 began and ended with notes of uncertainty in the world and an economic picture that wasn't quite in focus. Still, Pinnacle outperformed—as we often do. We created value for associates, clients and shareholders by executing our model with fidelity, just as we plan to do in 2023. Thank you for continuing this journey with us.

Onward!

M. Terry Turner
President and
Chief Executive Officer

Robert A. McCabe, Jr.
Chairman



Pinnacle

FINANCIAL REVIEW

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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: 000-31225



(Exact name of registrant as specified in charter)

Tennessee

62-1812853

(State or other jurisdiction of incorporation)

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

150 Third Avenue South, Suite 900, Nashville, TN

37201

(Address of principal executive offices)

(Zip Code)

Registrant's telephone number, including area code: (615) 744-3700

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

<u>Title of Each Class</u>	<u>Trading Symbol</u>	<u>Name of Exchange on which Registered</u>
Common Stock, par value \$1.00	PNFP	The Nasdaq Stock Market LLC
Depository Shares (each representing 1/40th interest in a share of 6.75% Fixed-Rate Non-Cumulative Perpetual Preferred Stock, Series B)	PNFPP	The Nasdaq Stock Market LLC

Securities registered to Section 12(g) of the Act:

None

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

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

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

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

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

Large Accelerated Filer ☒

Non-accelerated Filer ☐

(do not check if you are a smaller reporting company)

Accelerated Filer ☐

Smaller reporting company ☐

Emerging growth company ☐

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

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

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

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

Indicate by check mark if the registrant is a shell company (as defined in Rule 12b-2 of the Act). Yes ☐ 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 and asked price of such common equity as of the last business day of the registrant's most recently completed second fiscal quarter: \$5,404,761,562 as of June 30, 2022.

APPLICABLE ONLY TO CORPORATE REGISTRANTS

Indicate the number of shares outstanding of each of the registrant's classes of common stock, as of the latest practicable date: 76,642,595 shares of common stock as of February 22, 2023.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Definitive Proxy Statement for the Annual Meeting of Shareholders, scheduled to be held April 18, 2023 are incorporated by reference into Part III of this Form 10-K.

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FORWARD-LOOKING STATEMENTS

All statements, other than statements of historical fact, included in this Annual Report on Form 10-K, are forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995, Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. The words "expect," "anticipate," "intend," "may," "should," "plan," "believe," "seek," "estimate" and similar expressions are intended to identify such forward-looking statements, but other statements not based on historical information may also be considered forward-looking statements. These forward-looking statements are subject to known and unknown risks, uncertainties and other factors that could cause the actual results to differ materially from the statements, including, but not limited to: (i) deterioration in the financial condition of borrowers of Pinnacle Bank and its subsidiaries or BHG, including as a result of the negative impact of inflationary pressures on our and BHG's customers and their businesses, resulting in significant increases in loan losses and provisions for those losses and, in the case of BHG, substitutions; (ii) fluctuations or differences in interest rates on loans or deposits from those that Pinnacle Financial is modeling or anticipating, including as a result of Pinnacle Bank's inability to better match deposit rates with the changes in the short-term rate environment, or that affect the yield curve; (iii) adverse conditions in the national or local economies including in Pinnacle Financial's markets throughout Tennessee, North Carolina, South Carolina, Georgia, Alabama, Virginia and Kentucky, particularly in commercial and residential real estate markets; (iv) the inability of Pinnacle Financial, or entities in which it has significant investments, like BHG, to maintain the long-term historical growth rate of its, or such entities', loan portfolio; (v) the ability to grow and retain low-cost core deposits and retain large, uninsured deposits, including during times when Pinnacle Bank is seeking to limit the rates it pays on deposits; (vi) changes in loan underwriting, credit review or loss reserve policies associated with economic conditions, examination conclusions, or regulatory developments; (vii) effectiveness of Pinnacle Financial's asset management activities in improving, resolving or liquidating lower-quality assets; (viii) the impact of competition with other financial institutions, including pricing pressures and the resulting impact on Pinnacle Financial's results, including as a result of the negative impact to net interest margin from rising deposit and other funding costs; (ix) the results of regulatory examinations; (x) Pinnacle Financial's ability to identify potential candidates for, consummate, and achieve synergies from, potential future acquisitions; (xi) difficulties and delays in integrating acquired businesses or fully realizing costs savings and other benefits from acquisitions; (xii) BHG's ability to profitably grow its business and successfully execute on its business plans; (xiii) risks of expansion into new geographic or product markets; (xiv) any matter that would cause Pinnacle Financial to conclude that there was impairment of any asset, including goodwill or other intangible assets; (xv) the ineffectiveness of Pinnacle Bank's hedging strategies, or the unexpected counterparty failure or hedge failure of the underlying hedges; (xvi) reduced ability to attract additional financial advisors (or failure of such advisors to cause their clients to switch to Pinnacle Bank), to retain financial advisors (including as a result of the competitive environment for associates) or otherwise to attract customers from other financial institutions; (xvii) deterioration in the valuation of other real estate owned and increased expenses associated therewith; (xviii) inability to comply with regulatory capital requirements, including those resulting from changes to capital calculation methodologies, required capital maintenance levels or regulatory requests or directives, particularly if Pinnacle Bank's level of applicable commercial real estate loans were to exceed percentage levels of total capital in guidelines recommended by its regulators; (xix) approval of the declaration of any dividend by Pinnacle Financial's board of directors; (xx) the vulnerability of Pinnacle Bank's network and online banking portals, and the systems of parties with whom Pinnacle Bank contracts, to unauthorized access, computer viruses, phishing schemes, spam attacks, human error, natural disasters, power loss and other security breaches; (xxi) the possibility of increased compliance and operational costs as a result of increased regulatory oversight (including by the Consumer Financial Protection Bureau), including oversight of companies in which Pinnacle Financial or Pinnacle Bank have significant investments, like BHG, and the development of additional banking products for Pinnacle Bank's corporate and consumer clients; (xxii) the risks associated with Pinnacle Bank being a minority investor in BHG, including the risk that the owners of a majority of the equity interests in BHG decide to sell the company or all or a portion of their ownership interests in BHG (triggering a similar sale by Pinnacle Bank); (xxiii) changes in state and federal legislation, regulations or policies applicable to banks and other financial service providers, like BHG, including regulatory or legislative developments; (xxiv) fluctuations in the valuations of Pinnacle Financial's equity investments and the ultimate success of such investments; (xxv) the availability of and access to capital; (xxvi) adverse results (including costs, fines, reputational harm, inability to obtain necessary approvals and/or other negative effects) from current or future litigation, regulatory examinations or other legal and/or regulatory actions, including as a result of Pinnacle Bank's participation in and execution of government programs related to the COVID-19 pandemic; and (xxvii) general competitive, economic, political and market conditions. A more detailed description of these and other risks is contained in "Item 1A. Risk Factors" below. Many of such factors are beyond Pinnacle Financial's ability to control or predict, and readers are cautioned not to put undue reliance on such forward-looking statements. Pinnacle Financial disclaims any obligation to update or revise any forward-looking statements contained in this Annual Report on Form 10-K, whether as a result of new information, future events or otherwise.

PART I

Unless this Form 10-K indicates otherwise or the context otherwise requires, the terms "we," "our," "us," "the firm," "Pinnacle Financial Partners," "Pinnacle" or "Pinnacle Financial" as used herein refer to Pinnacle Financial Partners, Inc., and its subsidiaries, including Pinnacle Bank, which we sometimes refer to as "our bank subsidiary" or "our bank" and its other subsidiaries. References herein to the fiscal years 2020, 2021 and 2022 mean our fiscal years ended December 31, 2020, 2021 and 2022, respectively.

The disclosures set forth in this item are qualified by Item 1A. Risk Factors and the section captioned "Forward-Looking Statements" appearing elsewhere in this Form 10-K and other cautionary statements set forth elsewhere in this report.

ITEM 1. BUSINESS

OVERVIEW

Pinnacle Financial Partners is a financial holding company headquartered in Tennessee, with approximately \$42.0 billion in total assets as of December 31, 2022. The holding company is the parent company of Pinnacle Bank, a Tennessee state-chartered bank, and owns 100% of the capital stock of Pinnacle Bank. The firm started operations on October 27, 2000, in Nashville, Tennessee, and has since grown through a combination of acquisitions and organic growth to 123 offices from which we conduct branch banking operations, including 51 in Tennessee, 38 in North Carolina, 20 in South Carolina, 10 in Virginia, two in Georgia and two in Alabama.

Pinnacle Financial provides a full range of banking, investment, trust, mortgage and insurance products and services designed for businesses and their owners and individuals interested in a comprehensive relationship with their financial institution. The firm is the No. 1 bank in the Nashville-Murfreesboro-Franklin MSA, according to June 30, 2022 deposit data from the FDIC, is listed by Forbes among the top 25 banks in the nation and earned a spot on 2022 list of 100 Best Companies to Work For® in the U.S., its sixth consecutive appearance. Pinnacle Bank was also listed in Fortune magazine as the second best company to work for in the U.S. for women. American Banker recognized Pinnacle as one of America's Best Banks to Work in 2022 for the ninth year in a row and No. 1 among banks with more than \$11 billion in assets in 2021.

Pinnacle Bank owns a 49 percent interest in Bankers Healthcare Group (BHG), which provides innovative, hassle-free financial solutions to healthcare practitioners and other professionals. Prior to September 30, 2022, we held a portion of this investment at Pinnacle Financial and a portion at Pinnacle Bank. Effective September 30, 2022, Pinnacle Financial contributed 100% of the equity interests of BHG owned by it to Pinnacle Bank. The loans originated by BHG are either financed by secured borrowings or sold to independent financial institutions and investors. Great Place to Work and FORTUNE ranked BHG No. 4 on its 2021 list of Best Workplaces in New York State in the small/medium business category.

Pinnacle Financial Partners operates as a community bank in 17 primarily urban markets and their surrounding communities. As an urban community bank, Pinnacle Bank provides the personalized service most often associated with smaller banks while offering many of the sophisticated products and services, such as investments and treasury management, more typically found at much larger banks. This approach has enabled Pinnacle Bank to attract clients from the regional and national banks in all its markets.

PRODUCTS AND SERVICES

Lending Services

We offer a full range of lending products, including commercial, real estate and consumer loans to individuals, businesses and professional entities. We compete for these loans with competitors who are also well established in our geographic markets as well as other non-depository institution lenders that are subject to less regulation than we are.

Pinnacle Bank's loan approval policies provide for various levels of officer lending authority. When the total amount of loans to a single borrower exceeds an individual officer's lending authority, officers with higher lending authority determine whether to approve any new loan requests or renewals of existing loans. Loans to directors and executive officers subject to Regulation O of the FDIC's rules and regulations require approval of the board, and, certain extensions of credit, including loans above certain amounts require approval of a committee of the board.

Pinnacle Bank's lending activities are subject to a variety of lending limits imposed by federal and state law. Differing limits apply based on the type of loan or the nature of the borrower, including the borrower's relationship to Pinnacle Bank. In general, however, at December 31, 2022, we were able to loan any one borrower a maximum amount equal to approximately \$642.4 million, for loans that meet certain additional collateral guidelines. These legal limits will increase or decrease as Pinnacle Bank's capital increases or decreases as a result of its earnings or losses, the injection of additional capital, payments of dividends, acquisitions, or for other reasons. Pinnacle Bank has internal loan limits ranging from \$15 million to \$100 million, dependent upon the internal risk rating of a loan, all of which limits are well below the legal lending limit of the bank.

The principal economic risk associated with each category of loans that Pinnacle Bank has made or may in the future make is the creditworthiness of the borrower. General economic factors affecting a commercial or consumer borrower's ability to repay include interest, inflation and unemployment rates, as well as other factors affecting a borrower's assets, clients, business, suppliers and employees. Many of Pinnacle Bank's commercial loans are made to small- to medium-sized businesses that are sometimes less able to withstand competitive, economic and financial pressures than larger borrowers. During periods of economic weakness or periods of increased inflation, like we are currently experiencing, these businesses may be more rapidly and more adversely affected than other enterprises and may cause increased levels of nonaccrual or other problem loans, loan charge-offs and higher provision for credit losses.

Pinnacle Bank's commercial clients borrow for a variety of purposes. The terms of these loans (which include, among others, equipment loans and working capital loans) will vary by purpose and by type of any underlying collateral, if any. Commercial loans may be unsecured or secured by accounts receivable or by other business assets. Pinnacle Bank also makes a variety, if any, of commercial real estate loans, including loans secured by investment properties and business loans secured by real estate.

Pinnacle Bank also makes a variety of loans secured and unsecured to individuals for personal, family, investment and household purposes, including installment and term loans, lines of credit, residential first mortgage loans, home equity loans and home equity lines of credit. We also offer credit cards for consumers and businesses directly as well as through the marketing efforts of BHG.

Through our subsidiary Advocate Capital, we make loans to law firms to finance case expenses and the firms' working capital needs. These loans are typically secured by the borrower's receivables and include guaranties by certain individual partners of the firm.

Through our subsidiary JB&B Capital, we originate commercial equipment leases, which we also originate through Pinnacle Bank.

Additionally, during 2022, we added two specialty lending groups: franchise lending and equipment lease financing.

Deposit Services

Pinnacle Bank seeks to establish a broad base of core deposits, including savings, noninterest-bearing checking, interest-bearing checking, money market and certificate of deposit accounts, including access to products offered through various IntraFi Network Deposit programs. While Pinnacle Bank is focused on attracting operating accounts and other core deposits and lowering our cost of funds, rates paid on such deposits vary among banking markets and deposit categories due to different terms and conditions, individual deposit size, services rendered and rates paid by competitors on similar deposit products. We act as a depository for a number of state and local governments and government agencies or instrumentalities. Such public fund deposits are often subject to competitive bid and in many cases must be secured by pledging a portion of our investment securities or a letter of credit.

To attract deposits, Pinnacle Bank has typically employed a reputation management plan in its current geographic markets primarily based on relationship banking and features a broad product line and rates and services it believes are competitive. The primary sources of deposits are businesses, their owners and individuals interested in a comprehensive relationship with their financial institution located in those geographic markets. Pinnacle Bank traditionally has obtained these deposits primarily through personal solicitation by its financial advisors and leadership team, although its use of advertising has increased in recent years, primarily due to its partnerships with the Tennessee Titans NFL football team and the Memphis Grizzlies NBA basketball team.

Pinnacle Bank also offers its targeted commercial clients a comprehensive array of treasury management and remote deposit services, which allow electronic deposits to be made from the client's place of business. Our treasury management services include, among other products, online wire origination, enhanced ACH origination services, positive pay, zero balance and sweep accounts, automated bill pay services, electronic receivables processing, lockbox processing, merchant card acceptance services, small business and commercial credit cards and corporate purchasing cards.

Investment, Trust and Insurance Services

Pinnacle Bank contracts with Raymond James Financial Services, Inc. ("RJFS"), a registered broker-dealer and investment adviser, to offer and sell various securities and other financial products to the public through associates who are employed by both Pinnacle Bank and RJFS. RJFS is a subsidiary of Raymond James Financial, Inc.

Pinnacle Bank offers, through RJFS, non-FDIC insured investment products to help clients achieve their financial objectives within their risk tolerances. The brokerage and investment advisory program offered by RJFS complements Pinnacle Bank's general banking business and further supports its business philosophy and strategy of delivering to our clients a comprehensive array of products and services that meet their financial needs. Pursuant to its contract, RJFS is primarily responsible for the compliance monitoring of dual employees of RJFS and Pinnacle Bank. Additionally, Pinnacle Bank has developed its own compliance-monitoring program in an effort to further ensure that associates deliver these products in a manner consistent with the various regulations governing such activities. Pinnacle Bank receives a percentage of commission credits and fees generated by the program. Pinnacle Bank remains responsible for various expenses associated with the program, including furnishings, equipment and promotional expenses and general personnel costs, including commissions paid to licensed brokers.

Pinnacle Bank also provides fiduciary and investment services through its Trust & Investment Services department. Services offered for individual and commercial clients include an array of accounts including personal trust, investment management, estate administration, endowments, foundations, individual retirement accounts, escrow services and custody. Additionally, Trust & Investment Services provides investment services for qualified plans, primarily through its Retirement Plan Services division.

Additionally, Pinnacle Wealth Advisors, a registered investment advisor, provides investment advisory services to its clients. Miller Loughry Beach Insurance Services, Inc. and HPB Insurance Group, Inc., which are insurance agency subsidiaries of Pinnacle Bank, provide insurance products, particularly in the property and casualty area, to their respective clients. Advocap Insurance Agency, Inc., an insurance agency subsidiary of Advocate Capital, sells insurance products, including professional liability, cyber protection, directors and officers, errors and omissions and life insurance, to its clients consisting mainly of law firms and partners within those firms.

M&A Advisory and Securities Offering Services

PNFP Capital Markets, Inc. launched in 2015. As a broker-dealer, this team offers corporate clients merger and acquisition advisory services, private debt, equity and mezzanine placement services and other selected middle-market advisory services.

Other Banking Services

Given client demand to access banking and investment services easily, Pinnacle Bank also offers a broad array of convenience-centered products and services, including 24-hour telephone and online banking, mobile banking, debit and credit cards, direct deposit, remote deposit capture and mobile deposit options. We also offer cash management services for businesses. Additionally, Pinnacle Bank is associated with a nationwide network of automated teller machines of other financial institutions that clients are able to use throughout our footprint. In many cases, Pinnacle Bank reimburses its clients for any fees that may be charged for using the nationwide ATM network, providing greater convenience as compared to regional competitors.

Competitive Conditions

We face substantial competition in all areas of our operations from a variety of different competitors, many of whom are larger and have more financial resources than we do. Such competitors primarily include national, regional and internet banks within the various markets in which we operate though we also compete with smaller community banks that seek to offer service levels similar to ours. We also face competition from many other types of institutions, including, without limitation, savings and loans associations, credit unions, finance companies, brokerage firms, insurance companies and other financial intermediaries.

The financial services industry is becoming even more competitive as a result of legislative, regulatory and technological changes and continued consolidation. Banks, securities firms, and insurance companies can operate as affiliates under the umbrella of a financial holding company, which can offer virtually any type of financial service, including banking, securities underwriting, insurance (both agency and underwriting), and merchant banking. Also, technology has lowered barriers to entry and made it possible for nonbanks to offer products and services traditionally provided by banks, such as automatic transfer and automatic payment systems. Many of our nonbank competitors have fewer regulatory constraints and may have lower cost structures. Additionally, due to their size, many competitors may be able to achieve economies of scale and, as a result, may be able to develop and offer a broader range of products and services as well as better pricing for those products and services. Continued consolidation in the financial services industry, due in part to the regulatory changes made under the Economic Growth, Regulatory Relief and Consumer Protection Act, including the

increased asset threshold for required stress testing, as discussed below under "Supervision and Regulation - The Dodd-Frank Act," has contributed to increases in the number of large competitors we face in our markets. Finally, our competitors may choose to offer lower interest rates and pay higher deposit rates than we do. The actions of these competitors in these regards could cause us to lose customers or elements of the total business relationship we have with a client which could negatively impact our business.

We believe that the most important criteria to our bank's targeted clients when selecting a bank is their desire to receive exceptional and personal service. Equally important is being able to enjoy convenient access to a broad array of financial products offered by a financial institution with an ability to meet the changing needs of a sophisticated client base. Additionally, when presented with a choice, we believe that many of our bank's targeted clients would prefer to deal with an institution that favors local decision making as opposed to one where many important decisions regarding a client's financial affairs are made outside of the local community.

Employees and Human Capital

From our founding, we have focused on building an excellent work environment, because we believe excited associates lead to engaged clients and that engaged clients contribute to enriched shareholders. Our hiring philosophy has always been to create the best place to work in our markets. That started with our initial offices in our hometown of Nashville. From there we have branched out across our home state of Tennessee and into some of the best markets in the Southeast. Our hiring philosophy is simple: We aim to hire successful, experienced bankers in each of our markets that share our desire to build a team-oriented firm where our associates win together. In our company, all non-commissioned associates have one set of performance goals under our annual cash incentive plan and nearly every associate in our company is annually awarded equity-based compensation. We believe our unique culture and its resulting high levels of associate engagement and retention rates allow us to be better than our competitors in meeting the needs of our clients.

We are engaging with our associates on a regular basis to assess job satisfaction, and we use the information from internal and third-party surveys to improve our ability to attract, develop, and retain talented associates who drive client engagement. All associates joining Pinnacle, including those joining as a result of an acquisition, participate in a three-day orientation that focuses on culture. During 2022, we received more than 15 local or national workplace awards including ranking No. 28 among the 100 Best Companies to Work For, No. 7 Best Workplaces for Millennials and No. 2 Best Workplaces for Women all by Great Place to Work® and FORTUNE Magazine. As well as earning a spot on PEOPLE magazine's 100 Companies That Care list. All of these honors place heavy emphasis on anonymous surveys of associates in the judging criteria. We believe these awards illustrate that our culture is strong, and our financial returns illustrate that the focus on culture is a winning business strategy. As of December 31, 2022, we employed 3,241.5 full-time equivalent associates.

None of our associates are represented by a union, collective bargaining agreement or similar arrangement, and we have not experienced any labor disputes or strikes arising from any organized labor groups. We aim to create a great place to work for all of our associates. We believe that a strong and diverse team is critical to our success and are committed to being more vocal and focused on our efforts toward creating a great place to work for all. We are guided by the foundational elements of our diversity and inclusion policy, namely that all people deserve a great place to work and do business and that every community deserves an equal opportunity for economic prosperity. At December 31, 2022, more than 65% of our associates were women and approximately 16% identify themselves as part of a racial or ethnic minority group. Among the Company's 162-person Leadership Team, women make up approximately 35% of these associates, up from 22.58% in 2020 while minorities account for approximately 8% of the Leadership Team members, up from 4% in 2020. Beginning in 2020, a senior leadership team made up of a subset of these Leadership Team members was formed. Presently, the senior leadership team consists of 12 associates, with women making up 17% of this group and minorities making up 8%. Though we are proud of the progress we have made, we understand that more work remains to be done and we have implemented several initiatives designed to achieve a more diverse, equitable, and inclusive team, including enhanced training, leadership succession initiatives, and the development of a multi-year strategy to focus on enhancing our associates' diversity, equity, and inclusion awareness. This diversity, equity, and inclusion awareness enhancement process includes a number of initiatives that are underway to build broader networks with diverse agencies and community organizations as we look to recruit and develop future diverse associates and leaders. In 2020, we also named our first Director of Diversity, Equity, and Inclusion to lead our coordinated efforts and in 2021 we expanded that infrastructure by creating two new regional DEI Advisor roles.

Serving the needs of all of the members of our communities also remains an important part of our strategy. For years, we have focused our community investment efforts on giving within four categories that we believe improve the quality of life of the citizens in our communities: education, health and human services, economic development and the arts. We also empower our associates to serve the causes about which they are most passionate. In 2022, our associates volunteered more than 30,877 hours of their time to help organizations across our footprint.

OTHER INFORMATION

Investment Securities

In addition to loans, Pinnacle Bank has investments primarily in United States treasury and agency securities, agency sponsored mortgage-backed securities, corporate bonds and state and municipal securities. No investment in any of those instruments exceeds any applicable limitation imposed by law or regulation. The risk committee of the board of directors reviews the investment portfolio on an ongoing basis in order to ensure that the investments conform to Pinnacle Bank's asset liability management policy as set by the board of directors.

Asset and Liability Management

Our Asset Liability Management Committee ("ALCO"), composed of senior managers of Pinnacle Bank, manages Pinnacle Bank's assets and liabilities and strives to provide a stable, optimized net interest income and margin, adequate liquidity and ultimately a suitable after-tax return on assets and return on equity. ALCO conducts these management functions within the framework of written policies that Pinnacle Bank's board of directors has adopted. ALCO works to maintain an acceptable position between rate sensitive assets and rate sensitive liabilities. The Risk Committee of the board of directors oversees the ALCO function on an ongoing basis.

Available Information

We file reports with the Securities and Exchange Commission ("SEC"), including annual reports on Form 10-K, quarterly reports on Form 10-Q and current reports on Form 8-K. The SEC maintains an Internet site at www.sec.gov that contains the reports, proxy and information statements, and other information we have filed or furnished with the SEC.

Our website address is www.pnfp.com. Please note that our website address is provided as an inactive textual reference only. We make available free of charge through our website, the annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and all amendments to those reports as soon as reasonably practicable after such material is electronically filed with or furnished to the SEC. The information provided on our website is not part of this report, and is therefore not incorporated by reference unless such information is otherwise specifically referenced elsewhere in this report.

We have also posted our Corporate Governance Guidelines, Corporate Code of Conduct for directors, officers and employees, and the charters of our Audit Committee, Human Resources and Compensation Committee, Executive Committee, Risk Committee and Nominating and Corporate Governance Committee of our board of directors in the Investor Relations section of our website at www.pnfp.com. We will make any legally required disclosures regarding amendments to, or waivers of, provisions of our Corporate Code of Conduct, Corporate Governance Guidelines or current committee charters on our website. Our corporate governance materials are available free of charge upon request to our Corporate Secretary at our corporate headquarters, Pinnacle Financial Partners, Inc., 150 Third Avenue South, Suite 900, Nashville, Tennessee 37201. Our telephone number for our corporate headquarters is (615) 744-3700.

SUPERVISION AND REGULATION

Both Pinnacle Financial and Pinnacle Bank as well as many of their subsidiaries and entities in which they have made investments are subject to extensive state and federal banking and other laws and regulations that impose restrictions on and provide for general regulatory oversight of Pinnacle Financial's and Pinnacle Bank's and these subsidiaries' operations. These laws and regulations are generally intended to protect depositors and borrowers, not shareholders.

Pinnacle Financial

Pinnacle Financial is a bank holding company under the federal Bank Holding Company Act of 1956 that has elected to become a "financial holding company" thereunder. As a result, it is subject to the supervision, examination, and reporting requirements of the Bank Holding Company Act and the regulations of the Board of Governors of the Federal Reserve System ("Federal Reserve").

Acquisition of Banks. The Bank Holding Company Act requires every bank holding company to obtain the Federal Reserve's prior approval before:

- Acquiring direct or indirect ownership or control of any voting shares of any bank if, after the acquisition, the bank holding company will directly or indirectly own or control more than 5% of the bank's voting shares;
- Acquiring all or substantially all of the assets of any bank; or
- Subject to certain exemptions, merging or consolidating with any other bank holding company.

Additionally, the Bank Holding Company Act provides that the Federal Reserve may not approve any of these transactions if it would substantially lessen competition or otherwise function as a restraint of trade, or result in or tend to create a monopoly, unless the anticompetitive effects of the proposed transaction are clearly outweighed by the public interest in meeting the convenience and needs of the communities to be served. The Federal Reserve is also required to consider the financial and managerial resources and future prospects of the bank holding companies and banks concerned; the effectiveness of the applicant in combating money laundering; the convenience and needs of the communities to be served; and the extent to which the proposal would result in greater or more concentrated risk to the United States banking or financial system.

Under the Bank Holding Company Act, as amended by the Dodd-Frank Wall Street Reform and Consumer Protection Act ("Dodd-Frank Act"), if well capitalized and well managed, a bank holding company located in Tennessee may purchase a bank located outside of Tennessee. Conversely, a well capitalized and well managed bank holding company located outside of Tennessee may purchase a bank located inside Tennessee. In each case, however, state law restrictions may be placed on the acquisition of a bank that has only been in existence for a limited amount of time or will result in specified concentrations of deposits. For example, Tennessee law currently prohibits a bank holding company from acquiring control of a Tennessee-based financial institution until the target financial institution has been in operation for three years.

Change in Bank Control. Subject to various exceptions, the Federal Change in Bank Control Act, together with related regulations, require Federal Reserve approval prior to any person or company acquiring "control" of a bank holding company. Control is conclusively presumed to exist if an individual or company acquires 25% or more of any class of voting securities of the bank holding company. Control is rebuttably presumed to exist if a person or company acquires 10% or more, but less than 25%, of any class of voting securities and either:

- The bank holding company has registered securities under Section 12 of the Exchange Act; or
- No other person owns a greater percentage of that class of voting securities immediately after the transaction.

Pinnacle Financial's common stock is registered under Section 12 of the Exchange Act. The regulations provide a procedure for challenge of the rebuttable control presumption.

Permitted Activities. Bank holding companies generally are prohibited, except in certain statutorily prescribed instances including exceptions for financial holding companies, from acquiring direct or indirect ownership or control of 5% or more of any class of the outstanding voting securities of any company that is not a bank or bank holding company and from engaging directly or indirectly in activities other than those of banking, managing or controlling banks, or furnishing services to its subsidiaries. However, subject to prior notice or Federal Reserve approval, bank holding companies may engage in, or acquire shares of companies engaged in, activities determined by the Federal Reserve to be so closely related to banking or managing or controlling banks as to be a proper incident thereto. The Gramm-Leach-Bliley Act of 1999 amended the Bank Holding Company Act and expanded the activities in which bank holding companies and affiliates of banks are permitted to engage. The Gramm-Leach-Bliley Act eliminated many federal and state law barriers to affiliations among banks and securities firms, insurance companies, and other financial service providers, and provided that holding companies which elected to become financial holding companies, as Pinnacle Financial has done, could engage in activities that are:

- Financial in nature;
- Incidental to a financial activity (as determined by the Federal Reserve in consultation with the Secretary of the U.S. Treasury); or
- Complementary to a financial activity and do not pose a substantial risk to the safety or soundness of depository institutions or the financial system generally (as determined by the Federal Reserve).
- The Gramm-Leach-Bliley Act identifies the following activities as financial in nature:
- Lending, trust and other banking activities;
- Insuring, guaranteeing, or indemnifying against loss or harm, or providing and issuing annuities, and acting as principal, agent, or broker for these purposes, in any state;
- Providing financial, investment, or advisory services;
- Issuing or selling instruments representing interests in pools of assets permissible for a bank to hold directly;
- Underwriting, dealing in or making a market in securities;
- Activities that the Federal Reserve has determined to be so closely related to banking or managing or controlling banks as to be a proper incident to banking or managing or controlling banks;
- Activities permitted outside of the United States that the Federal Reserve has determined to be usual in connection with banking or other financial operations abroad;

- Merchant banking, including through securities or insurance affiliates; and
- Insurance company portfolio investments.

The Gramm-Leach-Bliley Act also authorizes the Federal Reserve, in consultation with the Secretary of the U.S. Treasury, to determine activities in addition to those listed above that are financial in nature or incidental or complementary to such financial activity. In determining whether a particular activity is financial in nature or incidental or complementary to a financial activity, the Federal Reserve must consider (1) the purpose of the Bank Holding Company Act and the Gramm-Leach-Bliley Act, (2) changes or reasonably expected changes in the marketplace in which financial holding companies compete and in the technology for delivering financial services, and (3) whether the activity is necessary or appropriate to allow financial holding companies to effectively compete with other financial service providers and to efficiently deliver information and services. Pinnacle Financial became a financial holding company effective as of February 17, 2016.

To maintain financial holding company status, a financial holding company and all of its depository institution subsidiaries must be "well capitalized" and "well managed" and, except in limited circumstances, in satisfactory compliance with the Community Reinvestment Act, as discussed in the section captioned "Community Reinvestment Act" below. A depository institution subsidiary is considered to be "well capitalized" if it satisfies the requirements for this status discussed in the section captioned "Capital Adequacy" below. A depository institution subsidiary is considered "well managed" if it received a composite rating and management rating of at least "satisfactory" in its most recent examination. A financial holding company's status will also depend upon it maintaining its status as "well capitalized" and "well managed" under applicable Federal Reserve regulations. If a financial holding company ceases to meet these capital and management requirements, the Federal Reserve's regulations provide that the financial holding company must enter into an agreement with the Federal Reserve to comply with all applicable capital and management requirements. Until the financial holding company returns to compliance, the Federal Reserve may impose limitations or conditions on the conduct of its activities, and the company may not commence any of the broader financial activities permissible for financial holding companies or acquire a company engaged in such financial activities without prior approval of the Federal Reserve. If the company does not return to compliance within 180 days, the Federal Reserve may require divestiture of the holding company's depository institutions or alternatively the holding company may be required to cease to engage in the activities that it is engaged in that a bank holding company is not permitted to engage in without being a financial holding company.

In order for a financial holding company to commence any new activity permitted by the Bank Holding Company Act or to acquire a company engaged in any new activity permitted by the Bank Holding Company Act, each insured depository institution subsidiary of the financial holding company must have received a rating of at least "satisfactory" in its most recent examination under the Community Reinvestment Act.

Despite prior approval, the Federal Reserve may order a financial holding company or its subsidiaries to terminate any of these activities or to terminate its ownership or control of any subsidiary when it has reasonable cause to believe that the financial holding company's continued ownership, activity or control constitutes a serious risk to the financial safety, soundness, or stability of any of its bank subsidiaries or if there is a failure to maintain certain capital or management standards.

Support of Subsidiary Institutions. Pinnacle Financial is required to act as a source of financial and managerial strength for its bank subsidiary, Pinnacle Bank, and to commit resources to support Pinnacle Bank. This support can be required at times when it would not be in the best interest of Pinnacle Financial's shareholders or creditors to provide it. In the event of Pinnacle Financial's bankruptcy, any commitment by it to a federal bank regulatory agency to maintain the capital of Pinnacle Bank would be assumed by the bankruptcy trustee and entitled to a priority of payment.

Pinnacle Bank

Pinnacle Financial owns one bank - Pinnacle Bank. Pinnacle Bank is a state bank chartered under the laws of the State of Tennessee that is not a member of the Federal Reserve. As a result, it is subject to the supervision, examination and reporting requirements and the regulations of the Federal Deposit Insurance Corporation ("FDIC") and Tennessee Department of Financial Institutions ("TDFI"). The TDFI has the authority to approve or disapprove mergers, the issuance of preferred stock and capital notes, the establishment of branches and similar corporate actions. The TDFI regularly examines state banks like Pinnacle Bank and in connection with its examinations may identify matters necessary to improve a bank's operation in accordance with principles of safety and soundness. The FDIC also has examination powers with respect to state, non-member banks like Pinnacle Bank. Any matters identified in such examinations are required to be appropriately addressed by the bank. Pinnacle Bank is also subject to numerous state and federal statutes and regulations that will affect its business, activities and operations.

Branching. While the TDFI has authority to approve branch applications, state banks are required by the State of Tennessee to adhere to branching laws applicable to state chartered banks in the states in which they are located. With prior regulatory approval, Tennessee law permits banks based in the state to either establish new or acquire existing branch offices throughout Tennessee. As a result of the Dodd-Frank Act, Pinnacle Bank and any other national or state-chartered bank generally may branch across state lines to the same extent as banks chartered in the state where the branch is located.

FDIC Insurance. Deposits in Pinnacle Bank are insured by the FDIC up to \$250,000 subject to applicable limitations. To offset the cost of this insurance, the FDIC has adopted a risk-based assessment system for insured depository institutions that takes into account the risks attributable to different categories and concentrations of an insured depository institution's assets and liabilities. An institution's assessment rate depends on the category to which it is assigned and certain adjustments specified by the FDIC, with less risky institutions paying lower assessments. Under the Dodd-Frank Act, the FDIC has adopted regulations that base deposit insurance assessments on total assets less capital rather than deposit liabilities and include off-balance sheet liabilities of institutions and their affiliates in risk-based assessments. After an institution's average assets exceed \$10 billion over four quarters as ours have, the assessment rate increases compared to institutions at lower average asset levels. In addition, for larger institutions, like Pinnacle Bank, the FDIC uses a performance score and a loss-severity score that are used to calculate an initial assessment rate. In calculating these scores, the FDIC uses a bank's capital level and supervisory ratings and certain financial measures to assess an institution's ability to withstand asset-related stress and funding-related stress. The FDIC has the ability to make discretionary adjustments to the total score based upon significant risk factors that are not adequately captured in the calculations. Continued increases in our FDIC insurance premiums could have an adverse effect on Pinnacle Bank's and Pinnacle Financial's results of operations.

The FDIC may terminate its insurance of an institution's deposits if it finds 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.

General Enforcement Authority of Regulators

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

Capital Adequacy

The Federal Reserve has established a risk-based and a leverage measure of capital adequacy for bank holding companies. Pinnacle Bank is also subject to risk-based and leverage capital requirements adopted by the FDIC, which are substantially similar to those adopted by the Federal Reserve for bank holding companies. The risk-based capital standards are designed to make regulatory capital requirements more sensitive to differences in risk profiles among banks and bank holding companies, to account for off-balance-sheet exposure, and to minimize disincentives for holding liquid assets. Assets and off-balance-sheet items, such as letters of credit and unfunded loan commitments, are assigned to broad risk categories, each with appropriate risk weights. The resulting capital ratios represent capital as a percentage of total risk-weighted assets and off-balance-sheet items. Tennessee state banks are required to have the capital structure that the TDFI deems adequate, and the Commissioner of the TDFI as well as federal regulators may require a state bank (or its holding company in the case of federal regulators) to increase its capital structure to the point deemed adequate by the Commissioner or such other federal regulator before granting approval of a branch application, merger application or charter amendment.

The Dodd-Frank Act contains a number of provisions dealing with capital adequacy of insured depository institutions and their holding companies, and for the most part these provisions have resulted in insured depository institutions and their holding companies being subject to more stringent capital requirements than before passage of the act. Under the Dodd-Frank Act, federal regulators have established minimum Tier 1 leverage and risk-based capital requirements for, among other entities, banks and bank holding companies on a consolidated basis. These minimum requirements require that a bank holding company maintain a ratio of Tier 1 capital to average assets, less goodwill, other intangible assets and other required deductions ("Tier 1 leverage ratio") of not less than 4% and a total capital ratio of not less than 8%.

In July 2013, the Federal Reserve and the FDIC approved final rules that substantially amended the regulatory capital rules applicable to Pinnacle Bank and Pinnacle Financial, effective January 1, 2015. The final rules implement the regulatory capital reforms of the Basel Committee on Banking Supervision reflected in "Basel III: A Global Regulatory Framework for More Resilient Banks and Banking Systems" (Basel III) and changes required by the Dodd-Frank Act.

Under these rules, the leverage and risk-based capital ratios of bank holding companies may not be lower than the leverage and risk-based capital ratios for insured depository institutions. The final capital rules implementing Basel III include minimum risk-based capital and leverage ratios for banks and their holding companies. Moreover, these rules refined the definition of what constitutes "capital" for purposes of calculating those ratios, including the definitions of Tier 1 capital and Tier 2 capital. Total capital consists of two components, Tier 1 capital and Tier 2 capital. Tier 1 capital generally consists of common stock (plus related surplus) and retained earnings, minority interests in the equity accounts of consolidated subsidiaries and noncumulative perpetual preferred stock and related surplus, less goodwill and other specified intangible assets and other regulatory deductions. Tier 2 capital generally consists of perpetual preferred stock and related surplus not meeting the Tier 1 capital definition, qualifying trust preferred securities and subordinated debt, qualifying mandatorily convertible debt securities, and a limited amount of the allowance for credit losses.

The minimum capital level requirements applicable to bank holding companies and banks subject to the federal regulators' capital rules are: (i) a Tier 1 common equity ("CET1") capital ratio of 4.5%; (ii) a Tier 1 risk-based capital ratio of 6%; (iii) a total risk-based capital ratio of 8%; and (iv) a Tier 1 leverage ratio of 4% for all institutions. The rules also established a "capital conservation buffer" of 2.5% (to consist of CET1 capital) above the regulatory minimum capital ratios that has resulted in the following minimum ratios: (i) a CET1 capital ratio of 7%, (ii) a Tier 1 capital ratio of 8.5%, and (iii) a total capital ratio of 10.5%. The phase-in of the capital conservation buffer requirement was fully implemented in January 2019. An institution will be subject to limitations on paying dividends, engaging in share repurchases and paying discretionary bonuses if capital levels fall below minimum levels plus the buffer amounts. These limitations establish a maximum percentage of eligible retained income that could be utilized for any such actions.

Under the Basel III capital rules, CET1 consists of common stock and paid in capital and retained earnings. CET1 is reduced by goodwill, certain intangible assets, net of associated deferred tax liabilities, deferred tax assets that arise from tax credit and net operating loss carryforwards, net of any valuation allowance, and certain other items specified in the Basel III capital rules. The Basel III capital rules also provide for a number of deductions from and adjustments to CET1. These include, for example, the requirement that mortgage servicing rights, deferred tax assets arising from temporary differences that could not be realized through net operating loss carrybacks and investments in non-consolidated financial institutions be deducted from CET1 to the extent that any such category exceeds 25% of CET1.

The final rules allow banks and their holding companies with less than \$250 billion in assets a one-time opportunity to opt-out of a requirement to include unrealized gains and losses in accumulated other comprehensive income in their capital calculation. Pinnacle Financial and Pinnacle Bank each opted out of this requirement.

Pinnacle Financial must qualify as "well capitalized," among other requirements, in order for it to engage in certain acquisitions or be eligible for expedited treatment of certain regulatory applications, including those related to mergers and acquisitions. For Pinnacle Financial to qualify as "well capitalized," for these purposes it must have a Tier 1 risk-based capital ratio of at least 8% and a total risk-based capital ratio of at least 10% and not be subject to a written agreement, order or directive to maintain a specific capital level.

Failure to meet statutorily mandated capital requirements or more restrictive ratios separately established for a depository institution or its holding company by its regulators could subject a bank or bank holding company to a variety of enforcement remedies, including issuance of a capital directive, the termination of deposit insurance by the FDIC, a prohibition on accepting or renewing brokered deposits, limitations on the rates of interest that the institution may pay on its deposits and other restrictions on its business.

Additionally, the Federal Deposit Insurance Corporation Improvement Act of 1991 ("FDICIA") establishes a system of prompt corrective action ("PCA") to resolve the problems of undercapitalized financial institutions. Under this system, the federal banking regulators have established five capital categories (well-capitalized, adequately capitalized, undercapitalized, significantly undercapitalized and critically undercapitalized) into one of which all institutions are placed. Federal banking regulators are required to take various mandatory supervisory actions and are authorized to take other discretionary actions with respect to institutions in the three undercapitalized categories. The severity of the action depends upon the capital category in which the institution is placed. Generally, subject to a narrow exception, the banking regulator must appoint a receiver or conservator within a specified period for an institution that is critically undercapitalized. The federal banking agencies have specified by regulation the relevant capital level for each category.

Under FDIC regulations, a state regulated bank which is not a member of the Federal Reserve (a state non-member bank) like Pinnacle Bank is "well capitalized" under PCA if it has a Tier 1 leverage ratio of 5% or better, a CET1 capital ratio of 6.5% or better, a Tier 1 risk-based capital ratio of 8% or better, a total risk-based capital ratio of 10% or better, and is not subject to a regulatory agreement, order or directive to maintain a specific level for any capital measure. A state non-member bank is considered "adequately capitalized" if it has a Tier 1 leverage ratio of at least 4%, a CET1 capital ratio of 4.5% or better, a Tier 1 risk-based capital ratio of at least 6.0%, a total risk-based capital ratio of at least 8.0% and does not meet the definition of a well-capitalized bank. Lower levels of capital result in a bank being considered undercapitalized, significantly undercapitalized and critically undercapitalized.

State non-member banks are required to be "well capitalized" in order to take advantage of expedited procedures on certain applications, such as those related to the opening of branches and mergers, and to accept and renew brokered deposits without further regulatory approval.

An institution that is categorized as undercapitalized, significantly undercapitalized, or critically undercapitalized is required to submit an acceptable capital restoration plan to its appropriate federal banking agency. In addition, a bank holding company must guarantee that a subsidiary depository institution meets its capital restoration plan, subject to various limitations. The controlling holding company's obligation to fund a capital restoration plan is limited to the lesser of 5% of an undercapitalized subsidiary's assets or the amount required to meet regulatory capital requirements. An undercapitalized institution is also generally prohibited from increasing its average total assets, making acquisitions, establishing any branches or engaging in any new line of business, except under an accepted capital restoration plan or with FDIC approval. The FDIC is required to resolve a bank when its ratio of tangible equity to tangible assets reaches 2%. The regulations also establish procedures for downgrading an institution into a lower capital category based on supervisory factors other than capital.

The Basel III capital rules prescribe a standardized approach for risk weightings that expand the risk-weighting categories from the four Basel I-derived categories (0%, 20%, 50% and 100%) to a much larger and more risk-sensitive number of categories, depending on the nature of the assets, generally ranging from 0% for U.S. government and agency securities, to 600% for certain equity exposures, and resulting in higher risk weights for a variety of asset categories. Specific changes to the rules impacting Pinnacle Financial's and Pinnacle Bank's determination of risk-weighted assets include, among other things:

- applying a 150% risk weight instead of a 100% risk weight for certain high volatility commercial real estate acquisition, development and construction loans;
- assigning a 150% risk weight to the unsecured portion of non-residential mortgage loans that are 90 days past due or otherwise on nonaccrual status;
- providing for a 20% credit conversion factor for the unused portion of a commitment with an original maturity of one year or less that is not unconditionally cancellable (previously set at 0%);
- providing for a risk weight, generally not less than 20% with certain exceptions, for securities lending transactions based on the risk weight category of the underlying collateral securing the transaction;
- providing for a 600% risk weight on certain equity exposures; and
- eliminating the 50% cap on the risk weight for OTC derivatives.

In December 2017, the Basel Committee on Banking Supervision published the last version of the Basel III accord, generally referred to as "Basel IV." The Basel Committee stated that a key objective of the revisions incorporated into the framework is to reduce excessive variability of risk-weighted assets ("RWA"), which will be accomplished by enhancing the robustness and risk sensitivity of the standardized approaches for credit risk and operational risk, which will facilitate the comparability of banks' capital ratios; constraining the use of internally modeled approaches; and complementing the risk-weighted capital ratio with a finalized leverage ratio and a revised and robust capital floor. Under the Basel framework, these standards will generally be effective on January 1, 2023, with an aggregate output floor phasing in through January 1, 2028. Under the current U.S. capital rules, operational risk capital requirements and a capital floor apply only to advanced approaches institutions, and not to Pinnacle Financial or Pinnacle Bank. The impact of Basel IV on us will depend on the manner in which it is implemented by the federal bank regulators.

In February 2019, the federal bank regulatory agencies issued a final rule (the "2019 CECL Rule") that revised certain capital regulations to account for changes to credit loss accounting under U.S. GAAP. The 2019 CECL Rule included a transition option that allows banking organizations to phase in, over a three-year period, the day-one adverse effects of adopting a new accounting standard related to the measurement of current expected credit losses ("CECL") on their regulatory capital ratios (three-year transition option). In March 2020, the federal bank regulatory agencies issued an interim final rule that maintains the three-year transition option of the 2019 CECL Rule and also provides banking organizations that were required under U.S. GAAP (as of January 2020) to implement CECL before the end of 2020 the option to delay for two years an estimate of the effect of CECL on regulatory capital, relative to the incurred loss methodology's effect on regulatory capital, followed by a three-year transition period (five-year transition option). As permitted by the interim final rule issued on March 27, 2020 by the federal banking regulatory agencies, each of Pinnacle Bank and Pinnacle Financial has elected the option to delay the estimated impact on regulatory capital of Pinnacle Financial's and Pinnacle Bank's adoption of ASU 2016-13, "Financial Instruments - Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments", which was effective January 1, 2020. The initial impact of adoption of ASU 2016-13, as well as 25% of the quarterly increases in the allowance for credit losses subsequent to adoption of ASU 2016-13 (collectively the "transition adjustments"), was delayed until December 31, 2021. As of January 1, 2022, the cumulative amount of the transition adjustments of \$68.0 million became fixed and will be phased out of the regulatory capital calculations evenly over a three year period, with 75% recognized in 2022, 50% recognized in 2023, and 25% recognized in 2024. Beginning on January 1, 2025, the temporary regulatory capital benefits will be fully reversed.

At December 31, 2022, Pinnacle Bank's CET1 capital ratio was 10.9%, Tier 1 risk-based capital ratio was 10.9%, total risk-based capital ratio was 11.6% and Tier 1 leverage ratio was 10.1%, compared to 11.9%, 11.9%, 12.6% and 9.9% at December 31, 2021, respectively. At December 31, 2022, Pinnacle Financial's CET1 capital ratio was 10.0%, Tier 1 risk-based capital ratio was 10.5%, total risk-based capital ratio was 12.4% and Tier 1 leverage ratio was 9.7%, compared to 10.9%, 11.7%, 13.8% and 9.7% at December 31, 2021, respectively. All of these ratios exceeded regulatory minimums and those required by Basel III and FDICIA (including after application of any applicable capital conservation buffer) to be considered well capitalized. More information concerning Pinnacle Financial's and Pinnacle Bank's regulatory ratios at December 31, 2022 is included in Note 19 to the "Notes to Consolidated Financial Statements" included elsewhere in this Annual Report on Form 10-K.

Capital Planning

Banking organizations must have appropriate capital planning processes, with proper oversight from the board of directors. Accordingly, pursuant to a separate, general supervisory letter from the Federal Reserve, bank holding companies are expected to conduct and document comprehensive capital adequacy analyses prior to the declaration of any dividends (on common stock, preferred stock, trust preferred securities or other Tier 1 capital instruments), capital redemptions or capital repurchases. Moreover, the federal banking agencies have adopted a joint agency policy statement, noting that the adequacy and effectiveness of a bank's interest rate risk management process and the level of its interest rate exposures are critical factors in the evaluation of the bank's capital adequacy. A bank with material weaknesses in its interest rate risk management process or high levels of interest rate exposure relative to its capital will be directed by the relevant federal banking agencies to take corrective actions.

In January 2022, Pinnacle Financial announced that its board of directors had authorized a share repurchase program for up to \$125.0 million of Pinnacle Financial's outstanding common stock, which is scheduled to expire upon the earlier of Pinnacle Financial's repurchase of shares of its outstanding common stock having an aggregate purchase price of \$125.0 million and March 31, 2023. During 2022, Pinnacle Financial repurchased no shares of its common stock under such share repurchase program. In addition, in January 2023, Pinnacle Financial announced that its board of directors approved a subsequent repurchase program for up to \$125.0 million. The new repurchase program will commence upon the expiration of the current program and is scheduled to expire upon the earlier of Pinnacle Financial's repurchase of shares of its outstanding common stock having an aggregate purchase price of \$125.0 million and March 31, 2024. Repurchases of shares of Pinnacle Financial's common stock will be made in accordance with applicable laws and may be made at management's discretion from time to time in the open market, through privately negotiated transactions or otherwise.

Payment of Dividends

Pinnacle Financial is a legal entity separate and distinct from Pinnacle Bank. Though Pinnacle Financial had cash and cash equivalents of \$186.6 million as of December 31, 2022, the principal source of Pinnacle Financial's cash flow, including cash flow to pay interest to its holders of subordinated debentures and subordinated notes, and any dividends payable to common shareholders and holders of its preferred stock, are dividends that Pinnacle Bank pays to Pinnacle Financial as its sole shareholder. Under Tennessee law, Pinnacle Financial is not permitted to pay dividends if, after giving effect to such payment, it would not be able to pay its debts as they become due in the usual course of business or its total assets would be less than the sum of its total liabilities plus any amounts needed to satisfy any preferential rights if it were dissolving. In addition, in deciding whether or not to declare a dividend of any particular size, Pinnacle Financial's board of directors must consider its and Pinnacle Bank's current and prospective capital, liquidity, and other needs.

In addition to state law limitations on Pinnacle Financial's ability to pay dividends, the Federal Reserve imposes limitations on Pinnacle Financial's ability to pay dividends. As noted above, effective January 1, 2016, Federal Reserve regulations limit dividends, stock repurchases and discretionary bonuses to executive officers if Pinnacle Financial's regulatory capital is below the level of regulatory minimums plus the applicable capital conservation buffer. Additionally, it is Federal Reserve policy that bank holding companies generally should pay dividends on common stock only out of net income available to common shareholders over the past year and only if the prospective rate of earnings retention appears consistent with the organization's current and expected future capital needs, asset quality and overall financial condition. Federal Reserve policy also provides that a bank holding company should inform the Federal Reserve 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. See "Capital Adequacy" above.

Statutory and regulatory limitations also apply to Pinnacle Bank's payment of dividends to Pinnacle Financial. Pinnacle Bank is required by Tennessee law to obtain the prior approval of the Commissioner of the TDFI for payments of dividends if the total of all dividends declared by its board of directors in any calendar year will exceed (1) the total of Pinnacle Bank's net income for that year, plus (2) Pinnacle Bank's retained net income for the preceding two years. As of December 31, 2022, Pinnacle Bank could pay dividends to Pinnacle Financial of up to \$1.0 billion. Generally, federal regulatory policy encourages holding company debt to be serviced by subsidiary bank dividends or additional equity rather than debt issuances. Pinnacle Financial had available cash balances of approximately \$186.6 million at December 31, 2022 that could be used to support Pinnacle Bank.

The payment of dividends by Pinnacle Bank and Pinnacle Financial may also be affected by other factors, such as the requirement to maintain adequate capital above statutory and regulatory requirements imposed on Pinnacle Bank or Pinnacle Financial by their regulators. The federal banking agencies have indicated that paying dividends that deplete a depository institution's capital base to an inadequate level would be an unsafe and unsound banking practice. Under the FDICIA, a depository institution may not pay any dividend if payment would cause it to become undercapitalized or if it already is undercapitalized.

During the fourth quarter of 2013, Pinnacle Financial initiated a quarterly common stock dividend in the amount of \$0.08 per share. The board of directors of Pinnacle Financial has increased the dividend amount per share over time. The most recent increase occurred on January 18, 2022, when the board of directors increased the dividend to \$0.22 per share. During the year ended December 31, 2022, Pinnacle Financial paid \$68.2 million in net dividends to its common shareholders. On January 17, 2023, our board of directors declared a \$0.22 per share quarterly cash dividend to common shareholders which approximated \$16.7 million in aggregate dividend payments and was paid on February 24, 2023 to common shareholders of record as of the close of business on February 3, 2023.

During the second quarter of 2020, Pinnacle Financial issued 9.0 million depository shares, each representing a 1/40th interest in a share of its 6.75% fixed rate non-cumulative, perpetual preferred stock, Series B (Series B Preferred Stock) in a registered public offering to both retail and institutional investors. During the year ended December 31, 2022, Pinnacle Financial paid \$15.2 million in dividends on its Series B Preferred Stock. On January 17, 2023, our board of directors approved a quarterly dividend of approximately \$3.8 million, or \$16.88 per share (or \$0.422 per depository share), on the Series B Preferred Stock payable on March 1, 2023 to shareholders of record at the close of business on February 14, 2023.

The amount and timing of all future dividend payments, if any, including on the Series B Preferred Stock, is subject to our board's discretion and will depend on our earnings, capital position, financial condition and other factors, including, if necessary, our receipt of dividends from Pinnacle Bank, regulatory capital requirements, as they become known to us and receipt of any regulatory approvals that may become required as a result of our and our bank subsidiary's financial results. If we fail to pay dividends on our Series B Preferred Stock, we will be prohibited from paying dividends on our common stock.

Restrictions on Transactions with Affiliates

Both Pinnacle Financial and Pinnacle Bank are subject to the provisions of Section 23A of the Federal Reserve Act. Section 23A places limits on the amount of:

- A bank's loans or extensions of credit, including purchases of assets subject to an agreement to repurchase, to or for the benefit of affiliates;
- A bank's investment in affiliates;
- Assets a bank may purchase from affiliates, except for real and personal property exempted by the Federal Reserve;
- The amount of loans or extensions of credit to third parties collateralized by the securities or obligations of affiliates;
- Transactions involving the borrowing or lending of securities and any derivative transaction that results in credit exposure to an affiliate; and
- A bank's 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 a bank's capital and surplus and, as to all affiliates combined, to 20% of a bank's capital stock and surplus. In addition to the limitation on the amount of these transactions, each of the above transactions that is a credit transaction must also meet specified collateral requirements. Pinnacle Bank must also comply with other provisions designed to avoid the taking of low-quality assets.

Pinnacle Financial and Pinnacle Bank are also subject to the provisions of Section 23B of the Federal Reserve Act which, among other things, prohibits an institution from engaging in the above transactions with affiliates unless the transactions are on terms substantially the same, or at least as favorable to the institution or its subsidiaries, as those prevailing at the time for comparable transactions with nonaffiliated companies.

Pinnacle 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 are subject to certain dollar value limitations, 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, and must not involve more than the normal risk of repayment or present other unfavorable features.

Community Reinvestment Act and Fair Lending

The Community Reinvestment Act (“CRA”) requires that, in connection with examinations of financial institutions within their respective jurisdictions, the Federal Reserve and the FDIC shall evaluate the record of each financial institution in meeting the credit needs of its local communities, including low- and moderate-income neighborhoods consistent with safe and sound operations of the institutions. These facts are also considered in evaluating mergers, acquisitions, and applications to open a branch or facility. Failure to adequately meet these criteria could impose additional requirements and limitations on Pinnacle Bank. Additionally, banks are required to publicly disclose the terms of various Community Reinvestment Act-related agreements. Pinnacle Bank received a satisfactory CRA rating from its primary federal regulator on its most recent regulatory examination.

In December 2019, the FDIC and the Office of the Comptroller of the Currency (“OCC”) jointly proposed rules that would have significantly changed existing CRA regulations. In May 2020, the OCC issued its final CRA rule, effective October 1, 2020; however, in December 2021, the OCC revoked the newly issued rule and largely reverted to its prior CRA rule. In May 2022, the Federal Reserve, the FDIC and the Office of the Comptroller of the Currency (“OCC”) issued a joint proposal that seeks to, among other things (i) expand access to credit, investment and basic banking services in low- and moderate-income communities, (ii) adapt to changes in the banking industry, including internet and mobile banking by modernizing assessment areas while maintaining a focus on branch-based areas, (iii) provide greater clarity, consistency and transparency in the application of the regulations and (iv) tailor performance standards to account for differences in bank size, business model, and local conditions. We will continue to evaluate the impact of any changes to the regulations implementing the CRA and their impact to our financial condition, results of operations, and/or liquidity, which cannot be predicted at this time.

Pinnacle Bank is also subject to fair lending requirements and reporting obligations involving its home mortgage lending operations. Fair lending laws prohibit discrimination in the provision of banking services, and bank regulators have increasingly focused on the enforcement of these laws. Fair lending laws include the Equal Credit Opportunity Act of 1974 and the Fair Housing Act of 1968, which prohibit discrimination in credit and residential real estate transactions on the basis of prohibited factors including, among others, race, color, national origin, gender and religion. Pinnacle Bank may be liable, either through administrative enforcement or private civil actions, for policies that result in a disparate treatment of or have a disparate impact on a protected class of applicants or borrowers. If a pattern or practice of lending discrimination is alleged by a regulator, then that agency may refer the matter to the U.S. Department of Justice (“DOJ”) for investigation. Pursuant to a Memorandum of Understanding, the DOJ and Consumer Financial Protection Bureau (“CFPB”) have agreed to share information, coordinate investigations and generally commit to strengthen their coordination efforts. Pinnacle Bank is required to have a fair lending program that is of sufficient scope to monitor the inherent fair lending risk of the institution and that appropriately remediates issues which are identified.

Cybersecurity and Data Privacy

State and federal banking regulators have issued various policy statements and, in some cases, regulations, emphasizing the importance of technology risk management and supervision. In March 2022, the SEC proposed rules that would require disclosure of material cybersecurity incidents, as well as cybersecurity risk management, strategy and governance. On November 18, 2021, the federal banking agencies issued a joint final rule that requires a banking organization to notify their primary federal regulator within 36 hours of becoming aware that a significant “computer-security incident” has occurred. In general, a banking organization must notify its primary federal regulator for incidents that have materially disrupted, degraded or impaired - or are reasonably likely to materially disrupt, degrade or impair - (i) the ability of such banking organization to carry out banking operations and activities or deliver banking products and services, (ii) such banking organization’s results of operations, or (iii) the financial stability of the financial sector. The final rule also requires a bank service provider to notify each of its affected customers as soon as possible when it determines that it has experienced a computer-security incident that has caused, or is reasonably likely to cause, a material service disruption for four or more hours. Compliance with the final rule was required by May 1, 2022. This new rule and the earlier such policy statements and regulations indicate that financial institutions should design multiple layers of security controls to establish lines of defense and to ensure that their risk management processes also address the risk posed by compromised customer credentials, including security measures to reliably authenticate customers accessing internet-based services of the financial institution. A financial institution’s management is expected to maintain sufficient business continuity planning processes to ensure the rapid recovery, resumption and maintenance of the institution’s operations after a cyber-attack involving destructive malware. A financial institution is expected to develop appropriate processes to enable recovery of data and business operations and address rebuilding network capabilities and restoring data if the institution or its critical service providers fall victim to this type of cyber-attack.

Federal statutes and regulations, including the Gramm-Leach-Bliley Act and the Right to Financial Privacy Act of 1978, limit Pinnacle Financial's and Pinnacle Bank's ability to disclose non-public information about consumers, customers and employees to nonaffiliated third parties. Specifically, the Gramm-Leach-Bliley Act requires disclosure of our privacy policies and practices relating to sharing non-public information and enables retail customers to opt out of the institution's ability to share information with unaffiliated third parties under certain circumstances. The Gramm-Leach-Bliley Act also requires Pinnacle Financial and Pinnacle Bank to implement a comprehensive information security program that includes administrative, technical and physical safeguards to ensure the security and confidentiality of customer records and information and, if applicable state law is more protective of customer privacy than the Gramm-Leach-Bliley Act, financial institutions, including Pinnacle Bank, will be required to comply with such state law. An increasing number of state laws and regulations have been enacted in recent years to implement privacy and cybersecurity standards and regulations, including data breach notification and data privacy requirements. Other nations in which our customers do business, such as the European Union, have adopted similar requirements. This trend of state-level and international activity is expected to continue to expand, requiring continual monitoring of developments in the states and nations in which our customers are located and ongoing investments in our information systems and compliance capabilities.

Other laws and regulations impact Pinnacle Financial's and Pinnacle Bank's ability to share certain information with affiliates and non-affiliates for marketing and/or non-marketing purposes. These regulations affect how consumer information is transmitted through diversified financial companies and conveyed to outside vendors. In connection with the regulations governing the privacy of consumer financial information, the federal banking agencies, including the FDIC, have adopted guidelines for establishing information security standards and programs to protect such information. In addition, Pinnacle Bank has established a privacy policy that it believes promotes compliance with the federal requirements.

Other Consumer Laws and Regulations

Interest and other charges collected or contracted for by Pinnacle Bank are subject to state usury laws and federal laws concerning interest rates. For example, under the Service Members Civil Relief Act, a lender is generally prohibited from charging an annual interest rate in excess of 6% on any obligations for which the borrower is a person on active duty with the United States military.

Pinnacle Bank's loan operations are also subject to federal laws applicable to credit transactions, such as the:

- Federal Truth-In-Lending Act, governing disclosures of credit terms and costs to consumer borrowers, giving consumers the right to cancel certain credit transactions, and defining requirements for servicing consumer loans secured by a dwelling;
- Home Mortgage Disclosure Act of 1975, requiring financial institutions to provide information to enable the public and public officials to determine whether a financial institution is fulfilling its obligation to help meet the housing needs of the community it serves;
- Fair Credit Reporting Act of 1978, governing the use and provision of information to credit reporting agencies;
- Fair Debt Collection Practices Act, governing the manner in which consumer debts may be collected by collection agencies;
- Service Members Civil Relief Act, governing the repayment terms of, and property rights underlying, secured obligations of persons in active military service;
- Rules and regulations of the various federal agencies charged with the responsibility of implementing the federal laws;
- Electronic Fund Transfers Act, which regulates fees and other terms of electronic funds transactions;
- Fair and Accurate Credit Transactions Act of 2003, which permanently extended the national credit reporting standards of the Fair Credit Reporting Act, and permits consumers, including our customers, to opt out of information sharing among affiliated companies for marketing purposes and requires financial institutions, including banks, to notify a customer if the institution provides negative information about the customer to a national credit reporting agency or if the credit that is granted to the customer is on less favorable terms than those generally available; and
- Real Estate Settlement and Procedures Act of 1974, which affords consumers greater protection pertaining to federally related mortgage loans by requiring, among other things, improved and streamlined loan estimate forms including clear summary information and improved disclosure of yield spread premiums.

Pinnacle Bank's deposit operations are subject to the:

- Right to Financial Privacy Act, which imposes a duty to maintain confidentiality of consumer financial records and prescribes procedures for complying with administrative subpoenas of financial records;
- Electronic Fund Transfers Act and Regulation E issued by the Federal Reserve to implement that act, which govern automatic deposits to and withdrawals from deposit accounts and customers' rights and liabilities (including with respect to the permissibility of overdraft charges) arising from the use of automated teller machines and other electronic banking services.
- Truth in Savings Act, which requires depository institutions to disclose the terms of deposit accounts to consumers;

- Expedited Funds Availability Act, which requires financial institutions to make deposited funds available according to specified time schedules and to disclose funds availability policies to consumers; and
- Check Clearing for the 21st Century Act ("Check 21"), which is designed to foster innovation in the payments system and to enhance its efficiency by reducing some of the legal impediments to check truncation. Check 21 created a new negotiable instrument called a substitute check and permits, but does not require banks to truncate original checks, process check information electronically, and deliver substitute checks to banks that wish to continue receiving paper checks.

Pinnacle Bank's loan and deposit operations are both subject to the Bank Secrecy Act ("BSA") which governs how banks and other firms report certain currency transactions and maintain appropriate safeguards against "money laundering" activities as discussed in the section captioned "Anti-Terrorism Legislation and Anti-Money Laundering" below.

Examination and enforcement by the state and federal banking agencies, including the CFPB (as described in more detail below), and other such enforcement authorities, for non-compliance with consumer protection laws and their implementing regulations have increased and become more intense. Due to these heightened regulatory concerns, including increased enforcement of the CRA by the federal banking agencies, and the powers and authority of the CFPB, Pinnacle Bank and its affiliates may incur additional compliance costs or be required to expend additional funds for investments in their local community.

Anti-Terrorism Legislation and Anti-Money Laundering

Pursuant to the Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism ("USA PATRIOT") Act of 2001, as amended, financial institutions are subject to prohibitions against specified financial transactions and account relationships as well as enhanced due diligence and "know your customer" standards in their dealings with foreign financial institutions and foreign customers.

A major focus of governmental policy on financial institutions has been aimed at combating money laundering and terrorist financing. The BSA and its implementing regulations and parallel requirements of the federal banking regulators require Pinnacle Bank to maintain a risk-based anti-money laundering ("AML") program reasonably designed to prevent and detect money laundering and terrorist financing and to comply with the recordkeeping and reporting requirements of the BSA, including the requirement to report suspicious activity. The USA PATRIOT Act substantially broadened the scope of AML laws and regulations by imposing significant new compliance and due diligence obligations on financial institutions, creating new crimes and penalties and expanding the extra-territorial jurisdiction of the United States. Financial institutions, including banks, are required under final rules implementing Section 326 of the USA PATRIOT Act to establish procedures for collecting standard information from customers opening new accounts and verifying the identity of these new account holders within a reasonable period of time. Financial institutions are also prohibited from entering into specified financial transactions and account relationships and must take certain steps to assist government agencies in detecting and preventing money laundering and to report certain types of suspicious transactions. In May 2016, Treasury's Financial Crimes Enforcement Network ("FinCEN") issued rules under the BSA requiring financial institutions to identify the beneficial owners who own or control certain legal entity customers at the time an account is opened and to update their AML compliance programs to include risk-based procedures for conducting ongoing customer due diligence. We have implemented procedures designed to comply with these requirements. In January 2021, the Anti-Money Laundering Act of 2020 ("AMLA"), which amends the BSA, was enacted as part of the National Defense Authorization Act for Fiscal Year 2021. Among other things, the AMLA codifies a risk-based approach to anti-money laundering compliance for financial institutions; requires the development of standards for evaluating technology and internal processes for BSA compliance; and expands enforcement and investigation-related authority, including increasing available sanctions for certain BSA violations and instituting BSA whistleblower incentives and protections.

Pinnacle Bank currently has policies and procedures in place designed to comply with the USA PATRIOT Act and the AMLA, the BSA and the other regulations targeting terrorism and money laundering. Federal banking regulators are required, when reviewing bank holding company acquisition and bank merger applications, to consider the effectiveness of the AML activities of the applicants. Material deficiencies in AML compliance, and non-compliance with related requirements such as the U.S. economic and trade sanctions regimes, can result in public enforcement actions by the bank regulatory agencies and other government agencies, including the imposition of civil money penalties and supervisory restrictions on growth and expansion. Such enforcement actions could also have serious financial, legal and reputational consequences for Pinnacle Financial and Pinnacle Bank including causing applicable bank regulatory authorities not to approve merger or acquisition transactions when regulatory approval is required or to prohibit such transactions even if approval is not required.

The Office of Foreign Assets Control

The Office of Foreign Assets Control (“OFAC”), which is an office in the U.S. Department of the Treasury, is responsible for helping to ensure that U.S. entities do not engage in transactions with “enemies” of the United States, as defined by various Executive Orders and Acts of Congress. OFAC publishes lists of names of persons and organizations suspected of aiding, harboring or engaging in terrorist acts; owned or controlled by, or acting on behalf of target countries, and narcotics traffickers. If a bank finds a name on any transaction, account or wire transfer that is on an OFAC list, it must freeze or block the transactions on the account. Pinnacle Bank has appointed a compliance officer to oversee the inspection of its accounts and the filing of any notifications. Pinnacle Bank actively checks high-risk OFAC areas such as new accounts, wire transfers and customer files. These checks are performed using software that is updated each time a modification is made to the lists provided by OFAC and other agencies of Specially Designated Nationals and Blocked Persons. Failure to comply with these sanctions could have serious financial, legal and reputational consequences, including causing applicable bank regulatory authorities not to approve merger or acquisition transactions when regulatory approval is required or to prohibit such transactions even if approval is not required. Regulatory authorities have imposed cease and desist orders and civil money penalties against institutions found to be violating these obligations.

The Dodd-Frank Act

New regulations and statutes are regularly proposed that contain wide-ranging proposals for altering the structures, regulations and competitive relationships of the nation's financial institutions. In 2010, the U.S. Congress passed the Dodd-Frank Act, which includes significant consumer protection provisions related to, among other things, residential mortgage loans that have increased, and are likely to further increase, our regulatory compliance costs. The Dodd-Frank Act also imposes other restrictions on our operations, including restrictions on the types of investments that bank holding companies and banks can make. Failure to comply with the requirements of the Dodd-Frank Act would negatively impact our results of operations and financial condition and could limit our growth or expansion activities. While we cannot predict what effect any presently contemplated or future changes in the laws or regulations or their interpretations would have on us, such changes could be materially adverse to our investors.

Interchange Fees. The Dodd-Frank Act included provisions (known as the “Durbin Amendment”) which restrict interchange fees to those which are “reasonable and proportionate” for certain debit card issuers and limits the ability of networks and issuers to restrict debit card transaction routing. The Federal Reserve issued final rules implementing the Durbin Amendment on June 29, 2011. In the final rules, interchange fees for debit card transactions were capped at \$0.21 plus five basis points (plus \$0.01 for fraud loss) in order to be eligible for a safe harbor such that the fee is conclusively determined to be reasonable and proportionate. The interchange fee restrictions contained in the Durbin Amendment, and the rules promulgated thereunder, only apply to debit card issuers with \$10 billion or more in total consolidated assets, like Pinnacle Bank. The implications of the Durbin Amendment first became applicable to us on July 1, 2017.

The Volcker Rule Section 13 of the Bank Holding Company Act and its implementing regulations, commonly referred to as the “Volcker Rule,” prohibit banking entities from engaging in proprietary trading, and prohibits certain interests in, or relationships with, hedge funds or private equity funds. The Volcker Rule applies to Pinnacle Financial, Pinnacle Bank and their affiliates.

In October 2019, the federal banking agencies responsible for implementing the Volcker Rule finalized amendments to their regulations to tailor the Volcker Rule’s compliance requirements to the size and scope of a banking entity’s trading activities, clarify certain key provisions in the Volcker Rule and modify the information that companies are required to provide these agencies. In June 2020, these agencies finalized additional modifications to their regulations expanding the ability of banking entities to make investments in certain types of private equity funds. These amendments became effective on October 1, 2020.

Consumer Financial Protection Bureau. The Dodd-Frank Act also created the CFPB, which took over responsibility for enforcing the principal federal consumer protection laws, such as the Truth in Lending Act, the Equal Credit Opportunity Act, the Service Members Civil Relief Act, the Real Estate Settlement Procedures Act and the Truth in Saving Act, among others, on July 21, 2011. We are subject to oversight by the CFPB.

The CFPB has broad rulemaking authority for a wide range of consumer financial laws that apply to all banks including, among other things, the authority to prohibit "unfair, deceptive, or abusive" acts and practices. Abusive acts or practices are defined as those that (1) materially interfere with a consumer's ability to understand a term or condition of a consumer financial product or service, or (2) take unreasonable advantage of a consumer's (a) lack of financial savvy, (b) inability to protect himself in the selection or use of consumer financial products or services, or (c) reasonable reliance on a covered entity to act in the consumer's interests. The CFPB has the authority to investigate possible violations of federal consumer financial law, hold hearings and commence civil litigation. The CFPB can issue cease-and-desist orders against banks and other entities that violate consumer financial laws. The CFPB may also institute a civil action against an entity in violation of federal consumer financial law in order to impose a civil penalty or an injunction. The CFPB has been active in bringing enforcement actions related to consumer financial protection laws and obtaining the forms of relief described above, and we expect the CFPB's oversight and enforcement to continue to increase over the next few years, as was the case in 2022 when the CFPB, among other initiatives, focused on deposit and other service charge fee practices of banks causing many banks, including Pinnacle Bank, to lower or in certain cases eliminate certain fees it charges customers who overdraw their accounts or have checks or other items presented when the customer's account does not have sufficient funds to cover those checks or other items.

The rules issued by the CFPB will have a long-term impact on our business, including our mortgage loan origination and servicing activities and our service charge practices. Compliance with these rules has increased, and will continue to increase, our overall regulatory compliance costs. On July 1, 2017, the CFPB took over conducting on-site consumer examinations from the FDIC for all regulations that transferred under their supervision.

Economic Growth, Regulatory Relief, and Consumer Protection Act. On May 24, 2018, President Trump signed into law the Economic Growth, Regulatory Relief, and Consumer Protection Act (the "Growth Act"). The Growth Act alters some of the provisions of the Dodd-Frank Act. Certain of these provisions, to which we became subject once our total assets exceeded \$10 billion, are set out below, along with the changes made to such provisions under the Growth Act.

Under the Dodd-Frank Act, publicly traded bank holding companies with \$10 billion or more in total assets like Pinnacle Financial were required to establish a risk committee responsible for oversight of enterprise-wide risk management practices. Pinnacle Financial established a risk committee on February 7, 2017. The Growth Act raised the minimum asset threshold triggering the requirement to establish a risk committee from \$10 billion to \$50 billion. As a result, Pinnacle Financial is no longer required to maintain its standalone risk committee though it has done so and expects it will continue to do so.

Pursuant to the Dodd-Frank Act, any banking organization, including whether a bank holding company or a depository institution, with more than \$10 billion in total consolidated assets and regulated by a federal financial regulatory agency was required to conduct annual company-run stress tests to ensure it had sufficient capital during periods of economic downturn. Pinnacle Financial's and Pinnacle Bank's first stress tests were due in July 2018. The Growth Act raised the asset threshold at which companies are required to conduct the stress tests from \$10 billion to \$250 billion. While we are no longer required to annually conduct stress tests under the Dodd-Frank Act, we have continued to perform, and expect to continue to perform, stress tests from time to time in connection with our capital planning process and to monitor our capital consistent with the safety and soundness expectations of the federal regulators.

While the Economic Growth Act provides some regulatory relief for mid-sized bank holding companies like us, most provisions of the Dodd-Frank Act and its implementing regulations remain in place and will continue to result in additional operating and compliance costs that could have a material adverse effect on our business, financial condition and results of operation.

Securities Registration and Listing

Pinnacle Financial's securities are registered under the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and listed on the Nasdaq Global Select Market. As such, Pinnacle Financial is subject to the information, proxy solicitation, insider trading, corporate governance, and other requirements and restrictions of the Exchange Act, as well as the Marketplace Rules and other requirements promulgated by the Nasdaq Stock Market, LLC.

As a public company, Pinnacle Financial is also subject to the accounting oversight and corporate governance requirements of the Sarbanes-Oxley Act of 2002, including, among other things, required executive certification of financial presentations, increased requirements for board audit committees and their members, and enhanced requirements relating to disclosure controls and procedures and internal control over financial reporting.

Insurance Agencies

Each of Miller Loughry Beach, HPB Insurance Group and AdvoCap Insurance Agency is subject to licensing requirements and extensive regulation under the laws of the various states in which it conducts its insurance agency business. These laws and regulations are primarily for the protection of policyholders. In all jurisdictions, the applicable laws and regulations are subject to amendment or interpretation by regulatory authorities. Generally, those authorities are vested with relatively broad discretion to grant, renew and revoke licenses and approvals and to implement regulations. Licenses may be denied or revoked for various reasons, including for regulatory violations or upon conviction for certain crimes. Possible sanctions that may be imposed for violation of regulations include the suspension of individual employees, limitations on engaging in a particular business for a specified period of time, revocation of licenses, censures and fines.

Effect of Governmental Monetary Policies

Our earnings are affected by domestic economic conditions and the monetary and fiscal policies of the United States government and its agencies. The Federal Reserve's monetary policies have had, and are likely to continue to have, an important impact on the operating results of commercial banks through the Federal Reserve's statutory power to implement national monetary policy in order, among other things, to curb inflation or combat a recession. The Federal Reserve, through its monetary and fiscal policies, affects the levels of bank loans, investments and deposits through its control over the issuance of United States government securities, its regulation of the discount rate applicable to member banks and its influence over reserve requirements to which member banks are subject. We cannot predict the nature or impact of future changes in monetary and fiscal policies.

Proposed Legislation and Regulatory Action

New regulations and statutes are regularly proposed that contain wide-ranging provisions for altering the structures, regulations and competitive relationships of the nation's financial institutions. We cannot predict whether or in what form any proposed regulation or statute will be adopted or the extent to which our business may be affected by any new regulation or statute or change in applicable rules or regulations. Even if modifications are enacted to existing or proposed regulations, including raising certain assets thresholds above those currently in place, we may continue to face enhanced scrutiny from our regulators who may expect us to continue to comply with the current, more stringent requirements as part of their safety and soundness and compliance examinations and general oversight of our operations.

Both Pinnacle Financial and Pinnacle Bank as well as many of their subsidiaries and entities in which they have made investments are subject to extensive state and federal banking and other laws and regulations that impose restrictions on and provide for general regulatory oversight of Pinnacle Financial's and Pinnacle Bank's and these subsidiaries' operations. These laws and regulations are generally intended to protect depositors and borrowers, not shareholders.

ITEM 1A. RISK FACTORS

Investing in our common stock involves various risks which are particular to our company, our industry and our market areas. If any of the following risks were to occur, we may not be able to conduct our business as currently planned and our results of operations and financial condition could be materially and negatively impacted. These matters could cause the trading price of our common stock to decline in future periods.

Summary Risk Factors

Our business is subject to a number of risks, including risks that may prevent us from achieving our business objectives or may adversely affect our business, financial condition, results of operations, cash flows, and prospects. These risks are discussed more fully below and include, but are not limited to, risks related to:

Interest Rate Risks

- Our net interest margin, and consequently our net earnings, are significantly affected by interest rate levels and movements in short-term interest rates as well as competitive pressures we face.
- The performance of our investment securities portfolio is subject to fluctuation due to changes in interest rates and market conditions, including credit deterioration of the issuers of individual securities.
- The elimination of, and transition away from, LIBOR as a reference rate for financial contracts may negatively affect our income and expense and the value of various financial contracts.

Credit and Lending Risks

- We have a concentration of credit exposure to borrowers in certain industries, and we also target small to medium-sized businesses that may be less able to weather challenging economic circumstances.
- Our ability to grow our loan portfolio may be limited by, among other things, economic conditions, competition within our market areas, and our ability to hire and retain experienced bankers.
- Changes in accounting standards may change the way we calculate our Allowance for Credit Losses.
- If our Allowance for Credit Losses is not sufficient to cover losses inherent in our loan or securities portfolios, our results of operations and financial condition will be negatively impacted.
- Our accounting estimates and risk management processes rely on analytical and forecasting models.
- Environmental liability associated with commercial lending could result in losses.
- We depend on the accuracy and completeness of information about customers.
- We may be subject to claims and litigation asserting lender liability.

Liquidity and Capital Risks

- Liquidity risk could impair our ability to fund our operations and jeopardize our financial condition.
- Excess levels of liquidity could negatively impact our earnings.
- Our ability to maintain required capital levels and adequate sources of funding and liquidity could be impacted by changes in the capital markets and deteriorating economic and market conditions.

Operational and Market Risks

- Negative developments in the U.S. and local economies in our primary markets may adversely impact our results in the future.
- Our operations are principally geographically concentrated in certain markets in the southeastern United States, and changes in local economic conditions could impact our profitability.
- Our business may suffer if there are significant declines in the value of real estate.
- BHG's results of operations have become a larger portion of our results of operations, and challenges in BHG's business that negatively affect its results would now more significantly impact our results.
- The fair values of our investments in private companies and venture capital funds are likely to fluctuate and the value that we ultimately realize on those investments may vary materially.
- A decline in our stock price or expected future cash flows, or a material adverse change in our results of operations or prospects, could result in impairment of our goodwill.
- Our selection of accounting policies and methods may affect our reported financial results.
- We currently invest in bank owned life insurance and may continue to do so in the future.
- An ineffective risk management framework could have a material adverse effect on our strategic planning and our ability to mitigate risks and/or losses and could have adverse regulatory consequences.
- We are dependent on our IT and telecommunications systems and third-party servicers, and systems failures, interruptions or breaches of security could have an adverse effect on our financial condition.
- Our business reputation and relationships are important and any damage to them could have a material adverse effect on our business.
- We face substantial competition and are subject to certain regulatory constraints not applicable to some of our competitors, which may decrease our growth or profits.
- Our operations, business and customers could be materially adversely affected by the impacts related to climate change.
- The implementation of other new lines of business or new products and services may subject us to additional risk.
- Inability to retain senior management and key employees or to attract new experienced financial services professionals could adversely affect our business.
- We are subject to regulatory oversight and certain litigation, and our expenses related to this oversight and litigation may adversely affect our results.
- Our business is dependent on technology, and an inability to invest in technological improvements may adversely affect our results of operations and financial condition.
- The soundness of other financial institutions, including those with whom we have engaged in transactions, could adversely affect us.
- We may be subject to claims and litigation pertaining to fiduciary responsibility.
- Natural disasters and the effects of a changing climate may adversely affect us and our customers.
- If we fail to maintain an effective system of internal control over financial reporting, we may not be able to accurately report our financial results.

Risks Related to Acquisition Activity

- Our acquisitions and future expansion may result in additional risks.
- We may face risks with respect to future acquisitions.

Regulatory and Compliance Risks

- National or state legislation or regulation may increase our expenses and reduce earnings.
- We are subject to various statutes and regulations that may impose additional costs or limit our ability to take certain actions.
- We must maintain adequate regulatory capital to support our business objectives.
- Pinnacle Financial is required to act as a source of financial and managerial strength for Pinnacle Bank in times of stress.
- Non-compliance with the USA PATRIOT Act, the Bank Secrecy Act or other laws and regulations could result in fines or sanctions against us or restrict our ability to make acquisitions.

Risks Relating to Our Securities

- The price of our capital stock may be volatile or may decline.
- Our ability to declare and pay dividends is limited.
- We may issue additional common stock or other equity securities in the future which could dilute the ownership interest of existing shareholders.
- The Series B Preferred Stock constitutes an equity security and ranks junior to all of our and our subsidiaries' existing indebtedness and will rank junior to our and our subsidiaries' future indebtedness.
- The Series B Preferred Stock and the depositary shares representing the Series B Preferred Stock effectively rank junior to any existing and all future liabilities of our subsidiaries.
- Dividends on the Series B Preferred Stock are non-cumulative and discretionary.
- The holders of the Series B Preferred Stock (and underlying depositary shares) have limited voting rights.
- Holders of Pinnacle Financial's junior subordinated debentures have rights that are senior to those of Pinnacle Financial's shareholders.
- Pinnacle Financial has issued subordinated indebtedness the holders of which have rights that are senior to those of Pinnacle Financial's shareholders.
- We and/or the holders of certain types of our securities could be adversely affected by unfavorable ratings from rating agencies.
- Our common stock and the depositary shares underlying our Series B Preferred Stock have less liquidity than many other stocks quoted on a national securities exchange.
- Our corporate organizational documents and the provisions of Tennessee law to which we are subject contain certain provisions that could have an anti-takeover effect.
- An investment in our common stock or depositary shares is not an insured deposit and is not guaranteed by the FDIC.

Risks Related to Our Business

Interest Rate Risks

Our net interest margin, and consequently our net earnings, are significantly affected by interest rate levels.

Our profitability is dependent to a large extent on net interest income, which is the difference between interest income earned on loans and investment securities and other interest-earning assets and interest expense paid on deposits, other borrowings, subordinated debentures and subordinated notes. The absolute level of interest rates as well as changes in interest rates or that affect the yield curve may affect our level of interest income, the largest component of our gross revenue, as well as the level of our interest expense. Interest rate fluctuations are caused by many factors which, for the most part, are not under our control. For example, national monetary policy plays a significant role in the determination of interest rates as is currently the case. Additionally, competition, including competitor pricing, and the resulting negotiations that occur with our customers also impact the rates we collect on loans and the rates we pay on deposits as does our liquidity position and then-current loan demand and our orientation toward loan growth. In addition, changes in the method of determining or the elimination of the London Interbank Offered Rate (LIBOR) or other reference rates, or uncertainty related to such potential changes, may adversely affect the value of reference rate-linked debt securities that we hold or issue, which could further impact our interest rate spread.

Changes in the level of interest rates also may negatively affect our ability to originate loans, the value of our assets (as is currently the case with our investment securities portfolio) and our ability to realize gains from the sale of our assets, all of which could ultimately affect our results of operations and financial condition. A decline in the market value of our assets may limit our ability to borrow additional funds or otherwise create issues for us should our liquidity levels decline. As a result, we could be required to sell some of our loans and investments under adverse market conditions, upon terms that are not favorable to us, in order to maintain our liquidity. If those sales are made at prices lower than the amortized costs of the investments, which is the case with a portion of our investment securities portfolio at this time, we will incur losses.

Following changes in the general level of interest rates, our ability to maintain a positive net interest spread is dependent on our ability to increase (in a rising rate environment) or maintain or minimize the decline in (in a falling rate environment) our loan offering rates, minimize increases on our deposit rates in a rising rate environment or promptly reduce the rates we pay on deposits in a falling rate environment, and maintain an acceptable level and mix of funding. Although at times we have implemented strategies we believe will reduce the potential effects of changes in interest rates on our net interest income, these strategies may not always be successful, and, in the case of certain hedging strategies (including the hedging strategy we entered into in the fourth quarter of 2022), could materially and adversely impact our results of operations if short term interest rates move in a direction that is different than the direction we anticipated at the time we initiated the strategy. Accordingly, changes in levels of market interest rates could materially and adversely affect our net income, net interest income and our net interest margin, asset quality, loan origination volume, liquidity, and overall profitability. We cannot assure you that we can minimize our interest rate risk.

As interest rates change, we expect that we will periodically experience “gaps” in the interest rate sensitivities of our assets and liabilities, meaning that either our interest-bearing liabilities (usually deposits and borrowings) will be more sensitive to changes in market interest rates than our interest-earning assets (usually loans and investment securities), or vice versa. In either event, if market interest rates should move contrary to our position, this “gap” may work against us, and our results of operations and financial condition may be negatively affected. Short-term interest rates rose significantly in 2022 and are expected to continue to rise during at least the first half of 2023. In a rising rate environment our ability to increase the rates we charge on loans faster than the rates we pay on deposits will be critical to maintaining or expanding our net interest margin. During the rising rate environment in 2022 (most notably in the fourth quarter of 2022), the rates we paid on our deposits increased at a faster rate than the rates we earned on loans, which had an increasingly negative impact on our net interest margin over the year. This negative impact was particularly acute in the fourth quarter of 2022. In addition, many of our variable rate loans have loan floors that limited our ability to capture the full benefit of initial increases in short-term rates, though all of these floors have been exceeded at this point.

There exists at this time much uncertainty in the interest rate futures markets due to the currently high level of inflation present in the economy, the pace of the rate tightening cycle being led by the Federal Reserve Open Market Committee and what risks these present for a recession to occur in the near-term. While short-term interest rates are expected to continue to rise at least through the first half of 2023, we believe that these rates may begin to fall during the second half of 2023. Were that to happen, our ability to lower the rates we pay on deposits will be critical to our ability to maintain or slow any potential decline in our net interest margin, as we anticipate that loan pricing in a falling rate environment would be competitive and existing loans that we have made may be refinanced at lower interest rates, particularly in the case of fixed rate loans with no prepayment penalties.

We attempt to manage our risk from changes in market interest rates by adjusting the rates, maturity, repricing characteristics, and balances of the different types of our interest-earning assets and interest-bearing liabilities and by utilizing hedging strategies to reduce the impact of changes in rates. Interest rate risk management techniques are not exact. From time to time we have repositioned a portion of our investment securities portfolio in an effort to better position our balance sheet for potential changes in short-term rates. We employ the use of models and modeling techniques to quantify the levels of risks to net interest income, which inherently involve the use of assumptions, judgments, and estimates. While we strive to ensure the accuracy of our modeled interest rate risk profile, there are inherent limitations and imprecision in this determination and actual results may differ.

At times, we have entered into certain hedging transactions including interest rate swaps and interest rate floors, which are designed to lessen elements of our interest rate exposure. In addition, from time to time we have utilized fixed-to-floating rate cash flow hedges to manage interest rate exposure for our wholesale borrowings portfolio. This hedging strategy converted the LIBOR-based variable interest rate on forecasted borrowings to a fixed interest rate and was used in an effort to protect us from floating interest rate variability in a rising rate environment. During the year ended December 31, 2022, we purchased interest rate caps and floors totaling approximately \$1.8 billion that we intended to mitigate the impact of interest rate changes on certain LIBOR and SOFR-based variable rate loans. In the event that interest rates do not change in the manner that we anticipate at the times we institute our hedging strategies or at the pace that we anticipated (including the hedging strategies we entered into during the year ended December 31, 2022), such transactions may materially and adversely affect our results of operations.

Hedging creates certain risks for us, including the risk that the other party to the hedge transaction will fail to perform (counterparty risk, which is a type of credit risk), and the risk that the hedge will not fully protect us from loss as intended (hedge failure risk). Unexpected counterparty failure or hedge failure could have a significant adverse effect on our liquidity and earnings.

The performance of our investment securities portfolio is subject to fluctuation due to changes in interest rates and market conditions, including credit deterioration of the issuers of individual securities.

Changes in interest rates can negatively affect the performance of most of our investment securities. Interest rate volatility can reduce unrealized gains or increase unrealized losses in our portfolio, as was the case in 2022 with the rising rate environment. Interest rates are highly sensitive to many factors including monetary policies, domestic and international economic, social and political conditions and issues, including trade disputes and global health pandemics, and other factors beyond our control. Fluctuations in interest rates can materially affect both the returns on and market value of our investment securities. Additionally, actual investment income and cash flows from investment securities that carry prepayment risk, such as mortgage-backed securities and callable securities, may

materially differ from those anticipated at the time of investment or subsequently as a result of changes in interest rates and market conditions.

Our investment securities portfolio consists of certain securities whose trading markets are “not active.” As a result, we utilize alternative methodologies for pricing these securities that include various estimates and assumptions. There can be no assurance that we can sell these investment securities at the price derived by these methodologies, or that we can sell these investment securities at all, which could have an adverse effect on our financial condition, results of operations and liquidity.

We monitor the financial position of the various issuers of investment securities in our portfolio, including each of the state and local governments and other political subdivisions where we have exposure. To the extent we have securities in our portfolio from issuers who have experienced a deterioration of financial condition, or who may experience future deterioration of financial condition, the value of such securities may decline and could result in a write down through income, which could have an adverse effect on our financial condition, results of operations and liquidity.

In addition, from time to time we may restructure portions of our investment securities portfolio as part of our asset liability management strategies or in response to liquidity needs, and we may incur losses, which may be material, in connection with any such restructuring. We currently have a significant amount of unrealized losses in our securities portfolio. These losses are largely the result of the rising interest rate environment we experienced in 2022 and are continuing to experience in 2023. If we were to sell any of these securities before their value recovers, including as a result of asset liability management strategies or in response to liquidity needs, we would be required to recognize these losses and the recognition of those losses could materially and adversely affect our results of operations, capital and financial condition.

The elimination of, and transition away from, LIBOR as a reference rate for financial contracts may negatively affect our income and expense and the value of various financial contracts.

On July 27, 2017, the Financial Conduct Authority, which regulates LIBOR, announced that it intended to stop persuading or compelling banks to submit rates for the calculation of LIBOR to the LIBOR administrator after 2021. Beginning on January 1, 2022, one-week and 2-month LIBOR are no longer being published, though overnight, 1-month, 3-month, 6-month and 12-month LIBOR are expected to be published until June 30, 2023.

Given consumer protection, litigation, and reputation risks, the bank regulatory agencies have indicated that entering into new contracts that use LIBOR as a reference rate after December 31, 2021, would create safety and soundness risks and that they will examine bank practices accordingly. Therefore, the agencies encouraged banks to cease entering into new contracts that use LIBOR as a reference rate as soon as practicable and in any event by December 31, 2021. In light of this regulatory guidance, we implemented a transition plan to identify and modify our loans and other financial instruments, including certain indebtedness, with attributes that are either directly or indirectly influenced by LIBOR. We have begun negotiating loans using our preferred replacement index, the Secured Overnight Financing Rate (“SOFR”). For Pinnacle Financial’s currently outstanding LIBOR-based loans, the timing and manner in which each customer’s contract transitions to SOFR will vary on a case-by-case basis. Pinnacle Financial expects to complete all loan transitions by June 30, 2023, or, if later, the loan’s next repricing date.

At December 31, 2022, approximately 15% of our total loan portfolio was indexed to 1-month, 3-month, 6-month and one-year LIBOR. Many of our loan agreements that are indexed to LIBOR include provisions that do not require us to default to any alternative index recommendations but instead allow us, in our sole discretion, to designate an alternative interest rate index in the event that LIBOR should become unavailable or unstable. While we believe these provisions within our loan agreements address the potential future unavailability of LIBOR, there can be no assurance that such provisions will be effective or that they, or our actions in this respect, will not be challenged by our borrowers.

The Adjustable Interest Rate (LIBOR) Act, enacted in March 2022, provides a statutory framework to replace U.S. dollar LIBOR with a benchmark rate based on SOFR for contracts governed by U.S. law that have no or ineffective fallbacks, and in December 2022, the Federal Reserve adopted related implementing regulations. Although governmental authorities have endeavored to facilitate an orderly discontinuation of LIBOR, no assurance can be provided that this aim will be achieved or that the use, level, and volatility of LIBOR or other interest rates or the value of LIBOR-based securities will not be adversely affected. As a result, and despite the enactment of the LIBOR Act, for the most commonly used LIBOR settings, the use or selection of a successor rate could expose us to risks associated with disputes and litigation with our customers and counterparties and other market participants in connection with implementing LIBOR fallback provisions.

In addition to loans, certain of our investment securities, funding sources and derivative contracts are also priced to LIBOR, like the subordinated notes we have issued and our trust preferred securities. At this time, it appears that SOFR is emerging as the replacement rate for instruments of these types when LIBOR is discontinued. The governing documents for the subordinated notes we have issued have fallback language in them that call for the transition to SOFR for purposes of determining the interest rate we will pay with respect to these notes when LIBOR is discontinued, but the governing documents for our trust preferred securities do not include any

language addressing what replacement rate will be utilized when LIBOR is no longer quoted. Under the LIBOR Act and related Federal Reserve regulation, if applicable, the interest rates on these trust preferred securities will transition from three-month LIBOR to three-month term SOFR plus a tenor spread adjustment outlined in the Federal Reserve's regulations plus the applicable spread that currently applies to these securities. The alternative rate may not be indicative of the rate we would have paid had LIBOR not been discontinued. If the LIBOR transition Act and the related Federal Reserve regulations do not apply to our trust preferred securities a replacement rate will need to be established and, the uncertainty around the calculation methodology by which interest is calculated could adversely affect the value of and return on these securities.

Credit and Lending Risks

We have a concentration of credit exposure to borrowers in certain industries, and we also target small to medium-sized businesses.

We have meaningful credit exposures to borrowers in certain businesses, including commercial and residential building lessors, new home builders and music publishers. Certain industries, particularly hotel and motel operators, experienced adversity as a result of the COVID-19 pandemic, and, as a result, an increased level of borrowers in these industries were unable to perform under the original terms of their loan agreements with us during the pandemic, which negatively impacted our results of operations in 2020 and 2021. Economic conditions remained volatile throughout 2022, and the economic environment in our markets further weakens, including as a result of persistent high inflation, supply chain disruptions and labor shortages, our exposure to these industries or other concentrations could result in increased deterioration in credit quality, past dues, loan charge offs and collateral value declines, which could cause our results of operations and financial condition to be negatively impacted. Furthermore, any of our large credit exposures that deteriorate unexpectedly could cause us to have to make significant additional credit loss provisions, negatively impacting our results of operations and financial condition.

A substantial focus of our marketing and business strategy is to serve small to medium-sized businesses in our market areas. As a result, a relatively high percentage of our loan portfolio consists of commercial loans primarily to small to medium-sized businesses. At December 31, 2022, our commercial and industrial loans accounted for approximately 35.3% of our total loans. Additionally, approximately 35.4% of our commercial real-estate loans at December 31, 2022 are owner-occupied commercial real estate loans, which are loans to businesses secured by the businesses' real estate. We expect to seek to expand the amount of these two types of loans in our portfolio during 2023. Small to medium-sized businesses frequently have smaller market shares than their competition, may be more vulnerable to economic downturns, or other operational challenges like those resulting from supply chain disruption, labor shortages or inflationary pressures on their costs, often need substantial additional capital to expand or compete and may experience substantial volatility in operating results, any of which may impair a borrower's ability to repay a loan. In addition, the success of a small or medium-sized business often depends on the management skills, talents and efforts of one or two people or a small group of people, and the death, disability or resignation of one or more of these people could have an adverse impact on the business and its ability to repay its obligations to us. If general economic conditions negatively impact the markets in which we operate and small to medium-sized businesses are adversely affected or our borrowers are otherwise harmed by adverse business developments, the ability of such businesses to repay their loans may deteriorate, and in some cases this deterioration may occur quickly, which would adversely impact our results of operations and financial condition.

Real estate construction and development loans are also an important part of our business. This type of lending is generally considered to have relatively high credit risks because the principal is concentrated in a limited number of loans with repayment dependent on the successful completion and operation of the related real estate project. Real estate industry pricing dynamics in the geographical markets in which we operate can vary from year to year, and with respect to construction, can vary between project funding and project completion. Asset values to which we underwrite loans can fluctuate from year to year and impact collateral values and the ability of our borrowers to repay their loans. Like regulatory guidelines on commercial real estate loans, federal regulators have issued guidance that imposes additional restrictions on banks with construction and development loans in excess of 100% of total risk-based capital. If our level of these loans was to exceed these guidelines, our ability to make additional loans in this segment would be limited.

Weakness in residential real estate market prices as well as demand could result in price reductions in home and land values adversely affecting the value of collateral securing some of the construction and development loans that we hold. Reduced demand for new residential mortgage loans, whether the result of higher mortgage interest rates, inflationary pressures on building costs or other factors, could also cause reduced demand for mortgage loans, which would reduce our net interest income and noninterest income levels. If economic and real estate market conditions deteriorate in our markets, we may experience increases in non-performing loans and other real estate owned, increased losses and expenses from the management and disposition of non-performing assets, increases in provision for credit losses, and increases in operating expenses as a result of the allocation of management time and resources to the collection and work out of loans, all of which would negatively impact our financial condition and results of operations.

We make loans to portfolio companies of private equity firms and other loans that qualify as highly leveraged transactions. In certain instances, including during challenging economic environments, these loans may deteriorate and that deterioration may occur quickly. If the private equity sponsor is unwilling or unable to provide necessary support we may suffer losses on these loans that could materially and adversely affect our results of operations.

Our ability to grow our loan portfolio may be limited by, among other things, economic conditions, competition within our market areas, the timing of loan repayments, our ability to grow our core deposits, our ability to hire experienced bankers and seasonality.

Our ability to improve our results of operations is dependent upon, among other things, growing our loan portfolio and increasing net interest income. While we believe that our strategy to grow our loan portfolio is sound and our growth targets are achievable over an extended period of time, competition within our market areas is significant and as a result of that competition, as well as a worsening in general economic conditions, we may experience periods when our loan growth is muted or we could experience declines in our loan portfolio. We compete with both large regional and national financial institutions, who are sometimes able to offer more attractive interest rates and other financial terms than we choose to offer, and smaller community-based financial institutions who seek to offer a similar level of service to that which we offer. This competition can make loan growth challenging, particularly if we are unwilling to price loans at levels that would cause unacceptable levels of compression of our net interest margin or if we are unwilling to structure a loan in a manner that we believe results in a level of risk to us that we are not willing to accept.

Our ability to grow our loan portfolio is also dependent on our ability to fund loan growth. We primarily seek to fund our loan growth through stable, core deposits, but at times our ability to attract core deposits in amounts sufficient to fund our loan growth has been limited by competitive pressures in our markets, general economic conditions, and our business model that focuses principally on serving small to medium-sized businesses and their owners rather than a broad retail distribution strategy. As a result, at times our funding sources have consisted of greater amounts of non-core funding. Increased reliance on these non-core funding sources can negatively impact our net interest margin and our net interest income if the rates we pay on these non-core funding sources exceed the rates we would pay on core funding sources.

Larger banks, with a more developed retail footprint, and non-banks, who are able to operate with greater flexibility and lower cost structures due to less regulatory oversight, are better able to attract lower-cost retail deposits than we can, which at times causes us to utilize a larger percentage of noncore funding to fund our loan growth. Though we grew our core deposits meaningfully during the COVID-19 pandemic, as consumer spending subsequently increased and has remained elevated and as the level of M2 in the economy begins to shrink and competition from others for our customers to place their money (including U.S. treasuries) increases, our levels of core funding may decline. If we are unable to retain or attract core deposits at sufficient levels to fund our loan growth and our percentage of noncore funding rises to levels that approach our policy limits, we may need to modify our growth plans, liquidate certain assets, participate loans to correspondents or execute other actions to allow for us to return to an acceptable level of noncore funding within a reasonable amount of time, any one of which actions could adversely affect our results of operations, particularly during periods of time when our net interest margin is experiencing compression. Moreover, loan growth throughout the year can fluctuate due in part to seasonality of the businesses of our borrowers and potential borrowers and the timing on loan repayments, particularly those of our borrowers with significant relationships with us, resulting from, among other things, excess levels of liquidity.

Much of our organic loan growth that we have experienced in recent years (and a key part of our loan growth strategy in 2023 and beyond) was the result not of strong loan demand but rather of our ability to attract experienced financial services professionals who have been able to attract customers from other financial institutions. Inability to retain these key personnel (including key personnel of the businesses we have acquired) or to continue to attract experienced lenders with established books of business (including, in either case, as a result of competitive compensation and other hiring and retention pressures), at all or at the pace we have anticipated, could negatively impact our growth because of the loss of these individuals' skills and customer relationships and/or the potential difficulty of promptly replacing them. Moreover, if these advisors we hire are unable to cause their customers to move their relationships to us in the time periods that we are targeting (including as a result of the current elevated interest rate environment we are experiencing) or at all, or if we are unable to retain such business, our loan growth may be negatively affected, which could have a material adverse effect on our results of operations and financial condition.

In our efforts to continue to grow our loan portfolio, we have expanded the types of loans that we offer to certain specialty areas, like equipment financing and the financing of solar power generating projects, and these areas remain an important focus of our loan growth plans for 2023. Our ability to grow loans in these areas will be dependent on our ability to attract bankers with experience in these areas and those bankers' ability to win new deals and projects in these spaces. It will also be important for us to adequately underwrite lending opportunities in these new specialty areas and price these transactions at levels that appropriately compensate us for the risks that we assume in these transactions.

Changes in accounting standards may change the way we calculate our Allowance for Credit Losses.

The Financial Accounting Standards Board and the SEC may change the financial accounting and reporting standards, or the interpretation of those standards, that govern the preparation of our external financial statements from time to time. The impact of

these changes or the application thereof on our financial condition and operations can be difficult to predict. For example, the FASB adopted a new accounting standard that became effective for Pinnacle Bank beginning January 1, 2020. This standard, referred to as current expected credit loss, or CECL, requires financial institutions to determine periodic estimates of lifetime expected credit losses on financial assets, including loans, and recognize the expected credit losses through provision for credit losses. CECL changed the current method of provisioning for loan losses, which required us to increase our allowance for credit losses in the first half of 2020, and is increasing the types and amounts of data we need to collect and review to determine the appropriate level of our allowance for credit losses. In addition, the adoption of CECL may result in more volatility in the level of our allowance for credit losses. An increase, to the extent material, in our allowance for credit losses or expenses incurred to determine the appropriate level of the allowance for credit losses could have a material adverse effect on our capital levels, financial condition and results of operations. A reduction in our capital levels could subject us to a variety of enforcement remedies available to the federal regulatory authorities and would negatively impact our ability to pursue acquisitions or other expansion opportunities if we are unable to satisfactorily raise additional capital.

If our Allowance for Credit Losses is not sufficient to cover losses inherent in our loan or securities portfolios, our results of operations and financial condition will be negatively impacted.

We maintain allowances for credit losses on loans, securities and off-balance sheet credit exposures. If loan customers with significant loan balances individually or in the aggregate fail to repay their loans, our results of operations, financial condition and capital levels will suffer. We make various assumptions and judgments about the expected losses in our loan portfolio, including the creditworthiness of our borrowers and the value of any collateral securing the loans. Utilizing objective and subjective factors, we maintain an allowance for credit losses, established through a provision for credit losses charged to expense, to cover our estimate of the current expected credit losses in our loan and securities portfolios. In determining the size of this allowance, we utilize estimates based on analyses of volume and types of loans, internal loan classifications, trends in classifications, volume and trends in delinquencies, nonaccruals and charge-offs, loss experience of various loan categories, national and local economic conditions, including unemployment statistics, industry and peer bank loan quality indications, and other pertinent factors and information. Actual losses are difficult to forecast, especially if those losses stem from factors beyond our historical experience or are otherwise inconsistent with our credit quality assessments. If our assumptions are inaccurate, our current allowance may not be sufficient to cover potential credit losses, and additional provisions may be necessary which would negatively impact our results of operations and financial condition.

In addition, federal and state regulators periodically review our loan portfolio and may require us to increase our allowance for credit losses or recognize loan charge-offs. Their conclusions about the quality of a particular borrower or our entire loan portfolio may be different than ours. Any increase in our allowance for credit losses or loan charge offs as required by these regulatory agencies could have a negative effect on our results of operations and financial condition. Moreover, additions to the allowance may be necessary based on changes in economic and real estate market conditions and forecasted conditions, new information regarding existing loans, identification of additional problem loans, accounting rule changes (like those that contributed to increases levels of provision expense in 2020 as a result of our adopting CECL) and other factors, both within and outside of our management's control. These additions may require increased provision expense which would negatively impact our results of operations and financial condition.

Our accounting estimates and risk management processes rely on analytical and forecasting models and tools.

The processes we use to estimate expected credit losses, calculate our allowance for credit losses and measure the fair value of financial instruments, as well as the processes used to estimate the effects of changing interest rates and other measures of our financial condition and results of operations, depend upon the use of analytical and forecasting models and tools. These models and tools reflect assumptions that may not be accurate, particularly in times of market stress or other unforeseen circumstances. Even if these assumptions are accurate, the models and tools may prove to be inadequate or inaccurate because of other flaws in their design or their implementation. Any such failure in our analytical or forecasting models and tools could have a material adverse effect on our business, financial condition and results of operations.

Environmental liability associated with commercial lending could result in losses.

In the course of business, Pinnacle Bank may acquire, through foreclosure, or deed in lieu of foreclosure, properties securing loans it has originated or purchased which are in default. Particularly in commercial real estate lending, there is a risk that hazardous substances could be discovered on these properties. In this event, Pinnacle Financial, or Pinnacle Bank, might be required to remove these substances from the affected properties at our sole cost and expense. The cost of this removal could substantially exceed the value of affected properties. We may not have adequate remedies against the prior owner or other responsible parties and could find it difficult or impossible to sell the affected properties. These events could have a material adverse effect on our business, results of operations and financial condition.

We have acquired a number of retail banking facilities and other real properties, any of which may contain hazardous or toxic substances. If hazardous or toxic substances are found, we may be liable for remediation costs, as well as for personal injury and property damage. Environmental laws may require us to incur substantial expenses and may materially reduce the affected property's

value or limit our ability to use or sell the affected property. In addition, future laws or more stringent interpretations or enforcement policies with respect to existing laws may increase our exposure to environmental liability.

We depend on the accuracy and completeness of information about customers.

In deciding whether to extend credit or enter into certain transactions, we rely on information furnished by or on behalf of customers, including financial statements, credit reports, tax returns and other financial information. We may also rely on representations of those customers or other third parties, such as independent auditors, as to the accuracy and completeness of that information. Reliance on inaccurate or misleading personal information, financial statements, credit reports, tax returns or other financial information, including information falsely provided as a result of identity theft, could have an adverse effect on our business, financial condition and results of operations.

We may be subject to claims and litigation asserting lender liability.

From time to time, and particularly during periods of economic stress, customers, including real estate developers and consumer borrowers, may make claims or otherwise take legal action pertaining to performance of our responsibilities. These claims are often referred to as “lender liability” claims and are sometimes brought in an effort to produce or increase leverage against us in workout negotiations or debt collection proceedings. Lender liability claims frequently assert one or more of the following allegations: breach of fiduciary duties, fraud, economic duress, breach of contract, breach of the implied covenant of good faith and fair dealing, and similar claims. Whether customer claims and legal action related to the performance of our responsibilities are founded or unfounded, if such claims and legal actions are not resolved in a favorable manner, they may result in significant financial liability and/or adversely affect our market reputation, products and services, as well as potentially affecting customer demand for those products and services. Any financial liability or reputation damage could have a material adverse effect on our business, which, in turn, could have a material adverse effect on our financial condition, results of operations and liquidity.

Liquidity and Capital Risks

Liquidity risk could impair our ability to fund our operations and jeopardize our financial condition.

Liquidity represents an institution’s ability to provide funds to satisfy demands from depositors, borrowers and other creditors by either converting assets into cash or accessing new or existing sources of incremental funds. Liquidity risk arises from the possibility that we may be unable to satisfy current or future funding requirements and needs.

The objective of managing liquidity risk is to ensure that our cash flow requirements resulting from depositor, borrower and other creditor demands as well as our operating cash needs, are met, and that our cost of funding such requirements and needs is reasonable. We maintain an asset/liability and interest rate risk policy and a liquidity and funds management policy, including a contingency funding plan that, among other things, include procedures for managing and monitoring liquidity risk. Generally we rely on deposits, repayments of loans and cash flows from our investment securities as our primary sources of funds. Our principal deposit sources include consumer, commercial and public funds customers in our markets. We have used these funds, together with wholesale deposit sources such as brokered deposits, along with Federal Home Loan Bank of Cincinnati (“FHLB Cincinnati”) advances, federal funds purchased and other sources of short-term and long-term borrowings, including subordinated indebtedness, to make loans, acquire investment securities and other assets and to fund continuing operations.

An inability to maintain or raise funds in amounts necessary to meet our liquidity needs could have a substantial negative effect, individually or collectively, on Pinnacle Financial’s and Pinnacle Bank’s liquidity. Our access to funding sources in amounts adequate to finance our activities, including our loan growth, or on terms attractive to us, could be impaired by factors that affect us specifically or the financial services industry in general. For example, factors that could detrimentally impact our access to liquidity sources include a decrease in the level of our business activity due to a market downturn or adverse regulatory action against us, increased levels of indebtedness, a reduction in our published credit ratings, any damage to our reputation or any other decrease in depositor or investor confidence in our creditworthiness and business. Our access to liquidity could also be impaired by factors that are not specific to us, such as a decrease in the money supply as a result of actions by the Federal Reserve, severe volatility or disruption of the financial markets or negative views and expectations about the prospects for the financial services industry as a whole. Any such event or failure to manage our liquidity effectively could affect our competitive position, increase our borrowing costs and the interest rates we pay on deposits, limit our access to the capital markets, require us to sell investment securities when they are in a loss position, cause our regulators to criticize our operations and have a material adverse effect on our results of operations or financial condition.

Deposit levels may be affected by a number of factors, including demands by customers, rates paid by competitors (particularly as it relates to brokered deposits and other noncore deposits), general interest rate levels, returns available to customers on alternative investments, government programs, general economic and market conditions and other factors. Loan repayments are a relatively stable source of funds but are subject to the borrowers’ ability to repay loans, which can be adversely affected by a number of factors including changes in general economic conditions, adverse trends or events affecting business industry groups or specific businesses, declines in real estate values or markets, business closings or lay-offs, inclement weather, natural disasters, prolonged government

shutdowns and other factors. Furthermore, loans generally are not readily convertible to cash. Accordingly, we may be required from time to time to rely on secondary sources of liquidity to meet growth in loans, deposit withdrawal demands or otherwise fund operations. Such secondary sources include FHLB Cincinnati advances, brokered deposits, secured and unsecured federal funds lines of credit from correspondent banks, Federal Reserve borrowings and/or accessing the equity or debt capital markets. An increase in our reliance on noncore funding (particularly brokered time deposits) would increase our liquidity risk.

These noncore funding sources can be more rate sensitive than core deposits, and the availability of these noncore funding sources is subject to broad economic conditions, in some instances regulation, and to investor assessment of our financial strength and, as such, the cost of funds may fluctuate significantly and/or the availability of such funds may be restricted, thus impacting our net interest income, our immediate liquidity and/or our access to additional liquidity. We have somewhat similar risks to the extent high balance core deposits exceed the amount of deposit insurance coverage available.

In the event that our funding strategies call for the use of brokered deposits, there can be no assurance that such sources will be available, or will remain available, or that the cost of such funding sources will be reasonable, or that we will be able to offer competitive rates to retain these deposits upon their maturity (particularly in a down rate or low rate environment). Additionally, should we no longer be considered well-capitalized, our ability to access new brokered deposits or retain existing brokered deposits could be affected by market conditions, regulatory requirements or a combination thereof, which could result in most, if not all, brokered deposit sources being unavailable. The inability to utilize brokered deposits as a source of funding could have an adverse effect on our results of operations, financial condition and liquidity.

We anticipate we will continue to rely primarily on deposits, loan repayments, and cash flows from our investment securities to provide liquidity. Additionally, where necessary, the secondary sources of borrowed funds and brokered deposits described above will be used to augment our primary funding sources. If we are unable to access any of these secondary funding sources when needed, or retain these funding sources upon maturity, we might be unable to meet our customers' or creditors' needs, which would adversely affect our financial condition, results of operations, and liquidity.

Our ability to maintain required capital levels and adequate sources of funding and liquidity could be impacted by changes in the capital markets and deteriorating economic and market conditions.

Federal and state bank regulators require Pinnacle Financial and Pinnacle Bank to maintain adequate levels of capital to support operations. At December 31, 2022, Pinnacle Financial's and Pinnacle Bank's regulatory capital ratios were at "well-capitalized" levels under regulatory guidelines. Growth in assets (either organically or as a result of acquisitions) at rates in excess of the rate at which our capital is increased through retained earnings, or significant losses, including as a result of selling investment securities that are in a loss position at the time of sale, will reduce our capital ratios unless we continue to increase capital. Failure by us to meet applicable capital guidelines or to satisfy certain other regulatory requirements could subject us to a variety of enforcement remedies available to the federal regulatory authorities and would negatively impact our ability to pursue acquisitions or other expansion opportunities.

We may need to raise additional capital (including through the issuance of common or preferred stock or additional Tier 2 capital instruments) in the future to provide us with sufficient capital resources (or replace expiring capital instruments) and liquidity to meet our commitments and business needs or in connection with our growth or as a result of deterioration in our asset quality. Our ability to maintain capital levels, sources of funding and liquidity could be impacted by negative perceptions of our business or prospects, changes in the capital markets and deteriorating economic and market conditions. Pinnacle Bank is required to obtain regulatory approval in order to pay dividends to Pinnacle Financial unless the amount of such dividends does not exceed its net income for that calendar year plus retained net income for the preceding two years. Any restriction on the ability of Pinnacle Bank to pay dividends to Pinnacle Financial could impact Pinnacle Financial's ability to continue to pay dividends on its capital stock or its ability to pay interest on its indebtedness.

Unexpected changes in requirements for capital resulting from regulatory actions could require us to raise capital at a time, and at a price, that might be unfavorable, or could require that we forego continuing growth or reduce our current loan portfolio. We cannot assure you that access to capital will be available to us in needed amounts or on acceptable terms or at all. Any occurrence that may limit our access to the capital markets may materially and adversely affect our capital costs and our ability to raise capital and/or debt and, in turn, our liquidity. If we cannot raise additional capital when needed, our ability to expand through internal growth or acquisitions or to continue operations could be impaired. Factors that could adversely affect our ability to raise additional capital or necessary funding include conditions in the capital markets, our financial performance, our credit ratings, regulatory actions and general economic conditions. Increases in our cost of capital, including dilution and increased interest or dividend requirements, could have a direct adverse impact on our operating performance and our ability to achieve our growth objectives.

Operational and Market Risks

Negative developments in the U.S. and local economies in our primary markets may adversely impact our results in the future.

Our financial performance is highly dependent on the business environment in the markets where we operate and in the U.S. as a

whole. Unfavorable or uncertain economic and market conditions can be caused by declines in economic growth, business activity, investor or business confidence, consumer sentiment, limitations on the availability or increases in the cost of credit and capital, increases in inflation or interest rates, natural disasters, international trade disputes and retaliatory tariffs, supply chain disruptions, labor shortages, terrorist attacks, global pandemics, acts of war, or a combination of these or other factors. Economic conditions in certain industries in the markets in which we operate deteriorated rapidly in 2020 as a result of the COVID-19 pandemic. These challenges manifested themselves primarily within the hotel, restaurant, retail, commercial real estate and entertainment industries and contributed to increased levels of provisions for credit losses. In addition, inflation rose sharply at the end of 2021 and continued at heightened levels throughout 2022, and is currently expected to remain elevated in 2023. A worsening of business and economic conditions, or persistent inflationary pressures, and actions taken by the Federal Reserve in response thereto, or supply chain disruptions or labor shortages, generally or specifically in the principal markets in which we conduct business could have adverse effects, including the following:

- a decrease in deposit balances or the demand for loans and other products and services we offer;
- an increase in the number of borrowers who become delinquent, file for protection under bankruptcy laws or default on their loans or other obligations to us, which could lead to higher levels of nonperforming assets, net charge-offs and provisions for credit losses;
- a decrease in the value of loans and other assets secured by real estate;
- a decrease in net interest income from our lending and deposit gathering activities; and
- an increase in competition resulting from financial services companies.

Although economic conditions have improved in most of our markets when compared to the first and second quarters of 2020 and we have returned our focus to growing earning assets, we and our customers began to experience an uncertain and volatile economic environment during 2022, and believe that it is possible we and our customers will continue to experience it in 2023, including as a result of issues of national security, health crises around the world, inflation, labor shortages and supply chain disruptions. There can be no assurance that these conditions will improve in the near term or that conditions will not worsen. Such conditions could adversely affect our business, financial condition, and results of operations.

In addition, over the last several years, the federal government has shut down periodically, in some cases for prolonged periods. It is possible that the federal government may shut down again in the future, particularly in light of the evenly divided United States Congress. If a prolonged government shutdown occurs, it could significantly impact business and economic conditions generally or specifically in our principal markets, which could have a material adverse effect on our results of operations and financial condition.

Our operations are principally geographically concentrated in certain markets in the southeastern United States, and changes in local economic conditions could impact our profitability.

A significant percentage of our borrowers are situated in various MSAs in Tennessee, North Carolina, South Carolina and Virginia in which we operate. In December 2019, we expanded our operations into Georgia, in 2021 into Alabama and the Washington, D.C. area, and recently we have expanded into Kentucky. Our success significantly depends upon the growth in population, income levels, deposits, employment levels and housing starts in our markets, along with the continued attraction of business ventures to these areas, and our profitability is impacted by the changes in general economic conditions in these markets and other markets in which collateral securing our loans is located. We cannot assure you that economic conditions, including loan demand, in these markets will not remain challenged during 2023 or thereafter, and as a result, we may not be able to grow our loan portfolio in line with our expectations and the ability of our customers to repay their loans to us may be negatively impacted and our financial condition and results of operations could be negatively and materially impacted.

Our business may suffer if there are significant declines in the value of real estate.

The market value of real estate can fluctuate significantly in a short period of time, including as a result of market conditions in the geographic area in which the real estate is located. If the value of the real estate serving as collateral for our loan portfolio were to decline materially, a significant part of our loan portfolio could become under-collateralized. If the loans that are collateralized by real estate become troubled during a time when market conditions are declining or have declined, we may not be able to realize the value of the security anticipated when we originated the loan, which in turn could have an adverse effect on our allowance and provision for credit losses and our financial condition, results of operations and liquidity.

Most of our foreclosed assets are comprised of real estate properties. We carry these properties at their estimated fair values less estimated selling costs. While we believe the carrying values for such assets are reasonable and appropriately reflect current market conditions, there can be no assurance that the values of such assets will not further decline prior to sale or that the amount of proceeds realized upon disposition of foreclosed assets will approximate the carrying value of such assets. If the proceeds from any such dispositions are less than the carrying value of foreclosed assets, we will record a loss on the disposition of such assets, which in turn could have an adverse effect on our results of operations.

Compared to national financial institutions, we are less able to spread the risks of unfavorable local economic conditions across a large number of diversified economies. Moreover, we cannot give any assurance that we will benefit from any market growth or return of more favorable economic conditions in our primary market areas if they do occur.

BHG's results of operations have become a larger portion of our results of operations, and challenges in BHG's business that negatively affect its results would now more significantly impact our results.

Pinnacle Bank holds a 49% interest in BHG. Our share of BHG's earnings make up a significant portion of our recurring noninterest income, and as a result, a meaningful portion of our net income. While we have a significant stake in BHG, are entitled to designate two members of BHG's five person board of managers and in some instances have protective rights to block BHG from engaging in certain activities, the other managers and members of BHG may make most decisions regarding BHG's and its subsidiaries' operations without our consent or approval. This includes a decision to sell the company or the other owners' interest in the company. Any sale of all or a portion of our interest in BHG would adversely affect our recurring noninterest income. In addition, any sale of all or a portion of the other members' interest in BHG, including in connection with a capital raising transaction, could affect our governance rights in BHG and adversely affect our recurring noninterest income. Moreover, there are certain limitations on our ability to sell our interest in BHG without first offering BHG and the other members a right of first refusal, other than transfers in connection with an acquisition of Pinnacle Bank.

A significant portion of BHG's revenue (and correspondingly our interest in any of BHG's net profits) comes from the sale of loans originated by BHG to community banks. BHG, and its subsidiaries, also retain loans that they originate on their balance sheet and earn interest income on those loans. This practice requires more external funding of BHG's business than the historical practice of routinely selling loans to other financial institutions and will likely increase BHG's funding costs and operating expenses. It also increases BHG's exposure to credit losses in its portfolio, which losses could materially and adversely impact BHG's results of operations and Pinnacle Bank's interest in BHG's net profits. BHG's decision whether to sell more loans through its auction platform or retain more loans on its balance sheet will impact BHG's earnings and as a result its contribution to our recurring noninterest income. The sale of loans through the auction platform generates a gain on the sale that results in the income from the transaction being recorded in the period when the sale is consummated. Conversely, when BHG decides to retain a loan on its balance sheet, the income from that loan is recognized over the life of the loan.

BHG currently maintains an allowance for loan losses under the incurred loss method related to the loans it retains on its balance sheet, but will be required to adopt CECL effective October 1, 2023. This change is likely to require BHG to increase its allowance for loan losses, and is likely to increase the types of data BHG would need to collect and review to determine the appropriate level of its allowance for loan losses. In addition, this change may result in more volatility in the level of BHG's allowance for loan losses. An increase, to the extent material, in BHG's allowance for loan losses or expenses incurred to determine the appropriate level of the allowance for loan losses could have a material adverse effect on BHG's financial condition and results of operations, which would negatively impact our interest in BHG's profits.

Future growth in contributions to our earnings from BHG and its subsidiaries will require that they continue to grow their business and increase the amount of loans that they are able to originate and sell, if not retained on BHG's or a subsidiary's balance sheet. In the event that BHG's loan growth slows over historical levels, its loan sales decrease (including but not limited to as a result of regulatory, or other restrictions or limitations on banks that are the principal purchasers of BHG's loans), the interest rates that BHG earns on its loans, or the spread between the rate BHG charges on its loans and the rates paid by banks who buy loans through the auction platform, decline or it experiences increased levels of loan losses or requests for substitutions on loans it previously originated and sold, its results of operations and our noninterest income would be adversely affected to amounts below those that BHG charges.

BHG currently operates in certain states without the need for a permit or any other license as its loans are principally commercial, business purpose loans that don't trigger the need for licensure. In the event that BHG or its subsidiaries were required to register or become licensed in any state in which they operate, including as a result of their expanding into consumer lending or expanding into other lending areas like patient financing, or regulations are adopted that seek to limit BHG's or its subsidiaries' ability to operate in any jurisdiction or that seek to limit the amounts of interest that BHG can charge on its loans, BHG's results of operations (and Pinnacle Bank's interest in BHG's net profits) could be materially and adversely affected.

Since our initial investment, BHG has expanded its operations to include commercial lending to other professional service firms like attorneys, accountants and others. Through subsidiaries that it owns, it also has expanded into patient financing, which involves making loans to individuals to finance medical expenses, particularly those where patients have high deductible health plans. BHG is also expanding into point-of-sale consumer lending and may further expand its business into other types of lending, which may not be as profitable as BHG's current lending products or successful at all. These new product lines may involve more risk than BHG's historical business and BHG's loss rates may increase when compared to historical levels. Moreover, BHG and its subsidiaries will likely face greater regulatory scrutiny in certain of these lines of business that may increase BHG's compliance costs and its risk of regulatory scrutiny. Failure to realize the expected revenue increases and/or other projected benefits from, and any increased compliance costs and regulatory scrutiny in connection with, any such expansion could have a negative impact on BHG's business, which would negatively impact our interest in BHG's profits and, consequently, our noninterest income.

BHG's business is also subject to increased scrutiny by bank regulatory agencies as a result of our investment. The FDIC has published guidance related to the operation of marketplace lenders and banks' business relationships with such lenders and other third parties in which banks are required to exercise increased oversight and ongoing monitoring and other responsibility for such third parties' compliance with applicable regulatory guidance and requirements. As a result, we are subject to enhanced responsibility for and risk related to BHG and our relationship with it. BHG's compliance costs have increased since our investment and are likely to continue to increase, including as a result of its new product lines, and its loan yields may be negatively impacted, which would negatively impact its results of operations and Pinnacle Bank's interest in BHG's net profits. If banks that are examined by the FDIC became restricted in their ability to buy loans originated by BHG, BHG's business would be negatively impacted, which would negatively impact our interest in BHG's profits.

Because of our ownership of a portion of BHG, BHG is limited in the types of activities in which it may engage. Were BHG to desire to expand its operations into areas that are not permissible for an entity owned by a state member bank like Pinnacle Bank, it may need to do so through separate entities in which we do not have an ownership interest. Were these businesses to be more profitable than BHG's core business or require BHG's management's attention in ways that are detrimental to BHG, our investment in BHG may be negatively impacted.

The fair values of our investments in private companies and venture capital funds are likely to fluctuate and the value that we ultimately realize on those investments may vary materially.

From time to time, we and our affiliates, including Pinnacle Bank, make investments in private companies and venture capital funds. The fair value of these investments are reflected in our financial statements and are adjusted on a quarterly basis. Moreover, because valuations of private companies are inherently uncertain, may fluctuate over short periods of time and may be based on estimates, our determinations of fair value for private companies may differ materially from the values that would have been used if a ready market for these securities existed. Therefore, fair value determinations may materially understate or overstate the value that we ultimately realize upon the sale of one or more investments. We cannot predict future realized or unrealized gains or losses, and any such gains or losses are likely to vary materially from period to period.

A decline in our stock price or expected future cash flows, or a material adverse change in our results of operations or prospects, could result in impairment of our goodwill.

A significant and sustained decline in our stock price and market capitalization below book value, a significant decline in our expected future cash flows, a significant adverse change in the business climate, slower growth rates or other factors could result in impairment of our goodwill. At December 31, 2022, our goodwill and other identifiable intangible assets totaled approximately \$1.9 billion. If we were to conclude that a write-down of our goodwill is necessary, then the appropriate charge would likely cause a material loss. Any significant loss would adversely impact the capacity of Pinnacle Bank to pay dividends to Pinnacle Financial without seeking prior regulatory approval, which could adversely affect Pinnacle Financial's ability to pay required interest payments on its outstanding indebtedness or to continue to pay dividends to its common and preferred shareholders.

Our selection of accounting policies and methods may affect our reported financial results.

Our accounting policies and methods are fundamental to how we record and report our financial condition and results of operations. Our management must exercise judgment in selecting and applying many of these accounting policies and methods so they comply with GAAP and reflect management's judgment of the most appropriate manner to report our financial condition and results of operations. In some cases, management must select the accounting policy or method to apply from two or more alternatives, any of which may be reasonable under the circumstances, which may result in our reporting materially different results than would have been reported under a different alternative.

Certain accounting policies are critical to presenting our financial condition and results of operations. They require management to make difficult, subjective or complex judgments about matters that are uncertain. Materially different amounts could be reported under different conditions or using different assumptions or estimates. Because of the uncertainty of estimates involved in these matters, we may be required to do one or more of the following: significantly increase the allowance for credit losses or sustain loan losses that are significantly higher than the reserve provided; recognize significant impairment on goodwill and other intangible asset balances; reduce the carrying value of an asset measured at fair value; or significantly increase our accrued tax liability. Any of these could have a material adverse effect on our business, financial condition or results of operations. For a discussion of our critical accounting policies, see "Part II, Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations - Critical Accounting Estimates" included elsewhere in this Annual Report on Form 10-K.

We currently invest in bank owned life insurance (“BOLI”) and may continue to do so in the future.

We had \$881.9 million in general, hybrid and separate account BOLI contracts at December 31, 2022. BOLI is an illiquid long-term asset that provides tax savings because cash value growth and life insurance proceeds are not taxable, subject to certain exceptions. However, if we needed additional liquidity and converted the BOLI to cash, such transaction would be subject to ordinary income tax and applicable penalties. We are also exposed to the credit risk of the underlying securities in the investment portfolio and to the insurance carrier’s credit risk (in a general account contract). If BOLI was exchanged to another carrier, additional fees would be incurred and a tax-free exchange could only be done for insureds that were still actively employed by us at that time. There is interest rate risk relating to the market value of the underlying investment securities associated with the BOLI in that there is no assurance that the market value of these securities will not decline. Investing in BOLI exposes us to liquidity, credit and interest rate risk, which could adversely affect our results of operations, financial condition and liquidity.

An ineffective risk management framework could have a material adverse effect on our strategic planning and our ability to mitigate risks and/or losses and could have adverse regulatory consequences.

We have implemented a risk management framework to identify and manage our risk exposure. This framework is comprised of various processes, systems and strategies, and is designed to manage the types of risk to which we are subject, including, among others, credit, market, liquidity, fraud, operational, capital, cybersecurity, compliance, strategic and reputational risks. Our framework also includes financial, analytical, forecasting, or other modeling methodologies, which involves management assumptions and judgment. In addition, our board of directors, in consultation with management, has adopted a risk appetite statement, which sets forth certain thresholds and limits to govern our overall risk profile. However, there is no assurance that our risk management framework, including the risk metrics under our risk appetite statement, will be effective under all circumstances or that it will adequately identify, manage or mitigate any risk or loss to us. If our risk management framework is not effective, we could suffer unexpected losses and become subject to regulatory consequences, as a result of which our business, financial condition, results of operations or prospects could be materially adversely affected.

We are dependent on our information technology and telecommunications systems and third-party servicers, and systems failures, interruptions or breaches of security could have an adverse effect on our financial condition and results of operations, as well as cause legal or reputational harm.

We are dependent upon information technologies, computer systems and networks, including those we maintain and those maintained and provided to us by third parties, to conduct operations and are reliant on technology to help increase efficiency in our business. These systems could become unavailable or impaired due to a variety of causes, including storms and other natural disasters, terrorist attacks, fires, utility outages, internal or external theft or fraud, design defects, human error, misconduct or complications or failures encountered as existing systems are maintained, replaced or upgraded. For example, our financial, accounting, data processing, or other operating or security systems or infrastructure or those of third parties upon which we rely may fail to operate properly or become compromised, disabled or damaged, which could adversely affect our ability to process transactions or provide services. In the event that backup systems are utilized, they may not process data as quickly as our primary systems and we may experience data losses in the course of such recovery. We continuously update the systems on which we rely to support our operations and growth and to remain compliant with all applicable laws, rules and regulations globally. This updating entails significant costs and creates risks associated with implementing new systems and integrating them with existing ones, including business interruptions that may occur in the course of such implementation challenges. We maintain a system of internal controls and security to mitigate the risks of many of these occurrences and maintain insurance coverage for certain risks; however, should an event, including a cyberattack (including a ransomware attack), occur that is not prevented or detected by our internal controls, causes an interruption, degradation or outage in service, or is uninsured against or in excess of applicable insurance limits, such occurrence could have an adverse effect on our business and our reputation, which, in turn, could have a material adverse effect on our financial condition, results of operations and liquidity.

Our operations rely on the secure processing, storage and transmission of confidential, proprietary, personal and other information in our computer systems and networks. Although we take protective measures and endeavor to modify these systems as circumstances warrant, the security of our computer systems, software and networks may be vulnerable to breaches, unauthorized access, misuse, computer viruses or other malicious code and other events that could have a security impact. We provide our customers the ability to bank remotely, including over the Internet or through their mobile device. The secure transmission of confidential information is a critical element of remote and mobile banking. Our network, and the systems of parties with whom we contract or on which we rely, as well as those of our customers and regulators, could be vulnerable to unauthorized access, computer viruses, phishing schemes, spam attacks, ransomware attacks, human error, natural disasters, power loss and other security breaches. Sources of attacks vary and may include hackers, disgruntled employees or vendors, organized crime, terrorists, foreign governments, corporate espionage and activists. In recent periods, there continues to be a rise in electronic fraudulent activity, security breaches and cyber-attacks within the financial services industry, especially in the commercial banking sector due to cyber criminals targeting commercial bank accounts or seeking to infiltrate legitimate transactions.

Cybersecurity risks for banking organizations have significantly increased in recent years in part because of the proliferation of new technologies, and the use of the internet and telecommunications technologies to conduct financial transactions. For example, cybersecurity risks may increase in the future as we continue to increase our mobile-payment and other internet-based product offerings and expand our internal use of web-based products and applications. Even the most advanced internal control environment may be vulnerable to compromise. Targeted social engineering attacks are becoming more prevalent and sophisticated and are extremely difficult to prevent. The techniques used by bad actors change frequently, may not be recognized until launched and may not be recognized until well after a breach has occurred. Additionally, the existence of cyber attacks or security breaches at third parties with access to our data, such as vendors, may not be disclosed to us in a timely manner. Consistent with industry trends, we remain at risk for attempted electronic fraudulent activity, as well as attempts at security breaches and cybersecurity-related incidents. Cloud technologies are also critical to the operation of our systems, and our reliance on cloud technologies is growing. Service disruptions in cloud technologies or intrusion into those of our systems hosted on cloud-based technologies may lead to unauthorized access of, delays in accessing, or the loss of, data that is important to our businesses and may hinder our clients' access to our products and services, which would negatively impact our operations which in turn could have a material adverse effect on our financial condition, results of operations and liquidity.

We spend significant capital and other resources to protect against the threat of security breaches and computer viruses, and may be required to spend significant capital and other resources to alleviate problems caused by security breaches or viruses. To the extent that our activities or the activities of our vendors, regulators or customers involve the storage and transmission of confidential information, security breaches (including breaches of security of customer, vendor or regulatory systems and networks) and viruses could expose us to claims, litigation and other possible liabilities. Any inability to prevent or promptly detect security breaches or computer viruses could also cause existing customers to lose confidence in our systems and could adversely affect our reputation, results of operations and ability to attract and retain customers and businesses. In addition, a security breach could also subject us to additional regulatory scrutiny, expose us to civil litigation and possible financial liability and cause reputational damage.

We outsource many of our major systems, such as data processing, loan servicing and deposit processing systems. The failure of these systems, or the termination of a third-party software license or service agreement on which any of these systems is based, could interrupt our operations. Because our information technology and telecommunications systems interface with and depend on third-party systems, we could experience service denials if demand for such services exceeds capacity or such third-party systems fail or experience interruptions, including as a result of viruses or other attacks. If sustained or repeated, a system failure or service denial could result in a deterioration of our ability to process new and renewal loans, gather deposits and provide customer service, compromise our ability to operate effectively, damage our reputation, result in a loss of customer business and/or subject us to additional regulatory scrutiny and possible financial liability, any of which could have a material adverse effect on our financial condition, results of operations and liquidity.

We also face the risk of operational disruption, failure, termination, or capacity constraints of any of the third parties that facilitate our business activities, including vendors, exchanges, and other financial intermediaries. Such parties could also be the source or cause of an attack on, or breach of, our operational systems, data or infrastructure, and could disclose such attack or breach to us in a delayed manner or not at all. In addition, we may be at risk of an operational failure with respect to our customers' systems. Our risk and exposure to these matters remains heightened because of, among other things, the evolving nature of these threats and the continued uncertain global economic environment.

As cyber threats continue to evolve, we will likely expend significant additional resources to continue to modify or enhance our protective measures, investigate and remediate any information security vulnerabilities, or respond to any changes to state or federal regulations, policy statements or laws concerning information systems or security. Any failure to maintain adequate security over our information systems, our technology-driven products and services or our customers' personal and transactional information could negatively affect our business and our reputation and result in fines, penalties, or other costs, including litigation expense and/or additional compliance costs, all of which could have a material adverse effect on our financial condition, results of operations and liquidity. Furthermore, the public perception that a cyber-attack on our systems has been successful, whether or not this perception is correct, may damage our reputation with customers and third parties with whom we do business. A successful penetration or circumvention of system security could cause us negative consequences, including loss of customers and business opportunities, disruption to our operations and business, misappropriation or destruction of our confidential information and/or that of our customers, or damage to our customers' and/or third parties' computers or systems, and could result in a violation of applicable privacy laws and other laws, litigation exposure, regulatory fines, penalties or intervention, loss of confidence in our security measures, reputational damage, reimbursement or other compensatory costs, additional compliance costs, and could adversely impact our financial condition, results of operations and liquidity.

Our business reputation and relationships are important and any damage to them could have a material adverse effect on our business.

Our reputation is very important in sustaining our business and we rely on our relationships with our current, former and potential clients and shareholders and other actors in the industries that we serve. Any damage to our reputation, whether arising from regulatory, supervisory or enforcement actions, matters affecting our financial reporting or compliance with SEC and exchange listing

requirements, negative publicity, the way in which we conduct our business or otherwise could strain our existing relationships and make it difficult for us to develop new relationships. Any such damage to our reputation and relationships could in turn lead to a material adverse effect on our business.

We face substantial competition and are subject to certain regulatory constraints not applicable to some of our competitors, which may decrease our growth or profits.

We face substantial competition for deposits, and for credit and trust relationships, and other financial services and products in the communities we serve. Competing providers include other banks, thrifts and trust companies, insurance companies, mortgage banking operations, credit unions, finance companies, title companies, money market funds and other financial and nonfinancial companies, including mobile payment platforms, which may offer products functionally equivalent to those offered by us. Competing providers may have greater financial resources than we do and offer services within and outside the market areas we serve. In addition to this challenge of attracting and retaining customers for traditional banking services, our competitors include securities dealers, brokers, mortgage bankers, investment advisors and finance and insurance companies who seek to offer one-stop financial services to their customers that may include services that financial institutions have not been able or allowed to offer to their customers in the past. The increasingly competitive environment is primarily a result of changes in regulation, changes in technology and product delivery systems and the accelerating pace of consolidation among financial service providers. If we are unable to adjust both to increased competition for traditional banking services and changing customer needs and preferences, our financial performance could be adversely affected.

Some of our competitors, including credit unions, are not subject to certain regulatory constraints, such as the Community Reinvestment Act, which requires us to, among other things, implement procedures to make and monitor loans throughout the communities we serve. Credit unions also have federal tax exemptions that may allow them to offer lower rates on loans and higher rates on deposits than taxpaying financial institutions such as commercial banks. In addition, non-depository institution competitors are generally not subject to the extensive regulation applicable to institutions, like Pinnacle Bank, that offer federally insured deposits. Other institutions may have other competitive advantages in particular markets or may be willing to accept lower profit margins on certain products. These differences in resources, regulation, competitive advantages, and business strategy may decrease our net interest margin, may increase our operating costs, and may make it harder for us to compete profitably.

The financial services industry could become even more competitive as a result of legislative, regulatory and technological changes and continued consolidation. Technology has lowered barriers to entry and made it possible for non-banks to offer products and services traditionally provided by banks, such as mobile payment and other automatic transfer and payment systems, and for banks that do not have a physical presence in our markets to compete for deposits. The absence of regulatory requirements may give non-bank financial companies a competitive advantage over us.

Our operations, businesses and customers could be materially adversely affected by the impacts related to climate change.

There is an increasing concern among individuals and governments over the risks of climate change and related environmental sustainability matters that create additional risk for us as it relates to the operation of our business and our relationships with our clients. The physical risks of climate change include rising average global temperatures, rising sea levels and an increase in the frequency and severity of extreme weather events and natural disasters, including floods, wildfires, hurricanes and tornados. Such disasters could disrupt our operations or the operations of customers or third parties on which we rely. Such disasters could result in market volatility or negatively impact our customers' ability to repay outstanding loans, result in rapid deposit outflows, cause supply chain and/or distribution network disruptions, damage collateral or result in the deterioration of the value of collateral or insurance shortfalls.

Additionally, climate change concerns could result in transition risk. Changes in consumer preferences or technology and additional legislation, regulatory and legal requirements, including those associated with the transition to a low-carbon economy, could restrict the scope of our or our clients' existing businesses, amplify credit and market risks, disproportionately impact certain of our clients, like those that own and/or operate trucking companies, negatively impact asset values, increase expenses, including as a result of strategic planning and technology and market changes, and/or otherwise adversely impact us, our businesses or our customers.

Our response to climate change, our climate change strategies, policies and disclosure, and/or our ability to achieve our climate-related goals and commitments (which are subject to risks and uncertainties, many of which are outside of our control) could result in reputational harm as a result of negative public sentiment, regulatory scrutiny, litigation and reduced investor and stakeholder confidence.

The implementation of other new lines of business or new products and services may subject us to additional risk.

We continuously evaluate our service offerings and may implement new lines of business or offer new products and services within existing lines of business in the future. There are substantial risks and uncertainties associated with these efforts. In developing and marketing new lines of business and/or new products and services, we undergo a new product process to assess the risks of the

initiative, and invest significant time and resources to build internal controls, policies and procedures to mitigate those risks, including hiring experienced management to oversee the implementation of the initiative. Initial timetables for the introduction and development of new lines of business and/or new products or services may not be achieved and price and profitability targets may not prove feasible. External factors, such as compliance with regulations, competitive alternatives, and shifting market preferences, may also impact the successful implementation of a new line of business and/or a new product or service. Furthermore, any new line of business and/or new product or service could require the establishment of new key and other controls and have a significant impact on our existing system of internal controls. Failure to successfully manage these risks in the development and implementation of new lines of business and/or new products or services could have a material adverse effect on our business and, in turn, our financial condition and results of operations.

Inability to retain senior management and key employees or to attract new experienced financial services professionals could impair our relationship with our customers, reduce growth and adversely affect our business.

We have assembled a senior management team which has substantial background and experience in banking and financial services in our markets. Moreover, much of our organic loan growth that we have experienced in recent years (and that we are seeking during 2023) was the result not of strong loan demand but rather of our ability to attract experienced financial services professionals as new associates of ours who have been able to attract customers from other financial institutions. We are continuing to deploy a similar hiring strategy in all of our markets, though in a rising rate environment it may be more difficult for these associates to attract their customers to the bank, particularly those with existing loans that are priced below current market rates. Inability to retain these key personnel (including key personnel of the businesses we have acquired) or to continue to attract experienced lenders with established books of business (including, in either case, as a result of competitive compensation and other hiring and retention pressures), at all or at the pace we have anticipated, could negatively impact our growth because of the loss of these individuals' skills and customer relationships and/or the potential difficulty of promptly replacing them. Moreover, the higher costs we have to pay to hire and retain these experienced individuals (which has seen increased pressure in the current inflationary and competitive environment in which we are operating) could cause our noninterest expense levels to rise and negatively impact our results of operations.

Many of our key associates, and those we seek to hire, are experienced bankers who have been engaged in the business of commercial banking for a significant period of time. While we believe this model of hiring has contributed to our success, we face risks associated with this older workforce. Our compensation expense, including our healthcare costs, may exceed those of our peers on account of our older, more experienced associate base. Additionally, as the number of our long-term employees reaching retirement age increases, our ability to successfully plan for the transition of those associates' clients to other associates becomes more important to our future success. If we are unable to successfully manage such transitions, our relationships with our clients may be negatively impacted and our results of operations may be negatively affected.

We are subject to regulatory oversight and certain litigation, and our expenses related to this regulatory oversight and litigation may adversely affect our results.

We are from time to time subject to certain litigation in the ordinary course of our business. As we have aggressively hired new revenue producing associates over the last six years we, and the associates we have hired, have also periodically been the subject of litigation and threatened litigation with these associates' former employers. We may also be subject to claims related to our loan servicing programs, particularly those involving servicing of commercial real estate loans. These and other claims and legal actions, as well as supervisory and enforcement actions by our regulators, including the CFPB or other regulatory agencies with which we deal, including those with oversight of our loan servicing programs, could involve large monetary claims, capital directives, agreements with federal regulators, cease and desist penalties and orders and significant defense costs. The outcome of any such cases or actions is uncertain. Substantial legal liability or significant regulatory action against us could have material adverse financial effects or cause significant reputational harm to us, which in turn could seriously harm our business prospects.

In accordance with GAAP, for matters where a loss is not probable or the amount of the loss cannot be estimated, no accrual is established. For matters where it is probable we will incur a loss and the amount can be reasonably estimated, we establish an accrual for the loss. Once established, the accrual is adjusted periodically to reflect any relevant developments. The actual cost of any outstanding legal proceedings or threatened claims, however, may turn out to be substantially higher than the amount accrued. Further, our insurance may not cover all litigation, other proceedings or claims, or the costs of defense. Future developments could result in an unfavorable outcome for any existing or new lawsuits or investigations in which we are, or may become, involved, which may have a material adverse effect on our business and our results of operations.

Our business is dependent on technology, and an inability to invest in technological improvements may adversely affect our results of operations and financial condition.

The financial services industry is undergoing rapid technological changes with frequent introductions of new technology-driven products and services. In addition to better serving customers, the effective use of technology increases efficiency and enables financial institutions to reduce costs. We have made significant investments in data processing, management information systems and internet banking accessibility, but additional investments may be required or necessary. Our future success will depend in part upon

our ability to create additional efficiencies in our operations through the use of technology. Many of our competitors have substantially greater resources to invest in technological improvements. We cannot make assurances that our technological improvements will increase our operational efficiency or that we will be able to effectively implement new technology-driven products and services or be successful in marketing these products and services to our customers.

The soundness of other financial institutions, including those with whom we have engaged in transactions, could adversely affect us.

Our ability to engage in routine funding transactions could be adversely affected by the actions and financial stability of other financial institutions. Financial services institutions are interrelated as a result of trading, clearing, counterparty or other relationships. We have exposure to various counterparties, including brokers and dealers, commercial and correspondent banks, and others including those with whom we have implemented our hedging strategies. As a result, defaults by, or rumors or questions about, one or more financial services institutions, or the financial services industry generally, may result in market-wide liquidity problems and could lead to losses or defaults by such other institutions. Such occurrences could expose us to credit risk in the event of default of one or more counterparties and could have a material adverse effect on our financial position, results of operations and liquidity.

We may be subject to claims and litigation pertaining to fiduciary responsibility.

From time to time as part of our normal course of business, customers may make claims and take legal action against us based on actions or inactions related to the fiduciary responsibilities of Pinnacle Bank's trust and wealth management associates. If such claims and legal actions are not resolved in a manner favorable to us, they may result in financial liability and/or adversely affect our market reputation or our products and services. Any financial liability or reputation damage could have a material adverse effect on our business, which, in turn, could have a material adverse effect on our financial condition and results of operations.

Natural disasters and the effects of a changing climate may adversely affect us and our customers.

Our operations and customer base are located in markets where natural disasters, including tornadoes, severe storms, fires, wildfires, floods, and hurricanes often occur. Such natural disasters could significantly impact the local population and economies and our business, and could pose physical risks to our properties. Although our banking offices are geographically dispersed throughout portions of the southeastern United States and we maintain insurance coverages for such events, a significant natural disaster in or near one or more of our markets could have a material adverse effect on our financial condition, results of operations or liquidity.

In addition to natural disasters, the impact of climate change, such as rising average global temperatures and rising sea levels, and the increasing frequency and severity of extreme weather events and natural disasters such as droughts, floods, wildfires and hurricanes could negatively impact our operations including our ability to provide financial products and services to our customers. Climate change also has the potential to negatively affect the collateral we take to secure loans that we make, the valuations of home prices or commercial real estate or our customers' (particularly those that are engaged in industries that could be negatively affected by a shift to a low-carbon economy) ability and/or willingness to pay fees, repay outstanding loans or afford new products. Climate change could also cause insurability risk and/or increased insurance costs for us or our customers.

If we fail to maintain an effective system of internal control over financial reporting, we may not be able to accurately report our financial results. As a result, current and potential holders of our securities could lose confidence in our financial reporting, which would harm our business and the trading price of our securities.

Maintaining and adapting our internal controls over financial reporting, as required by Section 404 of the Sarbanes-Oxley Act, is expensive and requires significant management attention. Moreover, as we continue to grow, our internal controls may become more complex and require additional resources to ensure they remain effective amid dynamic regulatory and other guidance. Failure to implement effective controls or difficulties encountered in the process may harm our results of operations and financial condition or cause us to fail to meet our reporting obligations. If we or our independent registered accounting firm identify material weaknesses in our internal control over financial reporting or are otherwise required to restate our financial statements, we could be required to implement expensive and time-consuming remedial measures and could lose investor confidence in the accuracy and completeness of our financial reports. We may also face regulatory enforcement or other actions, including the potential delisting of our securities from the Nasdaq Global Select Market. This could have an adverse effect on our business, financial condition or results of operations, as well as the trading price of our securities, and could potentially subject us to litigation.

Risks Related to Acquisition Activity

Our acquisitions and future expansion may result in additional risks.

From 2015 through 2017, we completed the acquisitions of CapitalMark, Magna, Avenue and BNC and made a significant investment in BHG. In 2019, we acquired Advocate Capital, and in 2022 we acquired the remaining 80% outstanding membership interest of

JB&B. We expect to continue to consider and explore opportunities to expand in our current markets and in select primarily high-growth markets in the southern portion of the United States through additional offices and also may consider expansion within these markets through additional acquisitions of all or part of other financial institutions or other financial services companies, including our recent de novo expansions into the Atlanta, Georgia, Huntsville and Birmingham, Alabama, Louisville, Kentucky and Washington, D.C. metro markets. These types of expansions, including the recent de novo expansions, involve various risks, including:

Management of Growth. We may be unable to successfully:

- maintain loan quality in the context of significant loan growth;
- identify and expand into suitable markets;
- obtain regulatory and other approvals;
- identify and acquire suitable sites for new banking offices;
- attract sufficient deposits and capital to fund anticipated loan growth;
- recruit seasoned professionals with significant experience and established books of business;
- maintain adequate common equity and regulatory capital;
- scale our technology platform and operational infrastructure;
- avoid diversion or disruption of our existing operations or management as well as those of the acquired institution;
- maintain adequate management personnel and systems to oversee and support such growth;
- maintain adequate internal audit, loan review and compliance functions; and
- implement additional policies, internal controls, procedures and operating systems required to support such growth.

Results of Operations. There is no assurance that existing offices or future offices will maintain or achieve deposit levels, loan balances or other operating results necessary to avoid losses or produce profits. If we are unable to grow our revenues in amounts necessary to support this higher expense base, our results of operations will be negatively impacted. Our growth strategy necessarily entails growth in overhead expenses as we add new offices and staff. Our historical results may not be indicative of future results or results that may be achieved as we continue to evaluate opportunities to increase the number and concentration of our offices in our newer markets.

Development of Offices. There are considerable costs involved in opening offices (particularly those in new markets), and new offices generally do not generate sufficient revenues to offset their costs until they have been in operation for at least a year or more. Accordingly, any new offices we establish, including those we plan to establish in the markets to which we have recently expanded, can be expected to negatively impact our earnings for some period of time until they reach certain economies of scale. The same is true for our efforts to expand in these markets with the hiring of additional seasoned professionals with significant experience in that market. Our expenses could be further increased if we encounter delays in opening any of our new offices, including as a result of supply chain disruptions and labor challenges currently affecting the construction industry. We may be unable to accomplish future office expansion plans due to a lack of available satisfactory sites, difficulties in acquiring such sites, failure or inability to receive any required regulatory approvals, increased expenses or loss of potential sites due to complexities associated with zoning and permitting processes, higher than anticipated construction or merger and acquisition costs or other factors. Finally, we have no assurance any office will be successful even after it has been established or acquired, as the case may be.

Regulatory and Economic Factors. Our growth and expansion plans may be adversely affected by a number of regulatory and economic developments or other events. Failure or inability to obtain required regulatory approvals, changes in laws and regulations or other regulatory developments and changes in prevailing economic conditions or other unanticipated events may prevent or adversely affect our continued growth and expansion. Such factors may cause us to alter our growth and expansion plans or slow or halt the growth and expansion process, which may prevent us from entering into or expanding in our other markets or allow competitors to gain or retain market share in our existing markets.

Infrastructure and Controls. We may not successfully implement improvements to, or integrate, our information and control systems, procedures and processes in an efficient or timely manner and may discover deficiencies in existing systems and controls. In particular, our systems, controls and procedures must be able to accommodate an increase in transaction volume and the infrastructure that comes with new products, offices, markets or any combination thereof. Thus, our growth strategy may divert management from our existing operation and may require us to incur additional expenditures to expand our administrative and operational infrastructure, which may adversely affect earnings, shareholder returns, and our efficiency ratio.

Failure to successfully address these and other issues related to our recent expansions or in any other future market could have a material adverse effect on our financial condition and results of operations, and could adversely affect our ability to successfully implement our business strategy. Also, if our growth occurs more slowly than anticipated or declines, our results of operations and financial condition could be materially adversely affected.

We may face risks with respect to future acquisitions.

When we attempt to expand our business through mergers and acquisitions, we seek targets that are culturally similar to us, have experienced management and possess either significant market presence or have potential for improved profitability through economies of scale or expanded products or services. In addition to the general risks associated with our growth plans which are highlighted above, in general acquiring or merging with other banks, businesses or branches, particularly those in markets with which we are less familiar, involves various risks commonly associated with acquisitions, including, among other things:

- the time and costs associated with identifying and evaluating potential acquisition and merger targets;
- inaccuracies in the estimates and judgments used to evaluate credit, operations, culture, management and market risks with respect to an institution we acquire or with which we merge;
- the time and costs of evaluating new markets, hiring experienced local management, including as a result of de novo expansion into a market such as our expansions into the Atlanta, Georgia, Huntsville and Birmingham, Alabama, Louisville, Kentucky and Washington, D.C. metro markets, and opening new bank locations, and the time lags between these activities and the generation of sufficient assets and deposits to support the significant costs of the expansion that we may incur, particularly in the first 12 to 24 months of operations;
- our ability to finance (or increase capital levels in connection with) an acquisition and possible dilution to our existing shareholders;
- the diversion of our management's attention to the negotiation of a transaction and integration of an acquired company's operations with ours;
- the incurrence of an impairment of goodwill associated with an acquisition and adverse effects on our results of operations;
- entry into new markets where we have limited or no direct prior experience;
- closing delays and increased expenses related to the resolution of lawsuits filed by our shareholders or shareholders of companies we may seek to acquire;
- the inability to receive regulatory approvals timely or at all, including as a result of community objections, or such approvals being restrictively conditional; and
- risks associated with integrating the operations, technologies and personnel of the acquired business.

Though we expect to remain principally focused on organically growing our business in our existing markets (including our new markets) during 2023, we nonetheless may have opportunities to evaluate merger and acquisition opportunities that are presented to us in our current markets as well as other select markets throughout the southern portion of the United States and conduct due diligence activities related to possible transactions with other financial institutions. As a result, merger or acquisition discussions and, in some cases, negotiations may take place and future mergers or acquisitions involving cash, debt or equity securities and related capital raising transactions may occur at any time. Generally, acquisitions of financial institutions involve the payment of a premium over book and market values, and, therefore, some dilution of our book value and fully diluted earnings per share may occur in connection with any future transaction. Failure to realize the expected revenue increases, cost savings, increases in product presence and/or other projected benefits from an acquisition could have a material adverse effect on our financial condition and results of operations.

In addition, we may face significant competition from numerous other financial services institutions, many of which may have greater financial resources than we do, when considering acquisition opportunities, particularly in our targeted high-growth markets located outside of Tennessee. Accordingly, attractive acquisition opportunities may not be available to us. There can be no assurance that we will be successful in identifying or completing any potential future acquisitions.

Regulatory and Compliance Risks

National or state legislation or regulation may increase our expenses and reduce earnings.

Bank regulators are increasing regulatory scrutiny, and additional restrictions on financial institutions (or new interpretations of existing regulations) have been proposed or adopted by regulators and by Congress. Changes in tax law, federal legislation, regulation or policies, such as bankruptcy laws, deposit insurance, consumer protection laws, and capital requirements, among others, can result in significant increases in our expenses and/or charge-offs, which may adversely affect our results of operations and financial condition. Changes in state or federal tax laws or regulations can have a similar impact. State and municipal governments, including the State of Tennessee, could seek to increase their tax revenues through increased tax levies which could have a meaningful impact on our results of operations. Furthermore, financial institution regulatory agencies are expected to continue to be aggressive in responding to concerns and trends identified in examinations, including in the case of service charges banks impose on customers related to overdrafts and instances in which customers' accounts do not have sufficient funds to cover items that are presented. These actions could include the issuance of additional formal or informal enforcement or supervisory actions and the imposition of monetary penalties, and whether formal or informal, could result in our agreeing to limitations or to take actions that limit our operational

flexibility, restrict our growth, increase our operating expenses, lower our non-interest income or increase our capital or liquidity levels. Failure to comply with any formal or informal regulatory restrictions, including informal supervisory actions, could lead to further regulatory enforcement actions.

Negative developments in the financial services industry and the impact of recently enacted or new legislation (or interpretation of existing legislation) in response to those developments could negatively impact our operations by restricting our business operations, including our ability to originate or sell loans, and adversely impact our financial performance. In addition, industry, legislative or regulatory developments may cause us to materially change our existing strategic direction, business policies, capital strategies, compensation or operating plans.

We are subject to various statutes and regulations that may impose additional costs or limit our ability to take certain actions.

We operate in a highly regulated industry and are subject to examination, supervision, and comprehensive regulation by various regulatory agencies. Our compliance with these regulations is costly and restricts certain of our activities, including payment of dividends, mergers and acquisitions, investments, loans and interest rates charged on loans, interest rates paid on deposits and locations of offices. We are also subject to capital requirements established by our regulators, which require us to maintain specified levels of capital. It is possible that our FDIC assessments may increase in the future. Any future assessment increases could negatively impact our results of operations. Significant changes in laws and regulations applicable to the banking industry have been recently adopted and others are being considered by our regulators and in Congress. We expect that the current Presidential administration will continue to implement a regulatory reform agenda that is significantly different than that of the prior administration. This reform agenda could include an increased level of attention and focus on consumer protection, fair lending, the regulation of loan portfolios and credit concentrations to borrowers impacted by climate change or that operate in industries that would not be favored in a low-carbon economy and heightened scrutiny of BSA and AML requirements among other areas. In addition mergers and acquisitions could be hampered by increased regulatory scrutiny. We cannot predict the effects of these changes on our business and profitability. Because government regulation greatly affects the business and financial results of commercial banks and bank holding companies, our cost of compliance could adversely affect our ability to operate profitably.

Additionally, we are subject to laws regarding our handling, disclosure and processing of personal and confidential information of certain parties, such as our employees, customers, suppliers, counterparties and other third parties. The Gramm-Leach-Bliley Act requires us to periodically disclose our privacy policies and practices relating to sharing such information and enables retail customers to opt out of our ability to share information with unaffiliated third parties, under certain circumstances. Other laws and regulations impact our ability to share certain information with affiliates and non-affiliates for marketing and/or non-marketing purposes, or to contact customers with marketing offers. We are subject to laws that require us to implement a comprehensive information security program that includes administrative, technical and physical safeguards to protect the security and confidentiality of customer records and information. Additionally, other legislative and regulatory activity continue to lend uncertainty to privacy compliance requirements that impact our business. We also expect that there will continue to be new laws, regulations and industry standards concerning privacy, data protection and information security proposed and enacted in various jurisdictions. The potential effects of pending legislation are far-reaching and may require us to modify our data processing practices and policies and to incur substantial costs and expenses in an effort to comply.

We must maintain adequate regulatory capital to support our business objectives.

Under regulatory capital adequacy guidelines and other regulatory requirements, we must satisfy capital requirements based upon quantitative measures of assets, liabilities and certain off-balance sheet items. Our satisfaction of these requirements is subject to qualitative judgments by regulators that may differ materially from management's and that are subject to being determined retroactively for prior periods. Additionally, regulators can make subjective assessments about the adequacy of capital levels, even if Pinnacle Bank's reported capital exceeds the "well-capitalized" requirements. Pinnacle Financial's ability to maintain its status as a financial holding company and to continue to operate Pinnacle Bank as it has in recent periods is dependent upon a number of factors, including Pinnacle Bank qualifying as "well capitalized" and "well managed" under applicable prompt corrective action regulations and upon Pinnacle Financial qualifying on an ongoing basis as "well capitalized" and "well managed" under applicable Federal Reserve regulations.

Failure to meet regulatory capital standards could have a material adverse effect on our business, including damaging the confidence of customers in us, adversely impacting our reputation and competitive position and retention of key personnel. Any of these developments could limit our access to:

- brokered deposits;
- the Federal Reserve discount window;
- advances from the FHLB;
- capital markets transactions; and
- development of new financial services.

Failure to meet regulatory capital standards may also result in higher FDIC assessments. If we fall below guidelines for being deemed “adequately capitalized” the FDIC or Federal Reserve could impose restrictions on our activities and a broad range of regulatory requirements in order to effect “prompt corrective action.” The capital requirements applicable to us are in a process of continuous evaluation and revision in connection with actions of the Basel Committee and our regulators. In September 2022, the Federal bank regulatory agencies publicly confirmed their joint commitment to implementing Basel IV in the United States, but did not provide any details or expected timing of such rules. We cannot predict the final form, timing or the effects of these regulations on our business, but among the possible effects are requirements that we slow our rate of growth or obtain additional capital which could reduce our earnings or dilute our existing shareholders.

Pinnacle Financial is required to act as a source of financial and managerial strength for Pinnacle Bank in times of stress.

Under federal law, Pinnacle Financial is required to act as a source of financial and managerial strength to Pinnacle Bank, and to commit resources to support Pinnacle Bank if necessary. Pinnacle Financial may be required to commit additional resources to Pinnacle Bank at times when Pinnacle Financial may not be in a financial position to provide such resources or when it may not be in Pinnacle Financial’s, or its shareholders’ or its creditors’ best interests to do so. Providing such support is more likely during times of financial stress for Pinnacle Financial and Pinnacle Bank, which may make any capital Pinnacle Financial is required to raise to provide such support more expensive or dilutive than it might otherwise be. In addition, any capital loans Pinnacle Financial makes to Pinnacle Bank are subordinate in right of payment to depositors and to certain other indebtedness of Pinnacle Bank. In the event of Pinnacle Financial’s bankruptcy, any commitment by it to a federal banking regulator to maintain the capital of Pinnacle Bank will be assumed by the bankruptcy trustee and entitled to priority of payment.

Non-compliance with the USA PATRIOT Act, the Bank Secrecy Act or other laws and regulations could result in fines or sanctions against us or restrict our ability to make acquisitions.

The Bank Secrecy Act, as amended by the USA PATRIOT Act of 2001, requires financial institutions to design and implement programs to prevent financial institutions from being used for money laundering and terrorist activities. If such activities are detected, financial institutions are obligated to file suspicious activity reports with the U.S. Treasury Department's Office of Financial Crimes Enforcement Network. These rules require financial institutions to establish procedures and maintain staffing levels that are sufficient for identifying and verifying the identity of customers seeking to open new financial accounts. Failure to comply with these regulations could result in fines or sanctions, including restrictions on conducting acquisitions or establishing new offices, as well as additional operating expenses to add staff and/or technological enhancements to our systems to better comply with our obligations. Failure to maintain and implement adequate programs to combat money laundering and terrorist financing could also have serious reputational consequences for us, which could have a material adverse effect on our business, financial condition or results of operations.

Risks Relating to Our Securities

The price of our capital stock may be volatile or may decline.

The trading price of our capital stock may fluctuate as a result of a number of factors, many of which are outside our control. In addition, the stock market is subject to fluctuations in trading volumes that affect the market prices of the shares of many companies. These broad market fluctuations could adversely affect the market price of our capital stock. Among the factors that could affect the price of the shares of our common stock and the depositary shares representing fractional interests in our Series B Preferred Stock are:

- actual or anticipated quarterly fluctuations in our results of operations and financial condition;
- changes in revenue or earnings estimates or publication of research reports and recommendations by financial analysts;
- failure to meet analysts’ or our own published estimates regarding earnings and the various financial measures that make up our earnings;
- speculation in the press or investment community;
- strategic actions by us or our competitors;
- actions by institutional shareholders;
- fluctuations in the stock price and operating results of our competitors;
- general market conditions and, in particular, developments related to market conditions for the financial services industry;
- market perceptions about the innovation economy, including levels of funding or "exit" activities of companies in the industries we serve;
- proposed or adopted regulatory changes or developments;
- changes in the political climate;
- market reactions to social media messages or posts;

- anticipated or pending investigations, proceedings or litigation that involve or affect us; and
- domestic and international economic and social factors unrelated to our performance.

The trading price of the shares of our common stock and the depositary shares representing fractional interests in our Series B Preferred Stock and the value of our other securities will further depend on many factors, which may change from time to time, including, without limitation, our financial condition, performance, creditworthiness and prospects, and future sales of our equity or equity-related securities. In some cases, the markets have produced downward pressure on stock prices and credit availability for certain issuers without regard to those issuers' underlying financial strength. A significant decline in our stock price could result in substantial losses for individual shareholders and could lead to costly and disruptive securities litigation, as well as the loss of key employees.

Our ability to declare and pay dividends is limited.

While our board of directors has approved the payment of a quarterly cash dividend on our common stock since the fourth quarter of 2013 and approved the payment of the quarterly dividends on our Series B Preferred Stock (and underlying depositary shares) since issuance, there can be no assurance of whether or when we may pay dividends on our capital stock in the future. Future dividends, if any, will be declared and paid at the discretion of our board of directors and will depend on a number of factors, including our and Pinnacle Bank's capital levels. Moreover, our ability to pay dividends on our common stock is limited by the terms of our Series B Preferred Stock which provides that if we have not paid dividends on the Series B Preferred Stock for the most recently completed dividend period, then no dividend or distribution shall be declared, paid, or set aside for payment on shares of our common stock.

Our principal source of funds used to pay cash dividends on our common stock will be cash we may hold from time to time as well as dividends that we receive from Pinnacle Bank. Although Pinnacle Bank's asset quality, earnings performance, liquidity and capital requirements will be taken into account before we declare or pay any future dividends on our capital stock, our board of directors will also consider our liquidity and capital requirements and our board of directors could determine to declare and pay dividends without relying on dividend payments from Pinnacle Bank.

Federal and state banking laws and regulations and state corporate laws restrict the amount of dividends we may declare and pay and that Pinnacle Bank may declare and pay to us. For example, Federal Reserve regulations implementing the capital rules required under Basel III do not permit dividends unless capital levels exceed certain higher levels applying capital conservation buffers. In addition, the Federal Reserve has issued supervisory guidance advising bank holding companies to eliminate, defer or reduce dividends paid on common stock and other forms of capital, like the Series B Preferred Stock, where the company's net income available to shareholders for the past four quarters, net of dividends previously paid during that period, is not sufficient to fully fund the dividends, the company's prospective rate of earnings retention is not consistent with the company's capital needs and overall current and prospective financial condition or the company will not meet, or is in danger of not meeting, minimum regulatory capital adequacy ratios. Recent supplements to this guidance reiterate the need for bank holding companies to inform their applicable reserve bank sufficiently in advance of the proposed payment of a dividend in certain circumstances.

In addition, subject to certain exceptions, the terms of our subordinated debentures prohibit us from paying dividends on shares of our capital stock at times when we are deferring the payment of interest on such subordinated debentures.

We may issue additional common stock or other equity securities in the future which could dilute the ownership interest of existing shareholders.

We may issue additional shares of common stock, or securities convertible into, exchangeable for or representing rights to acquire shares of common stock, including in connection with acquisitions. We may sell these shares at prices below the then current market price of shares, and the sale of these shares may significantly dilute shareholder ownership. We could also issue additional shares in connection with acquisitions of other financial institutions (as we did in connection with our acquisition of BNC and certain of our other acquisitions) or investments in fee-related or other businesses (as we did with BHG), which could also dilute shareholder ownership.

We have the ability under our current effective registration statement to issue shares of preferred stock. Further, our shareholders authorized our board of directors to issue up to 10,000,000 shares of preferred stock without any further action on the part of our shareholders, which is what we did when we issued the Series B Preferred Stock. We may determine that it is advisable, or we may encounter circumstances where we determine it is necessary, to issue additional shares of preferred stock, securities convertible into, exchangeable for, or that represent an interest in preferred stock, or preferred stock-equivalent securities to fund strategic initiatives or other business needs or to build additional capital. Our board of directors is authorized to cause us to issue one or more classes or series of preferred stock from time to time without any action on the part of our shareholders, including issuing additional shares of our Series B Preferred Stock or additional underlying depositary shares. Our board of directors also has the power, without shareholder approval, to set the terms of any such classes or series of preferred stock that may be issued, including voting rights, dividend rights, and preferences over the Series B Preferred Stock with respect to dividends or upon our dissolution, liquidation or

winding-up and other terms.

Although the affirmative vote or consent of the holders of at least two-thirds of all outstanding shares of the Series B Preferred Stock, voting together as a single class with any parity stock having similar voting rights, is required to authorize or issue any shares of capital stock senior in rights and preferences to the Series B Preferred Stock, if we issue preferred stock or depositary shares in the future with voting rights that dilute the voting power of the Series B Preferred Stock or depositary shares, the rights of holders of the depositary shares or the market price of the depositary shares could be adversely affected. The market price of the depositary shares underlying the shares of Series B Preferred Stock could decline as a result of these other offerings, as well as other sales of a large block of depositary shares, Series B Preferred Stock, or similar securities in the market thereafter, or the perception that such sales could occur. Holders of the Series B Preferred Stock are not entitled to preemptive rights or other protections against dilution.

Because our decision to issue securities in any future offering will depend on market conditions and other factors beyond our control, we cannot predict or estimate the amount, timing or nature of our future offerings or the prices at which we may issue securities that we offer. Thus, holders of the depositary shares underlying the shares of Series B Preferred Stock bear the risk of our future offerings reducing the market price of the depositary shares and diluting their holdings in the depositary shares.

The Series B Preferred Stock constitutes an equity security and ranks junior to all of our indebtedness and will rank junior to our and our subsidiaries' future indebtedness.

Shares of the Series B Preferred Stock are equity interests in Pinnacle Financial and do not constitute indebtedness. Accordingly, shares of the Series B Preferred Stock and the related depositary shares are and will be junior in right of payment to any existing and all future indebtedness and other non-equity claims of Pinnacle Financial with respect to assets available to satisfy claims on us, including in a liquidation of Pinnacle Financial. In the event of our bankruptcy, liquidation, dissolution or winding-up, our assets will be available to pay obligations on the Series B Preferred Stock and any parity stock only after all of our liabilities have been paid and any obligations we owe on any securities that rank senior to the Series B Preferred Stock then outstanding, if any, have been satisfied. In case of such bankruptcy, liquidation, dissolution or winding-up, the Series B Preferred Stock will rank equally with any parity stock in the distribution of our assets. Holders of the depositary shares may be fully subordinated to interests held by the U.S. government in the event of a receivership, insolvency, liquidation or similar proceeding. In addition, our existing and future indebtedness may restrict payment of dividends on the Series B Preferred Stock.

The Series B Preferred Stock and the depositary shares representing the Series B Preferred Stock effectively rank junior to any existing and all future liabilities of our subsidiaries.

We are a financial holding company and conduct substantially all of our operations through our subsidiaries. Our right to participate in any distribution of the assets of our subsidiaries upon any liquidation, reorganization, receivership or conservatorship of any subsidiary (and thus the ability of the holder of the Series B Preferred Stock and the holders of the depositary shares to benefit indirectly from such distribution) will rank junior to the prior claims of that subsidiary's creditors. In the event of bankruptcy, liquidation or winding-up, there may not be sufficient assets remaining, after paying our and our subsidiaries' liabilities, to pay amounts due on any or all of the Series B Preferred Stock and the depositary shares representing the Series B Preferred Stock then outstanding.

Pinnacle Bank owns 49% of the outstanding equity interests of BHG, and its right to participate in any distribution of the assets of BHG upon its liquidation, reorganization, receivership or conservatorship (and thus the ability of the holders of the Series B Preferred Stock and the holders of the depositary shares to benefit indirectly from such distribution) will rank junior to the prior claims of BHG's creditors. Moreover, Pinnacle Bank's 49% ownership interest in BHG and minority board representation on BHG's board means that Pinnacle Bank cannot on its own cause BHG to make distributions to Pinnacle Bank that could be used to pay dividends to Pinnacle Financial and thereafter used to pay dividends on the Series B Preferred Stock. In addition, BHG is a party to various agreements related to its indebtedness pursuant to which BHG's ability to make distributions to Pinnacle Bank may be limited.

The Series B Preferred Stock and the depositary shares representing the Series B Preferred Stock places no restrictions on our business or operations or on our ability to incur indebtedness or engage in any transactions, subject only to the limited voting rights of the shares of Series B Preferred Stock.

Dividends on the Series B Preferred Stock are non-cumulative and discretionary. If we do not declare dividends on the Series B Preferred Stock, holders of the depositary shares will not be entitled to receive related distributions on their depositary shares.

Dividends on the Series B Preferred Stock are non-cumulative and discretionary, not mandatory. Consequently, if our board of directors does not authorize and declare a dividend for any dividend period, the holder of the Series B Preferred Stock, and therefore the holders of the depositary shares, will not be entitled to receive a dividend for such period, and such undeclared dividend will not accrue and be payable. We will have no obligation to pay dividends for such dividend period, whether or not dividends are authorized and declared for any subsequent dividend period with respect to the Series B Preferred Stock. Our board of directors may determine

that it would be in our best interests to pay less than the full amount of the stated dividends on the Series B Preferred Stock or no dividend for any dividend period even if funds are available. Factors that would be considered by our board of directors in making this determination include our financial condition, liquidity and capital needs, the impact of current and pending legislation and regulations, economic conditions, our ability to service any equity or debt obligations senior to the Series B Preferred Stock, any credit agreements to which we may become a party, tax considerations and such other factors as our board of directors may deem relevant.

Unlike indebtedness, where principal and interest would customarily be payable on specified due dates, in the case of preferred stock like the Series B Preferred Stock dividends are payable only when, as and if authorized and declared by our board of directors or a duly authorized committee of the board and, as a Tennessee corporation and financial holding company, we are subject to restrictions on payments of dividends out of lawfully available funds as described elsewhere in this Annual Report on Form 10-K.

The holders of the Series B Preferred Stock, and therefore the holders of the depositary shares representing the Series B Preferred Stock, have limited voting rights.

Until and unless we are in arrears on our dividend payments on the Series B Preferred Stock for six quarterly dividend periods, whether consecutive or not, the holders of the Series B Preferred Stock, and therefore the holders of the depositary shares, have no voting rights with respect to matters that generally require the approval of voting shareholders, except with respect to certain fundamental changes in the terms of the Series B Preferred Stock, and except as may be required by the rules of any securities exchange or quotation system on which the Series B Preferred Stock is listed, traded or quoted or by Tennessee law. If dividends on the Series B Preferred Stock are not paid in full for six dividend periods, whether consecutive or not, the holders of Series B Preferred Stock, voting together as a class with any other equally ranked series of preferred stock that have similar voting rights then outstanding, if any, will have the right, at the first annual meeting or special meeting held thereafter and at subsequent annual meetings, to elect two directors to our board. The terms of the additional directors so elected will end upon the payment or setting aside for payment by us of continuous noncumulative dividends for at least four dividend periods on the Series B Preferred Stock and any other equally ranked series of preferred stock then outstanding, if any.

Holders of the depositary shares must act through the depositary to exercise any voting rights of the Series B Preferred Stock. Although each depositary share is entitled to 1/40th of a vote, the depositary can only vote whole shares of Series B Preferred Stock. While the depositary will vote the maximum number of whole shares of Series B Preferred Stock in accordance with the instructions it receives, any remaining fractional votes of holders of the depositary shares underlying such shares of Series B Preferred Stock will not be voted.

Holders of Pinnacle Financial's junior subordinated debentures have rights that are senior to those of Pinnacle Financial's shareholders.

At December 31, 2022, Pinnacle Financial had outstanding trust preferred securities and accompanying junior subordinated debentures totaling approximately \$133.0 million. Payments of the principal and interest on the trust preferred securities are conditionally guaranteed by Pinnacle Financial, and the accompanying subordinated debentures are senior to shares of Pinnacle Financial's common stock and preferred stock. As a result, Pinnacle Financial must make payments on the subordinated debentures (and the related trust preferred securities) before any dividends can be paid on our common stock or preferred stock and, in the event of Pinnacle Financial's bankruptcy, dissolution or liquidation, the holders of the subordinated debentures must be satisfied before any distributions can be made on Pinnacle Financial's preferred stock, and thereafter its common stock. Pinnacle Financial has the right to defer distributions on its junior subordinated debentures (and the related trust preferred securities) for up to five years, during which time no dividends may be paid on its common stock or preferred stock.

Pinnacle Financial and Pinnacle Bank have in the past issued subordinated indebtedness the holders of which have rights that are senior to those of Pinnacle Financial's shareholders.

From time to time, Pinnacle Financial and Pinnacle Bank have issued, and in connection with the Avenue merger and BNC merger, assumed, subordinated notes. At December 31, 2022, Pinnacle Financial had an aggregate of \$300.0 million of subordinated notes outstanding, not including the subordinated debentures issued in connection with our trust preferred securities; Pinnacle Bank did not have any subordinated notes outstanding at December 31, 2022. Moreover, the notes we have issued rank senior to shares of Pinnacle Financial's common and preferred stock and Pinnacle Bank's subordinated indebtedness, if any be outstanding from time to time, is structurally senior to the rights of the holders of Pinnacle Financial's common and preferred stock. In the event of any bankruptcy, dissolution or liquidation of Pinnacle Financial, these notes, along with Pinnacle Financial's other indebtedness, would have to be repaid before Pinnacle Financial's shareholders would be entitled to receive any of the assets of Pinnacle Financial.

Pinnacle Financial or Pinnacle Bank may from time to time issue, or assume in connection with an acquisition, additional subordinated indebtedness that would have to be repaid before Pinnacle Financial's shareholders would be entitled to receive any of the assets of Pinnacle Financial or Pinnacle Bank.

We and/or the holders of certain types of our securities could be adversely affected by unfavorable ratings from rating agencies.

The ratings agencies regularly evaluate Pinnacle Financial and Pinnacle Bank, and their ratings of our company and certain of our debt and equity securities are based on a number of factors, including our financial strength as well as factors not entirely within our control, including conditions affecting the financial services industry generally. There can be no assurance that we will not receive adverse changes in our published ratings in the future, which could adversely affect the cost and other terms upon which we are able to obtain funding, and the way in which we are perceived in the capital markets. Actual or anticipated changes, or downgrades in our published credit ratings, including any announcement that our ratings are under review for a downgrade, could affect the market value and liquidity of our securities, increase our borrowing costs and negatively impact our profitability. Additionally, a downgrade of published credit rating of any particular security issued by us or our subsidiaries could negatively affect the ability of the holders of that security to sell the securities and the prices at which any such securities may be sold.

Even though our common stock and the depositary shares underlying our Series B Preferred Stock are currently traded on the Nasdaq Stock Market's Global Select Market, these shares, particularly the depositary shares, have less liquidity than many other stocks quoted on a national securities exchange.

The trading volume in our common stock and depositary shares on the Nasdaq Global Select Market has been relatively low when compared with larger companies listed on the Nasdaq Global Select Market or other stock exchanges. Although we have experienced increased liquidity in our stock, we cannot say with any certainty that a more active and liquid trading market for our common stock or depositary shares will continue to develop. Because of this, it may be more difficult for shareholders to sell a substantial number of shares for the same price at which shareholders could sell a smaller number of shares.

We cannot predict the effect, if any, that future sales of our common stock or additional depositary shares in the market, or the availability of shares of common stock or depositary shares for sale in the market, will have on the market price of our common stock and depositary shares. We can give no assurance that sales of substantial amounts of common stock or depositary shares in the market, or the potential for large amounts of sales in the market, would not cause the price of our common stock or depositary shares to decline or impair our future ability to raise capital through sales of our common stock or additional depositary shares.

The market price of our common stock has fluctuated significantly, and may fluctuate in the future. These fluctuations may be unrelated to our performance. General market or industry price declines or overall market volatility in the future could adversely affect the price of our common stock or depositary shares, and the current market price may not be indicative of future market prices.

Our corporate organizational documents and the provisions of Tennessee law to which we are subject contain certain provisions that could have an anti-takeover effect and may delay, make more difficult or prevent an attempted acquisition of Pinnacle Financial that you may favor.

Our amended and restated charter, as amended, and bylaws, as amended, contain various provisions that could have an anti-takeover effect and may delay, discourage or prevent an attempted acquisition or change of control of Pinnacle Financial. These provisions include:

- a provision requiring our board of directors to take into account specific factors when considering an acquisition proposal;
- a provision that all extraordinary corporate transactions to which we are a party must be approved by a majority of the directors and a majority of the shares entitled to vote;
- a provision that any special meeting of our shareholders may be called only by our chairman, our chief executive officer, our president, our board of directors, or the holders of 25% of the outstanding shares of our voting stock that have held those shares for at least one year; and
- a provision establishing certain advance notice procedures for nomination of candidates for election as directors at an annual or special meeting of shareholders at which directors are elected.

Additionally, our amended and restated charter, as amended, authorizes the board of directors to issue shares of our preferred stock without shareholder approval and upon such terms as the board of directors may determine. The issuance of our preferred stock, while providing desirable flexibility in connection with possible acquisitions, financings, and other corporate purposes, could have the effect of making it more difficult for a third party to acquire, or of discouraging a third party from acquiring, a controlling interest in us. In addition, certain provisions of Tennessee law, including a provision which restricts certain business combinations between a Tennessee corporation and certain affiliated shareholders, may delay, discourage or prevent an attempted acquisition or change in control of our company.

An investment in our common stock or depositary shares is not an insured deposit and is not guaranteed by the FDIC.

An investment in our common stock or depositary shares is not a bank deposit and, therefore, is not insured against loss or guaranteed by the FDIC, any other deposit insurance fund or by any other public or private entity. An investment in our common stock or depositary shares is inherently risky for the reasons described herein and our shareholders will bear the risk of loss if the value or market price of our common stock or depositary shares is adversely affected.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

The Company's executive offices are located at 150 Third Avenue South, Suite 900, Nashville, Tennessee. At December 31, 2022, we conducted branch banking operations in 123 offices in six states. These offices include both owned and leased facilities as follows:

State	Owned	Leased	Total
Alabama	—	2	2
Tennessee	31	20	51
Georgia	—	2	2
North Carolina	28	10	38
South Carolina	10	10	20
Virginia	7	3	10
	76	47	123

ITEM 3. LEGAL PROCEEDINGS

Various legal proceedings to which Pinnacle Financial or a subsidiary of Pinnacle Financial is party arise from time to time in the normal course of business. Management does not expect the ultimate disposition of these proceedings to have a material adverse effect on Pinnacle Financial's business, financial condition or results of operations.

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

Pinnacle Financial's common stock is traded on the Nasdaq Global Select Market under the symbol "PNFP" and has traded on that market since July 3, 2006. As of February 22, 2023, Pinnacle Financial had approximately 4,080 shareholders of record.

In connection with the settlement of income tax liabilities associated with the Company's equity compensation plans, Pinnacle Financial repurchased shares of its common stock during the quarter ended December 31, 2022 as follows:

Period	Total Number of Shares Repurchased ⁽¹⁾	Average Price Paid Per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs ⁽²⁾	Maximum Number (or Approximate Dollar Value) of Shares That May Yet Be Purchased Under the Plans or Programs ⁽²⁾
October 1, 2022 to October 31, 2022	4,000	\$ 84.05	—	125,000,000
November 1, 2022 to November 30, 2022	12	84.46	—	125,000,000
December 1, 2022 to December 31, 2022	24	73.56	—	125,000,000
Total	4,036	\$ 84.00	—	125,000,000

⁽¹⁾ During the quarter ended December 31, 2022, 16,277 shares of restricted stock previously awarded to certain of our associates vested. We withheld 4,036 shares to satisfy tax withholding requirements associated with their vesting.

⁽²⁾ On January 18, 2022, the board of directors authorized a share repurchase program for up to \$125.0 million of Pinnacle Financial's outstanding common stock. The share repurchase program is set to expire on March 31, 2023 and the Board of Directors has authorized a \$125.0 million share repurchase program that will commence upon expiration of the current program. This new program will expire on March 31, 2024. Share repurchases may be made from time to time, on the open market or in privately negotiated transactions, at the discretion of the management of Pinnacle Financial, after the board of directors of Pinnacle Financial authorizes a repurchase program. The approved share repurchase programs do not obligate Pinnacle Financial to repurchase any dollar amount or number of shares, and the programs may be extended, modified, suspended, or discontinued at any time. Stock repurchases generally are affected through open market purchases, and may be made through unsolicited negotiated transactions. The timing of these repurchases will depend on market conditions and other requirements. Pinnacle Financial did not repurchase any shares of its common stock under its current repurchase plan during the year ended December 31, 2022.

ITEM 6. RESERVED

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

The following is a discussion of our financial condition at December 31, 2022 and 2021 and our results of operations for each of the years in the three-year period ended December 31, 2022. The purpose of this discussion is to focus on information about our financial condition and results of operations which is not otherwise apparent from our consolidated financial statements. The following discussion and analysis should be read along with our consolidated financial statements and the related notes included elsewhere herein, as well as the information included in Part I Item 1A "Risk Factors", and under the caption "Forward-Looking Statements".

Selected Financial Data

Set forth below is certain selected financial data related to the Company's operations for 2020, 2021 and 2022:

(dollars in thousands, except per share data)	2022	2021	2020 ⁽¹⁾
Total assets	\$ 41,970,021	\$ 38,469,399	\$ 34,932,860
Loans, net of unearned income	29,041,605	23,414,262	22,424,501
Allowance for credit losses	300,665	263,233	285,050
Total securities	6,637,920	6,070,152	4,615,040
Goodwill, core deposit and other intangible assets	1,881,528	1,853,630	1,862,147
Deposits and securities sold under agreements to repurchase	35,156,148	31,457,092	27,833,739
Advances from FHLB	464,436	888,681	1,087,927
Subordinated debt and other borrowings	424,055	423,172	670,575

(dollars in thousands, except per share data)

	2022	2021	2020 ⁽¹⁾
Shareholders' equity	5,519,392	5,310,607	4,904,611
Statement of Operations Data:			
Interest income	\$ 1,373,935	\$ 1,031,214	\$ 1,021,042
Interest expense	244,642	98,813	199,254
Net interest income	1,129,293	932,401	821,788
Provision for credit losses	67,925	16,126	203,815
Net interest income after provision for credit losses	1,061,368	916,275	617,973
Noninterest income	416,124	395,734	317,840
Noninterest expense	779,999	660,104	564,455
Income before income taxes	697,493	651,905	371,358
Income tax expense	136,751	124,582	59,037
Net income	560,742	527,323	312,321
Preferred stock dividends	15,192	15,192	7,596
Net income available to common shareholders	545,550	512,131	304,725
Per Share Data:			
Earnings per share available to common shareholders – basic	\$ 7.20	\$ 6.79	\$ 4.04
Weighted average common shares outstanding – basic	75,735,404	75,468,339	75,376,489
Earnings per share available to common shareholders – diluted	\$ 7.17	\$ 6.75	\$ 4.03
Weighted average common shares outstanding – diluted	76,133,865	75,927,147	75,654,385
Common dividends per share	\$ 0.88	\$ 0.72	\$ 0.64
Preferred dividends per share	\$ 67.52	\$ 67.52	\$ 33.76
Book value per common share	\$ 69.35	\$ 66.89	\$ 61.80
Common shares outstanding at end of period	76,454,020	76,142,726	75,850,323
Performance Ratios:			
Return on average assets	1.37 %	1.43 %	0.94 %
Return on average shareholders' equity	10.16 %	10.02 %	6.57 %
Net interest margin	3.29 %	3.02 %	2.97 %
Net interest spread	2.94 %	2.87 %	2.72 %
Noninterest income to average assets	1.05 %	1.11 %	0.98 %
Noninterest expense to average assets	1.96 %	1.85 %	1.75 %
Efficiency ratio	50.47 %	49.70 %	49.53 %
Average loan to average deposit ratio	80.35 %	80.61 %	88.11 %
Avg. interest-earning assets to avg. interest-bearing liabilities	151.73 %	149.63 %	136.60 %
Average equity to average total assets ratio	13.49 %	14.31 %	14.33 %
Common stock dividend payout ratio	12.26 %	10.67 %	15.84 %
Credit Quality Ratios:			
Allowance for credit losses to nonaccrual loans	788.81 %	833.83 %	386.06 %
Allowance for credit losses to total loans	1.04 %	1.12 %	1.27 %
Nonperforming assets to total assets	0.11 %	0.10 %	0.25 %
Nonperforming assets to total loans and other real estate	0.16 %	0.17 %	0.38 %
Net loan charge-offs to average loans	0.10 %	0.17 %	0.18 %
Capital Ratios⁽²⁾:			
Common equity Tier 1 capital	9.96 %	10.93 %	10.03 %
Leverage	9.75 %	9.70 %	8.63 %
Tier 1 capital	10.55 %	11.67 %	10.87 %
Total capital	12.44 %	13.84 %	14.26 %

(1) Information for the 2020 fiscal year includes adoption of FASB ASU 2016-13 on January 1, 2020 which introduces the current expected credit losses methodology which requires us to estimate all expected credit losses over the remaining life of our loan portfolio. The impact of the adoption of ASU 2016-13 is discussed throughout the remainder of this Annual Report on Form 10-K.

(2) Capital ratios are for Pinnacle Financial Partners, Inc.

Overview

General. Our fully diluted net income per common share for the year ended December 31, 2022 was \$7.17 compared to fully diluted net income per common share of \$6.75 and \$4.03 for the years ended December 31, 2021 and 2020, respectively. At December 31, 2022, loans had increased by \$5.6 billion to \$29.0 billion as compared to \$23.4 billion at December 31, 2021.

Results of operations. Our net interest income increased to \$1.1 billion for 2022 compared to \$932.4 million for 2021 and \$821.8 million for 2020. The increase in 2022 as compared to 2021 was largely the result of organic loan growth and yield expansion in our earning asset portfolio. Partially offsetting the increase was a decrease in the interest and fees related to PPP loans and discount accretion associated with fair value adjustments as well as the rising cost of funds in 2022. The increase in 2021 as compared to 2020 was largely the result of lower cost of funds and organic loan growth.

Net interest income in 2022, 2021 and 2020 was affected by fluctuations in our net interest spread and for 2021 and 2020 was materially impacted by income on PPP loans. The net interest margin (the ratio of net interest income to average earning assets) for 2022 was 3.29% compared to 3.02% and 2.97% for 2021 and 2020, respectively.

Our provision for credit losses was \$67.9 million for 2022 compared to \$16.1 million in 2021 and \$203.8 million in 2020. The increase in provision expense as compared to 2021 is primarily due to growth in the loan portfolio and the developing uncertain economic environment. Also contributing to provision expense in all periods were net charge-offs which were \$26.5 million during 2022 compared to \$38.7 million in 2021 and \$39.4 million in 2020.

Noninterest income for 2022 compared to 2021 increased by \$20.4 million, or 5.2%. The growth in noninterest income for 2022 compared to 2021 was in large part attributable to an increase in income from our equity method investment in Bankers Healthcare Group, LLC (BHG) of \$23.2 million, or 19.0%, during the year ended December 31, 2022 compared to the same period in the prior year. Additionally, positively impacting noninterest income were wealth management revenues of \$82.1 million for the year ended December 31, 2022 compared to \$69.2 million for the same period in the prior year. Other noninterest income, which is the result of, among other things, fee revenue lines of business other than those specifically identified on the face of our consolidated income statement, also increased during the year ended December 31, 2022 by \$6.6 million when compared to the same period in the prior year due in part to increases in interchange and other consumer fees when compared to 2021 and a \$5.5 million gain on remeasurement of our previously held equity investment in JB&B Capital, LLC (JB&B), resulting from our bank subsidiary's acquisition on March 1, 2022 of the 80% equity interest of JB&B it did not previously own. The above increases were offset by a decrease in income from other equity investments of \$12.5 million during 2022 when compared to 2021 as a result of several of our venture fund investments experiencing increased valuations in their underlying portfolios during the year ended December 31, 2022, but at lower amounts than those experienced during the same period in 2021 as well as gains on mortgage loans sold, net, which decreased by \$25.2 million for the year ended December 31, 2022 as compared to 2021 primarily due to the increases in the interest rate environment.

Noninterest income for 2021 compared to 2020 increased by \$77.9 million, or 24.5%. The growth in noninterest income for 2021 compared to 2020 was in large part attributable to an increase in income from our equity method investment in Bankers Healthcare Group, LLC (BHG) of \$38.7 million, or 46.4%, during the year ended December 31, 2021 compared to the same period in the prior year. Additionally, positively impacting noninterest income were wealth management revenues of \$69.2 million for the year ended December 31, 2021 compared to \$56.1 million for the same period in the prior year. Other noninterest income also increased during the year ended December 31, 2021 by \$46.9 million when compared to the same period in the prior year primarily due to an increase of \$22.0 million in income from other equity investments and an increase of \$16.3 million from interchange and other consumer fees when compared to 2020. The above increases were offset by a decrease in gains on mortgage loans sold, net, which decreased by \$27.6 million for the year ended December 31, 2021 as compared to 2020 primarily due to the fluctuations in the interest rate environment and a decline in inventory of homes available-for-sale in our markets in 2021.

Noninterest expense for 2022 compared to 2021 increased by \$119.9 million, or 18.2%. Impacting noninterest expense for the year ended December 31, 2022 as compared to 2021 was the \$74.2 million increase in salaries and employee benefits. The change in salaries and employee benefits was primarily the result of an increase in our associate base to 3,241.5 full-time equivalent associates at December 31, 2022 from 2,841.0 at December 31, 2021 as well as annual merit increases awarded in the first quarter of 2022. Also contributing to the increase for 2022 compared to 2021 were cash and equity incentives which were \$7.7 million, or 7.0% higher, in 2022. Noninterest expense categories, other than salaries and employee benefits, were \$269.8 million during 2022 compared to \$224.1 million during 2021. This increase is due primarily to overall growth in the infrastructure of the firm, additional locations added in 2022 and new technology implemented in 2022.

Noninterest expense for 2021 compared to 2020 increased by \$95.6 million, or 16.9%. Impacting noninterest expense for the year ended December 31, 2021 as compared to 2020 was the \$101.5 million increase in salaries and employee benefits. The change in salaries and employee benefits was primarily the result of an increase in our annual cash incentive plan accrual and an increase in equity compensation expense both due to accruals associated with achievement of above-target level performance during 2021 compared to 2020 when our performance resulted in below-target level achievement for cash and forfeiture of a portion of the equity awards we had issued with performance measures tied to 2020 performance equity incentives, as well as annual merit increases awarded in the first quarter of 2021 and an increase in our associate base to 2,841.0 at December 31, 2021 from 2,634.0 at December 31, 2020. Impacting the decrease in other noninterest expense during the year ended December 31, 2021 were \$15.2 million in FHLB restructuring charges and \$4.7 million in hedge termination charges recorded during the year ended December 31, 2020 that did not reoccur in 2021.

During the three years ended December 31, 2022, 2021 and 2020, we recorded income tax expense of \$136.8 million, \$124.6 million and \$59.0 million, respectively. Our tax expense for the year ended December 31, 2020 was impacted by the adoption of CECL and the provision for credit losses recorded in response to the COVID-19 pandemic. Our effective tax rate for the years ended December 31, 2022, 2021 and 2020, was 19.6%, 19.1% and 15.9%, respectively.

Our efficiency ratio (the ratio of noninterest expense to the sum of net interest income and noninterest income) was 50.5%, 49.7%, and 49.5%, for the three years ended December 31, 2022, 2021 and 2020, respectively. The efficiency ratio measures the amount of expense that is incurred to generate a dollar of revenue. The efficiency ratio for the year ended December 31, 2022 compared to the same period in 2021 and in 2021 as compared to 2020 were both positively and negatively impacted by the changes to noninterest expense, net interest income and noninterest income discussed above.

Net income for 2022 was \$560.7 million compared to \$527.3 million in 2021 and \$312.3 million in 2020. Net income available to common shareholders for 2022 was \$545.6 million compared to \$512.1 million in 2021 and \$304.7 million in 2020. The presentation of net income available to common shareholders (rather than net income available to shareholders) was required following the issuance of 9.0 million depositary shares, each representing a 1/40th interest in a share of our 6.75% fixed rate non-cumulative, perpetual preferred stock, Series B (Series B Preferred Stock) in the second quarter of 2020. Fully-diluted net income per common share was \$7.17 for 2022 compared to \$6.75 for 2021 and \$4.03 for 2020. Net income in 2022 was primarily impacted positively by organic growth and yield expansion in our earning asset portfolio as well as increased earnings from our equity method investment in BHG offset by higher costs of funds and increases in salaries and employee benefits as described above. Net income in 2021 was primarily impacted positively by decreased provision expense incurred and lower cost of funds during 2021. Fully-diluted net income per common share in all periods presented was also impacted by the dividends paid on the Series B Preferred Stock. Additionally, positively impacting fully-diluted net income per common share in each of the years ended 2022, 2021 and 2020 were organic growth.

Financial Condition. Our loan balances increased by \$5.6 billion, or 24.0%, to \$29.0 billion during 2022 as compared to 2021. The increase is primarily the result of loans made to borrowers that principally operate or are located in our core markets, including the markets in which we recently expanded, increases in the number of relationship advisors we employ and continued focus on attracting new customers to our company offset in part by a decrease of \$363.1 million of PPP loans in our portfolio as these loans were paid down or forgiven by the SBA. Loan growth was also positively impacted by the addition of certain specialty lending groups, including franchise lending and equipment lease financing.

At December 31, 2022, our allowance for credit losses was \$300.7 million compared to \$263.2 million at December 31, 2021. The increase in the allowance for credit losses is largely the result of growth in the loan portfolio and uncertainty in the economic environment.

Total deposits increased from \$31.3 billion at December 31, 2021 to \$35.0 billion at December 31, 2022, an increase of \$3.7 billion, or 11.7%. Interest-bearing deposit growth during the year ended December 31, 2022, increased approximately \$1.4 billion, or 20.7% from December 31, 2021, as a result of our intentional focus on gathering and retaining these deposits. Within our deposits, the ratio of core funding to total deposits decreased from 89.5% at December 31, 2021 to 86.9% at December 31, 2022. This decline is largely due to fluctuation in interest rates during 2022 resulting in increasing cost of funds.

We believe we have hired experienced relationship managers that have significant client portfolios and longstanding reputations within the communities we serve. As such, we believe they will attract more relationship managers to our firm as well as loans and deposits from new and existing small-and-middle-market clients particularly if the economies in our principal markets continue to expand.

Capital and Liquidity. At December 31, 2022 and 2021, our capital ratios, including our bank's capital ratios, exceeded regulatory minimum capital requirements and those necessary to be considered well-capitalized under applicable federal regulations. From time to time, we may be required to support the capital needs of our bank subsidiary. At December 31, 2022, we had approximately \$186.6 million of cash at the holding company which could be used to support our bank.

We believe we have various capital raising techniques available to us to provide for the capital needs of our company and bank, such as issuing subordinated debt or entering into a revolving credit facility with a financial institution. We also periodically evaluate capital markets conditions to identify opportunities to access those markets if necessary or prudent to support our capital levels.

On January 19, 2021, our board of directors authorized a share repurchase program for up to \$125.0 million of our outstanding common stock. The authorization for this program remained in effect through March 31, 2022. On January 18, 2022, our board of directors authorized a share repurchase program for up to \$125.0 million of our common stock which commenced upon the expiration of the share repurchase program that expired on March 31, 2022. The new authorization is to remain in effect through March 31, 2023. We did not repurchase any shares under either share repurchase program during the years ended December 31, 2022 or 2021, respectively. On January 17, 2023, our board of directors authorized a share repurchase program for up to \$125.0 million of our common stock to commence upon expiration of our existing share repurchase program that is set to expire on March 31, 2023. This authorization is to remain in effect through March 31, 2024.

Critical Accounting Estimates

The accounting principles we follow and our methods of applying these principles conform with U.S. generally accepted accounting principles and with general practices within the banking industry. In connection with the application of those principles, we have made judgments and estimates which, in the case of the determination of our allowance for credit losses and the assessment of impairment of goodwill, has been critical to the determination of our financial position and results of operations.

Allowance for Credit Losses - Loans - The allowance for credit losses is estimated under the CECL methodology set forth in FASB ASC 326. The allowance for credit losses reflects management's estimate of the amount of credit losses expected to be recognized over the remaining life of the loans in our portfolio. This evaluation requires significant management judgment and is based upon relevant available information related to historical default and loss experience, current and projected economic conditions, and other portfolio-specific and environmental risk factors. Losses are predicted over a reasonable and supportable forecast period, and at the end of the reasonable and supportable period losses revert to long term historical averages. The allowance for credit losses is measured on a collective basis for pools of loans with similar risk characteristics, and for loans that do not share similar risk characteristics with the collectively evaluated pools, evaluations are performed on an individual basis. There are factors beyond our control, such as changes in projected economic conditions, real estate markets or particular industry conditions which may materially impact asset quality and the adequacy of the allowance for credit losses and thus the resulting provision for credit losses. The allowance is adjusted through provision for credit losses and decreased by charge-offs, net of recoveries of amounts previously charged-off. See "Allowance for Credit Losses on Loans" elsewhere within this section as well as Note 1 - Summary of Significant Accounting Policies and Note 5 - Loans and Allowance for Credit Losses in the notes to consolidated financial statements included in Item 8. Financial Statements for additional information related to the allowance for credit losses.

Impairment of Goodwill - Goodwill is evaluated for impairment annually and more frequently if events and circumstances indicate that the asset might be impaired as described in ASC 350. Accordingly, we performed a qualitative assessment by examining changes in macroeconomic conditions, industry and market conditions, overall financial performance, cost factors and other relevant entity-specific events, including changes in the share price of our common stock. While we believe that the assumptions utilized in our testing are appropriate, they may not reflect actual outcomes that could occur. Specific factors that could negatively impact the assumptions used include significant fluctuations in our asset/liability balances or the composition of our balance sheet; a change in the overall valuation of the stock market, specifically bank stocks; performance of Southeast U.S. Banks; and our performance relative to peers. Changes in these assumptions, or any other key assumptions, could have a material impact on our qualitative assessment, resulting in the decision to perform additional procedures to identify and determine the amount of goodwill impairment, if any. Should it be determined in a future period that goodwill has become impaired, then a charge to earnings would be recorded in the period such determination is made. See Note 1 - Summary of Significant Accounting Policies in the notes to consolidated financial statements included in Item 8. Financial Statements for additional information related to goodwill.

Results of Operations

The following is a summary of certain financial information as of or for the years ended December 31, 2022, 2021 and 2020 (dollars in thousands, except per share data):

	Years ended December 31,		2022- 2021 Percent Increase (Decrease)	Year ended December 31,	2021 - 2020 Percent Increase (Decrease)
	2022	2021		2020	
Income Statement:					
Interest income	\$ 1,373,935	\$ 1,031,214	33.2 %	\$ 1,021,042	1.0 %
Interest expense	244,642	98,813	>100%	199,254	(50.4) %
Net interest income	1,129,293	932,401	21.1 %	821,788	13.5 %
Provision for credit losses	67,925	16,126	>100%	203,815	(92.1) %
Net interest income after provision for credit losses	1,061,368	916,275	15.8 %	617,973	48.3 %
Noninterest income	416,124	395,734	5.2 %	317,840	24.5 %
Noninterest expense	779,999	660,104	18.2 %	564,455	17.0 %
Net income before income taxes	697,493	651,905	7.0 %	371,358	75.5 %
Income tax expense	136,751	124,582	9.8 %	59,037	>100%
Net income	560,742	527,323	6.3 %	312,321	68.8 %
Preferred stock dividends	15,192	15,192	— %	7,596	100.0 %
Net income available to common shareholders	\$ 545,550	\$ 512,131	6.5 %	\$ 304,725	68.1 %
Per Share Data:					
Basic net income per common share	\$ 7.20	\$ 6.79	6.0 %	\$ 4.04	68.1 %
Diluted net income per common share	\$ 7.17	\$ 6.75	6.2 %	\$ 4.03	67.5 %
Performance Ratios:					
Return on average assets ⁽¹⁾	1.37 %	1.43 %	(4.2) %	0.94 %	52.1 %
Return on average shareholders' equity ⁽²⁾	10.16 %	10.02 %	1.4 %	6.57 %	52.5 %
Return on average common shareholders' equity ⁽³⁾	10.58 %	10.47 %	1.1 %	6.76 %	54.9 %
Balance Sheet:					
Loans, net of allowance for credit losses	\$ 28,740,940	\$ 23,151,029	24.2 %	\$ 22,139,451	4.6 %
Deposits	\$ 34,961,238	\$ 31,304,533	11.7 %	\$ 27,705,575	13.0 %

(1) Return on average assets is the result of net income available to common shareholders for the reported period, divided by average assets for the period.

(2) Return on average shareholders' equity is the result of net income available to common shareholders for the reported period, divided by average shareholders' equity for the period.

(3) Return on average common shareholders' equity is the result of net income available to common shareholders for the reported period, divided by average common shareholders' equity for the period.

Net Interest Income. Net interest income represents the amount by which interest earned on various earning assets exceeds interest paid on deposits and other interest bearing liabilities and is the most significant component of our revenues. For the year ended December 31, 2022, we recorded net interest income of approximately \$1.1 billion, which resulted in a net interest margin of 3.29%. For the year ended December 31, 2021, we recorded net interest income of approximately \$932.4 million, which resulted in a net interest margin of 3.02%. For the year ended December 31, 2020, we recorded net interest income of approximately \$821.8 million, which resulted in a net interest margin of 2.97%. The increase in net interest income in 2022 as compared to 2021 was largely the result of organic loan growth and yield expansion in our earning asset portfolio. Partially offsetting the increase was a decrease in the interest and fees related to PPP loans and discount accretion associated with fair value adjustments as well as the rising cost of funds in 2022. The increase in net interest income in 2021 as compared to 2020 was largely the result of lower cost of funds and organic loan growth.

The Federal Reserve influences the general market rates of interest, including the deposit and loan rates offered by many financial institutions, through changes to the federal funds rate. Our loan portfolio is affected by changes in the prime interest rate. During 2022, the prime rate increased 425 basis points to 7.50% at December 31, 2022. Our loan portfolio is also impacted by changes in LIBOR. At December 31, 2022, the one-month and three-month U.S. dollar LIBOR rates were 4.39% and 4.75%, respectively, while at December 31, 2021, the one-month and three-month U.S. dollar LIBOR rates were 0.10% and 0.21%, respectively, and at December 31, 2020, the one-month and three-month U.S. dollar LIBOR rates were 0.14% and 0.24% respectively. As a result of reference rate reform and the expected discontinuation of LIBOR by June 30, 2023, Pinnacle Financial has begun implementation of its transition plan to identify and modify its loans and other financial instruments, including certain indebtedness, with attributes that are either directly or indirectly influenced by LIBOR. Pinnacle Financial has begun negotiating loans using its preferred replacement index, SOFR. For Pinnacle Financial's currently outstanding LIBOR-based loans, the timing and manner in which each customer's contract transitions to SOFR will vary on a case-by-case basis. Pinnacle Financial expects to complete all loan transitions by June 30, 2023.

The following table sets forth the amount of our average balances, interest income or interest expense for each category of interest-earning assets and interest-bearing liabilities and the average interest rate for total interest-earning assets and total interest-bearing liabilities, net interest spread and net interest margin for each of the years in the three-year period ended December 31, 2022 (in thousands):

	2022			2021			2020		
	<i>Average Balances</i>	<i>Interest</i>	<i>Rates/ Yields</i>	<i>Average Balances</i>	<i>Interest</i>	<i>Rates/ Yields</i>	<i>Average Balances</i>	<i>Interest</i>	<i>Rates/ Yields</i>
Interest-earning assets:									
Loans ^{(1) (2)}	\$ 26,182,102	\$1,182,492	4.62 %	\$ 23,060,949	\$ 924,043	4.09 %	\$ 21,824,841	\$ 919,744	4.30 %
Securities:									
Taxable	3,405,346	67,063	1.97 %	2,711,044	34,769	1.28 %	2,136,437	35,663	1.67 %
Tax-exempt ⁽²⁾	3,013,505	81,522	3.26 %	2,534,653	64,848	3.09 %	2,114,277	58,867	3.35 %
Interest-bearing due from banks	1,815,251	23,206	1.28 %	3,056,555	3,853	0.13 %	2,410,611	4,038	0.17 %
Securities purchased under agreements to resell	1,010,443	14,106	1.40 %	426,027	1,440	0.34 %	—	—	— %
Federal funds sold	—	—	— %	9,964	—	— %	22,342	30	0.14 %
Other	181,824	5,546	3.05 %	160,066	2,261	1.41 %	153,345	2,700	1.76 %
Total interest-earning assets	35,608,471	1,373,935	3.98 %	31,959,258	1,031,214	3.33 %	28,661,853	1,021,042	3.67 %
Nonearning assets:									
Intangible assets	1,877,870			1,858,119			1,867,007		
Other nonearning assets	2,324,564			1,875,255			1,805,677		
Total assets	\$ 39,810,905			\$ 35,692,632			\$ 32,334,537		
Interest-bearing liabilities:									
Interest-bearing deposits:									
Interest checking	6,737,026	63,549	0.94 %	5,578,632	9,887	0.18 %	4,602,683	19,542	0.42 %
Savings and money market	12,695,974	112,218	0.88 %	11,437,779	22,823	0.20 %	9,623,790	45,364	0.47 %
Time deposits	2,478,629	28,352	1.14 %	2,682,315	21,406	0.80 %	4,162,523	70,641	1.70 %
Total interest-bearing deposits	21,911,629	204,119	0.93 %	19,698,726	54,116	0.27 %	18,388,996	135,547	0.74 %
Securities sold under agreements to repurchase	203,082	794	0.39 %	155,888	239	0.15 %	150,118	350	0.23 %
Federal Home Loan Bank advances	923,964	20,848	2.26 %	899,785	18,111	2.01 %	1,750,578	33,135	1.89 %
Subordinated debt and other borrowings	429,169	18,881	4.40 %	604,081	26,347	4.36 %	692,169	30,222	4.37 %
Total interest-bearing liabilities	23,467,844	244,642	1.04 %	21,358,480	98,813	0.46 %	20,981,861	199,254	0.95 %
Noninterest-bearing deposits	10,674,249	—	— %	8,910,349	—	— %	6,380,155	—	— %
Total deposits and interest-bearing liabilities	34,142,093	244,642	0.72 %	30,268,829	98,813	0.33 %	27,362,016	199,254	0.73 %
Other liabilities	297,409			314,650			337,855		
Total liabilities	34,439,502			30,583,479			27,699,871		
Shareholders' equity	5,371,403			5,109,153			4,634,666		
Total liabilities and shareholders' equity	\$ 39,810,905			\$ 35,692,632			\$ 32,334,537		
Net interest income		\$1,129,293			\$ 932,401			\$ 821,788	
Net interest spread ⁽³⁾			2.94 %			2.87 %			2.72 %
Net interest margin ⁽⁴⁾			3.29 %			3.02 %			2.97 %

⁽¹⁾ Average balances of nonperforming loans, consumer loans held-for-sale and commercial loans held-for-sale are included in average loan balances.

⁽²⁾ Yields computed on tax-exempt instruments on a tax equivalent basis and include \$43.0 million, \$33.8 million and \$29.9 million of taxable equivalent income for the years ended December 31, 2022, 2021 and 2020, respectively. The tax-exempt benefit has been reduced by the projected impact of tax-exempt income that will be disallowed pursuant to IRS Regulations as of and for the then current period presented.

⁽³⁾ Yields realized on interest-bearing assets less the rates paid on interest-bearing liabilities. The net interest spread calculation excludes the impact of

demand deposits. Had the impact of demand deposits been included, the net interest spread for the year ended December 31, 2022 would have been 3.26% compared to a net interest spread for the years ended December 31, 2021 and 2020 of 3.01% and 2.94%, respectively.

(4) Net interest margin is the result of net interest income calculated on a tax-equivalent basis divided by average interest earning assets for the period.

For the year ended December 31, 2022, our net interest spread was 2.94%, while the net interest margin was 3.29% compared to a net interest spread of 2.87% for the year ended December 31, 2021 and 2.72% for the year ended December 31, 2020, and a net interest margin of 3.02% and 2.97%, respectively. Our net interest margin for the year ended December 31, 2022 reflects the rising short-term interest rate environment, including the impact of exceeding substantially all of our loan floors during the second and third quarters of 2022, and the deployment of excess funds in higher yielding loans offset in part by the diminishing impact of loans made and fees recognized pursuant to the PPP, declining levels of positive impact from purchase accounting as well as the competitive rate environments for loans and deposits in our markets. During the year ended December 31, 2022, our earning asset yield increased by 65 basis points and 31 basis points from the years ended December 31, 2021 and 2020, respectively, while total funding rates increased by 39 basis points and decreased by 1 basis point compared to the years ended December 31, 2021 and 2020, respectively. During 2022, the Federal Reserve raised short-term interest rates by 425 basis points and our current expectation is another 75 basis point increase during 2023, inclusive of the 25 basis points increase in February 2023.

We continue to deploy various asset liability management strategies to manage our risk to interest rate fluctuations. The additional on-balance sheet liquidity that we accumulated primarily due to government stimulus efforts during the COVID-19 pandemic has largely runoff as of December 31, 2022. As a result, we do not anticipate excess liquidity negatively impacting our net interest margin going forward as much as it did in 2020, 2021 and 2022. Our ‘most likely’ forecast has short-term interest rates moving higher through at least the first half of 2023. However, there is much uncertainty in the interest rate futures markets due to the currently high level of inflation present in the economy, the pace of the rate tightening cycle being led by the Federal Reserve Open Market Committee and what risks these present for a recession to occur in the near-term.

Rate and Volume Analysis. Net interest income increased by \$196.9 million between the years ended December 31, 2022 and 2021 and by \$110.6 million between the years ended December 31, 2021 and 2020. The following is an analysis of the changes in our net interest income comparing the changes attributable to rates and those attributable to volumes (in thousands):

	<i>2022 Compared to 2021 Increase (decrease) due to</i>			<i>2021 Compared to 2020 Increase (decrease) due to</i>		
	<i>Rate</i>	<i>Volume</i>	<i>Net</i>	<i>Rate</i>	<i>Volume</i>	<i>Net</i>
Interest-earning assets:						
Loans	\$ 126,581	\$ 131,868	\$ 258,449	\$ (46,950)	\$ 51,249	\$ 4,299
Securities:						
Taxable	21,241	11,053	32,294	(9,226)	8,332	(894)
Tax-exempt	3,176	13,498	16,674	(6,566)	12,547	5,981
Interest-bearing due from banks	29,960	(10,607)	19,353	(1,149)	964	(185)
Securities purchased under agreements to resell	8,588	4,078	12,666	1,440	—	1,440
Federal funds sold	—	—	—	(24)	(6)	(30)
Other	2,812	473	3,285	(548)	109	(439)
Total interest-earning assets	192,358	150,363	342,721	(63,023)	73,195	10,172
Interest-bearing liabilities:						
Interest-bearing deposits:						
Interest checking	47,417	6,245	53,662	(12,621)	2,966	(9,655)
Savings and money market	82,572	6,823	89,395	(28,848)	6,307	(22,541)
Time deposits	8,858	(1,912)	6,946	(31,569)	(17,666)	(49,235)
Total deposits	138,847	11,156	150,003	(73,038)	(8,393)	(81,431)
Securities sold under agreements to repurchase	435	120	555	(122)	11	(111)
Federal Home Loan Bank advances	2,250	487	2,737	1,560	(16,584)	(15,024)
Subordinated debt and other borrowings	201	(7,667)	(7,466)	(47)	(3,828)	(3,875)
Total interest-bearing liabilities	141,733	4,096	145,829	(71,647)	(28,794)	(100,441)
Net interest income	\$ 50,625	\$ 146,267	\$ 196,892	\$ 8,624	\$ 101,989	\$ 110,613

Changes in net interest income are attributed to either changes in average balances (volume change) or changes in average rates (rate change) for earning assets and sources of funds on which interest is received or paid. Volume change is calculated as change in volume times the previous rate while rate change is change in rate times the previous volume.

Provision for Credit Losses. The provision for credit losses represents a charge to earnings necessary to establish an allowance for credit losses that, in management's evaluation, is adequate to provide coverage for all expected credit losses. The provision for credit losses amounted to \$67.9 million, \$16.1 million and \$203.8 million for the years ended December 31, 2022, 2021 and 2020, respectively. Provision expense is impacted by organic loan growth in our loan portfolio, our internal assessment of the credit quality of the loan portfolio, recent historical and projected future economic conditions and net charge-offs. The increase in provision expense during 2022 as compared to 2021 is primarily due to growth in the loan portfolio and deterioration in the projected macroeconomic factors due to the uncertain economic environment. The lower provision for credit losses during 2021 as compared to 2020 was the result of improvements in the current and projected economic conditions as compared to the economic deterioration which occurred or was anticipated during 2020 related to the COVID-19 pandemic. Also contributing to the provision expense in 2022 when compared to the 2021 and 2020 comparable periods were net charge-offs, which totaled \$26.5 million, \$38.7 million and \$39.4 million, respectively.

Our allowance for credit losses reflects an amount deemed appropriate to adequately cover all expected future losses as of the date the allowance is determined based on our allowance for credit losses assessment methodology. At December 31, 2022, our allowance for credit losses as a percentage of total loans was 1.04%, down from 1.12% at December 31, 2021.

Noninterest Income. Our noninterest income is composed of several components, some of which vary significantly between annual periods. Service charges on deposit accounts and other noninterest income generally reflect our growth, while investment services, fees from the origination of mortgage loans, swap fees and gains or losses on the sale of securities will often reflect market conditions and fluctuate from period to period.

The following is our noninterest income for the years ended December 31, 2022, 2021, and 2020 (in thousands):

	<i>Years ended December 31,</i>		<i>2022 - 2021 Percent Increase (Decrease)</i>	<i>Year ended December 31,</i>	<i>2021 - 2020 Percent Increase (Decrease)</i>
	<i>2022</i>	<i>2021</i>		<i>2020</i>	
Noninterest income:					
Service charges on deposit accounts	\$ 44,675	\$ 41,311	8.1 %	\$ 34,282	20.5 %
Investment services	46,441	37,917	22.5 %	29,537	28.4 %
Insurance sales commissions	12,186	10,516	15.9 %	10,055	4.6 %
Gains on mortgage loans sold, net	7,268	32,424	(77.6)%	60,042	(46.0)%
Investment gains on sales, net	156	759	(79.5)%	986	(23.0)%
Trust fees	23,511	20,724	13.5 %	16,496	25.6 %
Income from equity method investment	145,466	122,274	19.0 %	83,539	46.4 %
Other noninterest income:					
Interchange and other consumer fees	68,022	57,263	18.8 %	40,960	39.8 %
Bank-owned life insurance	21,033	18,942	11.0 %	18,784	0.8 %
Loan swap fees	5,812	5,414	7.4 %	4,568	18.5 %
SBA loan sales	7,036	12,242	(42.5)%	5,579	>100%
Income from other equity investments	10,605	23,109	(54.1)%	1,072	>100%
Other noninterest income	23,913	12,839	86.3 %	11,940	7.5 %
Total other noninterest income	136,421	129,809	5.1 %	82,903	56.6 %
Total noninterest income	\$ 416,124	\$ 395,734	5.2 %	\$ 317,840	24.5 %

The increase in service charges on deposit accounts in 2022 compared to 2021 and 2021 compared to 2020 is the result of increased transaction volumes in commercial checking accounts which we believe is the result of the increased economic activity in our markets in each of the periods presented. We expect future service charge revenues to be negatively impacted by the changes to our insufficient funds programs implemented in the second half of 2022 as a result of which we eliminated NSF fees on consumer accounts, reduced overdraft fees for paid items, established an overdraft cushion of \$15 for consumers and reduced the maximum number of overdraft paid item charges per day.

Income from our wealth management groups (investments, insurance and trust) is also included in noninterest income. Commissions and fees from investment services at our financial advisory unit, Pinnacle Asset Management, a division of Pinnacle Bank, and fees from our wealth advisory group, PNFP Capital Markets, Inc., were \$46.4 million for the year ended December 31, 2022, compared to \$37.9 million during 2021 and \$29.5 million during 2020, reflecting increases in brokerage assets. At December 31, 2022, Pinnacle Asset Management was receiving commissions and fees in connection with approximately \$8.0 billion in brokerage assets compared to \$7.2 billion and \$5.5 billion at December 31, 2021 and 2020, respectively. Revenues from the sale of insurance products by our insurance agency subsidiaries were approximately \$12.2 million during 2022 compared to \$10.5 million and \$10.1 million during 2021 and 2020, respectively. Additionally, at December 31, 2022, our trust department was receiving fees on approximately \$4.6 billion and \$2.0 billion of managed and custodied assets, respectively, compared to approximately \$4.7 billion and \$2.1 billion at December 31, 2021 and \$3.3 billion and \$1.7 billion at December 31, 2020. We believe the improvement in the results of our wealth management businesses in 2022 compared to 2021 is primarily attributable to an increased number of wealth management advisors and corresponding client acquisition while the improvement between 2021 and 2020 is primarily attributable to increased market valuations reflective of a stabilizing economy following the initial impact of the COVID-19 pandemic.

Gains on mortgage loans sold, net, consists of fees from the origination and sale of mortgage loans. These mortgage fees are for loans primarily originated in our current markets that are subsequently sold to third-party investors. Substantially all of these loan sales transfer servicing rights to the buyer. Generally, mortgage origination fees increase in lower interest rate environments and more robust housing markets and decrease in rising interest rate environments and more challenging housing markets. Mortgage origination fees will fluctuate from period to period as the rate environment changes. Gains on mortgage loans sold, net, were \$7.3 million, \$32.4 million and \$60.0 million, respectively, for the years ended December 31, 2022, 2021 and 2020. The decreases in 2022 compared to 2021 and 2021 compared to 2020 are the direct result of the increases in the rate environment negatively impacting both refinancing and new purchase originations. We hedge a portion of our mortgage pipeline as part of a mandatory delivery program whereby the hedge protects against changes in the fair value of the pipeline. The hedge is not designated as a hedge for GAAP purposes and, as such, changes in its fair value are recorded directly through the income statement. The change in the fair value of the outstanding mortgage pipeline at the end of any reporting period will directly impact the amount of gain recorded for mortgage loans held for sale during that reporting period. At December 31, 2022, the mortgage pipeline included \$46.9 million in loans expected to close in 2023 compared to \$136.7 million in loans at December 31, 2021 expected to close in 2022.

Investment gains and losses on sales, net, represent the net gains and losses on sales of investment securities in our available-for-sale securities portfolio during the periods noted. For the year ended December 31, 2022, investment gains (losses) on sales, net, represent a \$156,000 net pre-tax gain we recognized upon the sale of \$29.5 million of investment securities compared to a \$759,000 net pre-tax gain we recognized upon the sale of \$37.5 million of investment securities in 2021 compared to a \$986,000 net pre-tax gain on the sale of \$145.6 million of investment securities in 2020.

Income from equity-method investment. Income from equity-method investment is comprised solely of income from our 49% equity-method investment in BHG. Prior to September 30, 2022, we held a portion of this investment at Pinnacle Financial and a portion at Pinnacle Bank. Effective September 30, 2022, Pinnacle Financial contributed 100% of the equity interests of BHG owned by it to Pinnacle Bank. BHG is engaged in the origination of commercial and consumer loans largely to healthcare providers and other skilled professionals throughout the United States. The loans originated by BHG are either financed by secured borrowings or sold to independent financial institutions and investors.

Income from this equity-method investment was \$145.5 million for the year ended December 31, 2022 compared to \$122.3 million and \$83.5 million for the years ended December 31, 2021 and 2020, respectively. The increased level of contribution we experienced from BHG in 2022 as compared to 2021 as compared to 2020 reflects the positive results BHG experienced as a result of enhancements to its business model, including its marketing efforts. Results in 2021 as compared to 2020 also included a diminished impact from the COVID-19 pandemic and the resulting release of reserves BHG built in 2020 as a result of the COVID-19 pandemic. Historically, BHG has sold the majority of the loans it originates to a network of bank purchasers through a combination of online auctions, direct sales and its direct purchase option. In recent years, BHG began an effort to retain more loans on its balance sheet. BHG's decision to sell loans through its auction platform or retain loans on its balance sheet will be impacted by a variety of factors, including interest rates as well as demand levels from the community bank network of buyers to whom BHG markets these loans. In a rising rate environment, it may choose to sell more loans through its auction platform if the cost of financing loans on its balance sheet is not as attractive as a sale through its auction platform. During the fourth quarter of 2022, BHG accelerated its strategy of retaining more loans on its balance sheet, which was aided by expanding its liquidity platform through the establishment of three new borrowing facilities. These facilities, which are secured by loans on BHG's balance sheet, represent incremental funding sources to BHG. At December 31, 2022, BHG had fully drawn on one of these funding sources, a \$500 million facility from a U.S. asset manager which carried an annualized interest rate of 7.95 percent. As a result of drawing on this facility, BHG elected to place fewer loans through its auction platform in the fourth quarter of 2022. Since 2020, BHG has completed six securitizations totaling \$2.1 billion, with the latest securitization of \$412 million having been completed in the third quarter of 2022. We anticipate that BHG will complete additional securitizations in the future or otherwise establish other borrowing facilities to facilitate the retention of additional loans on BHG's balance sheet.

Income from equity-method investment is recorded net of amortization expense associated with customer lists and other intangible assets of \$512,000, \$752,000 and \$1.2 million for the years ended December 31, 2022, 2021 and 2020, respectively. At December 31, 2022, there were \$6.3 million of these intangible assets that are expected to be amortized in lesser amounts over the next 13 years. Also included in income from equity-method investment, is accretion income associated with the fair value of certain of BHG's liabilities of \$718,000, \$1.5 million and \$2.1 million for the years ended December 31, 2022, 2021 and 2020, respectively. At December 31, 2022, there were \$500,000 of these liabilities that are expected to be accreted into income in lesser amounts over the next four years.

During the years ended December 31, 2022, 2021 and 2020, respectively, Pinnacle Financial and Pinnacle Bank received \$63.1 million, \$70.0 million and \$53.0 million in dividends in the aggregate from BHG. Dividends from BHG during such periods reduced the carrying amount of our investment in BHG, while earnings from BHG during such periods increased the carrying amount of our investment in BHG. Profits from intercompany transactions are eliminated. Our proportionate share of earnings from BHG is included in our consolidated tax return. BHG partners with third party lenders, including Pinnacle Bank, to facilitate loan originations as part of BHG's alternative financing portfolio, whereby BHG acts as the marketing firm and refers loans to the third party lenders for funding. The third party lenders receive a fee for each loan funded and subsequently sold to BHG. These loans are ultimately sold through BHG's network of clients, which includes Pinnacle Bank. During the years ended December 31, 2022, 2021 and 2020, respectively, BHG purchased \$1.0 billion, \$646.6 million and \$453.8 million of loans originated by Pinnacle Bank, respectively. During the years ended December 31, 2022, 2021 and 2020, Pinnacle Bank purchased \$125.6 million, \$276.7 million and \$100.0 million, respectively, of loans from BHG at par pursuant to BHG's joint venture loan program whereby BHG and Pinnacle Bank share proportionately in the credit risk of the acquired loans based on the rate on the loan and the rate of the purchase. The yield on this portfolio to Pinnacle Bank is anticipated to be between 4.50% and 6.00% per annum. At December 31, 2022 and 2021, there were \$350.6 million and \$319.1 million, respectively, of BHG joint venture program loans held by Pinnacle Bank.

As our ownership interest in BHG is 49% and our representatives do not occupy a majority of the seats on BHG's board of managers, we do not consolidate BHG's results of operations or financial position into our financial statements but record the net result of BHG's activities at our percentage ownership in income from equity-method investment in noninterest income. For the year ended December 31, 2022, BHG reported \$1.1 billion in gross revenues, net of substitution losses of \$101.7 million, compared to \$735.5 million and \$457.9 million in gross revenues, respectively, for the years ended December 31, 2021 and 2020, net of substitution losses of \$91.8 million and \$90.6 million, respectively. Earnings from BHG are likely to fluctuate from period-to-period. Approximately \$640.7 million, or 57.7%, of BHG's revenues for the year ended December 31, 2022 related to gains on the sale of commercial and consumer loans compared to \$507.5 million, or 69.0%, for the year ended December 31, 2021 and \$347.4 million, or 75.9%, for the year ended December 31, 2020. These loans have typically been sold by BHG with no recourse to a network of community banks and other financial institutions at a premium to the par value of the loan, although the purchaser may access a BHG cash reserve account of up to 3% of the loan balance to support loan payments. BHG retains no servicing or other responsibilities related to the loan once sold. As a result, this gain on sale premium represents BHG's compensation for absorbing the costs to originate the loan as well as marketing expenses associated with maintaining its business model. At December 31, 2022 and 2021, there were \$5.5 billion and \$4.1 billion, respectively, of these loans previously sold by BHG that were being actively serviced by BHG's network of bank purchasers. BHG, at its sole option, may also provide purchasers of these loans the ability to substitute the acquired loan with another more recently-issued BHG loan should the previously-acquired loan become at least 90-days past due as to its monthly payments. As a result, BHG maintained a liability as of December 31, 2022 and 2021 of \$313.9 million and \$207.3 million, respectively, that represents an estimate of the future losses for the outstanding previously sold loan portfolio that may be subject to future substitution due to payment default or prepayment. This liability represents 5.7% and 5.0%, respectively, of loans previously sold by BHG that remain outstanding as of December 31, 2022 and 2021, respectively. The increase in this liability for the year ended December 31, 2022 compared to the year ended December 31, 2021 was principally the result of an increase in the amount of loans sold by BHG to financial institutions and increases in BHG management's estimate of future substitution losses due to economic uncertainty.

In addition to these loans that BHG sells into its auction market, at December 31, 2022, BHG reported balance sheet loans totaling \$3.6 billion compared to \$2.2 billion as of December 31, 2021. A portion of these loans do not qualify for sale accounting and accordingly an offsetting secured borrowing liability has been recorded. At December 31, 2022 and 2021, BHG had \$2.7 billion and \$1.6 billion, respectively, of secured borrowings associated with loans held for investment. At December 31, 2022 and 2021, BHG reported allowance for loan losses totaling \$146.9 million and \$46.7 million, respectively, with respect to the loans on its balance sheet. The increase in allowance for loan losses for the year ended December 31, 2022 compared to the year ended December 31, 2021 was principally the result of growth in the balance sheet loan portfolio and the uncertain economic environment. BHG records its allowance for loan losses under the incurred loss method, but will be required to adopt CECL effective October 1, 2023. Interest income and fees associated with these on-balance sheet loans amounted to \$431.8 million, \$208.5 million and \$92.5 million for the years ended December 31, 2022, 2021 and 2020, respectively.

Pinnacle Bank has a participating interest in a \$750.0 million revolving line of credit for the benefit of BHG in the amount of \$150.0 million and a \$150.0 million line of credit for the benefit of BHG in the amount of \$30.0 million. At December 31, 2022, there was \$88.3 million and \$10.0 million outstanding balances on the lines related to Pinnacle Bank's interest in the lines, respectively. The lines accrue interest at SOFR plus 200 basis points and are secured by all assets of BHG. The credit agreements contain covenants requiring BHG to maintain certain financial ratios and satisfy certain other affirmative and negative covenants. At December 31, 2022, neither BHG nor the originating bank had represented to Pinnacle Bank that BHG was not in compliance, in all material respects, with these covenants.

Included in other noninterest income are interchange and other consumer fees, gains from bank-owned life insurance, swap fees earned for the facilitation of derivative transactions for our clients, SBA loan sales, gains or losses on other equity investments and other noninterest income items. Interchange revenues increased 18.8% during the year ended December 31, 2022 as compared to the same period in 2021 due to increased commercial credit card volumes period-over-period. Other noninterest income also included changes in the cash surrender value of bank-owned life insurance (BOLI) which was \$21.0 million for the year ended December 31, 2022 compared to \$18.9 million and \$18.8 million for the years ended December 31, 2021 and 2020, respectively. The assets that support these policies are administered by the life insurance carriers and the income we recognize (i.e., increases or decreases in the cash surrender value of the policies) on these policies is dependent upon the crediting rates applied by the insurance carriers, which are subject to change at the discretion of the carriers, subject to any applicable floors. Earnings on these policies generally are not taxable. During 2022, we purchased an additional \$100 million of bank owned life insurance. We made no purchases of BOLI policies in 2021. Loan swap fees increased by \$398,000 and \$846,000 during the year ended December 31, 2022 as compared to the same periods in 2021 and 2020, respectively, due primarily to a change in the volume of activity resulting from the then current interest rate environment. SBA loan sales are also included in other noninterest income and fluctuate based on the current market conditions which is reflected in the decrease in 2022 as compared to 2021. Additionally, the carrying values of other equity investments are adjusted either upwards or downwards from the transaction price to reflect expected exit values as evidenced by financing and sale transactions with third parties, or when determination of a valuation adjustment is confirmed through financial reports provided by the portfolio managers of the investment. Income related to these investments decreased \$12.5 million during 2022 when compared to 2021 and increased \$22.0 million during 2021 when compared to 2020 each as a result of several of our venture fund investments experiencing increased valuations in their underlying portfolios during the year ended December 31, 2022, but at lower amounts than those experienced during the same period in 2021. The other components of other noninterest income increased \$11.1 million in 2022 when compared to 2021 and is largely the result of a \$5.5 million gain on remeasurement of our previously held equity investment in JB&B, resulting from our bank subsidiary's acquisition on March 1, 2022 of the 80% equity interests of JB&B it did not previously own. The other components of other noninterest income changed only slightly during the year ended December 31, 2021 as compared to the same period in 2020 and include all other noninterest income not included in the above noted categories.

Noninterest Expense. The following is our noninterest expense for the years ended December 31, 2022, 2021, and 2020 (in thousands):

	<i>Years ended December 31,</i>		<i>2022 - 2021 Percent Increase (Decrease)</i>	<i>Year ended December 31,</i>	<i>2021 - 2020 Percent Increase (Decrease)</i>
	<i>2022</i>	<i>2021</i>		<i>2020</i>	
<i>Noninterest expense:</i>					
Salaries and employee benefits:					
Salaries	\$ 293,167	\$ 241,775	21.3 %	\$ 215,542	12.2 %
Commissions	24,840	22,286	11.5 %	15,677	42.2 %
Cash and equity incentives	116,984	109,290	7.0 %	52,878	>100%
Employee benefits and other	75,184	62,655	20.0 %	50,386	24.4 %
Total salaries and employee benefits	510,175	436,006	17.0 %	334,483	30.4 %
Equipment and occupancy	109,672	95,250	15.1 %	88,475	7.7 %
Other real estate (benefit) expense, net	280	(712)	>100%	8,555	(<100%)
Marketing and business development	21,073	12,888	63.5 %	10,693	20.5 %
Postage and supplies	10,168	8,195	24.1 %	7,819	4.8 %
Amortization of intangibles	7,810	8,518	(8.3)%	9,793	(13.0)%

	<i>Years ended December 31,</i>		<i>2022 - 2021 Percent Increase (Decrease)</i>	<i>Year ended December 31,</i>	<i>2021 - 2020 Percent Increase (Decrease)</i>
	<i>2022</i>	<i>2021</i>		<i>2020</i>	
Other noninterest expense:					
Deposit related expenses	28,972	24,003	20.7 %	24,392	(1.6)%
Lending related expenses	52,700	39,578	33.2 %	28,703	37.9 %
Wealth management related expenses	2,565	1,950	31.5 %	2,053	(5.0)%
Audit, exam and insurance expense	9,209	11,259	(18.2)%	10,596	6.3 %
FHLB restructuring charges	—	—	— %	15,168	(100.0)%
Administrative and other expenses	27,375	23,169	18.2 %	23,725	(2.3)%
Total other noninterest expense	120,821	99,959	20.9 %	104,637	(4.5)%
Total noninterest expense	\$ 779,999	\$ 660,104	18.2 %	\$ 564,455	16.9 %

The increase in total salaries and employee benefits expense in 2022 over 2021 is primarily the result of increases in our associate base as well as annual merit increases awarded in the first quarter of 2022. Also contributing to the increase for 2022 compared to 2021 was cash and equity incentives which were up \$7.7 million, or 7.0%. The increase in total salaries and employee benefits expense in 2021 over 2020 is primarily the result of an increase in expenses associated with our annual cash incentive plan as well as stock-based compensation expense due to our performance during 2021 compared to 2020. Our performance in 2020 was notably impacted by the effects of COVID-19 on our anticipated earnings and performance for the year ended December 31, 2020.

At December 31, 2022, our associate base had expanded to 3,241.5 full-time equivalent associates as compared to 2,841.0 and 2,634.0 at December 31, 2021 and 2020, respectively, primarily resulting from our efforts to continue to hire experienced bankers and other associates throughout our footprint. We expect salary and benefit expenses will rise in 2023 compared to 2022 as we continue our focus on hiring experienced bankers in our markets as well as due to our increased associate base and annual merit increases given in the first quarter of each fiscal year.

Commissions expense represents compensation paid to our wealth management lines of business including investment services, trust, insurance and capital markets. Commissions expense for the year ended December 31, 2022 was 11.5% greater than in 2021 which was 42.2% greater than in 2020. The increase in 2022 as compared to 2021 and 2021 as compared to 2020 is primarily related to growth in our investment portfolio commissions as a result of increased activity in our wealth management lines of business and an increase in the number of wealth management associates. Commissions expense incurred related to the production of residential mortgages is recorded net of the related mortgage revenues.

We believe that cash and equity incentives are a valuable tool in motivating an associate base that is focused on providing our clients effective financial advice and increasing shareholder value. As a result, and unlike many other financial institutions, all of our bank's non-commissioned associates participate in our annual cash incentive plan with a minimum targeted bonus equal to 10% of each associate's annual salary, and all of our bank's associates participate in our equity compensation plans. Under the 2022 annual cash incentive plan, the targeted level of incentive payments required achievement of a certain soundness threshold and a targeted level of quarterly pre-tax, pre-provision net revenue (PPNR) and annual earnings per common share (subject to certain adjustments). To the extent that the soundness threshold is met and PPNR and earnings per common share are above or below the targeted amount, the aggregate incentive payments are increased or decreased. Historically, we have paid between 0% and 125% of our targeted incentives. For 2022, maximum payouts under the plan could reach approximately 125% of target compared to 160% of target for 2021.

Cash incentives for 2022 totaled \$76.8 million, compared to \$84.1 million in 2021 and \$33.9 million in 2020. The decrease in 2022 when compared to 2021 was the result of achieving 123% of target in 2022 compared to 160% of target for 2021. The increase in 2021 when compared to 2020 was primarily the result of the increase in the percentage of target of the payout from 65% of target in 2020 to 160% of target in 2021. As a result of our performance in 2020 the threshold for the plan's EPS target was not met, which resulted in a reduction in incentives earned under the annual cash incentive plan. In the third quarter of 2020, due to the effects of COVID-19 pandemic, the Human Resources and Compensation Committee of our board of directors approved an additional performance metric under the annual cash incentive plan tied to our adjusted pre-tax, pre-provision net revenue for the year ending December 31, 2020 ("PPNR"). Payouts for all participants based on the PPNR metric were between 15% and 25% of their targeted payouts under the plan at target and maximum performance levels. As a result of the addition of the PPNR performance metric, participants in the plan were able to earn a cash incentive payout under the plan based on the larger of the original plan metrics and the new PPNR performance metric and the original deposit volume and rate goals under the plan. The PPNR metric and the original deposit volume and rate goals were achieved at the maximum performance, resulting in payouts of 50% of the targeted payout; however, due to our results for 2020 and in consideration of the considerable effort our associates put forth during unusually difficult circumstances in 2020, the Human Resources and Compensation Committee approved an increase in the calculated award from 50 percent of target to 65 percent of

target, which amounted to \$6.8 million of additional expense in the fourth quarter of 2020.

Also included in cash and equity incentives for the years ended December 31, 2022, 2021 and 2020 were approximately \$14.5 million, \$12.1 million and \$12.1 million, respectively, of compensation expenses related to equity-based restricted share awards and approximately \$25.0 million, \$12.9 million and \$6.6 million, respectively, of compensation expenses related to equity-based restricted share units with either time-based or performance-based vesting criteria. We have not issued stock options since 2008. Under our equity incentive plans, we provide a broad-based equity incentive program for all of our bank's associates. We believe that equity incentives provide a vehicle for all associates to become meaningful shareholders of Pinnacle Financial over an extended period of time and create a shareholder-centric culture throughout our organization.

Our compensation expense associated with performance-based vesting equity awards for the year ended December 31, 2022 increased \$12.1 million when compared to the same period in 2021 and \$6.3 million for the year ended December 31, 2021 when compared to the same period in 2020. The increase when comparing 2021 to 2020 was primarily as a result of the fact that our performance in 2021 in regards to return on average tangible common equity and tangible book value per share accretion performance metrics relative to our peers provided for an above-target level payout. In January 2021, the Human Resources and Compensation Committee of our board of directors approved modifications to the performance metrics applicable to the 2021 and 2022 performance periods of our performance units previously awarded. These modifications replaced the return on average tangible assets performance metrics with two equally weighted metrics – return on average tangible common equity and tangible book value per share accretion including the impact of common dividends. Performance awards granted in January 2021 also utilize these modified metrics, as well as a relative total shareholder return ("TSR") payout modifier. In 2022, we again granted performance-based vesting equity awards with performance metrics tied to peer relative performance for return on average tangible common equity and tangible book value per share accretion, together with a TSR modifier, in each case over a three-year performance period. We also approved a special performance-based vesting restricted stock unit award to each of our named executive officers and our chief credit officer in 2022 with performance metrics tied to the ratio of our price to earnings and price to tangible book value per share relative to those measures for a peer group of companies. As a result, our compensation expense associated with performance-based equity awards for 2022 exceeded those levels that we recorded in 2021.

Our compensation expense associated with equity awards with time-based vesting criteria increased \$2.4 million during 2022 when compared to 2021 and 2020. The change in this balance is a product of the hiring and termination of the associates during the respective periods and the number of equity grants given to associates during the respective periods as well as the grant date fair value of these equity grants.

Employee benefits and other expenses include costs associated with our 401k plan, health insurance, payroll taxes and contract labor. These expenses increased by \$12.5 million, or 20.0%, in 2022 compared to 2021 which increased by \$12.3 million, or 24.4%, in 2021 compared to 2020. These increases reflect the increase in our associate base in the respective periods, and in the case of our health insurance costs, increases in the premiums we paid for this coverage in 2022 compared to 2021 premium levels.

Our operating lease commitments are primarily related to our branch and headquarters facilities. The terms of these leases expire at various points ranging from 2023 through 2058. At December 31, 2022, our total minimum operating lease commitment was \$159.0 million. Equipment and occupancy expense for the year ended December 31, 2022 was 15.1% greater than in 2021 which was 7.7% greater than in 2020. The increases are in part the result of the five new leased office locations that were opened, one in Virginia, one in Alabama, one in the North Carolina market and the two others in the Tennessee market during the year ended December 31, 2022. We expect to incur additional costs in future periods as we continue to enhance and expand our current locations, including in our new markets, and further develop our technology infrastructure. Additionally, during 2021, we announced our intention to move our corporate headquarters to an office tower under construction in Nashville, where we are a founding partner and sponsor of the project. This move is currently planned for 2025 and will impact equipment and occupancy costs as we plan for this move.

Other real estate for the year ended December 31, 2022 was an expense of \$280,000 compared to a benefit of \$712,000 in 2021 and expense of \$8.6 million in 2020. The increase in 2022 as compared to 2021 was the result of net gains of \$1.2 million on the sale of other real estate in 2021 compared to \$200,000 in 2022. The decrease in 2021 as compared to 2020 was the result of write-downs in 2020 of \$8.4 million of previously foreclosed upon properties to market value based on updated appraisals.

Marketing and business development expense for the year ended December 31, 2022 was 63.5% greater than in 2021 which was 20.5% greater than in 2020. The primary source of the increase for the year ended December 31, 2022 as compared to the same period in 2021 is the result of increased associate engagement as we brought back in-person orientation and associate meetings beginning in the first quarter of 2022 as well as increases in client engagement as pandemic-related restrictions lapsed, which was the primary source of increase in 2021 as compared to 2020. We expect these costs to rise modestly and return to more normalized levels during 2023 taking into account anticipated increases associated with the associates we have hired since December 31, 2019.

Noninterest expense related to the amortization of intangibles was \$7.8 million for the year ended December 31, 2022 compared to \$8.5 million and \$9.8 million for the years ended December 31, 2021 and 2020, respectively. The following table outlines our amortizing intangible assets, their initial valuations and their intangible lives as of December 31, 2022:

	Year acquired	Initial Valuation (in millions)	Amortizable Life (in years)	Remaining Value (in millions)
<i>Core Deposit Intangible:</i>				
Avenue	2016	\$ 8.8	9	\$ 0.7
BNC	2017	48.1	10	16.4
<i>Book of Business Intangible:</i>				
Miller Loughry Beach Insurance	2008	1.3	20	0.1
CapitalMark	2015	0.3	16	0.1
BNC Insurance	2017	0.4	20	0.2
BNC Trust	2017	1.9	10	0.8
Advocate Capital	2019	13.6	13	6.2
JB&B Capital	2022	6.7	10	5.9
Sweeney Asset Management	2022	0.8	10	0.8

These assets are being amortized on an accelerated basis which reflects the anticipated life of the underlying assets. Amortization expense related to these assets is estimated to decrease from \$7.1 million per year to \$2.8 million per year over the next five years with lesser amounts for the remaining amortization period.

Total other noninterest expenses increased by \$20.9 million to \$120.8 million during 2022 when compared to 2021 and decreased by \$4.7 million to \$100.0 million during 2021 when compared to 2020. Included in other noninterest expenses are deposit and lending related expenses, investment and trust sales expenses, audit, exam and insurance expense and administrative expenses.

Deposit related expenses were up \$5.0 million in 2022 when compared to 2021 and were relatively flat when compared to 2020. The increase in 2022 when compared to 2021 was largely the result of increased FDIC assessment costs primarily due to the firm's increased asset base. Lending related expenses, which are costs associated with loan origination as well as operation of our credit card program, increased by \$13.1 million and \$10.9 million, respectively, in 2022 when compared to 2021 and 2021 when compared to 2020. Audit, exam and insurance expense is comprised of the fees associated with ongoing audit and regulatory exams of our operations as well as the cost of our corporate insurance. Decreases in audit, exam and insurance expense in 2022 as compared to 2021 and 2020 are primarily related to our decision to no longer outsource our internal audit function and the development of that program internally. Also included in other noninterest expense were \$15.2 million in restructuring charges associated with our prepayment of \$1.1 billion in FHLB advances during 2020. No FHLB restructuring charges were incurred in either 2022 or 2021. Administrative and other expenses increased by \$4.2 million during 2022 when compared to 2021 and remained relatively flat decreasing by \$556,000 during 2021 when compared to 2020. Included in the increase in 2022 were increases in consultant fees, contributions and other miscellaneous expense items.

Our efficiency ratio (the ratio of noninterest expense to the sum of net interest income and noninterest income) was 50.5%, 49.7%, and 49.5% for the three years ended December 31, 2022, 2021 and 2020, respectively. The efficiency ratio measures the amount of expense that is incurred to generate a dollar of revenue. The efficiency ratio for 2022 compared to 2021 was negatively impacted in part by increased noninterest expense during the period as a result of increased salaries and employee benefits and a decrease in the amount of gains on mortgage loans sold offset, in part, by increased income from our equity method investment in BHG and the impact of a rising interest rate environment. The efficiency ratio for 2021 compared to 2020 was negatively impacted by increases in cash incentives in 2021. Net income for 2022 was \$560.7 million compared to \$527.3 million in 2021 and \$312.3 million in 2020. Fully-diluted net income per common share was \$7.17 for 2022 compared to \$6.75 for 2021 and \$4.03 for 2020.

Income Taxes. During the year ended December 31, 2022, we recorded income tax expense of \$136.8 million compared to \$124.6 million and \$59.0 million in 2021 and 2020, respectively. Our effective income tax rate was 19.6%, 19.1% and 15.9%, respectively, for the years ended December 31, 2022, 2021 and 2020. Our effective tax rate differs from the combined federal and state income tax statutory rate in effect of 26.14% primarily due to our investments in bank-qualified tax-exempt municipal securities, tax benefits from our real estate investment trust and municipal investment subsidiaries, participation in Tennessee's Community Investment Tax Credit (CITC) program, tax benefits associated with share-based compensation, bank-owned life insurance and tax savings from our captive insurance subsidiary, offset in part by the limitation on deductibility of meals and entertainment expense, non-deductible FDIC insurance premiums and non-deductible executive compensation. Our tax rate in each period was impacted by the vesting and exercise of equity-based awards previously granted under our equity-based compensation program, resulting in a tax benefit of \$3.0 million, \$2.5 million and \$417,000, respectively, for the years ended December 31, 2022, 2021 and 2020, respectively.

Financial Condition

Our consolidated balance sheet at December 31, 2022 reflects an increase of \$5.6 billion in outstanding loans to \$29.0 billion and an increase of \$3.7 billion in total deposits to \$35.0 billion from December 31, 2021. Total assets were \$42.0 billion at December 31, 2022 as compared to \$38.5 billion at December 31, 2021.

Loans. The composition of loans at December 31 for each of the past three years and the percentage (%) of each segment to total loans is summarized as follows (dollars in thousands):

	2022		2021		2020	
	Amount	Percent	Amount	Percent	Amount	Percent
Commercial real estate:						
Owner-occupied	\$ 3,587,257	12.3 %	\$ 3,048,822	13.0 %	\$ 2,802,227	12.5 %
Non-owner occupied	6,542,619	22.5 %	5,221,704	22.3 %	5,203,384	23.2 %
Consumer real estate - mortgage	4,435,046	15.3 %	3,680,684	15.7 %	3,099,172	13.8 %
Construction and land development	3,679,498	12.7 %	2,903,017	12.4 %	2,901,746	12.9 %
Commercial and industrial	10,241,362	35.3 %	8,074,546	34.5 %	8,038,457	35.9 %
Consumer and other	555,823	1.9 %	485,489	2.1 %	379,515	1.7 %
Total loans	<u>\$ 29,041,605</u>	<u>100.0 %</u>	<u>\$ 23,414,262</u>	<u>100.0 %</u>	<u>\$ 22,424,501</u>	<u>100.0 %</u>

At December 31, 2022, our loan portfolio composition had changed modestly from the composition at December 31, 2021. At December 31, 2022, approximately 35.4% of the outstanding principal balance of our commercial real estate loans was secured by owner-occupied commercial real estate properties compared to 36.9% at December 31, 2021. Owner-occupied commercial real estate is similar in many ways to our commercial and industrial lending in that these loans are generally made to businesses on the basis of the cash flows of the business rather than on the valuation of the real estate. Additionally, the construction and land development segment continues to be a meaningful portion of our portfolio and reflects the development in the local economies in which we operate and is diversified between commercial, residential and land.

The following table presents the maturity distribution of our loan portfolio by loan segment at December 31, 2022 according to contractual maturities of (1) one year or less, (2) after one but within five years, (3) after five but within fifteen years and (4) after fifteen years. The table also presents the portion of loans by loan segment that have fixed interest rates or variable interest rates that fluctuate over the life of the loans in accordance with changes in an interest rate index (dollars in thousands):

	Due in one year or less	After one but within five years	After five but within fifteen years	After fifteen years	Total
Commercial real estate:					
Owner-occupied	\$ 241,428	\$ 1,453,554	\$ 1,493,014	\$ 399,261	\$ 3,587,257
Non-owner occupied	1,169,249	4,418,946	883,776	70,648	6,542,619
Consumer real estate - mortgage	76,473	478,160	354,866	3,525,547	4,435,046
Construction and land development	1,105,540	2,176,253	324,429	73,276	3,679,498
Commercial and industrial	2,701,801	5,428,061	1,778,089	333,411	10,241,362
Consumer and other	155,427	294,280	61,083	45,033	555,823
Total loans	<u>\$ 5,449,918</u>	<u>\$ 14,249,254</u>	<u>\$ 4,895,257</u>	<u>\$ 4,447,176</u>	<u>\$ 29,041,605</u>
<i>Loans with fixed interest rates:</i>					
Commercial real estate:					
Owner-occupied	\$ 110,886	\$ 1,043,202	\$ 1,097,072	\$ 287,742	\$ 2,538,902
Non-owner occupied	453,265	2,528,311	517,639	53,227	3,552,442
Consumer real estate - mortgage	42,004	342,250	139,770	2,052,870	2,576,894
Construction and land development	179,250	486,014	207,073	50,388	922,725
Commercial and industrial	836,746	1,913,219	1,260,409	252,343	4,262,717
Consumer and other	87,322	185,310	59,511	45,030	377,173
Total loans	<u>\$ 1,709,473</u>	<u>\$ 6,498,306</u>	<u>\$ 3,281,474</u>	<u>\$ 2,741,600</u>	<u>\$ 14,230,853</u>

	Due in one year or less	After one but within five years	After five but within fifteen years	After fifteen years	Total
<i>Loans with variable interest rates:</i>					
Commercial real estate:					
Owner-occupied	\$ 130,542	\$ 410,352	\$ 395,942	\$ 111,519	\$ 1,048,355
Non-owner occupied	715,984	1,890,635	366,137	17,421	2,990,177
Consumer real estate - mortgage	34,469	135,910	215,096	1,472,677	1,858,152
Construction and land development	926,290	1,690,239	117,356	22,888	2,756,773
Commercial and industrial	1,865,055	3,514,842	517,680	81,068	5,978,645
Consumer and other	68,105	108,970	1,572	3	178,650
Total loans	\$ 3,740,445	\$ 7,750,948	\$ 1,613,783	\$ 1,705,576	\$ 14,810,752

The above information does not consider the impact of scheduled principal payments. Loans totaling \$1.3 billion at their contractual floor rate at December 31, 2022 are presented as fixed interest rate loans in the table above.

Loan Origination Risk Management. We maintain lending policies and procedures designed to maximize lending opportunities within an acceptable level of risk. Management reviews and approves these policies and procedures on a regular basis. A reporting system supplements the review process by providing management with frequent reports related to loans in our portfolio, loan quality, concentrations of credit, loan delinquencies and non-performing loans. Diversification in the loan portfolio is measured and monitored as a means of managing risk associated with fluctuations in economic conditions.

Underwriting standards are designed to promote relationship banking rather than transactional banking. Management examines current and projected cash flows to determine the expected ability of a borrower to repay its obligations as agreed. Commercial and industrial loans are primarily underwritten based on the identified cash flows of the borrower and generally are collateralized by business assets and may have a personal guaranty of business principals. Collateral pledged may include the assets being financed or other assets such as accounts receivable, inventory or equipment. Some loans may be advanced on an unsecured basis.

Commercial real estate-mortgage loans are subject to underwriting standards and processes similar to commercial and industrial loans. These loans are viewed primarily as cash flow loans and are underwritten based on the ability of the property (in the case of income producing property), or the borrower's business (if owner-occupied) to generate sufficient cash flow to amortize the debt. Secondary emphasis is placed upon collateral value and the financial strength of guarantors, if any. Commercial real estate loans may be adversely affected by conditions in the real estate markets or in the general economy. As detailed in the discussion of real estate loans below, the properties securing our commercial real estate portfolio generally are diverse in terms of type and industry and we measure and monitor concentrations regularly. We believe this diversity helps reduce our exposure to adverse economic events that affect any single industry or type of real estate product. Management monitors and evaluates commercial real estate loans based on cash flow, collateral, geography and risk grade criteria. We also utilize third-party experts to provide insight and guidance about economic conditions and trends affecting market areas we serve.

Construction loans are underwritten utilizing independent appraisals, sensitivity analysis of absorption and lease rates, financial analysis of the developers and property owners, and expectations of the permanent mortgage market, among other items. Construction loans are generally based upon estimates of costs and appraised value associated with the completed project, which may be inaccurate. Construction loans involve the disbursement of funds during construction with repayment substantially dependent on the success of the ultimate project. Sources of repayment for these types of loans may be sales of developed property, refinancing in the permanent mortgage market or an interim loan commitment from us until permanent financing is obtained. These loans are closely monitored by on-site inspections and are considered to have higher risks than other real estate loans because their ultimate repayment depends on the satisfactory completion of construction and is sensitive to interest rate changes, governmental regulation of real property, general economic conditions and the availability of long-term financing.

We also originate consumer loans, including consumer real-estate loans, where we typically use a computer-based credit scoring analysis to supplement the underwriting process. To monitor and manage consumer loan risk, policies and procedures are developed and modified, as needed, jointly by line and staff personnel. This activity, coupled with relatively small loan amounts that are spread across many individual borrowers, seeks to minimize risk. Additionally, trend and outlook reports are reviewed by management on a regular basis. Underwriting standards for home equity loans are heavily influenced by statutory requirements.

We also maintain an independent loan review department that reviews and validates the credit risk program on a periodic basis. Results of these reviews are presented to management and the risk committee of our board of directors. The loan review process complements and reinforces the risk identification and assessment decisions made by lenders and credit personnel, as well as our policies and procedures.

Lending Concentrations. We periodically analyze our loan portfolio to determine if a concentration of credit risk exists to any one or more industries. We use broadly accepted industry classification systems in order to classify borrowers into various industry classifications. We have a credit exposure (loans outstanding plus unfunded commitments) exceeding 25% of Pinnacle Bank's total risk-based capital to borrowers in the following industries at December 31, 2022 and 2021 (in thousands):

	At December 31, 2022			Total Exposure at December 31, 2021
	Outstanding Principal Balances	Unfunded Commitments	Total exposure	
Lessors of nonresidential buildings	\$ 4,911,231	\$ 2,146,814	\$ 7,058,045	\$ 5,368,638
Lessors of residential buildings	1,865,903	1,859,283	3,725,186	2,566,352
New housing for-sale builders	760,771	1,002,318	1,763,089	1,534,789
Music publishers	634,778	492,858	1,127,636	529,886

Banking regulations have established guidelines for the construction and land development ratio of less than 100% of total risk-based capital and for the non-owner occupied ratio of less than 300%. Should a bank's ratios be in excess of these guidelines, banking regulations generally require an increased level of monitoring in these lending areas by bank management. Both ratios are calculated by dividing certain types of loan balances for each of the two categories by Pinnacle Bank's total risk-based capital. At December 31, 2022 and 2021, Pinnacle Bank's construction and land development loans as a percentage of total risk-based capital were 85.9% and 79.1%, respectively. Non-owner occupied commercial real estate and multifamily loans (including construction and development loans) were 249.6% and 234.1% of total risk-based capital for December 31, 2022 and 2021, respectively. Pinnacle Bank was within the 100% and 300% guidelines throughout 2022 and has established what it believes to be appropriate controls to monitor its lending in these areas as it aims to keep the level of these loans to below the 100% and 300% thresholds over the long-term though there may be periods where we exceed these levels if loan growth is more heavily weighted to these types of loans.

Loans in Past Due Status. The following table is a summary of our loans that were past due at least 30 days but less than 89 days and 90 days or more past due as of December 31, 2022 and 2021 (dollars in thousands):

	December 31, 2022	December 31, 2021
<i>Loans past due 30 to 89 days:</i>		
Commercial real estate:		
Owner occupied	\$ 2,727	\$ 727
Non-owner occupied	407	1,434
Consumer real estate – mortgage	13,718	8,832
Construction and land development	323	61
Commercial and industrial	29,170	7,603
Consumer and other	5,744	2,283
Total loans past due 30 to 89 days	<u>\$ 52,089</u>	<u>\$ 20,940</u>
<i>Loans past due 90 days or more:</i>		
Commercial real estate:		
Owner occupied	\$ 1,139	\$ 2,426
Non-owner occupied	1,681	645
Consumer real estate – mortgage	9,094	4,450
Construction and land development	130	127
Commercial and industrial	9,428	7,311
Consumer and other	746	372
Total loans past due 90 days or more	<u>\$ 22,218</u>	<u>\$ 15,331</u>
<i>Ratios:</i>		
Loans past due 30 to 89 days as a percentage of total loans	0.18 %	0.09 %
Loans past due 90 days or more as a percentage of total loans	0.08 %	0.06 %
Total loans in past due status as a percentage of total loans	0.26 %	0.15 %

Potential Problem Loans. Potential problem loans amounted to approximately \$53.8 million, or 0.2% of total loans outstanding at December 31, 2022, compared to \$109.6 million, or 0.5% of total loans outstanding at December 31, 2021. Potential problem loans, which are not included in nonperforming loans, represent those loans with a well-defined weakness and where information about possible credit problems of borrowers has caused management to have doubts about the borrower's ability to comply with present

repayment terms. This definition is believed to be substantially consistent with the standards established by Pinnacle Bank's primary regulators for loans classified as substandard or worse, but not considered nonperforming loans. None of the potential problem loans were past due at least 30 but less than 90 days as of December 31, 2022.

Non-Performing Assets and Troubled Debt Restructurings (TDR). At December 31, 2022, we had \$46.1 million in nonperforming assets compared to \$40.1 million at December 31, 2021. Included in nonperforming assets were \$38.1 million in nonaccruing loans and \$8.0 million in other real estate owned and other nonperforming assets at December 31, 2022 and \$31.6 million in nonaccruing loans and \$8.5 million in other real estate owned and other nonperforming assets at December 31, 2021. At December 31, 2022 and 2021, there were \$2.2 million and \$2.4 million, respectively, of TDRs that were performing as of the restructured date and remain on accrual status. Nonaccruing loans totaled \$73.8 million, or 0.3% of total loans, at December 31, 2020.

All nonaccruing loans are reassigned to a special assets officer who was not responsible for originating the loan. The special assets officer is responsible for developing an action plan designed to minimize our future losses. Typically, these special assets officers review our loan files, interview prior officers assigned to the relationship, meet with borrowers, inspect collateral, reappraise collateral and/or consult with legal counsel. The special assets officer then recommends an action plan to a committee of senior associates including lenders and workout specialists, which could include foreclosing on collateral, restructuring the loan, issuing demand letters or other actions. We discontinue the accrual of interest income when (1) there is a significant deterioration in the financial condition of the borrower and full repayment of principal and interest is not expected or (2) the principal or interest is more than 90 days past due, unless the loan is both well-secured and in the process of collection. During 2022, 2021 and 2020, we recognized no interest income related to nonaccruing loans. At December 31, 2022, 2021 and 2020, our allowance for credit losses as a percentage of nonaccruing loans totaled 788.8%, 833.8% and 386.1%, respectively.

Allowance for Credit Losses on Loans (allowance). On January 1, 2020, we adopted FASB ASU 2016-13, which introduced the current expected credit losses ("CECL") methodology and required us to estimate all expected credit losses over the remaining life of our loan portfolio. Accordingly, the allowance for credit losses represents an amount that, in management's evaluation, is adequate to provide coverage for all expected future credit losses on outstanding loans. As of December 31, 2022 and 2021, our allowance for credit losses was \$300.7 million and \$263.2 million, respectively, which our management deemed to be adequate at each of the respective dates. Our allowance for credit losses as a percentage of total loans was 1.04% at December 31, 2022, down from 1.12% at December 31, 2021. No allowance for credit losses has been recorded for PPP loans as they are fully guaranteed by the SBA.

Our CECL models rely largely on recent historical and projected future macroeconomic conditions to estimate future credit losses. Macroeconomic factors used in the model include the national unemployment rate, gross domestic product, the commercial real estate price index and certain U.S. Treasury interest rates. Projections of these macroeconomic factors, obtained from an independent third party, are utilized to predict quarterly rates of default.

Under the CECL methodology, the allowance for credit losses is measured on a collective basis for pools of loans with similar risk characteristics, and for loans that do not share similar risk characteristics with the collectively evaluated pools, evaluations are performed on an individual basis. Losses are predicted over a period of time determined to be reasonable and supportable, and at the end of the reasonable and supportable period losses are reverted to long term historical averages. At December 31, 2022, a reasonable and supportable period of twenty-four months was utilized for all loan segments followed by a twelve month straight line reversion period to long term averages.

The following table sets forth, based on management's best estimate, the allocation of the allowance for credit losses on loans to categories of loans and loan balances by category and the percentage of loans in each category to total loans and allowance for credit losses as a percentage of total loans within each loan category as of December 31 for each of the past two years (in thousands):

	<i>At December 31,</i>							
	<i>2022</i>				<i>2021</i>			
	<i>Allowance Allocated (\$)</i>	<i>Total Loans (\$)</i>	<i>Allowance to Total Loans (%)</i>	<i>Loans to Total Loans (%)</i>	<i>Allowance Allocated (\$)</i>	<i>Total Loans (\$)</i>	<i>Allowance to Total Loans (%)</i>	<i>Loans to Total Loans (%)</i>
<i>Balance at end of period applicable to:</i>								
Commercial real estate:								
Owner-occupied	\$ 26,617	\$ 3,587,257	0.74 %	12.3 %	\$ 19,618	\$ 3,048,822	0.64 %	13.0 %
Non-owner occupied	40,479	6,542,619	0.62 %	22.5 %	58,504	5,221,704	1.12 %	22.3 %
Consumer real estate – mortgage	36,536	4,435,046	0.82 %	15.3 %	32,104	3,680,684	0.87 %	15.7 %
Construction and land development	36,114	3,679,498	0.98 %	12.7 %	29,429	2,903,017	1.01 %	12.4 %
Commercial and industrial	144,353	10,241,362	1.41 %	35.3 %	112,340	8,074,546	1.39 %	34.5 %
Consumer and other	16,566	555,823	2.98 %	1.9 %	11,238	485,489	2.31 %	2.1 %
Total	\$ 300,665	\$ 29,041,605	1.04 %	100.0 %	\$ 263,233	\$ 23,414,262	1.12 %	100.0 %

The following table presents information related to credit losses on loans by loan segment for each of the years in the three-year period ended December 31, 2022 (in thousands):

	Provision for credit losses	Net (charge-offs) recoveries	Average loans	Ratio of net (charge-offs) recoveries to average loans
For the year ended December 31, 2022:				
Commercial real estate:				
Owner occupied	\$ 6,330	\$ 669	\$ 3,258,092	0.02 %
Non-owner occupied	(18,027)	2	5,812,052	—
Consumer real estate - mortgage	3,571	861	4,031,082	0.02
Construction and land development	6,364	321	3,369,233	0.01
Commercial and industrial	55,346	(23,333)	9,162,689	(0.25)
Consumer and other	10,395	(5,067)	466,435	(1.08)
Total loans	<u>\$ 63,979</u>	<u>\$ (26,547)</u>	<u>\$ 26,099,583</u>	<u>(0.10)%</u>
For the year ended December 31, 2021:				
Commercial real estate:				
Owner occupied	\$ (3,869)	\$ 189	\$ 2,891,798	0.01 %
Non-owner occupied	(20,811)	183	5,358,828	—
Consumer real estate - mortgage	(2,856)	1,656	3,320,083	0.05
Construction and land development	(12,984)	5	2,845,957	—
Commercial and industrial	52,645	(38,728)	8,154,391	(0.47)
Consumer and other	4,781	(2,028)	403,624	(0.50)
Total loans	<u>\$ 16,906</u>	<u>\$ (38,723)</u>	<u>\$ 22,974,681</u>	<u>(0.17)%</u>
For the year ended December 31, 2020:				
Commercial real estate:				
Owner occupied	\$ 10,909	\$ (1,281)	\$ 2,693,062	(0.05)%
Non-owner occupied	63,544	365	5,217,596	0.01
Consumer real estate - mortgage	6,206	(1,985)	3,067,694	(0.06)
Construction and land development	32,743	147	2,594,505	0.01
Commercial and industrial	73,449	(34,178)	7,873,759	(0.43)
Consumer and other	4,691	(2,439)	288,772	(0.84)
Total loans	<u>\$ 191,542</u>	<u>\$ (39,371)</u>	<u>\$ 21,735,388</u>	<u>(0.18)%</u>

Pinnacle Financial's management assesses the adequacy of the allowance for credit losses on a quarterly basis. This assessment includes procedures to estimate the allowance and test the adequacy and appropriateness of the resulting balance. The level of the allowance is based upon management's evaluation of historical default and loss experience, current and projected economic conditions, asset quality trends, known and inherent risks in the portfolio, adverse situations that may affect the borrowers' ability to repay the loan (including the timing of future payments), the estimated value of any underlying collateral, composition of the loan portfolio, industry and peer bank loan quality indications and other pertinent factors, including regulatory recommendations. The allowance is increased by provisions charged to expense and decreased by charge-offs, net of recoveries of amounts previously charged-off.

Based upon our evaluation of the loan portfolio, we believe the allowance for credit losses on loans to be adequate to absorb our estimate of expected future credit losses on loans outstanding at December 31, 2022. While our policies and procedures used to estimate the allowance for credit losses as well as the resultant provision for credit losses charged to operations are considered adequate by management, they are necessarily approximate and imprecise. There are factors beyond our control, such as conditions in the local and national economy, local real estate market or a particular industry or borrower which may negatively impact, materially, our asset quality and the adequacy of our allowance for credit losses and, thus, the resulting provision for credit losses.

Investments. Our investment portfolio, consisting primarily of Federal agency bonds, state and municipal securities and mortgage-backed securities, amounted to \$6.6 billion and \$6.1 billion at December 31, 2022 and 2021, respectively. Our investment securities to asset ratio was 15.8% at both December 31, 2022 and 2021. Our investment portfolio serves many purposes including serving as a stable source of income, collateral for public funds and as a potential liquidity source. During 2022, we sold \$29.5 million of investment securities for a net pre-tax gain of \$156,000 compared to \$37.5 million of investment securities for a net pre-tax gain of \$759,000 during 2021 and \$145.6 million of investment securities for a net pre-tax gain of \$986,000 during 2020. These sales were implemented as part of our efforts to reposition our investment portfolio to provide our balance sheet more protection from the then anticipated rate environment in each respective period.

During the years ended December 31, 2022, 2020 and 2018, we transferred, at fair value, \$1.1 billion, \$873.6 million and \$179.8 million, respectively, of securities from the available-for-sale portfolio to the held-to-maturity portfolio to mitigate the impact of changes in fair value on our common tangible book equity. The related net unrealized after tax losses of \$1.5 million, gains of \$69.0 million and losses of \$2.2 million, respectively, on such transferred securities remained in accumulated other comprehensive income (loss) at December 31, 2022 and 2021 and will be amortized over the remaining life of the securities, offsetting the related amortization of discount on the transferred securities. No gains or losses were recognized at the time of transfer.

A summary of certain aspects of our investment portfolio at December 31, 2022 and 2021 follows:

	December 31,	
	2022	2021
Weighted average life	11.62 years	6.26 years
Effective duration (*)	4.39 %	4.07 %
Tax equivalent yield	3.19 %	2.08 %

(*) The metric is presented net of fair value hedges tied to certain investment portfolio holdings. The effective duration of the investment portfolio without the fair value hedges as of December 31, 2022 was 6.07%.

The following table shows the carrying value of investment securities according to contractual maturity classifications of (1) one year or less, (2) after one year through five years, (3) after five years through ten years, and (4) after ten years as of December 31, 2022 (in thousands):

	U.S. Treasury securities		U.S. Government agency securities		Mortgage-backed securities		State and municipal securities		Asset-backed securities		Corporate notes and other		Totals	
	Amt.	Yield	Amt.	Yield	Amt.	Yield	Amt.	Yield	Amt.	Yield	Amt.	Yield	Amt.	Yield
At December 31, 2022:														
<i>Securities available-for-sale:</i>														
Due in one year or less	\$ 1,997	0.41 %	\$ 1,030	1.81 %	\$ 772	1.31 %	\$ 154	0.31 %	\$ —	0.00 %	\$ 9,052	2.33 %	\$ 13,005	1.91 %
Due in one year through five years	—	0.00 %	159,149	1.19 %	45,400	2.04 %	5,012	3.64 %	4,875	1.33 %	29,351	3.05 %	243,787	1.63 %
Due in five years through ten years	—	0.00 %	235,978	1.65 %	471,399	1.74 %	21,352	2.98 %	407	2.07 %	397,470	2.49 %	1,126,606	2.00 %
Due after ten years	192,187	3.13 %	—	0.00 %	454,005	2.52 %	1,385,788	4.12 %	112,121	1.64 %	31,371	3.64 %	2,175,472	3.54 %
	<u>\$194,184</u>	<u>3.10 %</u>	<u>\$396,157</u>	<u>1.48 %</u>	<u>\$ 971,576</u>	<u>2.11 %</u>	<u>\$1,412,306</u>	<u>4.10 %</u>	<u>\$117,403</u>	<u>1.62 %</u>	<u>\$ 467,244</u>	<u>2.60 %</u>	<u>\$ 3,558,870</u>	<u>2.91 %</u>
<i>Securities held-to-maturity:</i>														
Due in one year or less	\$ 1,994	1.49 %	\$ —	0.00 %	\$ —	0.00 %	\$ —	0.00 %	\$ —	0.00 %	\$ —	0.00 %	\$ 1,994	1.49 %
Due in one year through five years	90,744	1.01 %	304,742	2.19 %	3,887	1.79 %	2,472	3.17 %	35,494	4.77 %	29,936	2.07 %	467,275	2.15 %
Due in five years through ten years	—	0.00 %	69,513	3.70 %	246,514	3.08 %	14,311	1.98 %	8,427	2.82 %	49,857	2.05 %	388,622	3.01 %
Due after ten years	—	0.00 %	—	0.00 %	162,718	1.53 %	1,910,995	3.32 %	140,320	2.58 %	8,734	2.16 %	2,222,767	3.14 %
	<u>\$ 92,738</u>	<u>1.02 %</u>	<u>\$374,255</u>	<u>2.47 %</u>	<u>\$ 413,119</u>	<u>2.46 %</u>	<u>\$1,927,778</u>	<u>3.31 %</u>	<u>\$184,241</u>	<u>3.01 %</u>	<u>\$ 88,527</u>	<u>2.07 %</u>	<u>\$ 3,080,658</u>	<u>2.97 %</u>

Actual maturities may differ from contractual maturities of mortgage-backed and asset-backed securities because the mortgages or other assets underlying the securities may be called or prepaid with or without penalty.

Yields have been computed using coupon interest, adding discount accretion or subtracting premium amortization, as appropriate, on a ratable basis over the life of each security. Weighted average yield for each maturity range has been computed on a fully taxable-equivalent basis using the amortized cost of each security in that range.

Restricted Cash. Our restricted cash balances totaled approximately \$31.4 million and \$82.5 million at December 31, 2022 and 2021, respectively. This restricted cash is maintained at other financial institutions as collateral primarily for our derivative portfolio. The decrease in restricted cash is attributable primarily to a decrease in collateral requirements on certain derivative instruments for which the fair value has increased. See *Note 14. Derivative Instruments* in the Notes to our Consolidated Financial Statements elsewhere in this Form 10-K.

Securities Purchased with Agreement to Resell. At December 31, 2022 and 2021, we had \$513.3 million and \$1.0 billion, respectively, in securities purchased with agreement to resell. This balance is the result of repurchase agreement transactions with a financial institution counterparty. During 2021, these investments allowed us to deploy some of our excess liquidity position into instruments that improved the return on funds in the then historically low interest rate environment. During 2022, we opted to exit certain of these transactions to both fund our loan growth as well as repay certain FHLB advances to best support our firm in the current rising rate environment. Prior to 2021, no securities were purchased with agreement to resell.

Deposits and Other Borrowings. We had approximately \$35.0 billion of deposits at December 31, 2022 compared to \$31.3 billion at December 31, 2021. Our deposits consist of noninterest and interest-bearing demand accounts, savings accounts, money market accounts and time deposits. At December 31, 2022 and 2021, we estimate that we had approximately \$15.7 billion and \$14.9 billion, respectively, in uninsured deposits, which are the portion of deposit accounts that exceed the FDIC insurance limit. Additionally, we entered into agreements with certain customers to sell certain of our securities under agreements to repurchase the security the following day. These agreements (which are typically associated with comprehensive treasury management programs for our commercial clients and provide the client with short-term returns for their excess funds) amounted to \$194.9 million at December 31, 2022 and \$152.6 million at December 31, 2021. Average balances for these repurchase agreements were \$203.1 million in 2022, \$155.9 million in 2021 and \$150.1 million in 2020. Additionally, at December 31, 2022, we had borrowed \$464.4 million in advances from the Federal Home Loan Bank of Cincinnati (FHLB Cincinnati) compared to \$888.7 million at December 31, 2021. At December 31, 2022, we had an estimated \$3.8 billion in additional borrowing capacity with the FHLB Cincinnati; however, incremental borrowings are made via a formal request by us and the subsequent approval by the FHLB Cincinnati.

Generally, we have classified our funding base as either core funding or non-core funding as shown in the table below. The following table represents the balances of our deposits and other funding and the percentage of each type to the total at December 31, 2022 and 2021 (in thousands):

	December 31, 2022			December 31, 2021		
	Balance	Average Rate Paid	Percent of Total Deposits	Balance	Average Rate Paid	Percent of Total Deposits
Core funding:						
Noninterest-bearing deposit accounts	\$ 9,812,744	0.00 %	27.2 %	\$ 10,461,071	0.00 %	31.9 %
Interest-bearing demand accounts	5,699,981	1.76 %	15.8 %	4,936,735	0.14 %	15.1 %
Savings and money market accounts	10,743,225	1.78 %	29.8 %	9,792,104	0.18 %	29.9 %
Time deposit accounts less than \$250,000	1,458,206	1.61 %	4.0 %	998,586	0.65 %	3.0 %
Reciprocating demand deposit accounts ⁽¹⁾	1,709,318	1.48 %	4.7 %	1,075,774	0.21 %	3.3 %
Reciprocating savings accounts ⁽¹⁾	1,566,982	2.45 %	4.4 %	1,885,806	0.26 %	5.8 %
Reciprocating CD accounts ⁽¹⁾	310,621	2.37 %	0.9 %	166,836	0.57 %	0.5 %
Total core funding	31,301,077	1.19 %	86.8 %	29,316,912	0.14 %	89.5 %
Non-core funding:						
Relationship based non-core funding:						
Other time deposits	1,177,786	2.13 %	3.3 %	565,184	0.76 %	1.7 %
Securities sold under agreements to repurchase	194,910	0.94 %	0.5 %	152,559	0.15 %	0.5 %
Total relationship based non-core funding	1,372,696	1.92 %	3.8 %	717,743	0.65 %	2.2 %
Wholesale funding:						
Brokered deposits	1,939,633	4.66 %	5.4 %	1,019,259	0.31 %	3.1 %
Brokered time deposits	542,742	2.09 %	1.5 %	403,178	1.15 %	1.2 %
Federal Home Loan Bank advances	464,436	3.04 %	1.3 %	888,681	2.01 %	2.7 %
Subordinated debt and other funding	424,055	5.00 %	1.2 %	423,172	4.38 %	1.3 %
Total wholesale funding	3,370,866	3.91 %	9.4 %	2,734,290	1.60 %	8.3 %
Total non-core funding	4,743,562	3.40 %	13.2 %	3,452,033	1.42 %	10.5 %
Totals	\$ 36,044,639	1.47 %	100.0 %	\$ 32,768,945	0.33 %	100.0 %

⁽¹⁾ The reciprocating categories consists of deposits we receive from a bank network (the IntraFi network) in connection with deposits of our customers in excess of our FDIC coverage limit that we place with the IntraFi network.

As noted in the table above, our core funding as a percentage of total funding decreased from 89.5% at December 31, 2021 to 86.8% at December 31, 2022 but remained well above internal policies. Our reliance on non-core funding increased in 2022 as our loan growth outpaced our core deposit growth in the year and our excess levels of liquidity built up in the pandemic also declined as those funds were utilized to fund our loan growth. We remain optimistic that we will be able to grow our levels of core funding as needed during 2023 to fund our balance sheet in a sound manner. We created and implemented several deposit gathering initiatives in 2022 as part of our annual strategic planning process in anticipation of the more challenging deposit gathering environment we began to see developing in the fourth quarter of 2022 and expect will continue into at least the first half of 2023 as M2 money supply levels are projected to decline. When wholesale funding is necessary to complement our core deposit base, management determines which source is best suited to address both liquidity risk management and interest rate risk management objectives. Our Asset Liability Management Policy imposes limitations on overall wholesale funding reliance and on brokered deposit exposure specifically. Both our overall reliance on wholesale funding and exposure to brokered deposits and brokered time deposits increased in 2022 but remained within those policy limitations as of December 31, 2022.

The amount of time deposits as of December 31, 2022 amounted to \$3.5 billion. The following table, which includes core, non-core and reciprocal time deposits, shows our time deposits at December 31, 2022 in denominations of under \$250,000 and those of denominations of \$250,000 and greater by category based on time remaining until maturity of (1) three months or less, (2) over three but less than six months, (3) over six but less than twelve months and (4) over twelve months and the weighted average rate for each category (in thousands):

	<u>Balances</u>	<u>Weighted Avg. Rate</u>
<i>Denominations less than \$250,000</i>		
Three months or less	\$ 527,347	1.84 %
Over three but through six months	508,775	1.87 %
Over six but through twelve months	709,096	2.40 %
Over twelve months	435,574	2.77 %
	<u>2,180,792</u>	<u>2.21 %</u>
<i>Denomination \$250,000 and greater</i>		
Three months or less	439,171	2.58 %
Over three but through six months	301,930	2.71 %
Over six but through twelve months	244,611	2.81 %
Over twelve months	322,851	3.45 %
	<u>1,308,563</u>	<u>2.87 %</u>
Totals	<u>\$ 3,489,355</u>	<u>2.46 %</u>

Subordinated debt and other borrowings. Pinnacle Bank receives advances from the FHLB Cincinnati, pursuant to the terms of various borrowing agreements, which assist it in the funding of its home mortgage and commercial real estate loan portfolios. Under the borrowing agreements with the FHLB Cincinnati, Pinnacle Bank has pledged certain qualifying residential mortgage loans and, pursuant to a blanket lien, all qualifying commercial mortgage loans as collateral. At December 31, 2022 and 2021, Pinnacle Financial had received advances from the FHLB Cincinnati totaling \$464.4 million and \$888.7 million, respectively. At December 31, 2022, the scheduled maturities of FHLB Cincinnati advances and interest rates are as follows (in thousands):

	<u>Scheduled maturities</u>	<u>Weighted average interest rates⁽¹⁾</u>
2023	\$ —	— %
2024	—	— %
2025	116,250	4.85 %
2026	—	— %
2027	—	— %
Thereafter	350,012	2.36 %
	<u>466,262</u>	
Deferred costs	<u>(1,826)</u>	
Total Federal Home Loan Bank advances	<u>\$ 464,436</u>	
<i>Weighted average interest rate</i>		<u>2.98 %</u>

⁽¹⁾ Some FHLB Cincinnati advances include variable interest rates and could increase in the future. The table reflects rates in effect as of December 31, 2022.

We have established, or through acquisition acquired, twelve statutory business trusts which were established to issue 30-year trust preferred securities and certain other subordinated debt agreements. From time to time we, or our bank subsidiary, have issued subordinated notes to enhance our capital positions. These trust-preferred securities and subordinated notes qualify as Tier 2 capital subject to annual phase outs beginning five years from maturity. These instruments are outlined below (in thousands):

Name	Date Established	Maturity	Total Debt Outstanding	Interest Rate at December 31, 2022	Coupon Structure
<u>Trust preferred securities</u>					
Pinnacle Statutory Trust I	December 29, 2003	December 30, 2033	\$ 10,310	7.54 %	3-month LIBOR + 2.80%
Pinnacle Statutory Trust II	September 15, 2005	September 30, 2035	20,619	6.13 %	3-month LIBOR + 1.40%
Pinnacle Statutory Trust III	September 07, 2006	September 30, 2036	20,619	6.40 %	3-month LIBOR + 1.65%
Pinnacle Statutory Trust IV	October 31, 2007	September 30, 2037	30,928	7.62 %	3-month LIBOR + 2.85%
BNC Capital Trust I	April 03, 2003	April 15, 2033	5,155	7.33 %	3-month LIBOR + 3.25%
BNC Capital Trust II	March 11, 2004	April 07, 2034	6,186	6.93 %	3-month LIBOR + 2.85%
BNC Capital Trust III	September 23, 2004	September 23, 2034	5,155	6.48 %	3-month LIBOR + 2.40%
BNC Capital Trust IV	September 27, 2006	December 31, 2036	7,217	6.43 %	3-month LIBOR + 1.70%
Valley Financial Trust I	June 26, 2003	June 26, 2033	4,124	7.82 %	3-month LIBOR + 3.10%
Valley Financial Trust II	September 26, 2005	December 15, 2035	7,217	6.26 %	3-month LIBOR + 1.49%
Valley Financial Trust III	December 15, 2006	January 30, 2037	5,155	6.14 %	3-month LIBOR + 1.73%
Southcoast Capital Trust III	August 05, 2005	September 30, 2035	10,310	6.23 %	3-month LIBOR + 1.50%
<u>Subordinated Debt</u>					
Pinnacle Financial Subordinated Notes	September 11, 2019	September 15, 2029	300,000	4.13 %	Fixed ⁽¹⁾
Debt issuance costs and fair value adjustment			(8,940)		
Total subordinated debt and other borrowings			<u>\$ 424,055</u>		

⁽¹⁾ Migrates to three month LIBOR + 2.775% (or an alternative benchmark rate plus a comparable spread in the event three month LIBOR is no longer published on such adjustment date) beginning September 15, 2024 through the end of the term.

On July 30, 2021, Pinnacle Bank redeemed \$130.0 million aggregate principal amount of subordinated notes due July 30, 2025. Additionally, Pinnacle Financial redeemed \$120.0 million aggregate principal amount of subordinated notes on November 16, 2021 due November 16, 2026. The redemptions were funded with existing cash on hand. Pursuant to regulatory guidelines, once the maturity date on subordinated notes is within five years, a portion of the notes will no longer be eligible to be included in regulatory capital, with an additional portion being excluded each year over the five year period approaching maturity.

Capital Resources. At December 31, 2022 and 2021, our shareholders' equity amounted to \$5.5 billion and \$5.3 billion, respectively. During 2022, shareholders' equity was negatively impacted by accumulated other comprehensive losses on our available-for-sale securities portfolio that were caused by the rising short-term interest rate environment. At December 31, 2022 and 2021, our capital ratios, including our bank's capital ratios, exceeded regulatory minimum capital requirements and those necessary to be considered well-capitalized under applicable federal regulations. See *Note 19. Regulatory Matters* in the Notes to our Consolidated Financial Statements elsewhere in this Form 10-K for additional information regarding our capital ratios. From time to time we may be required to support the capital needs of our bank (Pinnacle Bank). At December 31, 2022, we had approximately \$186.6 million of cash at the parent company that could be used to support our bank.

Our and our bank subsidiary's capital ratios as of December 31, 2022 and 2021 are presented in the following table:

	December 31,	
	2022	2021
Total capital to risk weighted assets:		
Pinnacle Financial	12.4%	13.8%
Pinnacle Bank	11.6%	12.6%
Tier 1 capital to risk weighted assets:		
Pinnacle Financial	10.5%	11.7%
Pinnacle Bank	10.9%	11.9%
Common equity Tier 1 capital:		
Pinnacle Financial	10.0%	10.9%
Pinnacle Bank	10.9%	11.9%

	December 31,	
	2022	2021
Tier 1 capital to average assets (*):		
Pinnacle Financial	9.7%	9.7%
Pinnacle Bank	10.1%	9.9%

(*) Average assets for the above calculations were based on the most recent quarter.

We and our bank subsidiary are subject to various regulatory capital requirements administered by federal banking agencies. Failure to meet minimum capital requirements can lead to certain mandatory, and possibly additional discretionary, actions by regulators that, if undertaken, could have a direct material effect on our financial condition or results of operations. Under capital adequacy guidelines and the regulatory framework for prompt corrective action, we and our bank subsidiary must meet specific capital guidelines that involve quantitative measures of the assets, liabilities, and certain off-balance-sheet items as calculated under regulatory accounting practices. Our and Pinnacle Bank's capital amounts and classification are also subject to qualitative judgments by the regulators about components, risk weightings, and other factors.

As permitted by the interim final rule issued on March 27, 2020 by the federal banking regulatory agencies, both we and our bank subsidiary have elected the option to delay the estimated impact on regulatory capital resulting from the adoption of ASU 2016-13, "Financial Instruments – Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments", which was effective January 1, 2020. The initial impact of adoption of ASU 2016-13, as well as 25% of the quarterly increases in the allowance for credit losses subsequent to adoption of ASU 2016-13 (collectively the "transition adjustments"), was delayed through December 31, 2021. Beginning on January 1, 2022, the cumulative amount of the transition adjustments of \$68.0 million became fixed and will be phased out of the regulatory capital calculations evenly over a three year period, with 75% recognized in 2022, 50% recognized in 2023, and 25% recognized in 2024. Beginning January 1, 2025, the temporary regulatory capital benefits will be fully reversed.

We believe we have various capital raising techniques available to us to provide for the capital needs of our company and bank, such as issuing subordinated debt or entering into a revolving credit facility with a financial institution. We also periodically evaluate capital markets conditions to identify opportunities to access those markets if necessary or prudent to support our capital levels.

Share Repurchase Program. On January 18, 2022, our board of directors authorized a share repurchase program for up to \$125.0 million of our outstanding common stock, pursuant to which we have acquired no shares of our common stock. The authorization for this program will remain in effect through March 31, 2023. On January 17, 2023, our board of directors authorized a share repurchase program for up to \$125.0 million of our common stock to commence upon expiration of our existing share repurchase program that is set to expire on March 31, 2023. This authorization is to remain in effect through March 31, 2024.

Dividends. Pursuant to Tennessee banking law, Pinnacle Bank may not, without the prior consent of the TDFI, pay any dividends to us in a calendar year in excess of the total of its retained net profits for that year plus the retained net profits for the preceding two years. During the year ended December 31, 2022, Pinnacle Bank paid dividends of \$110.8 million to us which was within the limits allowed by the TDFI.

During the year ended December 31, 2022, we paid \$68.2 million in dividends to common shareholders. On January 17, 2023 our board of directors declared a \$0.22 quarterly cash dividend to common shareholders (approximately \$17.1 million in aggregate) that was paid on February 24, 2023 to common shareholders of record as of the close of business on February 3, 2023.

During the year ended December 31, 2022, we paid \$15.2 million of dividends on our Series B Preferred Stock. On January 17, 2023 our board of directors declared a \$16.88 quarterly cash dividend (approximately \$3.8 million in aggregate) that will be paid on March 1, 2023 to preferred shareholders of record as of the close of business on February 14, 2023. This dividend equates to \$0.422 per share on our depositary shares.

The amount and timing of all future dividend payments, if any, is subject to board discretion and will depend on our earnings, capital position, financial condition and other factors, including, if necessary, our receipt of dividends from Pinnacle Bank, regulatory capital requirements, as they become known to us and receipt of any regulatory approvals that may become required as a result of our and our bank subsidiary's financial results.

If we fail to pay dividends on our Series B Preferred Stock, we will be prohibited from paying dividends on our common stock.

Market and Liquidity Risk Management

Our objective is to manage assets and liabilities to provide a satisfactory, consistent level of profitability within the framework of established liquidity, loan, investment, borrowing, and capital policies. Our Asset Liability Management Committee (ALCO) is charged with the responsibility of monitoring these policies, which are designed to ensure acceptable composition of asset/liability mix. Two critical areas of focus for ALCO are interest rate sensitivity and liquidity risk management.

Interest Rate Sensitivity. In the normal course of business, we are exposed to market risk arising from fluctuations in interest rates. ALCO measures and evaluates the interest rate risk so that we can meet customer demands for various types of loans and deposits. ALCO determines the most appropriate amounts of on-balance sheet and off-balance sheet items. Measurements which we use to help us manage interest rate sensitivity include an earnings simulation model and an economic value of equity (EVE) model.

Our interest rate sensitivity modeling incorporates a number of assumptions for both earnings simulation and EVE, including loan and deposit re-pricing characteristics, the rate of loan prepayments, etc. ALCO periodically reviews these assumptions for accuracy based on historical data and future expectations. Our ALCO policy requires that the base scenario assumes rates remain flat and is the scenario to which all others are compared in order to measure the change in net interest income and EVE. Policy limits are applied to the results of certain modeling scenarios. While the primary policy scenarios focus is on a twelve month time frame for the earnings simulations model, longer time horizons are also modeled. All policy scenarios assume a static volume forecast where the balance sheet is held constant, although other scenarios are modeled.

During the year ended December 31, 2022, there were several noteworthy factors when comparing the results of both the earnings simulation and the economic value of equity modeling results as of December 31, 2022, to the modeling results at December 31, 2021:

- The Federal Reserve tightened monetary policy with 425 basis points of Fed Funds rate increases during 2022.
- We deployed \$3.4 billion of interest-bearing cash and reverse repo agreements into loans and securities.
- We entered into \$875 million of interest rate floors for our variable rate loan portfolio.
- We entered into \$875 million of interest rate collars for our variable rate loan portfolio.

Earnings simulation model. We believe interest rate risk is best measured by our earnings simulation modeling. Earning assets, interest-bearing liabilities and off-balance sheet financial instruments are combined with forecasts of interest rates for the next 12 months and are combined with other factors in order to produce various earnings simulations over that same 12-month period. To limit interest rate risk, we have policy guidelines for our earnings at risk which seek to limit the variance of net interest income in both gradual and instantaneous changes to interest rates. For instantaneous upward and downward changes in rates from management's flat interest rate forecast over the next twelve months, assuming a static balance sheet, the following estimated changes are calculated:

	Estimated % Change in Net Interest Income Over 12 Months	
	December 31, 2022*	December 31, 2021*
Instantaneous Rate Change		
300 bps increase	5.5 %	10.3 %
200 bps increase	4.0 %	6.7 %
100 bps increase	2.0 %	2.8 %
100 bps decrease	(1.3)%	(2.5)%
200 bps decrease	(2.5)%	(3.7)%
300 bps decrease	(7.7)%	(4.2)%

*: Negative interest rates are not contemplated in these scenarios. The Treasury curve and all short-term rate indices, such as Fed Funds, LIBOR, etc., are assumed to be zero bound.

While an instantaneous and severe shift in interest rates was used in this analysis to provide an estimate of exposure under these scenarios, we believe that a gradual shift in interest rates would have a more modest impact. Further, the earnings simulation model does not take into account factors such as future balance sheet growth, changes in product mix, changes in yield curve relationships, hedging activities we might take and changing product spreads that could mitigate any potential adverse impact of changes in interest rates.

The behavior of our deposit portfolio in the baseline forecast and in alternate interest rate scenarios set out in the table above is a key assumption in our projected estimates of net interest income. The projected impact on net interest income in the table above assumes no change in deposit portfolio size or mix from the baseline forecast in alternative rate environments. In higher rate scenarios, any customer activity resulting in the replacement of low-cost or noninterest-bearing deposits with higher-yielding deposits or market-based funding would reduce the assumed benefit of those deposits. The projected impact on net interest income in the table above also

assumes a "through-the-cycle" non-maturity deposit beta which may not be an accurate predictor of actual deposit rate changes realized in scenarios of smaller and/or non-parallel interest rate movements.

At December 31, 2022, our earnings simulation model indicated we were in compliance with our policies for interest rate scenarios for which we model as required by our board approved Asset Liability Policy.

Economic value of equity model. While earnings simulation modeling attempts to determine the impact of a changing rate environment to our net interest income, our EVE model measures estimated changes to the economic values of our assets, liabilities and off-balance sheet items as a result of interest rate changes. Economic values are determined by discounting expected cash flows from assets, liabilities and off-balance sheet items, which establishes a base case EVE. We then shock rates as prescribed by our Asset Liability Policy and measure the sensitivity in EVE values for each of those shocked rate scenarios versus the base case. The Asset Liability Policy sets limits for those sensitivities. At December 31, 2022, our EVE modeling calculated the following estimated changes in EVE due to instantaneous upward and downward changes in rates:

	December 31, 2022*	December 31, 2021*
Instantaneous Rate Change		
300 bps increase	(20.6)%	(12.4)%
200 bps increase	(14.2)%	(7.2)%
100 bps increase	(7.3)%	(1.0)%
100 bps decrease	5.6 %	(8.1)%
200 bps decrease	3.9 %	(10.0)%
300 bps decrease	2.3 %	(9.9)%

*: Negative interest rates are not contemplated in these scenarios. The Treasury curve and all short-term rate indices, such as Fed Funds, LIBOR, etc., are assumed to be zero bound.

While an instantaneous and severe shift in interest rates was used in this analysis to provide an estimate of exposure under these scenarios, we believe that a gradual shift in interest rates would have a more modest impact. Since EVE measures the discounted present value of cash flows over the estimated lives of instruments, the change in EVE does not directly correlate to the degree that earnings would be impacted over a shorter time horizon (i.e., the current year). Further, EVE does not take into account factors such as future balance sheet growth, changes in product mix, changes in yield curve relationships, hedging activities we might take and changing product spreads that could mitigate the adverse impact of changes in interest rates.

At December 31, 2022, our EVE model indicated we were in compliance with our policies for all interest rate scenarios for which we model as required by our board approved Asset Liability Policy.

Most likely earnings simulation models. We also analyze a most-likely earnings simulation scenario that projects the expected change in rates based on a forward yield curve adopted by management using expected balance sheet volumes forecasted by management. Separate growth assumptions are developed for loans, investments, deposits, etc. Other interest rate scenarios analyzed by management may include delayed rate shocks, yield curve steepening or flattening, or other variations in rate movements to further analyze or stress our balance sheet under various interest rate scenarios. Each scenario is evaluated by management. These processes assist management to better anticipate our financial results and, as a result, management may determine the need to invest in other operating strategies and tactics which might enhance results or better position the firm's balance sheet to reduce interest rate risk going forward.

Each of the above analyses may not, on its own, be an accurate indicator of how our net interest income will be affected by changes in interest rates. Income associated with interest-earning assets and costs associated with interest-bearing liabilities may not be affected uniformly by changes in interest rates. In addition, the magnitude and duration of changes in interest rates may have a significant impact on net interest income. For example, although certain assets and liabilities may have similar maturities or periods of repricing, they may react in different degrees to changes in market interest rates. Interest rates on certain types of assets and liabilities fluctuate in advance of changes in general market rates, while interest rates on other types may lag behind changes in general market rates. In addition, certain assets, such as adjustable rate mortgage loans, have features (generally referred to as interest rate caps and floors) which limit changes in interest rates. Prepayment and early withdrawal levels also could deviate significantly from those assumed in calculating the maturity of certain instruments. The ability of many borrowers to service their debts also may decrease during periods of rising interest rates. ALCO reviews each of the above interest rate sensitivity analyses along with several different interest rate scenarios as part of its responsibility to provide a satisfactory, consistent level of profitability within the framework of established liquidity, loan, investment, borrowing, and capital policies.

Management's model governance, model implementation and model validation processes and controls are subject to review in our regulatory examinations to ensure they are in compliance with the most recent regulatory guidelines and industry and regulatory

practices. Management utilizes a respected, sophisticated third party asset liability modeling software to help ensure implementation of management's assumptions into the model are processed as intended in a robust manner. That said, there are numerous assumptions regarding financial instrument behavior that are integrated into the model. The assumptions are formulated by combining observations gleaned from our historical studies of financial instruments and our best estimations of how these instruments may behave in the future given changes in economic conditions, technology, etc. These assumptions may prove to be inaccurate. Additionally, given the large number of assumptions built into our asset liability modeling software, it is difficult, at best, to compare our results to other firms.

ALCO may determine that Pinnacle Financial should over time become more or less asset or liability sensitive depending on the underlying balance sheet circumstances and our conclusions as to anticipated interest rate fluctuations in future periods. At present, ALCO has determined that its "most likely" rate scenario assumes three 25 basis point increases in the Federal Funds Rate during 2023, inclusive of the 25 bps rate increase announced in February 2023. Our "most likely" rate forecast is based primarily on information we acquire from a service which includes a consensus forecast of numerous interest rate benchmarks. We may implement additional actions designed to achieve our desired sensitivity position which could change from time to time.

We have in the past used, and may in the future continue to use, derivative financial instruments as one tool to manage our interest rate sensitivity, including in our mortgage lending program, while continuing to meet the credit and deposit needs of our customers. For further details on the derivatives we currently use, see Note 14. Derivative Instruments in the Notes to our Consolidated Financial Statements elsewhere in this Form 10-K.

We may also enter into interest rate swaps to facilitate customer transactions and meet their financing needs. These swaps qualify as derivatives, even though they are not designated as hedging instruments.

Liquidity Risk Management. The purpose of liquidity risk management is to ensure that there are sufficient cash flows to satisfy loan demand, deposit withdrawals, and our other needs. Traditional sources of liquidity for a bank include asset maturities and growth in core deposits. A bank may achieve its desired liquidity objectives from the management of its assets and liabilities and by internally generated funding through its operations. Funds invested in marketable instruments that can be readily sold and the continuous maturing of other earning assets are sources of liquidity from an asset perspective. The liability base provides sources of liquidity through attraction of increased deposits and borrowing funds from various other institutions.

To assist in determining the adequacy of our liquidity, we perform a variety of liquidity stress tests including idiosyncratic, systemic and combined scenarios for both moderate and severe events. Liquidity is defined as the ability to convert assets into cash or cash equivalents without significant loss and to raise additional funds by increasing liabilities. Liquidity management involves maintaining our ability to meet the daily cash flow requirements of our customers, both depositors and borrowers. We seek to maintain a sufficiently liquid asset balance to ensure our ability to meet our obligations. The amount of the appropriate minimum liquid asset balance is determined through severe liquidity stress testing as measured by our liquidity coverage ratio calculation. At December 31, 2022, we were in compliance with our liquidity coverage ratio.

Changes in interest rates also affect our liquidity position. We currently price deposits in response to market rates, and our management intends to continue this policy. If deposits are not priced in response to market rates, a loss of deposits could occur which would negatively affect our liquidity position.

Scheduled loan payments are a relatively stable source of funds, but loan payoffs and deposit flows fluctuate significantly, being influenced by interest rates, general economic conditions and competition. Additionally, debt security investments are subject to prepayment and call provisions that could accelerate their payoff prior to stated maturity. We attempt to price our deposit products to meet our asset/liability objectives consistent with local market conditions. Our ALCO is responsible for monitoring our ongoing liquidity needs. Our regulators also monitor our liquidity and capital resources on a periodic basis.

As noted previously, Pinnacle Bank is a member of the FHLB Cincinnati and, pursuant to a borrowing agreement with the FHLB Cincinnati, has pledged certain assets pursuant to a blanket lien. As such, Pinnacle Bank may use the FHLB Cincinnati as a source of liquidity depending on the firm's ALCO strategies. Additionally, we may pledge additional qualifying assets or reduce the amount of pledged assets with the FHLB Cincinnati to increase or decrease our borrowing capacity at the FHLB Cincinnati. At December 31, 2022, we believe we had an estimated \$3.8 billion in additional borrowing capacity with the FHLB Cincinnati; however, incremental borrowings are made via a formal request by Pinnacle Bank and the subsequent approval by the FHLB Cincinnati.

Pinnacle Bank also has accommodations with upstream correspondent banks for unsecured short-term advances which aggregate \$155.0 million. These accommodations have various covenants related to their term and availability, and in most cases must be repaid within less than one month. There were no outstanding borrowings under these agreements at December 31, 2022, or during the year then ended, although we test the availability of these accommodations periodically. Pinnacle Bank also had approximately \$4.8 billion in available Federal Reserve discount window lines of credit at December 31, 2022.

At December 31, 2022 and 2021, excluding reciprocating time and money market deposits issued through the IntraFiNetwork, we had approximately \$2.5 billion and \$1.4 billion, respectively, in brokered deposits. Historically, we have issued brokered certificates through several different brokerage houses based on competitive bid.

Banking regulators have defined additional liquidity guidelines, through the issuance of the Basel III Liquidity Coverage Ratio (LCR) and the Modified LCR. These regulatory guidelines became effective January 2015 with phase in over subsequent years and require these large institutions to follow prescriptive guidance in determining an absolute level of a high quality liquid asset (HQLA) buffer that must be maintained on their balance sheets in order to withstand a potential liquidity crisis event. Although Pinnacle Financial follows the principles outlined in the Interagency Policy Statement on Liquidity Risk Management, issued March 2010, to determine its HQLA buffer, Pinnacle Financial is not currently subject to these regulations. However, these formulas could eventually be imposed on smaller banks, such as Pinnacle Bank, and require an increase in the absolute level of liquidity on our balance sheet, which could result in lower net interest margins for us in future periods.

At December 31, 2022, we had no individually significant commitments for capital expenditures. But, we believe the number of our locations, including non-branch locations, will increase over an extended period of time across our footprint, including the markets to which we have recently expanded, and that certain of our locations will be in need of required renovations. In future periods, these expansions and renovation projects may lead to additional equipment and occupancy expenses as well as related increases in salaries and benefits expense. Additionally, we expect we will continue to incur costs associated with technology improvements to enhance the infrastructure of our firm.

Our short-term borrowings (borrowings which mature within the next fiscal year) consist primarily of securities sold under agreements to repurchase (these agreements are typically associated with comprehensive treasury management programs for our clients and provide them with short-term returns on their excess funds) and FHLB Cincinnati advances.

We have certain contractual obligations as of December 31, 2022, which by their terms have a contractual maturity and termination dates subsequent to December 31, 2022. Each of these commitments is noted throughout *Item 7. Management's Discussion and Analysis*. Our management believes that we have adequate liquidity to meet all known contractual obligations and unfunded commitments, including loan commitments and reasonable borrower, depositor, and creditor requirements over the next twelve months and that we will have adequate liquidity to meet our obligations over a longer-term as well.

Off-Balance Sheet Arrangements. At December 31, 2022, we had outstanding standby letters of credit of \$355.1 million and unfunded loan commitments outstanding of \$15.9 billion. Because these commitments generally have fixed expiration dates and many will expire without being drawn upon, the total commitment level does not necessarily represent future cash requirements. If needed to fund these outstanding commitments, Pinnacle Bank has the ability to liquidate federal funds sold or securities available-for-sale, or on a short-term basis to borrow and purchase federal funds from other financial institutions.

We follow the same credit policies and underwriting practices when making these commitments as we do for on-balance sheet instruments. Each customer's creditworthiness is evaluated on a case-by-case basis and the amount of collateral obtained, if any, is based on management's credit evaluation of the customer. However, should the commitments be drawn upon and should our customers default on their resulting obligation to us, our maximum exposure to credit loss, without consideration of collateral, is represented by the contractual amount of those instruments. At December 31, 2022, we had accrued \$25.0 million related to expected credit losses associated with off-balance sheet commitments.

Risk Management

As a financial institution, we take on a certain amount of risk in every business decision, transaction and activity. Risk management does not eliminate risk, but seeks to achieve an appropriate balance between risk and reward, including return, which is critical to optimizing shareholder value. Understanding our risks and managing them appropriately can enhance our ability to make better decisions, deliver on objectives, and improve performance.

Our board of directors and members of senior management have identified major categories of risk: capital risk, liquidity risk, credit risk, market risk, strategic risk, reputational risk, information security risk, information technology risk, climate and sustainability risk, BSA/AML/OFAC risk, compliance risk, asset liability management risk, HR employment practices risk and non-bank activities risk. In its oversight role of our risk management function, our board of directors, acting principally, but not exclusively, through a Risk Committee comprised solely of independent directors, focuses on the strategies, analyses and conclusions of management relating to identifying, understanding and managing risks so as to optimize total shareholder value, while balancing prudent business and safety and soundness considerations. The Risk Committee (or in some cases the full board of directors) fulfills the overarching oversight role for the risk management process, including approving risk appetite and tolerance levels, risk policies and limits, monitoring key and emerging risks, and reviewing risk assessment results.

In addition, oversight of certain risk is allocated to other committees of the board of directors that meet regularly and report to our board of directors, including the Audit Committee and Human Resources and Compensation Committee.

We are also committed to understanding the impacts of climate change related to our activities and to partner with the communities in which we operate, to do the same. We expect that climate change will be increasingly impactful over time, and we will monitor closely to understand regulatory, environmental and business partner impacts that influence our business and the clients and communities we serve. Beginning in 2023, we will add a Climate and Sustainability Committee to our board committees which will fulfill the oversight role for climate and sustainability risks including transition and compliance risks associated with climate and sustainability.

The Chief Risk Officer reports to the Chief Executive Officer and provides overall vision, direction and leadership regarding the enterprise risk management framework. The framework includes an Enterprise Wide Risk Management Committee, chaired by the Chief Risk Officer, and various management-level risk committees that focus on specific areas of risk management. The Enterprise Wide Risk Management Committee is comprised of the Chief Executive Officer, Chief Financial Officer, Chief Administrative Officer, Chief Risk Officer, Chief Compliance Officer, Chief Credit Officer and Chief Information Officer. The Committee also includes other key leaders responsible for critical operation and support functions, and provides management oversight of our enterprise-wide risk management program. Additional management-level risk committees are responsible for effective risk measurement, management and reporting of their respective risk categories. The Chief Risk Officer is an active member of each of the management-level risk committees. The Chief Audit Executive, though not a member of the Committee, also participates in meetings of the Enterprise Wide Risk Management Committee.

Our board of directors has adopted a risk appetite statement that seeks to balance the amount of risk we are willing take as we seek to achieve our financial performance objectives, i.e. growth, soundness and returns. As such, our board of directors, principally acting through the Risk Committee, routinely monitors a host of risk metrics from both business and operational units, as well as by risk category, in an effort to appropriately balance the manner in which our performance aligns with our risk appetite. The Risk Committee and members of senior management, including the Chief Risk Officer, review assessments of our risk ratings within each of our key areas of risk on a regular basis. The Chief Risk Officer's report to the Risk Committee includes the assessment and direction of risk within each key area, an assessment of critical factors that influence firm risks, emerging risks, as well as the status of risk actions management is taking to mitigate and control key risks. These reviews are done in an effort to ensure performance alignment with our risk appetite, and where appropriate, trigger adjustments to applicable business strategies and tactics where risks approach our desired risk tolerance limits.

We support our risk management process through a governance structure involving our board of directors and senior management. The Risk Committee strives to ensure that business decisions are executed within appropriate risk tolerances. The Risk Committee is responsible for overseeing senior management's establishment and operation of our risk framework and our strategic and capital plans are aligned with the risk appetite approved by our board of directors. The Risk Committee serves as the primary point of contact between our board of directors and the Enterprise Wide Risk Management Committee.

Risk appetite is an integral element of our business and capital planning processes through our Risk Committee and Enterprise Wide Risk Management Committee. We use our risk appetite processes to promote appropriate alignment of risk, capital and performance tactics, while also considering risk capacity and appetite constraints from both financial and non-financial risks. Our Risk Committee, in collaboration with our Enterprise Wide Risk Management Committee, approves our risk appetite on an annual basis, or more frequently, as needed to reflect changes in the risk environment, with the goal of ensuring that our risk appetite remains consistent with our strategic plans and business operations, regulatory environment and our shareholders' expectations. Reports relating to our risk appetite and strategic plans, and our ongoing monitoring thereof, are regularly presented to our various management-level risk oversight and planning committees and periodically reported up to the Risk Committee of our board of directors.

As noted above, we have an Enterprise Wide Risk Management Committee comprised of key members of senior management. The purpose of this committee is to provide regular oversight of specific areas of risk within the tolerances and framework established by our Risk Committee and board of directors. The Chairman of our Enterprise Wide Risk Management Committee reports on a regular basis to the Risk Committee of our board of directors regarding our enterprise-wide risk profile and other significant risk management issues. Our Chief Risk Officer is responsible for the design and implementation of our enterprise-wide risk management strategy and framework and through his work with other senior associates seeks to ensure the coordinated and consistent implementation of risk management initiatives and strategies on a day-to-day basis.

Various departments within Pinnacle Bank, working with our Chief Risk Officer and our Chief Audit Executive, are responsible for developing policies and procedures to effectively monitor risks within their areas. For instance, our compliance department is responsible for developing policies and procedures and monitoring our compliance with applicable laws and regulations while our information technology department is responsible for maintaining a risk assessment of our information and cyber security risks and ensuring appropriate controls are in place to manage and control such risks, including designing appropriate testing plans to ensure the integrity of information and cyber security controls. Further, our internal audit function performs an independent assessment of our internal controls environment and plays an integral role in testing the operation of the internal controls systems and reporting findings to management and our Audit Committee. Both the Risk Committee and Audit Committee of our board of directors regularly report on risk-related matters to the full board of directors. In addition, both the Risk Committee of our board of directors and our Enterprise Wide Risk Management Committee regularly assess our enterprise-wide risk profile and provide guidance on actions needed to address key and emerging risk issues.

Our board of directors believes that our enterprise-wide risk management process is effective and enables the board of directors to:

- assess the quality of the information we receive;
- understand the businesses, investments and financial, accounting, legal, regulatory and strategic considerations and the risks that we face;
- oversee and assess how senior management identifies, evaluates and manages risk within our risk appetite; and
- assess appropriately the quality of our enterprise-wide risk management process.

Recently Adopted and Issued Accounting Pronouncements

See "Part II- Item 8. Financial Statements - Note 1. - Summary of Significant Accounting Policies" of this Report for further information.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

The response to this Item is included in Item 7. "Management's Discussion and Analysis of Financial Condition and Results of Operations", on pages 49 through 79 and is incorporated herein by reference.

ITEM 8. FINANCIAL STATEMENTS

Pinnacle Financial Partners, Inc. and Subsidiaries

Consolidated Financial Statements

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MANAGEMENT REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING

The management of Pinnacle Financial Partners, Inc. (the "Company") is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rules 13a-15(f) or 15d-15(f) promulgated under the Exchange Act. The Company's internal control over financial reporting is a process designed by, or under the supervision of, the Company's principal executive and principal financial officer and effected by the Company's Board of Directors, management and other personnel, 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 and includes those policies and procedures that (i) pertain to the maintenance of records that in reasonable detail accurately and fairly reflect the transactions and dispositions of the Company's assets; (ii) 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 are being made only in accordance with authorizations of our management and directors; and (iii) 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. All internal control systems, no matter how well designed, have inherent limitations. Therefore, even those systems determined to be effective can provide only reasonable assurance with respect to financial statement preparation and presentation. 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. 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 criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in Internal Control-Integrated Framework (2013). We completed the acquisition of JB&B Capital, LLC (JB&B) on March 1, 2022. We are continuing the process of analyzing the systems of internal control over financial reporting of the business and other operations acquired in the JB&B acquisition and integrating them within our broader framework of controls. In accordance with the SEC's rules which allow us to exclude JB&B and its operations from our internal controls assessment in respect of periods ending on or prior to the first anniversary of the acquisition, we have excluded the business and other operations acquired in the JB&B acquisition from management's assessment of the effectiveness of internal control over financial reporting as of December 31, 2022. JB&B and its operations represented approximately 0.49% of our total assets as of December 31, 2022, and the results of operations of JB&B and its operations represented approximately 0.54% of our revenues for the year ended December 31, 2022. We plan to complete the integration of the business and other operations acquired in the JB&B acquisition within our broader framework of internal controls during 2023 and include the business and other operations acquired in the JB&B acquisition within management's assessment of our internal control over financial reporting in our next annual report on Form 10-K.

Based on our assessment we believe that, as of December 31, 2022, the Company's internal control over financial reporting is effective based on the criteria set forth by COSO.

The Company's independent registered public accounting firm has issued an audit report on the Company's internal control over financial reporting. This report appears on page 85 of this Annual Report on Form 10-K.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Shareholders and the Board of Directors of
Pinnacle Financial Partners, Inc.
Nashville, Tennessee

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Pinnacle Financial Partners, Inc. and subsidiaries (the "Company") as of December 31, 2022 and 2021, the related consolidated statements of income, comprehensive income, shareholders' equity, and cash flows for each of the three years in the period ended December 31, 2022, and the related notes (collectively referred to as 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 also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) ("PCAOB"), the Company's internal control over financial reporting as of December 31, 2022, based on criteria established in Internal Control – Integrated Framework: (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO") and our report dated February 28, 2023 expressed an unqualified opinion.

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 the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the 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 the 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 a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Allowance for Credit Losses on Loans – Reasonable and Supportable Forecast

As described in Note 1 Summary of Significant Accounting Policies and Note 5 Loans and Allowance for Credit Losses ("ACL") to the consolidated financial statements, the Company's consolidated allowance for credit losses on loans was \$300.7 million as of December 31, 2022, and provision for credit losses on loans was \$64.0 million for the year then ended. The Company primarily employed a probability of default ("PD") and loss given default ("LGD") modeling approach. The PD assumption of the Company's ACL model utilized historical correlations between default experience and certain macroeconomic factors as determined through a statistical regression analysis. Projected macroeconomic factors obtained from an independent third party are utilized to predict losses over a period of time determined to be reasonable and supportable, and then projected losses revert to long term historical averages. The Company applies subjective judgments and assumptions in the selection and application of the projected macroeconomic conditions estimating the reasonable and supportable forecast.

As the estimation of the reasonable and supportable forecast, including selection and application of the projected macroeconomic conditions, involves subjective judgments and assumptions by management, the audit procedures involved challenging and subjective auditor judgment. Therefore, we identified the selection and application of projected macroeconomic conditions used in estimating the reasonable and supportable forecast as a critical audit matter.

The primary audit procedures we performed to address this critical audit matter included the following:

Tested the effectiveness of the Company's controls over the reasonable and supportable forecast including:

- Relevance and reliability of the macroeconomic factors used in the forecast model
- Reasonableness of the selection and application of the projected macroeconomic conditions used in the forecast model
- Reasonableness of the output of the forecast model.

Performed substantive testing over the reasonable and supportable forecast including:

- Tested the relevance and reliability of the macroeconomic factors used in the model to predict losses over the reasonable and supportable forecast period
- Evaluated the reasonableness of the selection and application of the projected macroeconomic conditions used in estimating the reasonable and supportable forecast
- Evaluated the reasonableness of the estimated reasonable and supportable forecast, which was developed by management's model.

/s/ Crowe LLP

We have served as the Company's auditor since 2016.

Denver, Colorado
February 28, 2023

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Shareholders and the Board of Directors of
Pinnacle Financial Partners, Inc.
Nashville, Tennessee

Opinion on Internal Control over Financial Reporting

We have audited Pinnacle Financial Partners, Inc. and subsidiaries' (the "Company") internal control over financial reporting as of December 31, 2022, based on criteria established in Internal Control – Integrated Framework: (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO"). 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: (2013) issued by COSO.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) ("PCAOB"), the consolidated balance sheets of the Company as of December 31, 2022 and 2021, the related consolidated statements of income, comprehensive income, shareholders' equity, and cash flows for each of the years in the three-year period ended December 31, 2022, and the related notes (collectively referred to as the "financial statements") and our report dated February 28, 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, included in the accompanying Management report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. As permitted, the Company has excluded the operations of JB&B Capital, LLC acquired during 2022, which is described in Note 1 of the consolidated financial statements, from the scope of management's report on internal control over financial reporting. As such, it has also been excluded from the scope of our audit of internal control over financial reporting. 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/ Crowe LLP

Denver, Colorado
February 28, 2023

PINNACLE FINANCIAL PARTNERS, INC. AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS

	<i>(in thousands)</i>	
	December 31,	
ASSETS	2022	2021
Cash and noninterest-bearing due from banks	\$ 268,649	\$ 188,287
Restricted cash	31,447	82,505
Interest-bearing due from banks	877,286	3,830,747
Federal funds sold and other	—	—
Cash and cash equivalents	<u>1,177,382</u>	<u>4,101,539</u>
Securities purchased under agreements to resell	513,276	1,000,000
Securities available-for-sale, at fair value	3,558,870	4,914,194
Securities held-to-maturity (fair value of \$2.7 billion and \$1.2 billion, net of allowance for credit losses of \$1.6 million and \$161 at Dec. 31, 2022 and 2021, respectively)	3,079,050	1,155,958
Consumer loans held-for-sale	42,237	45,806
Commercial loans held-for-sale	21,093	17,685
Loans	29,041,605	23,414,262
Less allowance for credit losses	(300,665)	(263,233)
Loans, net	<u>28,740,940</u>	<u>23,151,029</u>
Premises and equipment, net	327,885	288,182
Equity method investment	443,185	360,833
Accrued interest receivable	161,182	98,813
Goodwill	1,846,973	1,819,811
Core deposits and other intangible assets	34,555	33,819
Other real estate owned	7,952	8,537
Other assets	2,015,441	1,473,193
Total assets	<u>\$ 41,970,021</u>	<u>\$ 38,469,399</u>
Deposits:		
Non-interest-bearing	\$ 9,812,744	\$ 10,461,071
Interest-bearing	7,884,605	6,530,015
Savings and money market accounts	13,774,534	12,179,663
Time	3,489,355	2,133,784
Total deposits	<u>34,961,238</u>	<u>31,304,533</u>
Securities sold under agreements to repurchase	194,910	152,559
Federal Home Loan Bank advances	464,436	888,681
Subordinated debt and other borrowings	424,055	423,172
Accrued interest payable	19,478	12,504
Other liabilities	386,512	377,343
Total liabilities	<u>36,450,629</u>	<u>33,158,792</u>
Shareholders' equity:		
Preferred stock, no par value; 10.0 million shares authorized; 225,000 shares non-cumulative perpetual preferred stock, Series B, liquidation preference \$225.0 million, issued and outstanding at Dec. 31, 2022 and 2021, respectively	217,126	217,126
Common stock, par value \$1.00; 180.0 million shares authorized; 76.5 million and 76.1 million shares issued and outstanding at Dec. 31, 2022 and 2021, respectively	76,454	76,143
Additional paid-in capital	3,074,867	3,045,802
Retained earnings	2,341,706	1,864,350
Accumulated other comprehensive income (loss), net of taxes	(190,761)	107,186
Total shareholders' equity	<u>5,519,392</u>	<u>5,310,607</u>
Total liabilities and shareholders' equity	<u>\$ 41,970,021</u>	<u>\$ 38,469,399</u>

See accompanying notes to consolidated financial statements.

PINNACLE FINANCIAL PARTNERS, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF INCOME
(in thousands, except share and per share information)

	For the years ended December 31,		
	2022	2021	2020
Interest income:			
Loans, including fees	\$ 1,182,492	\$ 924,043	\$ 919,744
Securities:			
Taxable	67,063	34,769	35,663
Tax-exempt	81,522	64,848	58,867
Federal funds sold and other	42,858	7,554	6,768
Total interest income	<u>1,373,935</u>	<u>1,031,214</u>	<u>1,021,042</u>
Interest expense:			
Deposits	204,119	54,116	135,547
Securities sold under agreements to repurchase	794	239	350
Federal Home Loan Bank advances and other borrowings	39,729	44,458	63,357
Total interest expense	<u>244,642</u>	<u>98,813</u>	<u>199,254</u>
Net interest income	1,129,293	932,401	821,788
Provision for credit losses	67,925	16,126	203,815
Net interest income after provision for credit losses	<u>1,061,368</u>	<u>916,275</u>	<u>617,973</u>
Noninterest income:			
Service charges on deposit accounts	44,675	41,311	34,282
Investment services	46,441	37,917	29,537
Insurance sales commissions	12,186	10,516	10,055
Gains on mortgage loans sold, net	7,268	32,424	60,042
Investment gains on sales, net	156	759	986
Trust fees	23,511	20,724	16,496
Income from equity method investment	145,466	122,274	83,539
Other noninterest income	136,421	129,809	82,903
Total noninterest income	<u>416,124</u>	<u>395,734</u>	<u>317,840</u>
Noninterest expense:			
Salaries and employee benefits	510,175	436,006	334,483
Equipment and occupancy	109,672	95,250	88,475
Other real estate (benefit) expense, net	280	(712)	8,555
Marketing and other business development	21,073	12,888	10,693
Postage and supplies	10,168	8,195	7,819
Amortization of intangibles	7,810	8,518	9,793
Other noninterest expense	120,821	99,959	104,637
Total noninterest expense	<u>779,999</u>	<u>660,104</u>	<u>564,455</u>
Income before income taxes	<u>697,493</u>	<u>651,905</u>	<u>371,358</u>
Income tax expense	136,751	124,582	59,037
Net income	<u>\$ 560,742</u>	<u>\$ 527,323</u>	<u>\$ 312,321</u>
Preferred stock dividends	15,192	15,192	7,596
Net income available to common shareholders	<u>\$ 545,550</u>	<u>\$ 512,131</u>	<u>\$ 304,725</u>
Per share information:			
Basic net income per common share	<u>\$ 7.20</u>	<u>\$ 6.79</u>	<u>\$ 4.04</u>
Diluted net income per common share	<u>\$ 7.17</u>	<u>\$ 6.75</u>	<u>\$ 4.03</u>
Weighted average common shares outstanding:			
Basic	<u>75,735,404</u>	<u>75,468,339</u>	<u>75,376,489</u>
Diluted	<u>76,133,865</u>	<u>75,927,147</u>	<u>75,654,385</u>

See accompanying notes to consolidated financial statements.

PINNACLE FINANCIAL PARTNERS, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(in thousands)

	Year Ended December 31,		
	2022	2021	2020
Net income:	\$ 560,742	\$ 527,323	\$ 312,321
Other comprehensive income (loss), net of tax:			
Changes in fair value on available-for-sale securities, net of tax	(283,382)	(32,509)	92,829
Changes in fair value of cash flow hedges, net of tax	1,002	(18,373)	52,798
Accretion of net unrealized gains on securities transferred from available-for-sale to held-to-maturity, net of tax	(5,477)	(7,575)	(5,126)
Loss (gain) on cash flow hedges reclassified from other comprehensive income into net income, net of tax	(9,975)	(9,645)	5,542
Net gain on sale of investment securities reclassified from other comprehensive income into net income, net of tax	(115)	(561)	(728)
Total other comprehensive income (loss), net of tax	(297,947)	(68,663)	145,315
Total comprehensive income	\$ 262,795	\$ 458,660	\$ 457,636

See accompanying notes to consolidated financial statements.

PINNACLE FINANCIAL PARTNERS, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY
(in thousands, except per share information)

For the each of the years in the three-year period ended December 31, 2022

	Preferred Stock		Common Stock		Additional Paid-in Capital	Retained Earnings	Accumulated Other Comprehensive Income (Loss)		Total Shareholders' Equity
	Amount	Shares	Amount						
December 31, 2019									
Issuance of preferred stock	\$ 217,126	—	—	—	—	—	—	—	\$ 217,126
Exercise of employee common stock options and related tax benefits	—	—	18	18	392	—	—	—	410
Repurchase of common stock	—	—	(1,015)	(1,015)	(49,775)	—	—	—	(50,790)
Preferred dividends paid (\$33.76 per share)	—	—	—	—	—	(7,596)	—	—	(7,596)
Common dividends paid (\$0.64 per share)	—	—	—	—	—	(49,389)	—	—	(49,389)
Issuance of restricted common shares, net of forfeitures	—	—	255	255	(255)	—	—	—	—
Restricted shares withheld for taxes & related tax benefit	—	—	(58)	(58)	(2,929)	—	—	—	(2,987)
Issuance of common stock pursuant to restricted stock unit and performance stock unit agreements, net of shares withheld for taxes and related tax benefits	—	—	86	86	(2,574)	—	—	—	(2,488)
Compensation expense for restricted shares and performance stock units	—	—	—	—	18,737	—	—	—	18,737
Net income	—	—	—	—	—	312,321	—	—	312,321
Cumulative effect of change in accounting principle	—	—	—	—	—	(31,796)	—	—	(31,796)
Other comprehensive income	—	—	—	—	—	—	145,315	—	145,315
December 31, 2020	\$ 217,126	75,850	\$ 75,850	\$ 75,850	\$ 3,028,063	\$ 1,407,723	\$ 175,849	\$ 4,904,611	
Exercise of employee common stock options and related tax benefits	—	—	45	45	956	—	—	—	1,001
Preferred dividends paid (\$67.52 per share)	—	—	—	—	—	(15,192)	—	—	(15,192)
Common dividends paid (\$0.72 per share)	—	—	—	—	—	(55,504)	—	—	(55,504)
Issuance of restricted common shares, net of forfeitures	—	—	213	213	(213)	—	—	—	—
Restricted shares withheld for taxes & related tax benefit	—	—	(53)	(53)	(4,078)	—	—	—	(4,131)
Issuance of common stock pursuant to restricted stock unit and performance stock unit agreements, net of shares withheld for taxes and related tax benefits	—	—	88	88	(3,878)	—	—	—	(3,790)
Compensation expense for restricted shares and performance stock units	—	—	—	—	24,952	—	—	—	24,952
Net income	—	—	—	—	—	527,323	—	—	527,323
Other comprehensive loss	—	—	—	—	—	—	(68,663)	—	(68,663)
December 31, 2021	\$ 217,126	76,143	\$ 76,143	\$ 76,143	\$ 3,045,802	\$ 1,864,350	\$ 107,186	\$ 5,310,607	
Exercise of employee common stock options and related tax benefits	—	—	16	16	312	—	—	—	328
Preferred dividends paid (\$67.52 per share)	—	—	—	—	—	(15,192)	—	—	(15,192)
Common dividends paid (\$0.88 per share)	—	—	—	—	—	(68,194)	—	—	(68,194)
Issuance of restricted common shares, net of forfeitures	—	—	250	250	(250)	—	—	—	—
Restricted shares withheld for taxes & related tax benefit	—	—	(51)	(51)	(4,991)	—	—	—	(5,042)
Issuance of common stock pursuant to restricted stock unit and performance stock unit agreements, net of shares withheld for taxes and related tax benefits	—	—	96	96	(5,558)	—	—	—	(5,462)
Compensation expense for restricted shares and performance stock units	—	—	—	—	39,552	—	—	—	39,552
Net income	—	—	—	—	—	560,742	—	—	560,742
Other comprehensive loss	—	—	—	—	—	—	(297,947)	—	(297,947)
December 31, 2022	\$ 217,126	76,454	\$ 76,454	\$ 76,454	\$ 3,074,867	\$ 2,341,706	\$ (190,761)	\$ 5,519,392	

See accompanying notes to consolidated financial statements.

PINNACLE FINANCIAL PARTNERS, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS

(in thousands)

	For the years ended December 31,		
	2022	2021	2020
Operating activities:			
Net income	\$ 560,742	\$ 527,323	\$ 312,321
Adjustments to reconcile net income to net cash provided by operating activities:			
Net amortization/accretion of premium/discount on securities	65,838	59,066	38,051
Depreciation, amortization and accretion	62,298	53,256	45,203
Provision for credit losses	67,925	16,126	203,815
Gains on mortgage loans sold, net	(7,268)	(32,424)	(60,042)
Investment gains on sales, net	(156)	(759)	(986)
Gain on other equity investments, net	(10,605)	(23,109)	(1,071)
Stock-based compensation expense	39,552	24,952	18,737
Deferred tax expense (benefit)	19,740	(12,232)	(58,315)
Losses (gains) on disposition of other real estate and other investments	(179)	(1,168)	7,604
Gain on remeasurement of previously held noncontrolling interest	(5,500)	—	—
Income from equity method investment	(145,466)	(122,274)	(83,539)
Dividends received from equity method investment	63,114	69,996	53,020
Excess tax benefit from stock compensation	(3,027)	(2,475)	(417)
Gains on commercial loans sold, net	(2,275)	(4,143)	(2,620)
Commercial loans held for sale originated	(498,312)	(564,647)	(407,578)
Commercial loans held for sale sold	497,180	582,305	396,584
Consumer loans held for sale originated	(1,578,168)	(2,037,897)	(2,122,796)
Consumer loans held for sale sold	1,589,005	2,112,336	2,176,836
Decrease (increase) in other assets	(82,893)	73,527	(157,294)
Increase (decrease) in other liabilities	(26,620)	(60,315)	69,241
Net cash provided by operating activities	604,925	657,444	426,754
Investing activities:			
Activities in securities available-for-sale:			
Purchases	(699,293)	(2,107,794)	(1,412,210)
Sales	29,501	37,457	145,631
Maturities, prepayments and calls	417,348	617,054	469,337
Activities in securities held-to-maturity:			
Purchases	(968,449)	(186,260)	—
Maturities, prepayments and calls	74,770	40,442	20,473
Net decrease (increase) in securities purchased under agreements to resell	486,724	(1,000,000)	—
Increase in loans, net	(5,634,350)	(1,027,185)	(2,661,316)
Purchases of premises and equipment and software	(63,522)	(23,178)	(38,761)
Purchase of bank owned life insurance	(100,000)	—	(75,000)
Proceeds from bank owned life insurance settlement	1,951	1,656	6,486
Proceeds from sales of software, premises, and equipment	698	281	—
Acquisitions, net of cash acquired	(30,896)	—	—
Proceeds from sale of other real estate	994	6,090	13,272
Proceeds from (payments for) derivative instruments	(95,734)	99,710	35,680
Proceeds from sale (purchase) of Federal Home Loan Bank stock	(12,389)	12,602	—
Purchase of other intangible assets	(825)	—	(1,000)
Increase in other investments	(90,967)	(83,830)	(70,183)
Net cash used in investing activities	(6,684,439)	(3,612,955)	(3,567,591)

(in thousands)

	For the years ended December 31,		
	2022	2021	2020
Financing activities:			
Net increase in deposits	3,661,396	3,599,084	7,524,867
Net increase in securities sold under agreements to repurchase	42,351	24,395	1,810
Federal Home Loan Bank: Advances	500,000	—	762,473
Federal Home Loan Bank: Repayments/maturities	(925,000)	(200,001)	(1,737,521)
Proceeds from subordinated debt and other borrowings, net of issuance costs	—	—	56,568
Repayment of other borrowings	(29,547)	(250,000)	(136,661)
Principal payments of finance lease obligation	(281)	(261)	(243)
Issuance of preferred stock, net of issuance costs	—	—	217,126
Issuance of common stock pursuant to restricted and performance stock unit agreements, net of shares withheld for taxes	(5,462)	(3,790)	(2,488)
Exercise of common stock options, net of shares surrendered for taxes	(4,714)	(3,130)	(2,577)
Repurchase of common stock	—	—	(50,790)
Common stock dividends paid	(68,194)	(55,504)	(49,389)
Preferred stock dividends paid	(15,192)	(15,192)	(7,596)
Net cash provided by financing activities	3,155,357	3,095,601	6,575,579
Net increase (decrease) in cash, cash equivalents, and restricted cash	(2,924,157)	140,090	3,434,742
Cash, cash equivalents and restricted cash, beginning of year	4,101,539	3,961,449	526,707
Cash, cash equivalents and restricted cash, end of year	\$ 1,177,382	\$ 4,101,539	\$ 3,961,449

See accompanying notes to consolidated financial statements.

PINNACLE FINANCIAL PARTNERS, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Note 1. Summary of Significant Accounting Policies

Nature of Business — Pinnacle Financial Partners, Inc. (Pinnacle Financial) is a financial holding company whose primary business is conducted by its wholly-owned subsidiary, Pinnacle Bank (Pinnacle Bank). Pinnacle Bank is a Tennessee state-chartered commercial bank headquartered in Nashville, Tennessee. Pinnacle Financial completed its acquisitions of CapitalMark Bank & Trust (CapitalMark), Magna Bank (Magna), Avenue Financial Holdings, Inc. (Avenue), BNC Bancorp (BNC) and Advocate Capital, Inc. (Advocate Capital) on July 31, 2015, September 1, 2015, July 1, 2016, June 16, 2017 and July 2, 2019, respectively. Pinnacle Bank also holds a 49% interest in Bankers Healthcare Group, LLC (BHG), a company that primarily serves as a full-service commercial loan provider to healthcare and other professional practices and providers but also makes consumer loans for various purposes. The investment in BHG previously held by Pinnacle Financial was contributed to Pinnacle Bank effective September 30, 2022. Pinnacle Bank provides a full range of banking services, including investment, mortgage, insurance and comprehensive wealth management services, in its 17 primarily urban markets and their surrounding communities.

On March 1, 2022, Pinnacle Bank acquired the remaining 80% outstanding membership interest of JB&B Capital, LLC (JB&B) for a cash price of \$32.0 million. JB&B is a commercial equipment financing business headquartered in Knoxville, TN. Pinnacle Bank had previously acquired 20% of JB&B in 2017. Pinnacle Financial accounted for the acquisition of JB&B under the acquisition method in accordance with ASC Topic 805. Accordingly, the purchase price is allocated to the fair value of the assets acquired and liabilities assumed as of the date of the acquisition. Determining the fair value of assets and liabilities, particularly illiquid assets and liabilities, is a complicated process involving significant judgment regarding estimates and assumptions used to calculate estimated fair value. Fair value adjustments based on updated estimates could materially affect the goodwill recorded on the JB&B acquisition. At the acquisition date, JB&B's net assets were initially recorded at a fair value of \$12.9 million, consisting mainly of loans and leases receivable. JB&B's \$29.5 million of indebtedness was also paid off in connection with consummation of the acquisition. The preexisting noncontrolling interest of JB&B held by Pinnacle Bank was remeasured at a fair value of \$8.0 million on the acquisition date resulting in a gain on remeasurement of \$5.5 million that was recorded in other noninterest income during the year ended December 31, 2022. The purchase price allocations for the acquisition of JB&B are preliminary and will be finalized upon the receipt of final valuations on certain assets and liabilities.

Basis of Presentation — These consolidated financial statements include the accounts of Pinnacle Financial and its direct and indirect wholly-owned subsidiaries. Certain statutory trust affiliates of Pinnacle Financial, as noted in Note 9. Other Borrowings are included in these consolidated financial statements pursuant to the equity method of accounting. Significant intercompany transactions and accounts are eliminated in consolidation.

Use of Estimates — The preparation of financial statements in conformity with U.S. generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosures of contingent assets and liabilities as of the balance sheet dates and the reported amounts of revenues and expenses during the reporting periods. Actual results could differ from those estimates. Material estimates that are particularly susceptible to significant change in the near term include the determination of the allowance for credit losses and the determination of any impairment of goodwill or intangible assets.

Impairment — Long-lived assets, including purchased intangible assets subject to amortization, such as core deposit intangible assets, are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. Recoverability of assets to be held and used is measured by a comparison of the carrying amount of an asset to estimated undiscounted future cash flows expected to be generated by the asset. If the carrying amount of an asset exceeds its estimated future cash flows, an impairment charge is recognized by the amount by which the carrying amount of the asset exceeds the fair value of the asset. Assets to be disposed of would be separately presented in the balance sheet and reported at the lower of the carrying amount or fair value less costs to sell, and are no longer depreciated. Pinnacle Financial had \$34.6 million and \$33.8 million of long-lived intangibles at December 31, 2022 and 2021, respectively.

Goodwill is evaluated for impairment at least annually and more frequently if events and circumstances indicate that the asset might be impaired. Accounting Standards Codification (ASC) 350, *Intangibles - Goodwill and Other*, provides an entity the option to first perform a qualitative assessment to determine whether it is more likely than not that the fair value of a reporting unit is less than its carrying amount. If an entity performs a qualitative assessment and determines it is necessary, or if a qualitative assessment is not performed, the entity is required to perform a one-step test to identify potential goodwill impairment and measure the amount of goodwill impairment loss to be recognized for that reporting unit (if any). If, based on a qualitative assessment, an entity determines that the fair value of a reporting unit is more than its carrying amount, the one-step goodwill impairment test is not required.

Pinnacle Financial performed a qualitative assessment of goodwill as of September 30, 2022 by examining changes in macroeconomic conditions, industry and market conditions, overall financial performance, cost factors and other relevant entity-specific events, including changes in the share price of Pinnacle Financial's common stock. The results of the qualitative assessment indicated that it was more likely than not that the estimated fair value of Pinnacle Financial's sole reporting unit exceeded its carrying value amount at September 30, 2022 and, therefore, no goodwill impairment was recorded.

Should Pinnacle Financial's common stock price decline below book value per share and remain below book value per share for an extended duration or other impairment indicators become known, additional impairment testing of goodwill may be required. Should it be determined in a future period that the goodwill has become impaired, then a charge to earnings will be recorded in the period such determination is made. The following table presents activity for goodwill and other intangible assets (in thousands):

	Goodwill	Core deposit and other intangible assets	Total
Balance at December 31, 2021	\$ 1,819,811	\$ 33,819	\$ 1,853,630
Acquisitions and purchase of other intangible asset	27,162	8,546	35,708
Amortization	—	(7,810)	(7,810)
Balance at December 31, 2022	<u>\$ 1,846,973</u>	<u>\$ 34,555</u>	<u>\$ 1,881,528</u>

The following table presents the gross carrying amount and accumulated amortization for the core deposit and other intangible assets (in thousands):

	December 31, 2022	December 31, 2021
Gross carrying amount	\$ 117,211	\$ 108,665
Accumulated amortization	(82,656)	(74,846)
Net book value	<u>\$ 34,555</u>	<u>\$ 33,819</u>

Cash Equivalents and Cash Flows — Cash on hand, cash items in process of collection, amounts due from banks, Federal funds sold, short-term discount notes and securities purchased under agreements to resell, with original maturities within ninety days, are included in cash and cash equivalents. The following supplemental cash flow information addresses certain cash payments and noncash transactions for each of the years in the three-year period ended December 31, 2022 as follows (in thousands):

	For the years ended December 31,		
	2022	2021	2020
Cash Payments:			
Interest	\$ 236,463	\$ 110,119	\$ 215,888
Income taxes paid	128,850	108,304	110,798
Noncash Transactions:			
Loans charged-off to the allowance for credit losses	54,176	54,996	49,333
Loans foreclosed upon with repossessions transferred to other real estate	230	1,098	3,436
Loans foreclosed upon with repossessions transferred to other repossessed assets	—	—	25
Available-for-sale securities transferred to held-to-maturity portfolio	1,059,737	—	873,613
Right-of-use assets recognized in the period in exchange for lease obligations	42,413	17,642	15,820

Securities — Securities are classified based on management's intention on the date of purchase. All debt securities classified as available-for-sale are recorded at fair value with any unrealized gains and losses reported in accumulated other comprehensive income (loss), net of the deferred income tax effects. Securities that Pinnacle Financial has both the positive intent and ability to hold to maturity are classified as held-to-maturity and are carried at historical cost and adjusted for amortization of premiums and accretion of discounts.

Interest and dividends on securities, including amortization of premiums and accretion of discounts calculated under the effective interest method, are included in interest income. For certain securities, amortization of premiums and accretion of discounts is computed based on the anticipated life of the security which may be shorter than the stated life of the security. Realized gains and losses from the sale of securities are determined using the specific identification method and are recorded on the trade date of the sale.

Periodically, available-for-sale securities may be sold or the composition of the portfolio realigned to improve yields, quality or marketability, or to implement changes in investment or asset/liability strategy, including maintaining collateral requirements and raising funds for liquidity purposes. Additionally, if an available-for-sale security loses its investment grade, tax-exempt status, the underlying credit support is terminated or collection otherwise becomes uncertain based on factors known to management, Pinnacle Financial will consider selling the security, but will review each security on a case-by-case basis as these factors become known.

Allowance for Credit Losses - Securities Held-to-Maturity — Expected credit losses on debt securities classified as held-to-maturity are measured on a collective basis by major security type. Pinnacle has a zero loss expectation for certain securities within the portfolio, including U.S. government agency securities and residential mortgage-backed securities issued by Ginnie Mae, Fannie Mae, and Freddie Mac, and accordingly, no allowance for credit losses is estimated for these securities. The remainder of the portfolio consists substantially of municipal securities rated A or higher by the ratings agencies. The estimates of expected credit losses for the municipal securities are based on historical credit loss information that is adjusted for current conditions and reasonable and supportable forecasts. The credit models utilized rely on regression analyses to predict probability of default (PD) based on projected macroeconomic factors, including unemployment rates and gross domestic product (GDP), among others. A reasonable and supportable period of eighteen months and reversion period of twelve months is utilized to estimate credit losses on held-to-maturity municipal securities. The allowance is increased through provision for credit losses and decreased by charge-offs, net of recoveries of amounts previously charged-off.

Allowance for Credit Losses - Securities Available-for-Sale — For any securities classified as available-for-sale that are in an unrealized loss position at the balance sheet date, Pinnacle Financial assesses whether or not it intends to sell the security, or more likely than not will be required to sell the security, before recovery of its amortized cost basis. If either criteria is met, the security's amortized cost basis is written down to fair value through net income. If neither criteria is met, Pinnacle Financial evaluates whether any portion of the decline in fair value is the result of credit deterioration. Such evaluations consider the extent to which the amortized cost of the security exceeds its fair value, changes in credit ratings and any other known adverse conditions related to the specific security. If the evaluation indicates that a credit loss exists, an allowance for credit losses is recorded through provision for credit losses for the amount by which the amortized cost basis of the security exceeds the present value of cash flows expected to be collected, limited by the amount by which the amortized cost exceeds fair value. Any impairment not recognized in the allowance for credit losses is recognized in other comprehensive income.

Loans held-for-sale — Loans originated and intended for sale are carried at the lower of cost or estimated fair value as determined on a loan-by-loan basis. Net unrealized losses, if any, are recognized through a valuation allowance by charges to income. Realized gains and losses are recognized when legal title to the loans has been transferred to the purchaser and sales proceeds have been received and are reflected in the accompanying consolidated statement of income in gains on mortgage loans sold, net of related costs such as compensation expenses, for mortgage loans, and as a component of other noninterest income for commercial loans held-for-sale.

Loans — Pinnacle Financial uses the following loan segments for financial reporting purposes: owner occupied commercial real estate mortgage, non-owner occupied commercial real estate, consumer real estate mortgage, construction and land development, commercial and industrial and consumer and other. The appropriate classification is determined based on the underlying collateral utilized to secure each loan. These classifications are consistent with those utilized in the Quarterly Report of Condition and Income filed by Pinnacle Bank with the Federal Deposit Insurance Corporation (FDIC).

Loans are reported at their outstanding principal balances, net of applicable purchase accounting and any deferred fees or costs on originated loans. Interest income on loans is accrued based on the principal balance outstanding. Loan origination fees, net of certain loan origination costs, are deferred and recognized as an adjustment to the related loan yield using a method which approximates the interest method. At December 31, 2022 and 2021, net deferred loan fees of \$26.1 million and \$34.3 million, respectively, were included as a reduction to loans on the accompanying consolidated balance sheets.

As part of our routine credit monitoring process, commercial loans receive risk ratings by the assigned financial advisor and are subject to validation by our independent loan review department. Risk ratings are categorized as pass, special mention, substandard, substandard-nonaccrual or doubtful-nonaccrual. Pinnacle Financial believes that its categories follow those outlined by the FDIC, Pinnacle Bank's primary federal regulator. At December 31, 2022, approximately 78.4% of Pinnacle Financial's loan portfolio was assigned a specifically assigned risk rating. Certain consumer loans and commercial relationships that possess certain qualifying characteristics, including individually smaller balances, are generally not assigned an individual risk rating but are evaluated collectively for credit risk as a homogeneous pool of loans and individually as either accrual or nonaccrual based on the performance of the loan.

Loans are placed on nonaccrual status when there is a significant deterioration in the financial condition of the borrower, which generally is the case but is not limited to when the principal or interest is more than 90 days past due, unless the loan is both well-secured and in the process of collection. All interest accrued but not collected for loans that are placed on nonaccrual status is reversed against current interest income. Interest income is subsequently recognized only if certain cash payments are received while the loan is classified as nonaccrual, but interest income recognition is reviewed on a case-by-case basis to determine if the payment should be applied to interest or principal pursuant to regulatory guidelines. A nonaccrual loan is returned to accruing status once the loan has been brought current as to principal and interest and collection is reasonably assured or the loan has been well-secured through other techniques.

Loans are charged off when management believes that the full collectability of the loan is unlikely. As such, a loan may be partially charged-off after a "confirming event" has occurred which serves to validate that full repayment pursuant to the terms of the loan is unlikely.

Purchased loans, including loans acquired through a merger, are initially recorded at fair value on the date of purchase. At the time of acquisition, management evaluates all purchased loans using a variety of factors such as current classification or risk rating, past due status and history as a component of the fair value determination. For purchased loans that have not experienced more-than-insignificant credit deterioration since origination, management evaluates each reviewed loan using an internal grading system with a grade assigned to each loan at the date of acquisition. To the extent that any purchased loan is not specifically reviewed, such loan is assumed to have characteristics similar to the characteristics of the specifically reviewed acquired portfolio of purchased loans. Purchased loans that have experienced more than insignificant credit deterioration since origination ("purchased credit deteriorated loans") are individually evaluated by management to determine the estimated fair value of each loan. In determining the estimated fair value of such loans, management considers a number of factors including, among other things, the remaining life of the acquired loans, estimated prepayments, estimated loss ratios, estimated value of the underlying collateral, estimated holding periods, and net present value of cash flows expected to be received.

Allowance for Credit Losses - Loans — Pinnacle Financial adopted FASB ASC 326 effective January 1, 2020, which requires the estimation of an allowance for credit losses in accordance with the Current Expected Credit Losses (CECL) methodology. Pinnacle Financial's management assesses the adequacy of the allowance on a quarterly basis. This assessment includes procedures to estimate the allowance and test the adequacy and appropriateness of the resulting balance. The level of the allowance is based upon management's evaluation of historical default and loss experience, current and projected economic conditions, asset quality trends, known and inherent risks in the portfolio, adverse situations that may affect the borrowers' ability to repay a loan (including the timing of future payments), the estimated value of any underlying collateral, composition of the loan portfolio, industry and peer bank loan quality indications and other pertinent factors, including regulatory recommendations. The level of the allowance for credit losses maintained by management is believed adequate to absorb all expected future losses inherent in the loan portfolio at the balance sheet date. The allowance is increased through provision for credit losses and decreased by charge-offs, net of recoveries of amounts previously charged-off.

The allowance for credit losses is measured on a collective basis for pools of loans with similar risk characteristics. Pinnacle Financial has identified the following pools of financial assets with similar risk characteristics for measuring expected credit losses:

- *Owner occupied commercial real estate mortgage loans* - Owner occupied commercial real estate mortgage loans are secured by commercial office buildings, industrial buildings, warehouses or retail buildings where the owner of the building occupies the property. For such loans, repayment is largely dependent upon the operation of the borrower's business.
- *Non-owner occupied commercial real estate loans* - These loans represent investment real estate loans secured by office buildings, industrial buildings, warehouses, retail buildings, and multifamily residential housing. Repayment is primarily dependent on lease income generated from the underlying collateral.
- *Consumer real estate mortgage loans* - Consumer real estate mortgage consists primarily of loans secured by 1-4 family residential properties, including home equity lines of credit. Repayment is primarily dependent on the personal cash flow of the borrower.
- *Construction and land development loans* - Construction and land development loans include loans where the repayment is dependent on the successful completion and eventual sale, refinance or operation of the related real estate project. Construction and land development loans include 1-4 family construction projects and commercial construction endeavors such as warehouses, apartments, office and retail space and land acquisition and development.
- *Commercial and industrial loans* - Commercial and industrial loans include loans to business enterprises issued for commercial, industrial and/or other professional purposes. These loans are generally secured by equipment, inventory, and accounts receivable of the borrower and repayment is primarily dependent on business cash flows. Loans granted under the PPP, which are fully guaranteed by the SBA, are included in this category.
- *Consumer and other loans* - Consumer and other loans include all loans issued to individuals not included in the consumer real estate mortgage classification. Examples of consumer and other loans are automobile loans, consumer credit cards and loans to finance education, among others. Many consumer loans are unsecured. Repayment is primarily dependent on the personal cash flow of the borrower.

For commercial real estate, consumer real estate, construction and land development, and commercial and industrial loans, Pinnacle Financial primarily utilizes a PD and loss given default (LGD) modeling approach. These models utilize historical correlations between default experience and certain macroeconomic factors as determined through a statistical regression analysis. All loan segments modeled using this approach consider changes in the national unemployment rate. In addition to the national unemployment rate, GDP and the three month treasury rate are considered for owner occupied commercial real estate, the commercial real estate price index and the five year treasury rate are considered for construction loans, and the three month treasury rate is considered for commercial and industrial loans. Projections of these macroeconomic factors, obtained from an independent third party, are utilized to predict quarterly rates of default based on the statistical PD models. Adjustments are made to predicted default rates as considered necessary for each loan segment based on other quantitative and qualitative information not utilized as a direct input into the statistical models. The predicted quarterly default rates are then applied to the estimated future exposure at default (EAD), as determined based on contractual amortization terms and estimated prepayments. An estimated LGD, determined based on historical loss experience, is applied to the quarterly defaulted balances for each loan segment to estimate future losses of the loan's amortized cost.

Losses are predicted over a period of time determined to be reasonable and supportable, and at the end of the reasonable and supportable period losses are reverted to long term historical averages. The reasonable and supportable period and reversion period are re-evaluated each quarter by Pinnacle Financial and are dependent on the current economic environment among other factors. At December 31, 2022, a reasonable and supportable period of twenty-four months was utilized for all loan segments, followed by a twelve month straight line reversion to long term averages.

For the consumer and other loan segment, a loss rate approach is utilized. For these loans, historical charge off rates are applied to projected future balances, as determined in the same manner as EAD for the statistically modeled loan segments. For credit cards, which have no amortization terms or contractual maturities and are unconditionally cancellable, future balances are estimated based on expected payment volume applied to the current balance.

The estimated loan losses for all loan segments are adjusted for changes in qualitative factors not inherently considered in the quantitative analyses. The qualitative categories and the measurements used to quantify the risks within each of these categories are subjectively selected by management but measured by objective measurements period over period. The data for each measurement may be obtained from internal or external sources. The current period measurements are evaluated and assigned a factor commensurate with the current level of risk relative to past measurements over time. The resulting qualitative adjustments are applied to the relevant collectively evaluated loan portfolios. These adjustments are based upon quarterly trend assessments in portfolio concentrations, policy exceptions, associate retention, independent loan review results, collateral considerations, risk ratings, competition and peer group credit quality trends. The qualitative allowance allocation, as determined by the processes noted above, is increased or decreased for each loan segment based on the assessment of these various qualitative factors. Additional qualitative considerations are made for any identified risk which did not exist within our portfolio historically and therefore may not be adequately addressed through evaluation of such risk factor based on historical portfolio trends as previously discussed.

Loans that do not share similar risk characteristics with the collectively evaluated pools are evaluated on an individual basis and are excluded from the collectively evaluated pools. Individual evaluations are generally performed for loans greater than \$1.0 million which have experienced significant credit deterioration. Such loans are evaluated for credit losses based on either discounted cash flows or the fair value of collateral. When management determines that foreclosure is probable, expected credit losses are based on the fair value of the collateral, less selling costs. For loans for which foreclosure is not probable, but for which repayment is expected to be provided substantially through the operation or sale of the collateral, Pinnacle Financial has elected the practical expedient under ASC 326 to estimate expected credit losses based on the fair value of collateral, with selling costs considered in the event sale of the collateral is expected. Loans for which terms have been modified in a troubled-debt restructuring (TDR) are evaluated using these same individual evaluation methods. In the event the discounted cash flow method is used for a TDR, the original interest rate is used to discount expected cash flows.

In assessing the adequacy of the allowance for credit losses, Pinnacle Financial considers the results of Pinnacle Financial's ongoing independent loan review process. Pinnacle Financial undertakes this process both to ascertain those loans in the portfolio with elevated credit risk and to assist in its overall evaluation of the risk characteristics of the entire loan portfolio. Its loan review process includes the judgment of management, independent internal loan reviewers and reviews that may have been conducted by third-party reviewers including regulatory examiners. Pinnacle Financial incorporates relevant loan review results in the allowance.

In accordance with CECL, losses are estimated over the remaining contractual terms of loans, adjusted for prepayments. The contractual term excludes expected extensions, renewals and modifications unless management has a reasonable expectation at the reporting date that a TDR will be executed or such renewals, extensions or modifications are included in the original loan agreement and are not unconditionally cancellable by Pinnacle Financial.

Credit losses are estimated on the amortized cost basis of loans, which includes the principal balance outstanding, purchase discounts and premiums, deferred loan fees and costs and accrued interest receivable. Accrued interest receivable is presented separately on the balance sheets and as allowed under ASU 2016-13 is excluded from the tabular loan disclosures in Note 5.

While policies and procedures used to estimate the allowance for credit losses, as well as the resultant provision for credit losses charged to income, are considered adequate by management and are reviewed periodically by regulators, model validators and internal audit, they are necessarily approximate and imprecise. There are factors beyond Pinnacle Financial's control, such as changes in projected economic conditions, real estate markets or particular industry conditions which may materially impact asset quality and the adequacy of the allowance for credit losses and thus the resulting provision for credit losses.

Allowance for Credit Losses on Off Balance Sheet Credit Exposures — Pinnacle Financial estimates expected credit losses over the contractual term of obligations to extend credit, unless the obligation is unconditionally cancellable. The allowance for off balance sheet exposures is adjusted through the provision for credit losses. The estimates are determined based on the likelihood of funding during the contractual term and an estimate of credit losses subsequent to funding. Estimated credit losses on subsequently funded balances are based on the same assumptions as used to estimate credit losses on existing funded loans.

Transfers of Financial Assets — Transfers of financial assets are accounted for as sales when control over the assets has been surrendered or in the case of a loan participation, a portion of the asset has been surrendered and meets the definition of a "participating interest". Control over transferred assets is deemed to be surrendered when (1) the assets have been isolated from Pinnacle Financial, (2) the transferee obtains the right (free of conditions that constrain it from taking advantage of that right) to pledge or exchange the transferred assets, and (3) Pinnacle Financial does not maintain effective control over the transferred assets through an agreement to repurchase them before maturity.

Premises and Equipment and Leaseholds — Premises and equipment are carried at cost less accumulated depreciation and amortization computed principally by the straight-line method over the estimated useful lives of the assets or the expected lease terms for leasehold improvements, whichever is shorter. Useful lives for all premises and equipment range between three and thirty years.

Pinnacle Financial, or a subsidiary of Pinnacle Financial, is the lessee with respect to multiple office locations. At December 31, 2022, all such leases were being accounted for as operating leases within the accompanying consolidated financial statements, with the exception of one lease agreement classified as a finance lease. Pinnacle Financial recognizes right-of-use assets and lease liabilities reflecting the present value of future minimum lease payments under its lease agreements in accordance with *Accounting Standards Update 2016-02, Leases*.

Other Real Estate Owned — Other real estate owned (OREO) represents real estate foreclosed upon or acquired by deed in lieu of foreclosure by Pinnacle Bank through loan defaults by customers as well as properties acquired in connection with the acquisition of BNC that had previously been held for future expansion but were subsequently transferred to OREO. Substantially all of these amounts relate to lots, homes and residential development projects that are either completed or are in various stages of construction for which Pinnacle Financial believes it has adequately supported the value recorded. Upon its acquisition by Pinnacle Bank, the property is recorded at fair value, based on appraised value, less selling costs estimated as of the date acquired. The difference from the loan balance related to the property, if any, is recognized as a charge-off through the allowance for credit losses. Additional OREO losses for subsequent downward valuation adjustments and expenses to maintain OREO are determined on a specific property basis and are included as a component of noninterest expense. Net gains or losses realized at the time of disposal are reflected in noninterest expense.

Included in the accompanying consolidated balance sheet at December 31, 2022 and 2021 is \$8.0 million and \$8.5 million, respectively, of OREO with no related property-specific valuation allowances in either period. During the year ended December 31, 2022, Pinnacle Financial had a net foreclosed real estate expense of \$280,000 compared to net foreclosed real estate benefit of \$712,000 and net foreclosed real estate expense of \$8.6 million, respectively, during the years ended December 31, 2021 and 2020.

Other Assets — Included in other assets as of December 31, 2022 and 2021, is approximately \$6.6 million and \$5.1 million, respectively, of computer software related assets, net of amortization. This software supports Pinnacle Financial's primary data systems and relates to amounts paid to vendors for installation and development of such systems. These amounts are amortized on a straight-line basis over periods of three to seven years. For the years ended December 31, 2022, 2021, and 2020, Pinnacle Financial's amortization expense was approximately \$2.8 million, \$1.6 million and \$2.3 million, respectively. Software maintenance fees are capitalized in other assets and amortized over the term of the maintenance agreement.

Pinnacle Financial is required to maintain certain minimum levels of equity investments with certain regulatory and other entities in which Pinnacle Bank has outstanding borrowings, including the Federal Home Loan Bank of Cincinnati. At December 31, 2022 and 2021, the cost of these investments was \$80.2 million and \$67.8 million, respectively. Pinnacle Financial determined that cost approximates the fair value of these investments. Additionally, Pinnacle Financial has recorded certain investments in other non-public entities and funds at fair value of \$131.0 million and \$101.0 million at December 31, 2022 and 2021, respectively. During 2022, 2021 and 2020, Pinnacle Financial recorded net gains of \$10.6 million, \$23.1 million and \$1.1 million, respectively, on these investments due to changes in their fair value. Pinnacle Financial has an investment in twelve statutory business trusts valued at \$4.0 million as of December 31, 2022. The statutory business trusts were established to issue preferred securities, the dividends for which are paid with interest payments Pinnacle Financial makes on subordinated debentures it issued to the statutory business trusts.

Pinnacle Bank is the owner and beneficiary of various life insurance policies on certain key executives and certain current and former directors and associates, including policies that were acquired in mergers. Collectively, these policies are reflected in other assets in the accompanying consolidated balance sheets at their respective cash surrender values. At December 31, 2022 and 2021, the aggregate cash surrender value of these policies was approximately \$881.9 million and \$761.9 million, respectively. Noninterest income related to these policies was \$21.0 million, \$18.9 million, and \$18.8 million, during the years ended December 31, 2022, 2021 and 2020, respectively.

Also, as part of our compliance with the Community Reinvestment Act (CRA), we have investments in low income housing entities totaling \$228.4 million and \$188.9 million, net, as of December 31, 2022 and 2021, respectively. Included in our CRA investments are investments of \$138.0 million and \$115.4 million at December 31, 2022 and 2021, respectively, net of amortization, that qualify for federal low income housing tax credits. The investments are accounted for under the proportional amortization method. Under the proportional amortization method, the initial cost of the investment is amortized in proportion to the tax credits and other tax benefits received. The amortization and benefits are recognized as a component of income tax expense in the consolidated statements of income. The investments are recorded using the cost method.

Derivative Instruments — In accordance with ASC Topic 815, *Derivatives and Hedging*, all derivative instruments are recorded on the accompanying consolidated balance sheet at their respective fair values. The accounting for changes in fair value (i.e., gains or losses) of a derivative instrument depends on whether it has been designated and qualifies as part of a hedging relationship. If the derivative instrument is not designated as a hedge, changes in the fair value of the derivative instrument are recognized in earnings in the period of change.

Pinnacle Financial enters into interest rate swaps (swaps) to facilitate customer transactions and meet their financing needs. Upon entering into these instruments to meet customer needs, Pinnacle Financial enters into offsetting positions with large U.S. financial institutions in order to minimize the risk to Pinnacle Financial. These swaps are derivatives, but are not designated as hedging instruments.

Pinnacle Financial enters into forward cash flow hedge relationships in the form of interest rate swap agreements to manage its future interest rate exposure. These derivative contracts have been designated as a hedge and, as such, changes in the fair value of the derivative instrument are recorded in other comprehensive income (loss). Pinnacle Financial also enters into fair value hedge relationships to mitigate the effect of changing interest rates on the fair values of fixed rate securities. The gain or loss on the derivative instrument as well as the offsetting loss or gain on the hedged asset or liability attributable to the hedged risk are recognized in current earnings. The gain or loss on the derivative instrument is presented on the same income statement line item as the earnings effect of the hedged item. Pinnacle Financial prepares written hedge documentation for all derivatives which are designated as hedges. The written hedge documentation includes identification of, among other items, the risk management objective, hedging instrument, hedged item and methodologies for assessing and measuring hedge effectiveness and ineffectiveness, along with support for management's assertion that the hedge will be highly effective.

For designated hedging relationships, Pinnacle Financial performs retrospective and prospective effectiveness testing using quantitative methods where required by accounting standards. For certain hedging relationships, effectiveness is tested through the matching of critical terms. Assessments of hedge effectiveness and measurements of hedge ineffectiveness are performed at least quarterly. The portion of the changes in the fair value of a derivative that is highly effective and that has been designated and qualifies as a cash flow hedge is initially recorded in accumulated other comprehensive income (loss) and will be reclassified to earnings in the same period that the hedged item impacts earnings; any ineffective portion is recorded in current period earnings.

Hedge accounting ceases on transactions that are no longer deemed effective, or for which the derivative has been terminated or de-designated.

Securities Sold Under Agreements to Repurchase — Pinnacle Financial routinely sells securities to certain treasury management customers and then repurchases these securities the next day. Securities sold under agreements to repurchase are reflected as a secured borrowing in the accompanying consolidated balance sheets at the amount of cash received in connection with each transaction.

Income Taxes — ASC 740, *Income Taxes*, defines the threshold for recognizing the benefits of tax return positions in the financial statements as "more-likely-than-not" to be sustained by the taxing authority. ASC 740 also provides guidance on the derecognition, measurement and classification of income tax uncertainties, along with any related interest and penalties, and includes guidance concerning accounting for income tax uncertainties in interim periods.

Deferred tax assets and liabilities are the expected future tax amounts for the temporary differences between carrying amounts and tax bases of assets and liabilities, computed using enacted tax rates. The net deferred tax asset is reflected as a component of other assets on the consolidated balance sheet. A valuation allowance is required for deferred tax assets if, based on available evidence, it is more likely than not that all or some portion of the asset may not be realized due to the inability to generate sufficient taxable income in the period and/or of the character necessary to utilize the benefit of the deferred tax asset.

Income tax expense or benefit for the year is allocated among continuing operations and other comprehensive income (loss), as applicable. The amount allocated to continuing operations is the income tax effect of the pretax income or loss from continuing operations that occurred during the year, plus or minus income tax effects of (i) changes in certain circumstances that cause a change in judgment about the realization of deferred tax assets in future years, including the valuation of deferred tax assets due to changes in enacted income tax rates (ii) changes in income tax laws or rates and (iii) changes in income tax status, subject to certain exceptions. The amount allocated to other comprehensive income (loss) is related solely to changes in the valuation allowance on items that are normally accounted for in other comprehensive income (loss) such as unrealized gains or losses on available-for-sale securities.

In accordance with ASC 740-10, *Accounting for Uncertainty in Income Taxes*, uncertain tax positions are recognized if it is more likely than not, based on technical merits, that the tax position will be realized or sustained upon examination. The term more likely than not means a likelihood of more than 50 percent; the terms realized or sustained upon examination also include resolution of the related appeals or litigation processes, if any. A tax position that meets the more likely than not recognition threshold is initially and subsequently measured as the largest amount of tax benefit that has a greater than 50 percent likelihood of being realized upon settlement with a taxing authority that has full knowledge of all relevant information. The determination of whether or not a tax position has met the more likely than not recognition threshold considers the facts, circumstances and information available at the reporting date.

Pinnacle Financial and its subsidiaries file consolidated U.S. Federal and state income tax returns. Each entity provides for income taxes based on its contribution to income or loss of the consolidated group. Pinnacle Financial has a Real Estate Investment Trust subsidiary that files a separate federal tax return, but its income is included in the consolidated group's return as required by the federal tax laws. Pinnacle Financial remains open to audit under the statute of limitations by the IRS and the states in which Pinnacle operates for the years ended December 31, 2019 through 2022.

Pinnacle Financial's policy is to recognize interest and/or penalties related to income tax matters in income tax expense. Pinnacle Financial recognized \$264,000 in interest and penalties for the year ended December 31, 2022. No interest and penalties were recorded for the year ended December 31, 2021. Pinnacle Financial recognized \$571,000 in interest and penalties for the year ended December 31, 2020.

Income Per Common Share — Basic net income per common share (EPS) is computed by dividing net income available to common shareholders by the weighted average common shares outstanding for the period. Diluted EPS reflects the dilution that could occur if securities or other contracts to issue common stock were exercised or converted. The difference between basic and diluted weighted average common shares outstanding is attributable to common stock options, restricted share awards, and restricted share unit awards, including those with performance-based vesting provisions. The dilutive effect of outstanding options, restricted share awards, and restricted share unit awards is reflected in diluted EPS by application of the treasury stock method.

As of December 31, 2022, there were 40,188 stock options outstanding to purchase common shares. For the years ended December 31, 2022, 2021 and 2020, respectively, 398,461, 458,808 and 277,896 of dilutive stock options, dilutive restricted shares and dilutive restricted share units were included in the diluted earnings per share calculation under the treasury stock method. For the years ended December 31, 2022, 2021 and 2020, there were 263,573, 32,684 and 394,593 respectively, of restricted shares excluded from the calculation because they were deemed to be antidilutive.

The following is a summary of the basic and diluted earnings per share calculation for each of the years in the three-year period ended December 31, 2022 (dollars in thousands except earnings per share):

	<u>December 31, 2022</u>	<u>December 31, 2021</u>	<u>December 31, 2020</u>
Basic earnings per common share calculation:			
Numerator - Net income available to common shareholders	\$ 545,550	\$ 512,131	\$ 304,725
Denominator - Weighted average common shares outstanding	75,735,404	75,468,339	75,376,489
Basic net income per common share	\$ 7.20	\$ 6.79	\$ 4.04
Diluted earnings per common share calculation:			
Numerator - Net income available to common shareholders	\$ 545,550	\$ 512,131	\$ 304,725
Denominator - Weighted average common shares outstanding	75,735,404	75,468,339	75,376,489
Dilutive shares contingently issuable	398,461	458,808	277,896
Weighted average diluted common shares outstanding	<u>76,133,865</u>	<u>75,927,147</u>	<u>75,654,385</u>
Diluted net income per common share	\$ 7.17	\$ 6.75	\$ 4.03

Stock-Based Compensation — Stock-based compensation expense is recognized based on the fair value of the portion of stock-based payment awards that are ultimately expected to vest, reduced for estimated forfeitures. ASC 718-20, *Compensation – Stock Compensation Awards Classified as Equity*, allows forfeitures to be estimated at the time of grant and revised, if necessary, in subsequent periods if actual forfeitures differ from those estimates. Service based awards with multiple vesting periods are expensed over the entire requisite period as if the award were a single award. For awards with performance vesting criteria, anticipated performance is projected to determine the number of awards expected to vest, and the corresponding aggregate expense is adjusted to reflect the elapsed portion of the applicable performance period.

Comprehensive Income (Loss) — Comprehensive income (loss) consists of the total of all components of comprehensive income (loss) including net income (loss). Other comprehensive income (loss) refers to revenues, expenses, gains and losses that under U.S. GAAP are included in comprehensive income (loss) but excluded from net income (loss). As of December 31, 2022, 2021 and 2020, Pinnacle Financial's other comprehensive income (loss) consists primarily of unrealized gains and losses on securities available-for-sale, net of deferred tax expense (benefit) and unrealized gains (losses) on derivative hedging relationships.

Fair Value Measurement — ASC Topic 820, *Fair Value Measurements and Disclosures*, which defines fair value, establishes a framework for measuring fair value in U.S. GAAP and established required disclosures about fair value measurements. ASC 820 applies only to fair value measurements that are already required or permitted by other accounting standards and increases the consistency of those measurements. The definition of fair value focuses on the exit price, i.e., the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date, not the entry price, (i.e., the price that would be paid to acquire the asset or received to assume the liability at the measurement date). The statement emphasizes that fair value is a market-based measurement; not an entity-specific measurement. Therefore, the fair value measurement should be determined based on the assumptions that market participants would use in pricing the asset or liability.

Pinnacle Financial has an established process for determining fair values. Fair value is based upon quoted market prices, where available. If listed prices or quotes are not available, fair value is based upon internally developed models or processes that use primarily market-based or independently-sourced market data, including interest rate yield curves, option volatilities and third party information such as prices of similar assets or liabilities. Valuation adjustments may be made to ensure that financial instruments are recorded at fair value. Furthermore, while Pinnacle Financial believes its valuation methods are appropriate and consistent with other market participants, the use of different methodologies or assumptions to determine the fair value of certain financial instruments could result in a different estimate of fair value at the reporting date.

Recently Adopted Accounting Pronouncements — In March 2020, the FASB issued *Accounting Standards Update 2020-04, Reference Rate Reform (Topic 848): Facilitation of the Effects of Reference Rate Reform on Financial Reporting*, and has issued subsequent amendments thereto, which provides temporary optional guidance to ease the potential burden in accounting for reference rate reform. The ASU provides optional expedients and exceptions for applying generally accepted accounting principles to contract modifications and hedging relationships, subject to meeting certain criteria, that reference LIBOR or another reference rate expected to be discontinued. It is intended to help stakeholders during the global market-wide reference rate transition period. The guidance is effective for all entities as of March 12, 2020 through December 31, 2022. In December 2022, the FASB issued an update to *Accounting Standards Update 2020-04, Reference Rate Reform (Topic 848): Facilitation of the Effects of Reference Rate Reform on Financial Reporting* with *Accounting Standards Update 2022-06, Reference Rate Reform (Topic 848): Deferral of the Sunset Date of Topic 848*, which updated the effective date to be March 12, 2020 through December 31, 2024. Pinnacle Financial has implemented a transition plan to identify and modify its loans and other financial instruments, including certain indebtedness, with attributes that are

either directly or indirectly influenced by LIBOR. Pinnacle Financial has begun negotiating loans using its preferred replacement index, the Secured Overnight Financing Rate ("SOFR"). For Pinnacle Financial's currently outstanding LIBOR-based loans, the timing and manner in which each customer's contract transitions to SOFR will vary on a case-by-case basis. Pinnacle Financial expects to complete all loan transitions by June 30, 2023.

Newly Issued Not Yet Effective Accounting Standards — In March 2022, the FASB issued *Accounting Standards Update 2022-01, Derivatives and Hedging (Topic 815): Fair Value Hedging - Portfolio Layer Method*, which allows multiple hedged layers to be designated for a single closed portfolio of financial assets resulting in a greater portion of the interest rate risk in the closed portfolio being eligible to be hedged. The amendments allow the flexibility to use different types of derivatives or combinations of derivatives to better align with risk management strategies. Furthermore, among other things, the amendments clarify that basis adjustments of hedged items in the closed portfolio should be allocated at the portfolio level and not the individual assets within the portfolio. The guidance is effective for public business entities for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2022. Pinnacle Financial is assessing ASU 2022-01 and its impact on its accounting and disclosures.

In March 2022, the FASB issued *Accounting Standards Update 2022-02, Financial Instruments - Credit Losses (Topic 326): Troubled Debt Restructurings and Vintage Disclosures*, which removes the accounting guidance for troubled debt restructurings and requires entities to evaluate whether a modification provided to a borrower results in a new loan or continuation of an existing loan. The amendments enhance existing disclosures and require new disclosures for receivables when there has been a modification in contractual cash flows due to a borrower experiencing financial difficulties. Additionally, the amendments require public business entities to disclose gross charge-off information by year of origination in the vintage disclosures. The guidance is effective for entities that have adopted ASU 2016-13 for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2022. Pinnacle Financial is assessing ASU 2022-02 and its impact on its accounting and disclosures.

In June 2022, the FASB issued *Accounting Standards Update 2022-03, Fair Value Measurement (Topic 820): Fair Value Measurement of Equity Securities Subject to Contractual Sale Restrictions*, which clarifies the guidance in ASC 820 when measuring the fair value of equity securities subject to contractual restrictions that prohibit the sale of an equity security. This update also requires specific disclosures related to these types of securities. The guidance is effective for public business entities for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2023. Early adoption is permitted, including early adoption in an interim period. An entity should apply ASU 2022-03 prospectively once adopted. Pinnacle Financial is assessing ASU 2022-03 and its impact on its accounting and disclosures.

Other than those pronouncements discussed above which have been recently adopted, Pinnacle Financial does not believe there were any other recently issued accounting pronouncements that are expected to materially impact its consolidated financial statements.

Reclassifications — Some items in the prior year financial statements were reclassified to conform to the current presentation. Reclassifications had no effect on prior year net income or shareholders' equity.

Subsequent Events — ASC Topic 855, *Subsequent Events*, establishes general standards of accounting for and disclosure of events that occur after the balance sheet date but before financial statements are issued. Pinnacle Financial evaluated all events or transactions that occurred after December 31, 2022 through the date of the issued financial statements.

Note 2. Equity Method Investment

On February 1, 2015, Pinnacle Bank acquired a 30% interest in Bankers Healthcare Group, LLC (BHG) for \$75 million in cash. On March 1, 2016, Pinnacle Bank and Pinnacle Financial increased their investment in BHG by a combined 19%, for a total investment in BHG of 49%. The additional 19% interest was acquired pursuant to a purchase agreement whereby both Pinnacle Financial and Pinnacle Bank acquired 8.55% and an additional 10.45%, respectively, of the outstanding membership interests in BHG in exchange for \$74.1 million in cash and 860,470 shares of Pinnacle Financial common stock valued at \$39.9 million. The investment in BHG previously held by Pinnacle Financial was contributed to Pinnacle Bank effective September 30, 2022.

On March 1, 2016, Pinnacle Financial, Pinnacle Bank and the other members of BHG entered into an Amended and Restated Limited Liability Company Agreement of BHG and have subsequently entered into a Second Amended and Restated Limited Liability Company Agreement on February 2, 2021. The Second Amended and Restated Limited Liability Company Agreement, provides for, among other things, the following terms:

- co-sale rights for Pinnacle Bank in the event the other members of BHG decide to sell all or a portion of their ownership interests; and
- a right of first refusal for BHG and the other members of BHG in the event that Pinnacle Bank decides to sell all or a portion of its ownership interests, except in connection with a transfer of its ownership interests to an affiliate or in connection with the acquisition of Pinnacle Financial or Pinnacle Bank or a merger in which Pinnacle Financial or Pinnacle Bank is not the surviving entity.

Pinnacle Financial accounts for this investment pursuant to the equity method for unconsolidated subsidiaries and will recognize its interest in BHG's profits and losses in noninterest income with corresponding adjustments to the BHG investment account. Because BHG has been determined to be a voting interest entity of which Pinnacle Financial controls less than a majority of the board seats, this investment does not require consolidation and is accounted for pursuant to the equity method of accounting. Additionally, Pinnacle Financial did not recognize any goodwill or other intangible assets associated with these transactions as of the respective purchase dates, however, it will recognize accretion income and amortization expense associated with the fair value adjustments to the net assets acquired including the fair value of certain of BHG's liabilities which are recorded as a component of income from equity method investment, pursuant to the equity method of accounting.

In accordance with Regulation S-X 3-09, the audited consolidated balance sheets of BHG as of September 30, 2022 and 2021, and the related consolidated statements of income, comprehensive income, members' equity, and cash flows for each of the two years in the period ended September 30, 2022 are filed herewith as Exhibit 99.1 and the audited consolidated balance sheets of BHG as of September 30, 2021 and 2020, and the related consolidated statements of income, comprehensive income, members' equity, and cash flows for each of the two years in the period ended September 30, 2021 are filed herewith as Exhibit 99.2, as a result of the fact that Pinnacle Bank's share of BHG's pre-tax net income for the year ended December 31, 2022 exceeded 20% of Pinnacle Financial's consolidated pre-tax net income for the same period. BHG has a fiscal year-end of September 30th.

For each of the fiscal years in the period from December 31, 2016 through December 31, 2021, Pinnacle Financial included summarized financial information for BHG as of and for the periods presented in the footnotes to Pinnacle Financial's consolidated financial statements in its Annual Reports on Form 10-K in accordance with Regulation S-X 4-08(g), as a result of the fact that Pinnacle Financial's share of BHG's pre-tax net income exceeded 10%, but not 20%, of Pinnacle Financial's consolidated pre-tax net income for the relevant periods presented.

At December 31, 2022, Pinnacle Financial has recorded technology, trade name and customer relationship intangibles, net of related amortization, of \$6.3 million compared to \$6.8 million as of December 31, 2021. Amortization expense of \$512,000 was included in Pinnacle Financial's results for the year ended December 31, 2022 compared to \$752,000 for 2021 and \$1.2 million for 2020. Accretion income of \$718,000 was included in Pinnacle Financial's results for the year ended December 31, 2022, while \$1.5 million of accretion income was recorded in 2021 and \$2.1 million was recorded in 2020. Additionally, at December 31, 2022, Pinnacle Financial had recorded accretable discounts associated with certain liabilities of BHG of \$500,000 compared to \$1.2 million as of December 31, 2021.

During the year ended December 31, 2022, Pinnacle Financial and Pinnacle Bank received dividends from BHG of \$63.1 million in the aggregate, compared to \$70.0 million during the year ended December 31, 2021 and \$53.0 million during the year ended December 31, 2020. Pinnacle Financial's and Pinnacle Bank's share of earnings from BHG are included in Pinnacle Financial's consolidated tax return. Profits from intercompany transactions are eliminated.

Pinnacle Bank has a participating interest in a \$750.0 million revolving line of credit for the benefit of BHG in the amount of \$150.0 million and a \$150.0 million line of credit for the benefit of BHG in the amount of \$30.0 million. At December 31, 2022, there was \$88.3 million and \$10.0 million outstanding balances on the lines related to Pinnacle Bank's interest in the lines, respectively. The lines accrue interest at SOFR plus 200 basis points and are secured by all assets of BHG. The credit agreements contain covenants requiring BHG to maintain certain financial ratios and satisfy certain other affirmative and negative covenants. At December 31, 2022, neither BHG nor the originating bank had represented to Pinnacle Bank that BHG was not in compliance, in all material respects, with these covenants.

BHG partners with third party lenders, including Pinnacle Bank, to facilitate loan originations as part of BHG's alternative financing portfolio, whereby BHG acts as the marketing firm and refers loans to the third party lenders for funding. The third party lenders receive a fee for each loan funded and subsequently sold to BHG. These loans are ultimately sold through BHG's network of clients, which includes Pinnacle Bank. During the years ended December 31, 2022, 2021 and 2020, respectively, BHG purchased \$1.0 billion, \$646.6 million and \$453.8 million of loans originated by Pinnacle Bank, respectively. During the years ended December 31, 2022, 2021 and 2020, Pinnacle Bank purchased \$125.6 million, \$276.7 million and \$100.0 million, respectively, of loans from BHG at par pursuant to BHG's joint venture loan program whereby BHG and Pinnacle Bank share proportionately in the credit risk of the acquired loans based on the rate on the loan and the rate of the purchase. The yield on this portfolio to Pinnacle Bank is anticipated to be between 4.50% and 6.00% per annum. At December 31, 2022 and 2021, there were \$350.6 million and \$319.1 million, respectively, of BHG joint venture program loans held by Pinnacle Bank.

The following summary of BHG's financial position and results of operations as of December 31, 2022 and 2021 and for the years ended December 31, 2022, 2021 and 2020 are presented as unaudited due to BHG's fiscal year end being September 30 (in thousands):

Banker's Healthcare Group	December 31, 2022	December 31, 2021
Assets	\$ 4,375,643	\$ 2,724,542
Liabilities	\$ 3,821,725	\$ 2,355,256
Equity interests	553,918	369,286
Total liabilities and equity	\$ 4,375,643	\$ 2,724,542

	For the year ended December 31,		
	2022	2021	2020
Revenues	\$ 1,110,230	\$ 735,506	\$ 457,928
Net income, pre-tax	\$ 295,186	\$ 241,051	\$ 171,964

Note 3. Restricted Cash Balances

Regulation D of the Federal Reserve Act requires that banks maintain reserve balances with the Federal Reserve Bank based principally on the type and amount of their deposits. At its option, Pinnacle Financial maintains additional balances to compensate for clearing and other services. For the years ended December 31, 2022 and 2021, the average daily balance maintained at the Federal Reserve was approximately \$1.8 billion and \$2.9 billion, respectively.

Restricted cash included on Pinnacle Financial's consolidated balance sheets was \$31.4 million and \$82.5 million at December 31, 2022 and 2021, respectively. This restricted cash is maintained at banks as collateral primarily for our derivative portfolio.

Pinnacle Financial maintains some of its cash in bank deposit accounts at financial institutions other than Pinnacle Bank that, at times, may exceed federally insured limits. Pinnacle Financial may lose all uninsured balances if one of the correspondent banks fails without warning. Pinnacle Financial has not experienced any losses in such accounts. Pinnacle Financial believes it is not exposed to any significant credit risk on cash and cash equivalents.

Note 4. Securities

The amortized cost and fair value of securities available-for-sale and held-to-maturity at December 31, 2022 and 2021 are summarized as follows (in thousands):

	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
December 31, 2022				
Securities available-for-sale:				
U.S Treasury securities	\$ 196,151	\$ —	\$ 1,967	\$ 194,184
U.S. Government agency securities	432,475	—	36,318	396,157
Mortgage-backed securities	1,114,948	211	143,583	971,576
State and municipal securities	1,478,310	12,553	78,557	1,412,306
Asset-backed securities	134,386	—	16,983	117,403
Corporate notes and other	515,221	41	48,018	467,244
	<u>\$ 3,871,491</u>	<u>\$ 12,805</u>	<u>\$ 325,426</u>	<u>\$ 3,558,870</u>
Securities held-to-maturity:				
U.S Treasury securities	\$ 92,738	\$ —	\$ 6,472	\$ 86,266
U.S. Government agency securities	374,255	—	27,860	346,395
Mortgage-backed securities	413,119	52	41,593	371,578
State and municipal securities	1,927,778	2,216	233,564	1,696,430
Asset-backed securities	184,241	—	18,573	165,668
Corporate notes and other	88,527	—	9,918	78,609
	<u>\$ 3,080,658</u>	<u>\$ 2,268</u>	<u>\$ 337,980</u>	<u>\$ 2,744,946</u>
Allowance for credit losses - securities held-to-maturity	(1,608)			
Securities held-to-maturity, net of allowance for credit losses	<u>\$ 3,079,050</u>			
December 31, 2021				
Securities available-for-sale:				
U.S Treasury securities	\$ 194,490	\$ —	\$ 881	\$ 193,609
U.S. Government agency securities	634,611	2,359	4,961	632,009
Mortgage-backed securities	1,908,675	29,874	18,310	1,920,239
State and municipal securities	1,774,119	52,961	3,243	1,823,837
Asset-backed securities	232,294	60	2,785	229,569
Corporate notes and other	114,355	3,082	2,506	114,931
	<u>\$ 4,858,544</u>	<u>\$ 88,336</u>	<u>\$ 32,686</u>	<u>\$ 4,914,194</u>
Securities held-to-maturity:				
U.S. Government agency securities	11,920	—	37	11,883
Mortgage-backed securities	106,555	86	196	106,445
State and municipal securities	1,037,644	32,966	889	1,069,721
	<u>\$ 1,156,119</u>	<u>\$ 33,052</u>	<u>\$ 1,122</u>	<u>\$ 1,188,049</u>
Allowance for credit losses - securities held-to-maturity	(161)			
Securities held-to-maturity, net of allowance for credit losses	<u>\$ 1,155,958</u>			

During the years ended December 31, 2022, 2020 and 2018, Pinnacle Financial transferred, at fair value, \$1.1 billion, \$873.6 million and \$179.8 million, respectively, of securities from the available-for-sale portfolio to the held-to-maturity portfolio. The related net unrealized after tax losses of \$1.5 million, net unrealized after tax gains of \$69.0 million and net unrealized after tax losses of \$2.2 million, respectively, remained in accumulated other comprehensive income (loss) and will be amortized over the remaining life of the securities, offsetting the related amortization of discount on the transferred securities. No gains or losses were recognized at the time of the transfer. At December 31, 2022, approximately \$724.0 million of Pinnacle Financial's investment portfolio was pledged to secure public funds and other deposits and securities sold under agreements to repurchase. At December 31, 2022, repurchase agreements comprised of secured borrowings totaled \$194.9 million and were secured by \$194.9 million of pledged U.S. government agency securities, mortgage-backed securities, municipal securities, asset backed securities, and corporate debentures. As the fair value of securities pledged to secure repurchase agreements may decline, Pinnacle Financial regularly evaluates its need to pledge additional securities for the counterparty to remain adequately secured.

The amortized cost and fair value of debt securities as of December 31, 2022 by contractual maturity is shown below. Actual maturities may differ from contractual maturities of mortgage-backed securities since the mortgages underlying the securities may be called or prepaid with or without penalty. Therefore, these securities are not included in the maturity categories in the following summary (in thousands):

	Available-for-sale		Held-to-maturity	
	Amortized Cost	Fair Value	Amortized Cost	Fair Value
Due in one year or less	\$ 12,329	\$ 12,234	\$ 1,994	\$ 1,981
Due in one year to five years	186,874	193,512	427,894	396,683
Due in five years to ten years	725,776	654,799	133,681	120,245
Due after ten years	1,697,178	1,609,346	1,919,729	1,688,791
Mortgage-backed securities	1,114,948	971,576	413,119	371,578
Asset-backed securities	134,386	117,403	184,241	165,668
	<u>\$ 3,871,491</u>	<u>\$ 3,558,870</u>	<u>\$ 3,080,658</u>	<u>\$ 2,744,946</u>

At December 31, 2022 and 2021, included in securities available-for-sale were the following investments with unrealized losses. The information below classifies these investments according to the term of the unrealized loss of less than twelve months or twelve months or longer (in thousands):

	Investments with an Unrealized Loss of less than 12 months		Investments with an Unrealized Loss of 12 months or longer		Total Investments with an Unrealized Loss	
	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses
<i>December 31, 2022</i>						
U.S. Treasury securities	\$ 192,188	\$ 1,963	\$ 1,997	\$ 4	\$ 194,185	\$ 1,967
U.S. Government agency securities	46,062	2,224	350,094	34,094	396,156	36,318
Mortgage-backed securities	390,014	34,106	570,601	109,477	960,615	143,583
State and municipal securities	568,691	18,863	304,451	59,694	873,142	78,557
Asset-backed securities	513	5	116,442	16,978	116,955	16,983
Corporate notes and other	259,453	20,260	207,326	27,758	466,779	48,018
Total temporarily-impaired securities	<u>\$ 1,456,921</u>	<u>\$ 77,421</u>	<u>\$ 1,550,911</u>	<u>\$ 248,005</u>	<u>\$ 3,007,832</u>	<u>\$ 325,426</u>
<i>December 31, 2021</i>						
U.S. Treasury securities	\$ 178,610	\$ 881	\$ —	\$ —	\$ 178,610	\$ 881
U.S. Government agency securities	365,833	3,024	54,266	1,974	420,099	4,998
Mortgage-backed securities	825,664	11,859	178,956	6,647	1,004,620	18,506
State and municipal securities	363,102	2,665	57,270	1,045	420,372	3,710
Asset-backed securities	198,349	2,595	6,513	190	204,862	2,785
Corporate notes and other	14,991	554	20,270	1,952	35,261	2,506
Total temporarily-impaired securities	<u>\$ 1,946,549</u>	<u>\$ 21,578</u>	<u>\$ 317,275</u>	<u>\$ 11,808</u>	<u>\$ 2,263,824</u>	<u>\$ 33,386</u>

The applicable date for determining when securities are in an unrealized loss position is December 31, 2022 and 2021. As such, it is possible that a security had a market value less than its amortized cost on other days during the twelve-month periods ended December 31, 2022 and 2021, but is not in the "Investments with an Unrealized Loss of less than 12 months" category above.

As shown in the tables above, at December 31, 2022 and 2021, Pinnacle Financial had unrealized losses of \$325.4 million and \$33.4 million on \$3.0 billion and \$2.3 billion, respectively, of securities. The unrealized losses associated with \$1.1 billion, \$873.6 million and \$179.8 million of securities transferred from the available-for-sale portfolio to the held-to-maturity portfolio during the years ended December 31, 2022, 2020 and 2018, respectively, represent unrealized losses since the date of purchase, independent of the impact associated with changes in the cost basis upon transfer between portfolios. As described in Note 1. Summary of Significant Accounting Policies, for any securities classified as available-for-sale that are in an unrealized loss position at the balance sheet date, Pinnacle Financial assesses whether or not it intends to sell the security, or more-likely-than-not will be required to sell the security, before recovery of its amortized cost basis which would require a write-down to fair value through net income. Because Pinnacle Financial, as of December 31, 2022, did not intend to sell those securities that had an unrealized loss at December 31, 2022, and at December 31, 2022 it was not more-likely-than-not that Pinnacle Financial will be required to sell the securities before recovery of their amortized cost bases, which may be maturity, Pinnacle Financial has determined that no write-down is necessary. In addition, Pinnacle Financial evaluates whether any portion of the decline in fair value is the result of credit deterioration, which would require the recognition of an allowance for credit losses. Such evaluations consider the extent to which the amortized cost of the security exceeds its fair value, changes in credit ratings and any other known adverse conditions related to the specific security. The unrealized losses associated with securities at December 31, 2022 are driven by changes in interest rates and are not due to the credit quality of the securities, and accordingly, no allowance for credit losses is considered necessary related to available-for-sale securities at December 31, 2022. These securities will continue to be monitored as a part of Pinnacle Financial's ongoing evaluation of credit quality.

The allowance for credit losses on held-to-maturity securities is measured on a collective basis by major security type as described in Note 1. Summary of Significant Accounting Policies. Pinnacle Financial has a zero loss expectation for U.S government agency securities and mortgage-backed securities issued by Ginnie Mae, Fannie Mae, and Freddie Mac, and accordingly, no allowance for credit losses is estimated for these securities. Credit losses on held-to-maturity municipal securities are estimated using probability of default and loss given default models driven primarily by macroeconomic factors over a reasonable and supportable period of eighteen months with a twelve month reversion to average loss factors. The allowance for credit losses on held-to-maturity securities totaled \$1.6 million and \$161,000, at December 31, 2022 and 2021, respectively.

Pinnacle Financial utilizes bond credit ratings assigned by third party ratings agencies to monitor the credit quality of debt securities held-to-maturity. At December 31, 2022, all debt securities classified as held-to-maturity were rated A or higher by the ratings agencies. Updated credit ratings are obtained as they become available from the ratings agencies.

Periodically, available-for-sale securities may be sold or the composition of the portfolio realigned to improve yields, quality or marketability, or to implement changes in investment or asset/liability strategy, including maintaining collateral requirements and raising funds for liquidity purposes. Additionally, if an available-for-sale security loses its investment grade or tax-exempt status, the underlying credit support is terminated or collection otherwise becomes uncertain based on factors known to management, Pinnacle Financial will consider selling the security, but will review each security on a case-by-case basis as these factors become known. Consistent with the investment policy, during the years ended December 31, 2022, 2021 and 2020, available-for-sale securities of approximately \$29.5 million, \$37.5 million and \$145.6 million, respectively, were sold, resulting in gross realized gains of \$292,000, \$769,000 and \$2.2 million, and gross realized losses of \$136,000, \$10,000 and \$1.2 million, respectively.

Pinnacle Financial has entered into various fair value hedging transactions to mitigate the impact of changing interest rates on the fair values of available for sale securities. See Note 14. Derivative Instruments for disclosure of the gains and losses recognized on derivative instruments and the cumulative fair value hedging adjustments to the carrying amount of the hedged securities.

Note 5. Loans and Allowance for Credit Losses

For financial reporting purposes, Pinnacle Financial classifies its loan portfolio based on the underlying collateral utilized to secure each loan. This classification is consistent with those utilized in the Quarterly Report of Condition and Income filed by Pinnacle Bank with the Federal Deposit Insurance Corporation (FDIC).

Pinnacle Financial uses the following loan categories for presentation of loan balances and the related allowance for credit losses on loans:

- *Owner occupied commercial real estate mortgage loans* - Owner occupied commercial real estate mortgage loans are secured by commercial office buildings, industrial buildings, warehouses or retail buildings where the owner of the building occupies the property. For such loans, repayment is largely dependent upon the operation of the borrower's business.
- *Non-owner occupied commercial real estate loans* - These loans represent investment real estate loans secured by office buildings, industrial buildings, warehouses, retail buildings, and multifamily residential housing. Repayment is primarily dependent on lease income generated from the underlying collateral.
- *Consumer real estate mortgage loans* - Consumer real estate mortgage consists primarily of loans secured by 1-4 family residential properties, including home equity lines of credit. Repayment is primarily dependent on the personal cash flow of the borrower.
- *Construction and land development loans* - Construction and land development loans include loans where the repayment is dependent on the successful completion and eventual sale, refinance or operation of the related real estate project. Construction and land development loans include 1-4 family construction projects and commercial construction endeavors such as warehouses, apartments, office and retail space and land acquisition and development.
- *Commercial and industrial loans* - Commercial and industrial loans include loans to business enterprises issued for commercial, industrial and/or other professional purposes. These loans are generally secured by equipment, inventory, and accounts receivable of the borrower and repayment is primarily dependent on business cash flows. Loans granted under the PPP, which are fully guaranteed by the SBA, are included in this category. Such loans totaled \$8.0 million and \$371.1 million at December 31, 2022 and 2021, respectively.
- *Consumer and other loans* - Consumer and other loans include all loans issued to individuals not included in the consumer real estate mortgage classification. Examples of consumer and other loans are automobile loans, consumer credit cards and loans to finance education, among others. Many consumer loans are unsecured. Repayment is primarily dependent on the personal cash flow of the borrower.

Loans at December 31, 2022 and 2021 were as follows (in thousands):

	December 31, 2022	December 31, 2021
Commercial real estate:		
Owner-occupied	\$ 3,587,257	\$ 3,048,822
Non-owner occupied	6,542,619	5,221,704
Consumer real estate – mortgage	4,435,046	3,680,684
Construction and land development	3,679,498	2,903,017
Commercial and industrial	10,241,362	8,074,546
Consumer and other	555,823	485,489
Subtotal	\$ 29,041,605	\$ 23,414,262
Allowance for credit losses	(300,665)	(263,233)
Loans, net	<u>\$ 28,740,940</u>	<u>\$ 23,151,029</u>

Commercial loans receive risk ratings by the assigned financial advisor subject to validation by Pinnacle Financial's independent loan review department. Risk ratings are categorized as pass, special mention, substandard, substandard-nonaccrual or doubtful-nonaccrual. Pass rated loans include multiple ratings categories representing varying degrees of risk attributes lesser than those of the other defined risk categories further described below. Pinnacle Financial believes its categories follow those used by Pinnacle Bank's primary regulators. At December 31, 2022, approximately 78.4% of Pinnacle Financial's loan portfolio was analyzed as a commercial loan type with a specifically assigned risk rating. Consumer loans and small business loans are generally not assigned an individual risk rating but are evaluated as either accrual or nonaccrual based on the performance of the individual loans. However, certain consumer real estate-mortgage loans and certain consumer and other loans receive a specific risk rating due to the loan proceeds being used for commercial purposes even though the collateral may be of a consumer loan nature. Consumer loans that have been placed on nonaccrual but have not otherwise been assigned a risk rating are believed by management to share risk characteristics with loans rated substandard-nonaccrual and have been presented as such in Pinnacle Financial's risk rating disclosures.

Risk ratings are subject to continual review by a financial advisor and a senior credit officer. At least annually, Pinnacle Financial's credit procedures require every risk rated loan of \$1.0 million or more be subject to a formal credit risk review process. Each loan's risk rating is also subject to review by Pinnacle Financial's independent loan review department, which reviews a substantial portion of Pinnacle Financial's risk rated portfolio annually. Included in the coverage are independent reviews of loans in targeted higher-risk portfolio segments such as certain commercial and industrial loans, land loans and/or loan types in certain geographies.

Following are the definitions of the risk rating categories used by Pinnacle Financial. Pass rated loans include all credits other than those included within these categories:

- Special mention loans have potential weaknesses that deserve management's close attention. If left uncorrected, these potential weaknesses may result in deterioration of the repayment prospects for the asset or in Pinnacle Financial's credit position at some future date.
- Substandard loans are inadequately protected by the current net worth and financial capacity of the obligor or of the collateral pledged, if any. Assets so classified must have a well-defined weakness or weaknesses that jeopardize collection of the debt. Substandard loans are characterized by the distinct possibility that Pinnacle Financial could sustain some loss if the deficiencies are not corrected.
- Substandard-nonaccrual loans are substandard loans that have been placed on nonaccrual status.
- Doubtful-nonaccrual loans have all the characteristics of substandard-nonaccrual loans with the added characteristic that the weaknesses make collection or liquidation in full, on the basis of currently existing facts, conditions and values, highly questionable and improbable.

The table below presents loan balances classified within each risk rating category by primary loan type and based on year of origination or most recent renewal as of December 31, 2022 (in thousands):

December 31, 2022	2022	2021	2020	2019	2018	Prior	Revolving Loans	Total
Commercial real estate- owner occupied								
Pass	\$1,172,662	\$ 856,145	\$ 594,369	\$ 315,711	\$ 244,203	\$ 277,072	\$ 64,206	\$ 3,524,368
Special Mention	20,710	9,451	8,434	5,987	—	5,575	—	50,157
Substandard ⁽¹⁾	2,685	2,843	1,633	1,035	1,356	1,298	—	10,850
Substandard-nonaccrual	677	—	64	94	919	128	—	1,882
Doubtful-nonaccrual	—	—	—	—	—	—	—	—
Total Commercial real estate - owner occupied	\$1,196,734	\$ 868,439	\$ 604,500	\$ 322,827	\$ 246,478	\$ 284,073	\$ 64,206	\$ 3,587,257
Commercial real estate- Non-owner occupied								
Pass	\$2,443,858	\$1,551,480	\$ 998,502	\$ 708,665	\$ 294,972	\$ 382,254	\$ 89,370	\$ 6,469,101
Special Mention	28,927	—	16,936	15,064	—	9,071	—	69,998
Substandard ⁽¹⁾	—	—	—	1,276	—	—	—	1,276
Substandard-nonaccrual	—	1,040	—	—	—	1,204	—	2,244
Doubtful-nonaccrual	—	—	—	—	—	—	—	—
Total Commercial real estate - Non-owner occupied	\$2,472,785	\$1,552,520	\$1,015,438	\$ 725,005	\$ 294,972	\$ 392,529	\$ 89,370	\$ 6,542,619
Consumer real estate – mortgage								
Pass	\$1,055,454	\$1,122,823	\$ 492,824	\$ 238,931	\$ 124,579	\$ 258,187	\$1,124,453	\$ 4,417,251
Special Mention	207	—	—	—	216	42	—	465
Substandard ⁽¹⁾	—	—	—	—	—	—	—	—
Substandard-nonaccrual	198	1,676	2,184	7,957	1,202	3,749	364	17,330
Doubtful-nonaccrual	—	—	—	—	—	—	—	—
Total Consumer real estate – mortgage	\$1,055,859	\$1,124,499	\$ 495,008	\$ 246,888	\$ 125,997	\$ 261,978	\$1,124,817	\$ 4,435,046
Construction and land development								
Pass	\$1,964,251	\$1,363,519	\$ 246,840	\$ 55,396	\$ 5,989	\$ 5,707	\$ 19,251	\$ 3,660,953
Special Mention	14,978	2,765	—	—	—	—	1	17,744
Substandard ⁽¹⁾	440	—	—	—	—	130	—	570
Substandard-nonaccrual	—	130	—	—	—	101	—	231
Doubtful-nonaccrual	—	—	—	—	—	—	—	—
Total Construction and land development	\$1,979,669	\$1,366,414	\$ 246,840	\$ 55,396	\$ 5,989	\$ 5,938	\$ 19,252	\$ 3,679,498
Commercial and industrial								
Pass	\$3,686,252	\$1,643,062	\$ 485,030	\$ 320,501	\$ 146,884	\$ 132,388	\$3,645,795	\$ 10,059,912
Special Mention	33,491	2,370	3,570	27,607	4,738	1,174	51,014	123,964
Substandard ⁽¹⁾	7,673	7,954	255	6,818	715	792	16,934	41,141
Substandard-nonaccrual	11,682	3,684	143	183	266	369	18	16,345
Doubtful-nonaccrual	—	—	—	—	—	—	—	—
Total Commercial and industrial	\$3,739,098	\$1,657,070	\$ 488,998	\$ 355,109	\$ 152,603	\$ 134,723	\$3,713,761	\$ 10,241,362

December 31, 2022	2022	2021	2020	2019	2018	Prior	Revolving Loans	Total
Consumer and other								
Pass	\$ 156,417	\$ 101,821	\$ 55,362	\$ 1,865	\$ 744	\$ 997	\$ 238,533	\$ 555,739
Special Mention	—	—	—	—	—	—	—	—
Substandard ⁽¹⁾	—	—	—	—	—	—	—	—
Substandard-nonaccrual	—	82	—	—	—	2	—	84
Doubtful-nonaccrual	—	—	—	—	—	—	—	—
Total Consumer and other	\$ 156,417	\$ 101,903	\$ 55,362	\$ 1,865	\$ 744	\$ 999	\$ 238,533	\$ 555,823
Total loans								
Pass	\$10,478,894	\$6,638,850	\$2,872,927	\$1,641,069	\$ 817,371	\$1,056,605	\$5,181,608	\$ 28,687,324
Special Mention	98,313	14,586	28,940	48,658	4,954	15,862	51,015	262,328
Substandard ⁽¹⁾	10,798	10,797	1,888	9,129	2,071	2,220	16,934	53,837
Substandard-nonaccrual	12,557	6,612	2,391	8,234	2,387	5,553	382	38,116
Doubtful-nonaccrual	—	—	—	—	—	—	—	—
Total loans	\$10,600,562	\$6,670,845	\$2,906,146	\$1,707,090	\$ 826,783	\$1,080,240	\$5,249,939	\$ 29,041,605

⁽¹⁾ Potential problem loans represent those loans with a well-defined weakness and where information about possible credit problems of borrowers has caused management to have doubts about the borrower's ability to comply with present repayment terms. This definition is believed to be substantially consistent with the standards established by Pinnacle Bank's primary regulators for loans classified as substandard, excluding TDRs. Potential problem loans, which are not included in nonaccrual loans, amounted to approximately \$53.8 million at December 31, 2022, compared to \$109.6 million at December 31, 2021.

The table below presents the aging of past due balances by loan segment at December 31, 2022 and December 31, 2021 (in thousands):

	30-59 days past due	60-89 days past due	90 days or more past due	Total past due	Current	Total loans
December 31, 2022						
Commercial real estate:						
Owner-occupied	\$ 2,112	\$ 615	\$ 1,139	\$ 3,866	\$ 3,583,391	\$ 3,587,257
Non-owner occupied	359	48	1,681	2,088	6,540,531	6,542,619
Consumer real estate – mortgage	13,635	83	9,094	22,812	4,412,234	4,435,046
Construction and land development	221	102	130	453	3,679,045	3,679,498
Commercial and industrial	15,457	13,713	9,428	38,598	10,202,764	10,241,362
Consumer and other	4,056	1,688	746	6,490	549,333	555,823
Total	\$ 35,840	\$ 16,249	\$ 22,218	\$ 74,307	\$ 28,967,298	\$ 29,041,605
December 31, 2021						
Commercial real estate:						
Owner-occupied	\$ 727	\$ —	\$ 2,426	\$ 3,153	\$ 3,045,669	\$ 3,048,822
Non-owner occupied	1,434	—	645	2,079	5,219,625	5,221,704
Consumer real estate – mortgage	8,710	122	4,450	13,282	3,667,402	3,680,684
Construction and land development	61	—	127	188	2,902,829	2,903,017
Commercial and industrial	4,926	2,677	7,311	14,914	8,059,632	8,074,546
Consumer and other	1,715	568	372	2,655	482,834	485,489
Total	\$ 17,573	\$ 3,367	\$ 15,331	\$ 36,271	\$ 23,377,991	\$ 23,414,262

The following table details the changes in the allowance for credit losses from December 31, 2019 to December 31, 2020 to December 31, 2021 to December 31, 2022 by loan classification and the allocation of allowance for credit losses (in thousands):

	Commercial real estate - owner occupied	Commercial real estate - non-owner occupied	Consumer real estate - mortgage	Construction and land development	Commercial and industrial	Consumer and other	Unallocated	Total
Allowance for Credit Losses:								
Balance at December 31, 2019	\$ 13,406	\$ 19,963	\$ 8,054	\$ 12,662	\$ 36,112	\$ 3,595	\$ 985	\$ 94,777
Impact of adopting ASC 326	264	(4,740)	21,029	(3,144)	23,040	2,638	(985)	38,102
Charged-off loans	(2,598)	(546)	(3,478)	—	(38,718)	(3,993)	—	(49,333)
Recovery of previously charged-off loans	1,317	911	1,493	147	4,540	1,554	—	9,962
Provision for loan losses	10,909	63,544	6,206	32,743	73,449	4,691	—	191,542
Balance at December 31, 2020	\$ 23,298	\$ 79,132	\$ 33,304	\$ 42,408	\$ 98,423	\$ 8,485	\$ —	\$ 285,050
Charged-off loans	(1,420)	(786)	(632)	(367)	(46,213)	(5,578)	—	(54,996)
Recovery of previously charged-off loans	1,609	969	2,288	372	7,485	3,550	—	16,273
Provision for loan losses	(3,869)	(20,811)	(2,856)	(12,984)	52,645	4,781	—	16,906
Balance at December 31, 2021	\$ 19,618	\$ 58,504	\$ 32,104	\$ 29,429	\$ 112,340	\$ 11,238	\$ —	\$ 263,233
Charged-off loans	(1,413)	(185)	(651)	(150)	(39,020)	(12,757)	—	(54,176)
Recovery of previously charged-off loans	2,082	187	1,512	471	15,687	7,690	—	27,629
Provision for loan losses	6,330	(18,027)	3,571	6,364	55,346	10,395	—	63,979
Balance at December 31, 2022	\$ 26,617	\$ 40,479	\$ 36,536	\$ 36,114	\$ 144,353	\$ 16,566	\$ —	\$ 300,665

The adequacy of the allowance for credit losses is reviewed by Pinnacle Financial's management on a quarterly basis. This assessment includes procedures to estimate the allowance and test the adequacy and appropriateness of the resulting balance. The level of the allowance is based upon management's evaluation of historical default and loss experience, current and projected economic conditions, asset quality trends, known and inherent risks in the portfolio, adverse situations that may affect the borrowers' ability to repay the loan (including the timing of future payment), the estimated value of any underlying collateral, composition of the loan portfolio, industry and peer bank loan quality indications and other pertinent factors, including regulatory recommendations. The level of the allowance for credit losses maintained by management is believed adequate to absorb all expected future losses inherent in the loan portfolio at the balance sheet date. The allowance is increased by provisions charged to expense and decreased by charge-offs, net of recoveries of amounts previously charged-off.

Pinnacle Financial adopted ASU 2016-13 on January 1, 2020, which introduced the CECL methodology for estimating all expected losses over the life of a financial asset. Under the CECL methodology the allowance for credit losses is measured on a collective basis for pools of loans with similar risk characteristics, and for loans that do not share similar risk characteristics with the collectively evaluated pools, evaluations are performed on an individual basis. Upon adoption of ASU 2016-13 in 2020, the opening balance of the allowance for credit losses was increased by \$38.1 million through retained earnings.

For commercial real estate, consumer real estate, construction and land development, and commercial and industrial loans, Pinnacle Financial primarily utilizes a probability of default and loss given default modeling approach. These models utilize historical correlations between default experience and certain macroeconomic factors as determined through a statistical regression analysis. All loan segments modeled using this approach consider changes in the national unemployment rate. In addition to the national unemployment rate, GDP and the three month treasury rate are considered for owner occupied commercial real estate, the commercial real estate price index and the five year treasury rate are considered for construction loans, and the three month treasury rate is considered for commercial and industrial loans. For the consumer and other loan segment, a non-statistical approach based on historical charge off rates is utilized.

Losses are predicted over a period of time determined to be reasonable and supportable, and at the end of the reasonable and supportable period losses are reverted to long term historical averages. The reasonable and supportable period and reversion period are re-evaluated each quarter by Pinnacle Financial and are dependent on the current economic environment among other factors. A reasonable and supportable period of 24 months was utilized for all loan segments at December 31, 2022 and 2021, followed by, in each case, a 12 month straight line reversion to long term averages at each measurement date.

The estimated loan losses for all loan segments are adjusted for changes in qualitative factors not inherently considered in the quantitative analyses. These adjustments are based in part on quarterly trend assessments compared to historical experience in portfolio concentrations, policy exceptions, associate retention, independent loan review results, collateral considerations, risk ratings, competition and peer group credit quality trends. The qualitative allowance allocation, as determined by the processes noted above, is increased or decreased for each loan segment based on the assessment of these various qualitative factors.

Loans that do not share similar risk characteristics with the collectively evaluated pools are evaluated on an individual basis and are excluded from the collectively evaluated pools. Individual evaluations are generally performed for loans greater than \$1.0 million which have experienced significant credit deterioration. Such loans are evaluated for credit losses based on either discounted cash flows or the fair value of collateral.

The following table presents the amortized cost basis of collateral dependent loans, which are individually evaluated to determine expected credit losses, as of December 31, 2022 and December 31, 2021 (in thousands):

	Real Estate		Business Assets		Other		Total
December 31, 2022							
Commercial real estate:							
Owner-occupied	\$	10,804	\$	—	\$	—	10,804
Non-owner occupied		4,795		—		—	4,795
Consumer real estate – mortgage		22,466		—		—	22,466
Construction and land development		299		—		—	299
Commercial and industrial		—		12,327		—	12,327
Consumer and other		—		—		2	2
Total	\$	38,364	\$	12,327	\$	2	50,693
December 31, 2021							
Commercial real estate:							
Owner-occupied	\$	5,300	\$	—	\$	—	5,300
Non-owner occupied		5,631		—		—	5,631
Consumer real estate – mortgage		16,392		—		—	16,392
Construction and land development		1,208		—		—	1,208
Commercial and industrial		—		6,976		206	7,182
Consumer and other		—		—		—	—
Total	\$	28,531	\$	6,976	\$	206	35,713

The table below presents the amortized cost basis of loans on nonaccrual status and loans past due 90 or more days and still accruing interest at December 31, 2022 and 2021. Also presented is the balance of loans on nonaccrual status at December 31, 2022 and 2021 for which there was no related allowance for credit losses recorded (in thousands):

	December 31, 2022			December 31, 2021		
	Total nonaccrual loans	Nonaccrual loans with no allowance for credit losses	Loans past due 90 or more days and still accruing	Total nonaccrual loans	Nonaccrual loans with no allowance for credit losses	Loans past due 90 or more days and still accruing
Commercial real estate:						
Owner-occupied	\$ 1,882	\$ —	\$ —	\$ 2,694	\$ —	\$ —
Non-owner occupied	2,244	1,040	—	1,404	—	—
Consumer real estate – mortgage	17,330	—	—	10,264	—	144
Construction and land development	231	—	—	356	—	—
Commercial and industrial	16,345	8,003	3,663	16,849	13,188	1,091
Consumer and other	84	—	743	2	—	372
Total	\$ 38,116	\$ 9,043	\$ 4,406	\$ 31,569	\$ 13,188	\$ 1,607

Pinnacle Financial's policy is the accrual of interest income will be discontinued when (1) there is a significant deterioration in the financial condition of the borrower and full repayment of principal and interest is not expected or (2) the principal or interest is more than 90 days past due, unless the loan is both well secured and in the process of collection. As such, at the date loans are placed on nonaccrual status, Pinnacle Financial reverses all previously accrued interest income against current year earnings. Pinnacle Financial's policy is once a loan is placed on nonaccrual status each subsequent payment is reviewed on a case-by-case basis to determine if the payment should be applied to interest or principal pursuant to regulatory guidelines. Pinnacle Financial recognized no interest income through cash payments received on nonaccrual loans during the years ended December 31, 2022, 2021, and 2020. Had these nonaccruing loans been on accruing status, interest income would have been higher by \$1.6 million, \$1.7 million and \$3.3 million for the years ended December 31, 2022, 2021 and 2020, respectively. Approximately \$6.4 million and \$15.5 million of nonaccrual loans as of December 31, 2022 and 2021, respectively, were performing pursuant to their contractual terms at those dates.

At December 31, 2022 and 2021, there were \$2.2 million and \$2.4 million, respectively, of TDRs that were performing as of their restructure date and which are accruing interest. Troubled commercial loans are restructured by specialists within Pinnacle Bank's Special Assets Group, and all restructurings are approved by committees and/or credit officers separate and apart from the normal loan approval process. These specialists are charged with reducing Pinnacle Financial's overall risk and exposure to loss in the event of a restructuring by obtaining some or all of the following: improved documentation, additional guaranties, increase in curtailments, reduction in collateral release terms, additional collateral or other similar strategies.

There were no TDRs made during the years ended December 31, 2022 and 2021. The following table outlines the amount of each TDR by loan classification made during the year ended December 31, 2020 (dollars in thousands):

	Number of contracts	Pre Modification Outstanding Recorded Investment	Post Modification Outstanding Recorded Investment, net of related allowance
Commercial real estate:			
Owner-occupied	—	\$ —	\$ —
Non-owner occupied	—	—	—
Consumer real estate – mortgage	1	807	807
Construction and land development	—	—	—
Commercial and industrial	—	—	—
Consumer and other	—	—	—
	1	\$ 807	\$ 807

During the years ended December 31, 2022, 2021 and 2020, Pinnacle Financial had no TDRs that subsequently defaulted within twelve months of the restructuring. A default is defined as an occurrence which violates the terms of the receivable's contract.

Pinnacle Financial analyzes its commercial loan portfolio to determine if a concentration of credit risk exists to any industries. Pinnacle Financial utilizes broadly accepted industry classification systems in order to classify borrowers into various industry classifications. Pinnacle Financial had a credit exposure (loans outstanding plus unfunded lines of credit) exceeding 25% of Pinnacle Bank's total risk-based capital to borrowers in the following industries at December 31, 2022 with the comparative exposures for December 31, 2021 (in thousands):

	At December 31, 2022				Total Exposure at December 31, 2021
	Outstanding Principal Balances	Unfunded Commitments	Total exposure		
Lessors of nonresidential buildings	\$ 4,911,231	\$ 2,146,814	\$ 7,058,045	\$	5,368,638
Lessors of residential buildings	1,865,903	1,859,283	3,725,186		2,566,352
New housing for-sale builders	760,771	1,002,318	1,763,089		1,534,789
Music publishers	634,778	492,858	1,127,636		529,886
Total	\$ 8,172,683	\$ 5,501,273	\$ 13,673,956	\$	9,999,665

Pinnacle Financial monitors two ratios regarding construction and commercial real estate lending as a part of its concentration management process. Both ratios are calculated by dividing certain types of loan balances for each of the two categories by Pinnacle Bank's total risk-based capital. At December 31, 2022 and 2021, Pinnacle Bank's construction and land development loans as a percentage of total risk-based capital were 85.9% and 79.1%, respectively. Non owner-occupied commercial real estate and multifamily loans (including construction and land development loans) as a percentage of total risk-based capital were 249.6% and 234.1% as of December 31, 2022 and 2021, respectively. Banking regulations have established guidelines for the construction ratio of less than 100% of total risk-based capital and for the non owner-occupied commercial real estate and multifamily ratio of less than 300% of total risk-based capital. When a bank's ratios are in excess of one or both of these guidelines, banking regulations generally require an increased level of monitoring in these lending areas by bank management. Pinnacle Bank was within the 100% and 300% guidelines as of December 31, 2022 and has established what it believes to be appropriate controls to monitor its lending in these areas as it aims to keep the level of these loans below the 100% and 300% thresholds.

At December 31, 2022, Pinnacle Financial had granted loans and other extensions of credit amounting to approximately \$20.9 million to current directors, executive officers, and their related interests, of which \$16.0 million had been drawn upon. At December 31, 2021, Pinnacle Financial had granted loans and other extensions of credit amounting to approximately \$45.2 million to directors, executive officers, and their related interests, of which approximately \$14.5 million had been drawn upon. All loans to directors, executive officers, and their related entities were performing in accordance with contractual terms at December 31, 2022 and 2021.

Loans Held for Sale

At December 31, 2022, Pinnacle Financial had approximately \$21.1 million in commercial loans held for sale compared to \$17.7 million at December 31, 2021. These include commercial real estate and apartment loans originated for sale to a third-party as part of a multi-family loan program. Such loans are closed under a pass-through commitment structure wherein Pinnacle Bank's loan commitment to the borrower is the same as the third party's take-out commitment to Pinnacle Bank and the third party purchase typically occurs within thirty days of Pinnacle Bank closing with the borrowers. Also included are commercial loans originated for sale to BHG as part of BHG's alternative financing portfolio as more fully described in Note 2. Equity Method Investment.

At December 31, 2022, Pinnacle Financial had approximately \$12.9 million of mortgage loans held-for-sale compared to approximately \$30.3 million at December 31, 2021. Total mortgage loan volumes sold during the year ended December 31, 2022 were approximately \$826.2 million compared to approximately \$1.6 billion and \$1.8 billion for the years ended December 31, 2021 and 2020, respectively. During the year ended December 31, 2022, Pinnacle Financial recognized \$7.3 million in gains on the sale of these loans, net of commissions paid, compared to \$32.4 million and \$60.0 million, respectively, during the years ended December 31, 2021 and 2020.

These mortgage loans held-for-sale are originated internally and are primarily to borrowers in Pinnacle Bank's geographic markets. These sales are typically on a mandatory basis to investors that follow conventional government sponsored entities (GSE) and the Department of Housing and Urban Development/U.S. Department of Veterans Affairs (HUD/VA) guidelines.

Each purchaser of a mortgage loan held-for-sale has specific guidelines and criteria for sellers of loans and the risk of credit loss with regard to the principal amount of the loans sold is generally transferred to the purchasers upon sale. While the loans are sold without recourse, the purchase agreements require Pinnacle Bank to make certain representations and warranties regarding the existence and sufficiency of file documentation and the absence of fraud by borrowers or other third parties such as appraisers in connection with obtaining the loan. If it is determined that the loans sold were in breach of these representations or warranties, Pinnacle Bank has obligations to either repurchase the loan for the unpaid principal balance and related investor fees or make the purchaser whole for the economic benefits of the loan. To date, Pinnacle Bank's liability pursuant to the terms of these representations and warranties has been insignificant.

Note 6. Premises and Equipment and Lease Commitments

Premises and equipment at December 31, 2022 and 2021 are summarized as follows (in thousands):

	Range of Useful Lives	2022	2021
Land	Not applicable	\$ 71,741	\$ 70,240
Buildings	15 years - 30 years	206,434	202,255
Leasehold improvements	15 years - 20 years	62,209	54,922
Furniture and equipment	3 years - 20 years	144,979	138,766
		485,363	466,183
Less: accumulated depreciation and amortization		157,478	178,001
		<u>\$ 327,885</u>	<u>\$ 288,182</u>

Depreciation and amortization expense was approximately \$25.9 million, \$22.2 million, and \$22.8 million for the years ended December 31, 2022, 2021 and 2020, respectively.

Pinnacle Financial has entered into various operating leases, primarily for office space and branch facilities. The leases are classified as operating or finance leases at commencement. Right-of-use assets representing the right to use the underlying asset and lease liabilities representing the obligation to make future lease payments are recognized on the balance sheet within other assets and other liabilities. These assets and liabilities are estimated based on the present value of future lease payments discounted using Pinnacle Financial's incremental secured borrowing rates as of the commencement date of the lease. Certain lease agreements contain renewal options which are considered in the determination of the lease term if they are deemed reasonably certain to be exercised. Pinnacle Financial has elected not to recognize leases with an original term of less than 12 months on the balance sheet.

Right-of-use assets and lease liabilities relating to Pinnacle Financial's operating and finance leases are as follows at December 31, 2022 and 2021 (in thousands):

	December 31, 2022	December 31, 2021
Right-of-use assets:		
Operating leases	\$ 126,767	\$ 92,819
Finance leases	1,318	1,544
Total right-of-use assets	<u>\$ 128,085</u>	<u>\$ 94,363</u>
Lease liabilities:		
Operating leases	\$ 133,108	\$ 97,925
Finance leases	2,458	2,739
Total lease liabilities	<u>\$ 135,566</u>	<u>\$ 100,664</u>

The total lease cost related to operating leases and short term leases is recognized on a straight-line basis over the lease term. For finance leases, right-of-use assets are amortized on a straight-line basis over the lease term and interest imputed on the lease liability is recognized using the effective interest method. The components of Pinnacle Financial's total lease cost were as follows for the years ended December 31, 2022, 2021 and 2020 (in thousands):

	For the years ended December 31,		
	2022	2021	2020
Operating lease cost	\$ 18,292	\$ 15,696	\$ 13,963
Short-term lease cost	401	297	354
Finance lease cost:			
Interest on lease liabilities	189	208	227
Amortization of right-of-use asset	226	226	226
Sublease income	(1,357)	(1,309)	(1,324)
Net lease cost	<u>\$ 17,751</u>	<u>\$ 15,118</u>	<u>\$ 13,446</u>

The weighted average remaining lease term and weighted average discount rate for operating and finance leases at December 31, 2022 and 2021 are as follows:

	December 31, 2022	December 31, 2021
Weighted average remaining lease term		
Operating leases	10.44 years	10.00 years
Finance leases	5.84 years	6.84 years
Weighted average discount rate		
Operating leases	3.11 %	2.71 %
Finance leases	7.22 %	7.22 %

Cash flows related to operating and finance leases during the years ended December 31, 2022, 2021 and 2020 were as follows (in thousands):

	For the years ended December 31,		
	2022	2021	2020
Operating cash flows related to operating leases	\$ 16,956	\$ 14,712	\$ 13,494
Operating cash flows related to finance leases	\$ 189	\$ 208	\$ 227
Financing cash flows related to finance leases	\$ 281	\$ 261	\$ 243

Future undiscounted lease payments for operating and finance leases with initial terms of more than 12 months are as follows at December 31, 2022 (in thousands):

	Operating Leases	Finance Leases
2023	\$ 18,975	\$ 480
2024	19,365	527
2025	16,944	527
2026	14,463	527
2027	13,272	527
Thereafter	75,939	440
Total undiscounted lease payments	158,958	3,028
Less: imputed interest	(25,850)	(570)
Net lease liabilities	<u>\$ 133,108</u>	<u>\$ 2,458</u>

Note 7. Deposits

At December 31, 2022, the scheduled maturities of time deposits are as follows (in thousands):

2023	\$ 2,730,929
2024	617,312
2025	99,814
2026	26,551
2027	14,645
Thereafter	104
	<u>\$ 3,489,355</u>

At December 31, 2022 and 2021, approximately \$1.3 billion and \$603.8 million, respectively, of time deposits had been issued in denominations of \$250,000 or greater.

At December 31, 2022 and 2021, Pinnacle Financial had \$1.4 million and \$1.9 million, respectively, of deposit accounts in overdraft status that have been reclassified to loans on the accompanying consolidated balance sheets.

Note 8. Federal Home Loan Bank Advances

Pinnacle Bank is a member of the Federal Home Loan Bank of Cincinnati (FHLB) and as a result, is eligible for advances from the FHLB pursuant to the terms of various borrowing agreements, which assist Pinnacle Bank in the funding of its home mortgage and commercial real estate loan portfolios. Pinnacle Bank has pledged certain qualifying residential mortgage loans and, pursuant to a blanket lien, certain qualifying commercial mortgage loans with an aggregate carrying value of approximately \$7.6 billion as collateral under the borrowing agreements with the FHLB.

At December 31, 2022 and 2021, Pinnacle Bank had outstanding advances from the FHLB totaling approximately \$464.4 million and \$888.7 million, respectively. The scheduled maturities of FHLB advances at December 31, 2022 and interest rates are as follows (in thousands):

	Scheduled maturities	Weighted average interest rates⁽¹⁾
2023	\$ —	— %
2024	—	— %
2025	116,250	4.85 %
2026	—	— %
2027	—	— %
Thereafter	350,012	2.36 %
	466,262	
Deferred costs	(1,826)	
Total Federal Home Loan Bank advances	<u>\$ 464,436</u>	
Weighted average interest rate		<u>2.98 %</u>

⁽¹⁾ Some FHLB Cincinnati advances include variable interest rates and could increase in the future. The table reflects rates in effect as of December 31, 2022.

At December 31, 2022, Pinnacle Bank had accommodations which allow it to borrow from the Federal Reserve Bank of Atlanta's discount window and purchase Federal funds from several of its correspondent banks on an overnight basis at prevailing overnight market rates. These accommodations are subject to various restrictions as to their term and availability, and in most cases, must be repaid within less than a month. At December 31, 2022, Pinnacle Bank had approximately \$3.8 billion in borrowing availability with the FHLB, \$4.8 billion with the Federal Reserve Bank discount window, and approximately \$155.0 million with other correspondent banks with whom Pinnacle Bank has arranged lines of credit. At December 31, 2022, Pinnacle Bank was not carrying any balances with the Federal Reserve Bank discount window or correspondent banks under these arrangements.

Note 9. Other Borrowings

Pinnacle Financial has twelve wholly-owned subsidiaries that are statutory business trusts created for the exclusive purpose of issuing 30-year capital trust preferred securities, and Pinnacle Financial has entered into certain other subordinated debt agreements. These instruments are outlined below as of December 31, 2022 (in thousands):

Name	Date Established	Maturity	Total Debt Outstanding	Interest Rate at December 31, 2022	Coupon Structure
<i>Trust preferred securities</i>					
Pinnacle Statutory Trust I	December 29, 2003	December 30, 2033	\$ 10,310	7.54 %	3-month LIBOR + 2.80%
Pinnacle Statutory Trust II	September 15, 2005	September 30, 2035	20,619	6.13 %	3-month LIBOR + 1.40%
Pinnacle Statutory Trust III	September 07, 2006	September 30, 2036	20,619	6.40 %	3-month LIBOR + 1.65%
Pinnacle Statutory Trust IV	October 31, 2007	September 30, 2037	30,928	7.62 %	3-month LIBOR + 2.85%
BNC Capital Trust I	April 03, 2003	April 15, 2033	5,155	7.33 %	3-month LIBOR + 3.25%
BNC Capital Trust II	March 11, 2004	April 07, 2034	6,186	6.93 %	3-month LIBOR + 2.85%
BNC Capital Trust III	September 23, 2004	September 23, 2034	5,155	6.48 %	3-month LIBOR + 2.40%
BNC Capital Trust IV	September 27, 2006	December 31, 2036	7,217	6.43 %	3-month LIBOR + 1.70%
Valley Financial Trust I	June 26, 2003	June 26, 2033	4,124	7.82 %	3-month LIBOR + 3.10%
Valley Financial Trust II	September 26, 2005	December 15, 2035	7,217	6.26 %	3-month LIBOR + 1.49%
Valley Financial Trust III	December 15, 2006	January 30, 2037	5,155	6.14 %	3-month LIBOR + 1.73%
Southcoast Capital Trust III	August 05, 2005	September 30, 2035	10,310	6.23 %	3-month LIBOR + 1.50%
<i>Subordinated Debt</i>					
Pinnacle Financial Subordinated Notes	September 11, 2019	September 15, 2029	300,000	4.13 %	Fixed ⁽¹⁾
Debt issuance costs and fair value adjustment			(8,940)		
Total subordinated debt and other borrowings			\$ 424,055		

(1) Migrates to three month LIBOR + 2.775% (or an alternative benchmark rate plus comparable spread in the event that three month LIBOR is no longer published on such adjustment date) beginning September 15, 2024 through the end of the term.

Interest on each of the trust preferred securities Pinnacle Financial has issued is currently based on a floating rate tied to 3-month LIBOR plus some spread.

On July 30, 2021, Pinnacle Bank redeemed \$130.0 million aggregate principal amount of subordinated notes due July 30, 2025. Additionally on November 16, 2021, Pinnacle Financial redeemed \$120.0 million aggregate principal amount of subordinated notes due November 16, 2026. The redemptions were funded with existing cash on hand. Pursuant to regulatory guidelines, once the maturity date on subordinated notes is within five years, a portion of the notes will no longer be eligible to be included in regulatory capital, with an additional portion being excluded each year over the five year period approaching maturity.

Note 10. Income Taxes

Income tax expense attributable to continuing operations for each of the years ended December 31 is as follows (in thousands):

	2022	2021	2020
<i>Current tax expense :</i>			
Federal	\$ 104,141	\$ 125,016	\$ 98,082
State	12,870	11,798	19,270
Total current tax expense	117,011	136,814	117,352
<i>Deferred tax expense (benefit):</i>			
Federal	15,082	(12,149)	(45,450)
State	4,658	(83)	(12,865)
Total deferred tax (benefit) expense	19,740	(12,232)	(58,315)
Total income tax expense	\$ 136,751	\$ 124,582	\$ 59,037

Pinnacle Financial's income tax expense differs from the amounts computed by applying the Federal income tax statutory rate of 21% to income before income taxes. A reconciliation of the differences for each of the years in the three-year period ended December 31, 2022 is as follows (in thousands):

	2022	2021	2020
Income tax expense at statutory rate	\$ 146,474	\$ 136,900	\$ 77,985
State excise tax expense, net of federal tax effect	13,847	9,255	5,059
Non-deductible executive compensation	5,481	2,149	1,297
Tax-exempt securities	(18,730)	(15,243)	(13,706)
Federal tax credits	(5,019)	(4,712)	(3,717)
Bank owned life insurance	(4,599)	(4,413)	(4,759)
Insurance premiums	(36)	(273)	(272)
Excess tax benefits associated with equity compensation	(3,027)	(2,475)	(417)
Other items	2,360	3,394	(2,433)
Income tax expense	\$ 136,751	\$ 124,582	\$ 59,037

Pinnacle Financial's effective tax rate differs from the Federal income tax rates primarily due to state excise tax expense, investments in bank-qualified tax-exempt municipal securities, tax benefits from Pinnacle Bank's real estate investment trust and municipal investment subsidiaries, and tax benefits associated with share-based compensation, bank owned life insurance, and Pinnacle Financial's captive insurance subsidiary, offset in part by the limitation on deductibility of meals and entertainment expense, non-deductible FDIC insurance premiums and non-deductible executive compensation.

The components of deferred income taxes included in other assets in the accompanying consolidated balance sheets at December 31, 2022 and 2021 are as follows (in thousands):

	2022	2021
<i>Deferred tax assets:</i>		
Allowance for credit losses	\$ 77,015	\$ 66,785
Loans	10,576	14,778
Insurance	817	759
Accrued liability for supplemental retirement agreements	7,595	7,612
Restricted stock and stock options	7,795	9,148
Securities	67,286	—
Lease liability	35,589	26,476
Other real estate owned	1,526	1,540
Net federal operating loss carryforward and credits	1,168	1,271
Annual incentive compensation	21,322	23,095
Partnership interests	31,559	27,653
Allowance for off balance sheet credit exposures	6,527	5,873
Tax credit investments	8,282	—
Other deferred tax assets	3,267	1,941
Total deferred tax assets	280,324	186,931

	2022	2021
<i>Deferred tax liabilities:</i>		
Depreciation and amortization	17,723	14,520
Core deposit and other intangible assets	9,070	8,787
Securities	—	21,680
Cash flow hedge	6,854	9,890
REIT dividends	2,338	1,222
FHLB related liabilities	328	1,600
Equity method investment	76	23
Right-of-use assets and other leasing transactions	33,157	24,315
Leases	35,547	—
Subordinated debt	1,662	1,791
Other deferred tax liabilities	2,054	1,831
Total deferred tax liabilities	108,809	85,659
<i>Net deferred tax assets</i>	<u>\$ 171,515</u>	<u>\$ 101,272</u>

At December 31, 2022, the Company had federal and state loss carryforwards resulting from acquisitions of approximately \$5.3 million that expire at various dates from 2028 to 2034.

ASC 740, *Income Taxes*, defines the threshold for recognizing the benefits of tax return positions in the financial statements as "more-likely-than-not" to be sustained by the taxing authority. This section also provides guidance on the derecognition, measurement and classification of income tax uncertainties, along with any related interest and penalties, and includes guidance concerning accounting for income tax uncertainties in interim periods.

A reconciliation of the beginning and ending unrecognized tax benefit related to state uncertain tax positions for each of the years in the three-year period ended December 31, 2022 is as follows (in thousands):

	2022	2021	2020
Balance at January 1,	\$ 12,737	\$ 9,658	\$ 6,910
Increases due to tax positions taken during the current year	3,721	3,647	2,748
Increases due to tax positions taken during a prior year	—	—	—
Decreases due to the lapse of the statute of limitations during the current year	(706)	(568)	—
Decreases due to settlements with the taxing authorities during the current year	—	—	—
Balance at December 31,	<u>\$ 15,752</u>	<u>\$ 12,737</u>	<u>\$ 9,658</u>

Pinnacle Financial's policy is to recognize interest and/or penalties related to income tax matters in income tax expense. Pinnacle Financial recognized \$264,000 in interest and penalties for the year ended December 31, 2022. No interest and penalties were recorded for the year ended December 31, 2021. Pinnacle Financial recognized \$571,000 in interest and penalties for the year ended December 31, 2020.

Note 11. Commitments and Contingent Liabilities

In the normal course of business, Pinnacle Financial has entered into off-balance sheet financial instruments which include commitments to extend credit (i.e., including unfunded lines of credit) and standby letters of credit. Commitments to extend credit are usually the result of lines of credit granted to existing borrowers under agreements that the total outstanding indebtedness will not exceed a specific amount during the term of the indebtedness. Typical borrowers are commercial concerns that use lines of credit to supplement their treasury management functions, thus their total outstanding indebtedness may fluctuate during any time period based on the seasonality of their business and the resultant timing of their cash flows. Other typical lines of credit are related to home equity loans granted to consumers. Commitments to extend credit generally have fixed expiration dates or other termination clauses and may require payment of a fee. At December 31, 2022, these commitments amounted to \$15.9 billion, of which approximately \$1.7 billion related to home equity lines of credit.

Standby letters of credit are generally issued on behalf of an applicant (customer) to a specifically named beneficiary and are the result of a particular business arrangement that exists between the applicant and the beneficiary. Standby letters of credit have fixed expiration dates and are usually for terms of two years or less unless terminated beforehand due to criteria specified in the standby letter of credit. A typical arrangement involves the applicant routinely being indebted to the beneficiary for such items as inventory purchases, insurance, utilities, lease guarantees or other third party commercial transactions. The standby letter of credit would permit the beneficiary to obtain payment from Pinnacle Financial under certain prescribed circumstances. Subsequently, Pinnacle Financial would then seek reimbursement from the applicant pursuant to the terms of the standby letter of credit. At December 31, 2022, these commitments amounted to \$355.1 million.

Pinnacle Financial follows the same credit policies and underwriting practices when making these commitments as it does for on-balance sheet instruments. Each customer's creditworthiness is evaluated on a case-by-case basis and the amount of collateral obtained, if any, is based on management's credit evaluation of the customer. Collateral held varies but may include cash, real estate and improvements, marketable securities, accounts receivable, inventory, equipment, and personal property.

The contractual amounts of these commitments are not reflected in the consolidated financial statements and would only be reflected if drawn upon. Since many of the commitments are expected to expire without being drawn upon, the contractual amounts do not necessarily represent future cash requirements. However, should the commitments be drawn upon and should Pinnacle Bank's customers default on their resulting obligation to Pinnacle Bank, the maximum exposure to credit loss, without consideration of collateral, is represented by the contractual amount of those commitments. At December 31, 2022 and 2021, Pinnacle Financial had accrued \$25.0 million and \$22.5 million, respectively, for the inherent risks associated with these off-balance sheet commitments.

Various legal claims also arise from time to time in the normal course of business. In the opinion of management, the resolution of these routine claims outstanding at December 31, 2022 will not have a material impact on Pinnacle Financial's consolidated financial condition, operating results or cash flows.

Note 12. Salary Deferral Plans

Pinnacle Financial has a 401(k) retirement plan (the 401k Plan) covering all employees who elect to participate, subject to certain eligibility requirements. The 401(k) Plan allows employees to defer up to 50% of their salary subject to regulatory limitations with Pinnacle Financial matching 100% of the first 4% of employee self-directed contributions during 2022, 2021, and 2020. Pinnacle Financial's expense associated with the matching component of the plan for each of the years in the three-year period ended December 31, 2022 was approximately \$13.7 million, \$11.1 million and \$9.4 million, respectively, and is included in the accompanying consolidated statements of operations in salaries and employee benefits expense.

Pinnacle Financial has assumed supplemental retirement plans for certain directors and executive officers of banks which we have acquired. At December 31, 2022 and 2021, respectively, Pinnacle Financial had recorded \$30.3 million and \$30.4 million of liabilities on its balance sheet associated with these supplemental executive retirement plans. A portion of these assumed plans were fully funded with Rabbi Trusts whose balances at December 31, 2022 totaled \$17.0 million. At December 31, 2022, the remaining amounts that are not yet funded are included in other liabilities in the accompanying consolidated balance sheets.

Note 13. Stock Options and Restricted Shares

Pinnacle Financial's Amended and Restated 2018 Omnibus Equity Incentive Plan (the "2018 Plan") permits Pinnacle Financial to reissue outstanding awards that are subsequently forfeited, settled in cash, withheld by Pinnacle Financial to cover withholding taxes or expire unexercised and returned to the 2018 Plan. At December 31, 2022, there were approximately 1.3 million shares available for issuance under the 2018 Plan.

Upon the acquisition of CapitalMark, Pinnacle Financial assumed approximately 858,000 stock options under the CapitalMark Option Plan. No further shares remain available for issuance under the CapitalMark Option Plan. At December 31, 2022, all of the remaining options outstanding under any equity incentive plan of Pinnacle Financial were granted under the CapitalMark Option Plan.

Common Stock Options

As of December 31, 2022, of the 40,188 stock options outstanding, approximately 11,539 options were granted with the intention to be incentive stock options qualifying under Section 422 of the Internal Revenue Code for favorable tax treatment to the option holder while approximately 28,649 options would be deemed non-qualified stock options and thus not subject to favorable tax treatment to the option holder. Favorable treatment generally refers to the recipient of the award not having to report ordinary income at the date of exercise assuming certain conditions are met. All stock options granted under the CapitalMark Plan were fully vested at the date of the CapitalMark merger.

A summary of stock option activity within the equity incentive plans during each of the years in the three-year period ended December 31, 2022 and information regarding expected vesting, contractual terms remaining, intrinsic values and other matters was as follows:

	Number	Weighted-Average Exercise Price	Weighted-Average Contractual Remaining Term (in years)	Aggregate Intrinsic Value ⁽¹⁾ (000's)
Outstanding at December 31, 2019	119,274	\$ 23.45		
Granted	—	—		
Stock options exercised	(17,505)	23.40		
Forfeited	—	—		
Outstanding at December 31, 2020	101,769	\$ 23.46		
Granted	—	—		
Stock options exercised	(45,125)	22.18		
Forfeited	(497)	20.00		
Outstanding at December 31, 2021	56,147	\$ 24.51		
Granted	—	—		
Stock options exercised	(15,959)	23.28		
Forfeited	—	—		
Outstanding at December 31, 2022	40,188	\$ 25.00	0.33	\$ 1,945
Options exercisable at December 31, 2022	40,188	\$ 25.00	0.33	\$ 1,945

(1) The aggregate intrinsic value is calculated as the difference between the exercise price of the underlying awards and the quoted price of Pinnacle Financial common stock of \$73.40 per common share at December 31, 2022 for the 40,188 options that were in-the-money at December 31, 2022.

During 2022, 2021 and 2020, the aggregate intrinsic value of stock options exercised under Pinnacle Financial's equity incentive plans was \$1.0 million, \$3.0 million and \$350,000, respectively, determined using the quoted price of Pinnacle Financial common stock as of the date of option exercise.

There have been no options granted by Pinnacle Financial since 2008. All stock option awards granted by Pinnacle Financial were fully vested during 2013. Stock options granted under the CapitalMark Plan were fully vested at the time of acquisition. As such, there was no impact on the results of operations for stock-based compensation related to stock options for any year in the three-year period ended December 31, 2022, except for the tax impact recorded as a component of income tax expense upon exercise.

Restricted Shares

A summary of activity for unvested restricted share awards for the years ended December 31, 2022, 2021, and 2020 follows:

	Number	Grant Date Weighted-Average Cost
Unvested at December 31, 2019	555,296	\$ 57.04
Shares awarded	284,904	55.91
Restrictions lapsed and shares released to associates/directors	(215,846)	55.39
Shares forfeited	(29,685)	59.64
Unvested at December 31, 2020	594,669	\$ 56.97
Shares awarded	249,641	77.00
Restrictions lapsed and shares released to associates/directors	(193,846)	56.47
Shares forfeited	(37,129)	62.79
Unvested at December 31, 2021	613,335	\$ 64.93
Shares awarded	286,445	98.06
Restrictions lapsed and shares released to associates/directors	(188,394)	64.53
Shares forfeited	(35,775)	75.35
Unvested at December 31, 2022	675,611	\$ 78.53

Pinnacle Financial grants restricted share awards to associates (including certain members of executive management) and outside directors with time-based vesting criteria. The following tables outline restricted stock grants that were made by grant year, grouped by similar vesting criteria, during the three-year period ended December 31, 2022. The table below reflects the life-to-date activity for these awards:

Grant year	Group ⁽¹⁾	Vesting period in years	Shares awarded	Restrictions lapsed and shares released to participants	Shares withheld for taxes by participants	Shares forfeited by participants ⁽⁴⁾	Shares unvested
Time Based Awards							
2020	Associates ⁽²⁾	3 – 5	266,379	74,888	30,556	25,770	135,165
2021	Associates ⁽²⁾	3 – 5	237,811	31,372	12,388	24,977	169,074
2022	Associates ⁽²⁾	3 – 5	276,965	75	66	8,866	267,958
Outside Director Awards ⁽³⁾							
2020	Outside directors	1	18,525	16,327	2,198	—	—
2021	Outside directors	1	11,830	10,222	1,608	—	—
2022	Outside directors	1	9,480	—	—	—	9,480

- (1) Groups include employees (referred to as associates above) and outside directors. When the restricted shares are awarded, a participant receives voting rights and forfeitable dividend rights with respect to the shares, but is not able to transfer the shares until the restrictions have lapsed. Once the restrictions lapse, the participant is taxed on the value of the award and may elect to sell some shares (or have Pinnacle Financial withhold some shares) to pay the applicable income taxes associated with the award. Alternatively, the recipient can pay the withholding taxes in cash. For time-based vesting restricted share awards, dividends paid on shares for which the forfeiture restrictions do not lapse will be recouped by Pinnacle Financial at the time of termination. For awards to Pinnacle Financial's directors, dividends are placed into escrow until the forfeiture restrictions on such shares lapse.
- (2) The forfeiture restrictions on these restricted share awards lapse in equal annual installments on the anniversary date of the grant.
- (3) Restricted share awards are issued to the outside members of the board of directors in accordance with their board compensation plan. Restrictions lapse on March 1, 2023 based on each individual board member meeting attendance goals for the various board and board committee meetings to which each member was scheduled to attend.
- (4) These shares represent forfeitures resulting from recipients whose employment or board membership was terminated during the year-to-date period ended December 31, 2022. Any dividends paid on shares for which the forfeiture restrictions do not lapse will be recouped by Pinnacle Financial at the time of termination or will not be distributed from escrow, as applicable.

Compensation expense associated with the time-based vesting restricted share awards is recognized over the time period that the restrictions associated with the awards lapse on a straight-line basis based on the total cost of the award.

Restricted Stock Unit Awards

A summary of activity for unvested restricted stock units for the year ended December 31, 2022 is as follows:

	Number	Grant Date Weighted-Average Cost
Unvested at December 31, 2021	56,368	\$ 71.22
Restricted stock units awarded	38,133	104.80
Restrictions lapsed and underlying shares released to associates/directors	(18,897)	71.24
Restricted stock units forfeited	(1,621)	85.50
Unvested at December 31, 2022	73,983	\$ 88.21

Pinnacle Financial grants restricted stock units to its Named Executive Officers (NEOs) and leadership team members with time-based vesting criteria. Compensation expense associated with time-based vesting restricted stock unit awards is recognized over the time period that the restrictions associated with the awards lapse on a straight-line basis based on the total cost of the award. The following table outlines restricted stock unit grants that were made, grouped by similar vesting criteria, during the years ended December 31, 2022 and 2021. The table reflects the life-to-date activity for these awards:

Grant year	Vesting period in years	Shares awarded	Restrictions lapsed and shares released to participants	Shares withheld for taxes by participants	Shares forfeited by participants ⁽¹⁾	Shares unvested
2021	3	56,864	12,534	6,476	1,486	36,368
2022	3	38,133	11	4	503	37,615

- (1) These shares represent forfeitures resulting from recipients whose employment was terminated during the life-to-date period ended December 31, 2022. Dividend equivalents are held in escrow for award recipients for dividends paid prior to the forfeiture restrictions lapsing. Such dividend equivalents are not released from escrow if an award is forfeited.

Performance Stock Unit Awards

The following table details the performance stock unit awards outstanding at December 31, 2022:

Grant year	Units Awarded				Applicable performance periods associated with each tranche (fiscal year)	Service period per tranche (in years)	Subsequent holding period per tranche (in years)	Period in which units to be settled into shares of common stock ⁽²⁾
	Named Executive Officers (NEOs) ⁽¹⁾		Leadership Team other than NEOs					
2022	56,465	—	135,514	32,320	2022-2024	0	0	2025
2022	—	—	230,000	—	2022-2024	0	1	2026
2021	89,234	—	214,155	45,240	2021-2023	0	0	2024
2020	136,137	—	204,220	59,648	2020	2	3	2025
					2021	2	2	2025
					2022	2	1	2025
2019	166,211	—	249,343	52,244	2019	2	3	2024
					2020	2	2	2024
					2021	2	1	2024
2018	96,878	—	145,339	25,990	2018	2	3	2023
					2019	2	2	2023
					2020	2	1	2023

(1) The named executive officers are awarded a range of awards that generally may be earned based on attainment of goals between a target level of performance and a maximum level of performance. The 230,000 performance units awarded to the NEOs in 2022 may be earned based on target level performance and do not include maximum level payout.

(2) Performance stock unit awards granted in or after 2021, if earned, will be settled in shares of Pinnacle Financial common stock in the period noted in the table, if the performance criterion included in the applicable performance unit award agreement are met.

During the years ended December 31, 2022 and 2021, the restrictions associated with 130,996 performance stock unit awards and 134,146 performance stock unit awards, respectively, granted in prior years lapsed, based on the terms of the applicable award agreement and approval by Pinnacle Financial's Human Resources and Compensation Committee, and were settled into shares of Pinnacle Financial common stock with 46,684 shares and 46,616 shares, respectively, being withheld to pay the taxes associated with the settlement of those shares.

Additionally, during the year ended December 31, 2021, 199,633 performance stock unit awards granted in prior years were forfeited due to the failure to reach performance targets for the year ended December 31, 2020 as defined in the associated performance stock unit award agreements.

A summary of stock compensation expense, net of the impact of income taxes, related to restricted share awards, restricted stock unit awards and performance stock unit awards for the three-year period ended December 31, 2022, follows (in thousands):

	2022	2021	2020
Restricted stock expense	\$ 39,552	\$ 24,952	\$ 18,737
Income tax benefit ⁽¹⁾	10,339	6,522	4,898
Restricted stock expense, net of income tax benefit	\$ 29,213	\$ 18,430	\$ 13,839

(1) Income tax benefit shown at statutory tax rate for each period presented. A portion of the restricted stock expense associated with awards to NEOs may be disallowed based on Federal income tax regulations.

As of December 31, 2022, compensation cost related to unvested restricted share awards, restricted stock unit awards and performance stock unit awards not yet recognized was \$72.8 million. This expense, if the underlying awards are earned, is expected to be recognized over a weighted-average period of 2.00 years.

Note 14. Derivative Instruments

Financial derivatives are reported at fair value in other assets or other liabilities. The accounting for changes in the fair value of a derivative depends on whether it has been designated and qualifies as part of a hedging relationship. For derivatives not designated as hedges, the gain or loss is recognized in current earnings.

Pinnacle Financial's derivative instruments with certain counterparties contain legally enforceable netting that allow multiple transactions to be settled into a single amount. The fair value hedge and interest rate swaps (swaps) assets and liabilities are presented at gross fair value before the application of bilateral collateral and master netting agreements, but after the initial margin posting and daily variation margin payments made with central clearinghouse organizations. Total fair value hedge and swaps assets and liabilities are adjusted to take into consideration the effects of legally enforceable master netting agreements and cash collateral received or paid as of December 31, 2022. The resulting net fair value hedge and swaps asset and liability fair values are included in other assets and other liabilities, respectively, on the consolidated balance sheets. The daily settlement of the derivative exposure does not change or reset the contractual terms of the instrument.

Non-hedge derivatives

For derivatives not designated as hedges, the gain or loss is recognized in current period earnings. Pinnacle Financial enters into swaps to facilitate customer transactions and meet their financing needs. Upon entering into these instruments to meet customer needs, Pinnacle Financial enters into offsetting positions in order to minimize the risk to Pinnacle Financial. These swaps qualify as derivatives, but are not designated as hedging instruments. The income statement impact of the offsetting positions is limited to changes in the reserve for counterparty credit risk. A summary of Pinnacle Financial's interest rate swaps to facilitate customer transactions as of December 31, 2022 and 2021 is included in the following table (in thousands):

	December 31, 2022		December 31, 2021	
	Notional Amount	Estimated Fair Value ⁽¹⁾	Notional Amount	Estimated Fair Value
Interest rate swap agreements:				
Assets	\$ 1,620,520	\$ 39,763	\$ 1,540,992	\$ 39,770
Liabilities	1,620,520	(96,483)	1,540,992	(40,241)
Total non-hedging derivatives	\$ 3,241,040	\$ (56,720)	\$ 3,081,984	\$ (471)

- (1) The variation margin payments for derivatives cleared through central clearing houses are characterized as settlements. At December 31, 2022, the notional amount of interest rate swap agreements designated as non-hedge derivatives cleared through clearing houses is \$827.3 million with a fair value that approximates zero due to \$56.3 million in received variation margin payments.

The effects of Pinnacle Financial's interest rate swaps to facilitate customers' transactions on the income statement during the years ended December 31, 2022, 2021 and 2020 were as follows (in thousands):

	Location of Gain (Loss) Recognized in Income	Amount of Gain (Loss) Recognized in Income		
		Year ended December 31,		
		2022	2021	2020
Interest rate swap agreements	Other noninterest income	\$ 53	\$ 846	\$ (1,109)

Derivatives designated as cash flow hedges

For derivative instruments that are designated and qualify as a cash flow hedge, the aggregate fair value of the derivative instrument is recorded in other assets or other liabilities with any gain or loss related to changes in fair value recorded in accumulated other comprehensive income, net of tax. The gain or loss is reclassified into earnings in the same period during which the hedged asset or liability affects earnings and is presented in the same income statement line item as the earnings effect of the hedged asset or liability. Pinnacle Financial uses forward cash flow hedge relationships in an effort to manage future interest rate exposure. The hedging strategy converts the LIBOR-based variable interest rate on forecasted borrowings to a fixed interest rate and is used in an effort to protect Pinnacle Financial from floating interest rate variability. During 2022, Pinnacle Financial paid \$95.7 million to purchase interest rate floors and interest rate collars with notional amounts totaling \$1.8 billion to mitigate the impact of changing interest rates on LIBOR and SOFR-based variable rate loans. A summary of Pinnacle Financial's cash flow hedge relationships as of December 31, 2022 and 2021 are as follows (in thousands):

					December 31, 2022		December 31, 2021	
	Balance Sheet Location	Weighted Average Remaining Maturity (In Years)	Receive Rate	Pay Rate	Notional Amount	Estimated Fair Value	Notional Amount	Estimated Fair Value
Asset derivatives								
Interest rate floor - loans	Other assets	4.84	4.00%-4.50% minus USD-Term SOFR 1M	N/A	\$ 875,000	\$ 48,622	\$ —	\$ —
Interest rate collar - loans	Other assets	4.84	4.25%-4.75% minus USD-Term SOFR 1M	USD-Term SOFR 1M minus 6.75%-7.00%	\$ 875,000	\$ 45,553	\$ —	\$ —
					<u>\$ 1,750,000</u>	<u>\$ 94,175</u>	<u>\$ —</u>	<u>\$ —</u>

The effects of Pinnacle Financial's cash flow hedge relationships on the statement of comprehensive income (loss) during the years ended December 31, 2022, 2021 and 2020 were as follows (in thousands):

	Amount of Gain (Loss) Recognized in Other Comprehensive Income		
	Years ended December 31,		
	2022	2021	2020
Asset derivatives			
Interest rate floor - loans	\$ 1,002	\$ (15,034)	\$ 62,979
Liability derivatives			
Interest rate swaps - borrowings	\$ —	\$ —	\$ 2,447
	<u>\$ 1,002</u>	<u>\$ (15,034)</u>	<u>\$ 65,426</u>

The cash flow hedges were determined to be highly effective during the periods presented and as a result qualified for hedge accounting treatment. If a hedge were deemed to be ineffective, the amount included in accumulated other comprehensive income (loss) would be reclassified into a line item within the statement of income that impacts operating results. A hedging relationship is no longer considered to be effective if a portion of the hedge becomes ineffective, the item hedged is no longer in existence or Pinnacle Financial discontinues hedge accounting. Gains on cash flow hedges totaling \$10.0 million and \$9.6 million, net of tax, were reclassified from accumulated other comprehensive income (loss) into net income during the years ended December 31, 2022 and 2021, respectively. Losses on cash flow hedges totaling and \$5.5 million, net of tax, were reclassified from other comprehensive income (loss) into net income during the year ended December 31, 2020. Approximately \$9.8 million in unrealized gains, net of tax, are expected to be reclassified from accumulated other comprehensive income (loss) into net income over the next twelve months.

Derivatives designated as fair value hedges

For derivative instruments that are designated and qualify as a fair value hedge, the gain or loss on the derivative instrument as well as the offsetting loss or gain on the hedged asset or liability attributable to the hedged risk are recognized in current earnings. The gain or loss on the derivative instrument is presented on the same income statement line item as the earnings effect of the hedged item. Pinnacle Financial utilizes interest rate swaps designated as fair value hedges to mitigate the effect of changing interest rates on the fair values of fixed rate callable securities available-for-sale. The hedging strategy on securities converts the fixed interest rates to LIBOR, SOFR or federal funds rates. These derivatives are designated as partial term hedges of selected cash flows covering specified periods of time prior to the call dates of the hedged securities.

A summary of Pinnacle Financial's fair value hedge relationships as of December 31, 2022 and 2021 are as follows (in thousands):

					December 31, 2022		December 31, 2021	
	Balance Sheet Location	Weighted Average Remaining Maturity (In Years)	Weighted Average Pay Rate	Receive Rate	Notional Amount	Estimated Fair Value ⁽¹⁾	Notional Amount	Estimated Fair Value
Asset derivatives								
Interest rate swap agreements - securities	Other assets	7.43	2.25%	3 month LIBOR/ Federal funds/ SOFR	\$ 1,420,724	\$ 56,056	\$ 559,820	\$ 15,109
Liability derivatives								
Interest rate swap agreements - securities	Other liabilities	0.00	—%	N/A	—	—	471,670	(39,781)
Total fair value derivatives					<u>\$ 1,420,724</u>	<u>\$ 56,056</u>	<u>\$ 1,031,490</u>	<u>\$ (24,672)</u>

- (1) The variation margin payments for derivatives cleared through central clearing houses are characterized as settlements. At December 31, 2022, the notional amount of fair value derivatives hedges cleared through clearing houses is \$877.7 million with a fair value that approximates zero due to \$47.9 million in received variation margin payments.

Notional amounts of \$464.7 million included in the table above as of December 31, 2022 receive a variable rate of interest based on three month LIBOR, notional amounts totaling \$392.2 million as of December 31, 2022 receive a variable rate of interest based on the daily compounded federal funds rate and notional amounts totaling \$563.8 million as of December 31, 2022 receive a variable rate of interest based on the daily compounded secured overnight financing rate.

The effects of Pinnacle Financial's fair value hedge relationships on the income statement during the years end December 31, 2022, 2021 and 2020 were as follows (in thousands):

		Amount of Gain (Loss) Recognized in Income		
		Year ended December 31,		
Securities	Location of Gain (Loss)	2022	2021	2020
Interest rate swap agreements	Interest income on securities	\$ 80,728	\$ 42,642	\$ (26,536)
Securities available-for-sale	Interest income on securities	\$ (80,728)	\$ (42,642)	\$ 26,536

The following amounts were recorded on the balance sheet related to cumulative basis adjustments for fair value hedges at December 31, 2022 and 2021 (in thousands):

		Carrying Amount of the Hedged Assets		Cumulative Amount of Fair Value Hedging Adjustment Included in the Carrying Amount of the Hedged Assets	
		December 31, 2022	December 31, 2021	December 31, 2022	December 31, 2021
Line item on the balance sheet					
Securities available-for-sale		\$ 1,445,511	\$ 1,165,773	\$ (56,056)	\$ 24,672

During the years ended December 31, 2022, 2021 and 2020 amortization expense totaling \$1.9 million, \$3.5 million and \$4.3 million, respectively, related to previously terminated fair value hedges was recognized as a reduction to interest income on loans.

In April 2022, interest rates swaps designated as fair value hedges with notional amounts totaling \$164.3 million and market values totaling \$14.3 million were terminated. Approximately \$986,000 in gains were recognized at the time of termination and the remaining \$11.6 million will be accreted as additional interest income on the previously hedged available-for-sale mortgage backed and municipal securities over the same period as existing purchase discounts or premiums on these securities.

Note 15. Employment Contracts

Pinnacle Financial has entered into, and subsequently amended employment agreements with five of its senior executives: the President and Chief Executive Officer, the Chairman of the Board, the Chairman of the Carolinas and Virginia, the Chief Administrative Officer and the Chief Financial Officer. These agreements, as amended, automatically renew each year on January 1 for an additional year unless any of the parties to the agreements gives notice of intent not to renew the agreement prior to November 30th of the preceding year, in which case the agreement terminates 30 days later. The agreements specify that in certain defined "Terminating Events," Pinnacle Financial will be obligated to pay each of the five senior executives certain amounts, which vary according to the Terminating Event, which is based on their annual salaries and bonuses. These Terminating Events include termination for disability, cause, without cause and other events. The agreement with the Chairman of the Carolinas and Virginia also provides for the payment of certain deferred benefits under his prior employment agreement with BNC upon termination of his employment with Pinnacle Financial.

Note 16. Related Party Transactions

See Note 5 - "Loans and Allowance for Credit Losses", concerning loans and other extensions of credit to certain directors, officers, and their related entities and individuals, Note 12 - "Salary Deferral Plans" regarding supplemental retirement agreement obligations to certain directors who were formerly directors or employees of acquired banks and Note 2 - "Equity Method Investment" regarding related parties associated with the investment.

Note 17. Fair Value of Financial Instruments

FASB ASC 820, *Fair Value Measurements and Disclosures*, defines fair value, establishes a framework for measuring fair value in U.S. GAAP and expands disclosures about fair value measurements. The definition of fair value focuses on the exit price, i.e., the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date, not the entry price, i.e., the price that would be paid to acquire the asset or received to assume the liability at the measurement date. The statement emphasizes that fair value is a market-based measurement; not an entity-specific measurement. Therefore, the fair value measurement should be determined based on the assumptions that market participants would use in pricing the asset or liability.

Valuation Hierarchy

FASB ASC 820 establishes a three-level valuation hierarchy for disclosure of fair value measurements. The valuation hierarchy is based upon the transparency of inputs to the valuation of an asset or liability as of the measurement date. The three levels are defined as follows:

- Level 1 – inputs to the valuation methodology are quoted prices (unadjusted) for identical assets or liabilities in active markets.
- Level 2 – inputs to the valuation methodology include quoted prices for similar assets and liabilities in active markets, and inputs that are observable for the asset or liability, either directly or indirectly, for substantially the full term of the financial instrument.
- Level 3 – inputs to the valuation methodology are unobservable and significant to the fair value measurement.

A financial instrument's categorization within the valuation hierarchy is based upon the lowest level of input that is significant to the fair value measurement. The following is a description of the valuation methodologies used for assets and liabilities measured at fair value, as well as the general classification of such assets and liabilities pursuant to the valuation hierarchy.

Assets

Securities available-for-sale – Where quoted prices are available for identical securities in an active market, securities are classified within Level 1 of the valuation hierarchy. Level 1 securities include highly liquid government securities and certain other financial products. If quoted market prices are not available, then fair values are estimated by using pricing models that use observable inputs or quoted prices of securities with similar characteristics and are classified within Level 2 of the valuation hierarchy. In certain cases where there is limited activity or less transparency around inputs to the valuation and more complex pricing models or discounted cash flows are used, securities are classified within Level 3 of the valuation hierarchy.

Other investments – Included in other investments are investments recorded at fair value primarily in certain nonpublic investments and funds. The valuation of these nonpublic investments requires management judgment due to the absence of observable quoted market prices, inherent lack of liquidity and the long-term nature of such assets. These investments are valued initially based upon transaction price. The carrying values of other investments are adjusted either upwards or downwards from the transaction price to reflect expected exit values as evidenced by financing and sale transactions with third parties, or when determination of a valuation adjustment is confirmed through financial reports provided by the portfolio managers of the investments. A variety of factors are reviewed and monitored to assess positive and negative changes in valuation including, but not limited to, current operating performance and future expectations of the particular investment, industry valuations of comparable public companies and changes in market outlook and the third-party financing environment over time. In determining valuation adjustments resulting from the investment review process, emphasis is placed on current company performance and market conditions. These investments are included in Level 3 of the valuation hierarchy if the entities and funds are not widely traded and the underlying investments are in privately-held and/or start-up companies for which market values are not readily available. Certain investments in funds for which the underlying assets of the fund represent publicly traded investments are included in Level 2 of the valuation hierarchy.

Other assets – Included in other assets are certain assets carried at fair value, including interest rate swap agreements to facilitate customer transactions, interest rate swap agreements designated as fair value hedges, interest rate caps and floors designated as cash flow hedges and interest rate locks associated with the mortgage loan pipeline. The carrying amount of interest rate swap agreements is based on Pinnacle Financial's pricing models that utilize observable market inputs. The fair value of the cash flow hedge agreements is determined by calculating the difference between the discounted fixed rate cash flows and the discounted variable rate cash flows. The fair value of the mortgage loan pipeline is based upon the projected sales price of the underlying loans, taking into account market interest rates and other market factors at the measurement date, net of the projected fallout rate. Pinnacle Financial reflects these assets within Level 2 of the valuation hierarchy as these assets are valued using similar transactions that occur in the market.

Collateral dependent loans – Collateral dependent loans are measured at the fair value of the collateral securing the loan less estimated selling costs. The fair value of real estate collateral is determined based on real estate appraisals which are generally based on recent sales of comparable properties which are then adjusted for property specific factors. Non-real estate collateral is valued based on various sources, including third party asset valuations and internally determined values based on cost adjusted for depreciation and other judgmentally determined discount factors. Collateral dependent loans are classified within Level 3 of the hierarchy due to the unobservable inputs used in determining their fair value such as collateral values and the borrower's underlying financial condition.

Other real estate owned – Other real estate owned (OREO) represents real estate foreclosed upon by Pinnacle Bank through loan defaults by customers or acquired by deed in lieu of foreclosure. A significant portion of these amounts relate to lots, homes and development projects that are either completed or are in various stages of construction for which Pinnacle Financial believes it has adequate collateral. Upon foreclosure, the property is recorded at the lower of cost or fair value, based on appraised value, less selling costs estimated as of the date acquired with any loss recognized as a charge-off through the allowance for credit losses. Additional OREO losses for subsequent valuation downward adjustments are determined on a specific property basis and are included as a component of noninterest expense along with holding costs. Any gains or losses realized at the time of disposal are also reflected in noninterest expense, as applicable. OREO is included in Level 3 of the valuation hierarchy due to the lack of observable market inputs into the determination of fair value as appraisal values are property-specific and sensitive to the changes in the overall economic environment.

Liabilities

Other liabilities – Pinnacle Financial has certain liabilities carried at fair value including certain interest rate swap agreements to facilitate customer transactions, interest rate swaps designated as fair value and cash flow hedges and interest rate locks associated with the funding for its mortgage loan originations. The fair value of these liabilities is based on Pinnacle Financial's pricing models that utilize observable market inputs and is reflected within Level 2 of the valuation hierarchy.

The following tables present the financial instruments carried at fair value on a recurring basis as of December 31, 2022 and 2021, by caption on the consolidated balance sheets and by FASB ASC 820 valuation hierarchy (as described above) (in thousands):

	Total carrying value in the consolidated balance sheet	Quoted market prices in an active market (Level 1)	Models with significant observable market parameters (Level 2)	Models with significant unobservable market parameters (Level 3)
December 31, 2022				
Investment securities available-for-sale:				
U.S. treasury securities	\$ 194,184	\$ —	\$ 194,184	\$ —
U.S. government agency securities	396,157	—	396,157	—
Mortgage-backed securities	971,576	—	971,576	—
State and municipal securities	1,412,306	—	1,411,677	629
Asset-backed securities	117,403	—	117,403	—
Corporate notes and other	467,244	—	467,244	—
Total investment securities available-for-sale	3,558,870	—	3,558,241	629
Other investments	153,011	—	22,029	130,982
Other assets	190,629	—	190,629	—
Total assets at fair value	\$ 3,902,510	\$ —	\$ 3,770,899	\$ 131,611
Other liabilities	\$ 96,483	\$ —	\$ 96,483	\$ —
Total liabilities at fair value	\$ 96,483	\$ —	\$ 96,483	\$ —
December 31, 2021				
Investment securities available-for-sale:				
U.S. treasury securities	\$ 193,609	\$ —	\$ 193,609	\$ —
U.S. government agency securities	632,009	—	632,009	—
Mortgage-backed securities	1,920,239	—	1,920,239	—
State and municipal securities	1,823,837	—	1,823,009	828
Asset-backed securities	229,569	—	229,569	—
Corporate notes and other	114,931	—	114,931	—
Total investment securities available-for-sale	4,914,194	—	4,913,366	828
Other investments	125,969	—	24,973	100,996
Other assets	57,441	—	57,441	—
Total assets at fair value	\$ 5,097,604	\$ —	\$ 4,995,780	\$ 101,824
Other liabilities	\$ 80,106	\$ —	\$ 80,106	\$ —
Total liabilities at fair value	\$ 80,106	\$ —	\$ 80,106	\$ —

The following table presents assets measured at fair value on a nonrecurring basis as of December 31, 2022 and 2021 (in thousands):

	Total carrying value in the consolidated balance sheet	Quoted market prices in an active market (Level 1)	Models with significant observable market parameters (Level 2)	Models with significant unobservable market parameters (Level 3)
December 31, 2022				
Other real estate owned	\$ 7,952	\$ —	\$ —	\$ 7,952
Collateral dependent loans ⁽¹⁾	33,767	—	—	33,767
Total	\$ 41,719	\$ —	\$ —	\$ 41,719
December 31, 2021				
Other real estate owned	\$ 8,537	\$ —	\$ —	\$ 8,537
Collateral dependent loans ⁽¹⁾	30,799	—	—	30,799
Total	\$ 39,336	\$ —	\$ —	\$ 39,336

⁽¹⁾ The carrying values of collateral dependent loans at December 31, 2022 and 2021 are net of valuation allowances of \$6.5 million and \$1.7 million, respectively.

In the case of the investment securities portfolio, Pinnacle Financial monitors the portfolio to ascertain when transfers between levels have been affected. The nature of the remaining assets and liabilities is such that transfers in and out of any level are expected to be rare. For the year ended December 31, 2022, there were no transfers between Levels 1, 2 or 3.

The table below includes a rollforward of the balance sheet amounts for the years ended December 31, 2022 and December 31, 2021, (including the change in fair value) for financial instruments classified by Pinnacle Financial within Level 3 of the valuation hierarchy measured at fair value on a recurring basis including changes in fair value due in part to observable factors that are part of the valuation methodology (in thousands):

	For the year ended December 31,					
	2022			2021		
	Available-for-sale Securities	Other investments	Other liabilities	Available-for-sale Securities	Other investments	Other liabilities
Fair value, Jan. 1	\$ 828	\$ 100,996	\$ —	\$ 15,497	\$ 47,759	\$ —
Total net realized gains included in income	7	10,605	—	1,302	23,109	—
Change in unrealized gains/losses included in other comprehensive income (loss)	(48)	—	—	(3,184)	—	—
Purchases	—	33,208	—	—	45,986	—
Issuances	—	—	—	—	—	—
Settlements	(158)	(13,827)	—	(12,787)	(15,858)	—
Transfers out of Level 3	—	—	—	—	—	—
Fair value, Dec. 31	\$ 629	\$ 130,982	\$ —	\$ 828	\$ 100,996	\$ —
Total realized gains included in income	\$ 7	\$ 10,605	\$ —	\$ 1,302	\$ 23,109	\$ —

The following table presents the carrying amounts, estimated fair value and placement in the fair value hierarchy of Pinnacle Financial's financial instruments at December 31, 2022 and 2021. This table excludes financial instruments for which the carrying amount approximates fair value. For short-term financial assets such as cash, cash equivalents, interest-bearing due from banks and restricted cash, the carrying amount is a reasonable estimate of fair value due to the relatively short time between the origination of the instrument and its expected realization. For financial liabilities such as non-interest bearing demand, interest-bearing demand, and savings deposits, the carrying amount is a reasonable estimate of fair value due to these products having no stated maturity (in thousands).

	Carrying/ Notional Amount	Estimated Fair Value ⁽¹⁾	Quoted market prices in an active market (Level 1)	Models with significant observable market parameters (Level 2)	Models with significant unobservable market parameters (Level 3)
December 31, 2022					
<i>Financial assets:</i>					
Securities purchased with agreement to resell	\$ 513,276	\$ 440,390	\$ —	\$ —	\$ 440,390
Securities held-to-maturity	3,079,050	2,744,946	—	2,744,946	—
Loans, net	28,740,940	27,901,662	—	—	27,901,662
Consumer loans held-for-sale	42,237	42,353	—	42,353	—
Commercial loans held-for-sale	21,093	21,151	—	21,151	—
<i>Financial liabilities:</i>					
Deposits and securities sold under agreements to repurchase	35,156,148	34,435,447	—	—	34,435,447
Federal Home Loan Bank advances	464,436	477,673	—	—	477,673
Subordinated debt and other borrowings	424,055	430,884	—	—	430,884
<i>Off-balance sheet instruments:</i>					
Commitments to extend credit ⁽²⁾	16,224,349	26,780	—	—	26,780

	Carrying/ Notional Amount	Estimated Fair Value ⁽¹⁾	Quoted market prices in an active market (Level 1)	Models with significant observable market parameters (Level 2)	Models with significant unobservable market parameters (Level 3)
December 31, 2021					
<i>Financial assets:</i>					
Securities purchased with agreement to resell	\$ 1,000,000	\$ 980,543	\$ —	\$ —	\$ 980,543
Securities held-to-maturity	1,155,958	1,188,049	—	1,188,049	—
Loans, net	23,151,029	23,223,299	—	—	23,223,299
Consumer loans held-for-sale	45,806	46,288	—	46,288	—
Commercial loans held-for-sale	17,685	17,871	—	17,871	—
<i>Financial liabilities:</i>					
Deposits and securities sold under agreements to repurchase	31,457,092	30,812,222	—	—	30,812,222
Federal Home Loan Bank advances	888,681	1,006,866	—	—	1,006,866
Subordinated debt and other borrowings	423,172	479,879	—	—	479,879
<i>Off-balance sheet instruments:</i>					
Commitments to extend credit ⁽²⁾	13,063,942	24,351	—	—	24,351

- (1) Estimated fair values are consistent with an exit-price concept. The assumptions used to estimate the fair values are intended to approximate those that a market-participant would realize in a hypothetical orderly transaction.
- (2) At the end of each period, Pinnacle Financial evaluates the inherent risks of the outstanding off-balance sheet commitments, including both commitments for unfunded loans and standby letters of credit. In making this evaluation, Pinnacle Financial utilizes credit loss expectations on funded loans from our allowance for credit losses methodology and evaluates the probability that the outstanding commitment will eventually become a funded loan. As a result, at December 31, 2022 and 2021, Pinnacle Financial included in other liabilities \$25.0 million and \$22.5 million, respectively, representing expected credit losses on off-balance sheet commitments, which are reflected in the estimated fair values of the related commitments. Also included in the fair values at December 31, 2022 and 2021, are unamortized fees related to these commitments of \$1.8 million and \$1.9 million, respectively.

Note 18. Variable Interest Entities

Under ASC 810, Pinnacle Financial is deemed to be the primary beneficiary and required to consolidate a variable interest entity (VIE) if it has a variable interest in the VIE that provides it with a controlling financial interest. For such purposes, the determination of whether a controlling financial interest exists is based on whether a single party has both the power to direct the activities of the VIE that most significantly impact the VIE's economic performance and the obligation to absorb losses of the VIE or the right to receive benefits from the VIE that could potentially be significant to the VIE. ASC 810 requires continual reconsideration of conclusions reached regarding which interest holder is a VIE's primary beneficiary and disclosures surrounding those VIE's which have not been consolidated. The consolidation methodology provided in this footnote as of December 31, 2022 and 2021 has been prepared in accordance with ASC 810.

Non-consolidated Variable Interest Entities

At December 31, 2022, Pinnacle Financial did not have any consolidated VIEs to disclose but did have the following non-consolidated VIEs: low income housing partnerships, other tax credit investments, trust preferred issuances, commercial loan TDRs, and managed discretionary trusts.

Since 2003, Pinnacle Financial has made equity investments as a limited partner in various partnerships that sponsor affordable housing projects. The purpose of these investments is to achieve a satisfactory return on capital and to support Pinnacle Financial's community reinvestment initiatives. The activities of the limited partnerships include the identification, development, and operation of multi-family housing that is leased to qualifying residential tenants generally within Pinnacle Financial's primary geographic region.

Pinnacle Financial has invested in various limited partnerships that sponsor affordable housing projects utilizing the Low Income Housing Tax Credit ("LIHTC") pursuant to Section 42 of the Internal Revenue Code. The purpose of these investments is to assist Pinnacle Bank in achieving its strategic plan associated with the Community Reinvestment Act and to achieve a satisfactory return on capital. The primary activities of the limited partnerships include the identification, development, and operation of multi-family housing that is leased to qualifying residential tenants. Generally, these types of investments are funded through a combination of debt and equity.

Pinnacle Financial is a limited partner in each LIHTC limited partnership. Each limited partnership is managed by an unrelated third party general partner who exercises full control over the affairs of the limited partnership. The general partner has all the rights, powers and authority granted or permitted to be granted to a general partner of a limited partnership. Except for limited rights granted to the limited partner(s), the limited partner(s) may not participate in the operation, management, or control of the limited partnership's business, transact any business in the limited partnership's name or have any power to sign documents for or otherwise bind the limited partnership. In addition, the general partner may only be removed by the limited partner(s) in the event the general partner fails to comply with the terms of the agreement or is negligent in performing its duties.

The partnerships related to affordable housing projects are considered VIEs because Pinnacle Financial, as the holder of the equity investment at risk, does not have the ability to direct the activities that most significantly affect the success of the entity through voting rights or similar rights. While Pinnacle Financial could absorb losses that are significant to these partnerships as it has a risk of loss for its initial capital contributions and funding commitments to each partnership, it is not considered the primary beneficiary of the partnerships as the general partners whose managerial functions give them the power to direct the activities that most significantly impact the partnerships' economic performance and who are exposed to all losses beyond Pinnacle Financial's initial capital contributions and funding commitments are considered the primary beneficiaries.

Pinnacle Financial makes equity investments as a limited partner or non-managing member in entities that receive New Markets Tax Credits, historic tax credits, and renewable energy tax credits. The purpose of these investments is to achieve a satisfactory return on investment and support Pinnacle Financial's community reinvestment initiatives. These entities are considered VIEs as Pinnacle Financial as the holder of the equity investment at risk, does not have the ability to direct the activities that most significantly affect the success of the entity through voting rights or similar rights.

Pinnacle Financial (or companies it has acquired) has previously issued subordinated debt totaling \$133.0 million to certain statutory trusts which are considered VIEs because Pinnacle Financial's capital contributions to these trusts are not considered "at risk" in evaluating whether the holders of the equity investments at risk in the trusts have the power through voting rights or similar rights to direct the activities that most significantly impact the entities' economic performance. These trusts were not consolidated by Pinnacle Financial because the holders of the securities issued by the trusts absorb a majority of expected losses and residual returns.

For certain troubled commercial loans, Pinnacle Financial restructures the terms of the borrower's debt in an effort to increase the probability of receipt of amounts contractually due. However, Pinnacle Financial does not assume decision-making power or responsibility over the borrower's operations. Following a debt restructuring, the borrowing entity typically meets the definition of a VIE as the initial determination of whether the entity is a VIE must be reconsidered and economic events have proven that the entity's equity is not sufficient to permit it to finance its activities without additional subordinated financial support or a restructuring of the terms of its financing. As Pinnacle Financial does not have the power to direct the activities that most significantly impact such troubled commercial borrowers' operations, it is not considered the primary beneficiary even in situations where, based on the size of the financing provided, Pinnacle Financial is exposed to potentially significant benefits and losses of the borrowing entity. Pinnacle Financial has no contractual requirements to provide financial support to the borrowing entities beyond certain funding commitments established upon restructuring of the terms of the debt to allow for completion of activities which prepare the collateral related to the debt for sale.

Pinnacle Financial serves as manager over certain discretionary trusts, for which it makes investment decisions on behalf of the trusts' beneficiaries in return for a management fee. The trusts meet the definition of a VIE since the holders of the equity investments at risk do not have the power through voting rights or similar rights to direct the activities that most significantly impact the entities' economic performance. However, since the management fees Pinnacle Financial receives are not considered variable interests in the trusts as all of the requirements related to permitted levels of decision maker fees are met, such VIEs are not consolidated by Pinnacle Financial because it cannot be the trusts' primary beneficiary. Pinnacle Financial has no contractual requirements to provide financial support to the trusts.

The following table summarizes VIE's that are not consolidated by Pinnacle Financial as of December 31, 2022 and 2021 (in thousands):

Type	December 31, 2022		December 31, 2021		Classification
	Maximum Loss Exposure	Liability Recognized	Maximum Loss Exposure	Liability Recognized	
Low income housing partnerships	\$ 228,372	\$ —	\$ 188,861	\$ —	Other Assets
Other tax credit investments	6,118	—	739	—	Other Assets
Trust preferred issuances	N/A	132,995	N/A	132,995	Subordinated Debt
Commercial TDRs	110	—	145	—	Loans
Managed discretionary trusts	N/A	N/A	N/A	N/A	N/A

Note 19. Regulatory Matters

Pursuant to Tennessee banking law, Pinnacle Bank may not, without the prior consent of the Commissioner of the Tennessee Department of Financial Institutions (TDFI), pay any dividends to Pinnacle Financial in a calendar year in excess of the total of Pinnacle Bank's retained net income for that year plus the retained net income for the preceding two years. Under Tennessee corporate law, Pinnacle Financial is not permitted to pay dividends if, after giving effect to such payment, it would not be able to pay its debts as they become due in the usual course of business or its total assets would be less than the sum of its total liabilities plus any amounts needed to satisfy any preferential rights if it were dissolving. In addition, in deciding whether or not to declare a dividend of any particular size, Pinnacle Financial's board of directors must consider its and Pinnacle Bank's current and prospective capital, liquidity, and other needs. In addition to state law limitations on Pinnacle Financial's ability to pay dividends, the Federal Reserve imposes limitations on Pinnacle Financial's ability to pay dividends. Federal Reserve regulations limit dividends, stock repurchases and discretionary bonuses to executive officers if Pinnacle Financial's regulatory capital is below the level of regulatory minimums plus the applicable 2.5% capital conservation buffer.

In addition, the Federal Reserve has issued supervisory guidance advising bank holding companies to eliminate, defer or reduce dividends paid on common stock and other forms of Tier 1 capital where the company's net income available to shareholders for the past four quarters, net of dividends previously paid during that period, is not sufficient to fully fund the dividends, the company's prospective rate of earnings retention is not consistent with the company's capital needs and overall current and prospective financial condition or the company will not meet, or is in danger of not meeting, minimum regulatory capital adequacy ratios. Recent supplements to this guidance reiterate the need for bank holding companies to inform their applicable reserve bank sufficiently in advance of the proposed payment of a dividend in certain circumstances.

During the year ended December 31, 2022, Pinnacle Bank paid \$110.8 million in dividends to Pinnacle Financial. As of December 31, 2022, Pinnacle Bank could pay approximately \$1.0 billion of additional dividends to Pinnacle Financial without prior approval of the Commissioner of the TDFI. Since the fourth quarter of 2013, Pinnacle Financial has paid a quarterly common stock dividend. The board of directors of Pinnacle Financial has increased the dividend amount per share over time. The most recent increase occurred on January 18, 2022, when the board of directors increased the dividend to \$0.22 per common share from \$0.18 per common share. During the second quarter of 2020, Pinnacle Financial successfully issued 9.0 million depositary shares, each representing a 1/40th fractional interest in a share of Series B noncumulative, perpetual preferred stock (the "Series B Preferred Stock") in a registered public offering to both retail and institutional investors. Beginning in the third quarter of 2020, Pinnacle Financial began paying a quarterly dividend of \$16.88 per share (or \$0.422 per depositary share), on the Series B Preferred Stock. The amount and timing of all future dividend payments by Pinnacle Financial, if any, including dividends on Pinnacle Financial's Series B Preferred Stock (and associated depositary shares), is subject to discretion of Pinnacle Financial's board of directors and will depend on Pinnacle Financial's receipt of dividends from Pinnacle Bank, earnings, capital position, financial condition and other factors, including regulatory capital requirements, as they become known to Pinnacle Financial and receipt of any regulatory approvals that may become required as a result of each of Pinnacle Financial's or Pinnacle Bank's financial results.

Pinnacle Financial and Pinnacle Bank are subject to various regulatory capital requirements administered by federal banking agencies. Failure to meet minimum capital requirements can initiate certain mandatory, and possibly additional discretionary actions, by regulators that, if undertaken, could have a direct material effect on the financial statements. Under capital adequacy guidelines and the regulatory framework for prompt corrective action, Pinnacle Financial and Pinnacle Bank must meet specific capital guidelines that involve quantitative measures of the assets, liabilities, and certain off-balance-sheet items as calculated under regulatory accounting practices. Pinnacle Financial's and Pinnacle Bank's capital amounts and classification are also subject to qualitative judgments by the regulators about components, risk weightings, and other factors.

Quantitative measures established by regulation to ensure capital adequacy require Pinnacle Financial and its banking subsidiary to maintain minimum amounts and ratios of common equity Tier 1 capital to risk-weighted assets, Tier 1 capital to risk-weighted assets, total capital to risk-weighted assets and Tier 1 capital to average assets.

As permitted by the interim final rule issued on March 27, 2020 by the federal banking regulatory agencies, each of Pinnacle Bank and Pinnacle Financial has elected the option to delay the estimated impact on regulatory capital of Pinnacle Financial's and Pinnacle Bank's adoption of ASU 2016-13, "Financial Instruments – Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments", which was effective January 1, 2020. The initial impact of adoption of ASU 2016-13, as well as 25% of the quarterly increases in the allowance for credit losses subsequent to adoption of ASU 2016-13 (collectively the "transition adjustments"), was delayed until December 31, 2021. As of January 1, 2022, the cumulative amount of the transition adjustments of \$68.0 million became fixed and will be phased out of the regulatory capital calculations evenly over a three year period, with 75% recognized in 2022, 50% recognized in 2023, and 25% recognized in 2024. Beginning on January 1, 2025, the temporary regulatory capital benefits will be fully reversed.

Management believes, as of December 31, 2022, that Pinnacle Financial and Pinnacle Bank met all capital adequacy requirements to which they are subject. To be categorized as well-capitalized under applicable banking regulations, Pinnacle Financial and Pinnacle Bank must maintain certain total, Tier 1, common equity Tier 1 and Tier 1 leverage capital ratios as set forth in the following table and not be subject to a written agreement, order or directive to maintain a higher capital level. The capital conservation buffer of 2.5% is not included in the required minimum ratios of the table presented below. Pinnacle Financial's and Pinnacle Bank's actual capital amounts and ratios are presented in the following table (in thousands):

	Actual		Minimum Capital Requirement		Minimum To Be Well-Capitalized	
	Amount	Ratio	Amount	Ratio	Amount	Ratio
December 31, 2022						
Total capital to risk weighted assets:						
Pinnacle Financial	\$ 4,584,292	12.4 %	\$ 2,949,276	8.0 %	\$ 3,686,595	10.0 %
Pinnacle Bank	\$ 4,282,742	11.6 %	\$ 2,941,082	8.0 %	\$ 3,676,353	10.0 %
Tier 1 capital to risk weighted assets:						
Pinnacle Financial	\$ 3,888,100	10.5 %	\$ 2,211,957	6.0 %	\$ 2,949,276	8.0 %
Pinnacle Bank	\$ 4,015,550	10.9 %	\$ 2,205,812	6.0 %	\$ 2,941,082	8.0 %
Common equity Tier 1 capital:						
Pinnacle Financial	\$ 3,670,851	10.0 %	\$ 1,658,968	4.5 %	N/A	N/A
Pinnacle Bank	\$ 4,015,427	10.9 %	\$ 1,654,359	4.5 %	\$ 2,389,629	6.5 %
Tier 1 capital to average assets (*):						
Pinnacle Financial	\$ 3,888,100	9.7 %	\$ 1,595,457	4.0 %	N/A	N/A
Pinnacle Bank	\$ 4,015,550	10.1 %	\$ 1,591,502	4.0 %	\$ 1,989,378	5.0 %
December 31, 2021						
Total capital to risk weighted assets:						
Pinnacle Financial	\$ 4,060,598	13.8 %	\$ 2,347,963	8.0 %	\$ 2,934,953	10.0 %
Pinnacle Bank	\$ 3,670,111	12.6 %	\$ 2,334,243	8.0 %	\$ 2,917,804	10.0 %
Tier 1 capital to risk weighted assets:						
Pinnacle Financial	\$ 3,425,751	11.7 %	\$ 1,760,972	6.0 %	\$ 2,347,963	8.0 %
Pinnacle Bank	\$ 3,464,265	11.9 %	\$ 1,750,683	6.0 %	\$ 2,334,243	8.0 %
Common equity Tier 1 capital:						
Pinnacle Financial	\$ 3,208,503	10.9 %	\$ 1,320,729	4.5 %	N/A	N/A
Pinnacle Bank	\$ 3,464,142	11.9 %	\$ 1,313,012	4.5 %	\$ 1,896,573	6.5 %
Tier 1 capital to average assets (*):						
Pinnacle Financial	\$ 3,425,751	9.7 %	\$ 1,412,747	4.0 %	N/A	N/A
Pinnacle Bank	\$ 3,464,265	9.9 %	\$ 1,406,063	4.0 %	\$ 1,757,578	5.0 %

(*) Average assets for the above calculations were based on the most recent quarter.

As noted above, during the second quarter of 2020, Pinnacle Financial issued 9.0 million depositary shares, each representing a 1/40th interest in a share of Series B Preferred Stock in a registered public offering to both retail and institutional investors. Net proceeds from the transaction were approximately \$217.1 million after deducting the underwriting discounts and offering expenses payable by Pinnacle Financial. The net proceeds were initially retained by Pinnacle Financial and the remaining net proceeds are available to support the capital needs of Pinnacle Financial and Pinnacle Bank, to support Pinnacle Financial's obligations, including interest payments on its outstanding indebtedness and dividend payments on the Series B Preferred Stock, and for other general corporate purposes.

Note 20. Other Noninterest Income and Expense

Other noninterest income and expense totals are more fully detailed in the following tables (in thousands). Any components of these totals exceeding 1% of the aggregate of total net interest income and total noninterest income for any of the years presented, as well as amounts Pinnacle Financial elected to present, are stated separately.

	<i>Years ended December 31,</i>		
	<i>2022</i>	<i>2021</i>	<i>2020</i>
Other noninterest income:			
Interchange and other consumer fees	\$ 68,022	\$ 57,263	\$ 40,960
Bank-owned life insurance	21,033	18,942	18,784
Loan swap fees	5,812	5,414	4,568
SBA loan sales	7,036	12,242	5,579
Income from other equity investments	10,605	23,109	1,072
Other noninterest income	23,913	12,839	11,940
Total other noninterest income	<u>\$ 136,421</u>	<u>\$ 129,809</u>	<u>\$ 82,903</u>
Other noninterest expense:			
Deposit related expenses	\$ 28,972	\$ 24,003	\$ 24,392
Lending related expenses	52,700	39,578	28,703
Wealth management related expenses	2,565	1,950	2,053
Audit, exam and insurance expense	9,209	11,259	10,596
FHLB restructuring charges	—	—	15,168
Administrative and other expenses	27,375	23,169	23,725
Total other noninterest expense	<u>\$ 120,821</u>	<u>\$ 99,959</u>	<u>\$ 104,637</u>

Note 21. Parent Company Only Financial Information

The following information presents the condensed balance sheets, statements of operations, and cash flows of Pinnacle Financial as of December 31, 2022 and 2021 and for each of the years in the three-year period ended December 31, 2022 (in thousands):

CONDENSED BALANCE SHEETS

	2022	2021
Assets:		
Cash and cash equivalents	\$ 186,572	\$ 184,654
Investments in bank subsidiaries	5,626,844	5,329,003
Investments in consolidated subsidiaries	12,202	11,133
Investment in unconsolidated subsidiaries:		
Statutory Trusts	3,995	3,995
Other investments	56,957	156,292
Current income tax receivable	33,870	29,609
Other assets	57,980	24,930
	<u>\$ 5,978,420</u>	<u>\$ 5,739,616</u>
Liabilities and shareholders' equity:		
Subordinated debt and other borrowings	424,055	423,172
Other liabilities	34,973	5,837
Shareholders' equity	5,519,392	5,310,607
	<u>\$ 5,978,420</u>	<u>\$ 5,739,616</u>

CONDENSED STATEMENTS OF OPERATIONS

	2022	2021	2020
Revenues:			
Income from bank subsidiaries	\$ 110,834	\$ 99,766	\$ 119,065
Income from nonbank subsidiaries	145	89	119
Income from equity method investment	33,817	33,169	22,587
Other income	6,478	14,945	3,861

	2022	2021	2020
Expenses:			
Interest expense	18,590	22,903	23,877
Personnel expense, including stock compensation	39,552	24,952	18,737
Other expense	3,025	2,697	2,905
Income before income taxes and equity in undistributed income of subsidiaries	90,107	97,417	100,113
Income tax benefit	(8,444)	(3,088)	(5,370)
Income before equity in undistributed income of subsidiaries	98,551	100,505	105,483
Equity in undistributed income of bank subsidiaries	461,004	424,978	205,327
Equity in undistributed income of nonbank subsidiaries	1,187	1,840	1,511
Net income	\$ 560,742	\$ 527,323	\$ 312,321
Preferred stock dividends	15,192	15,192	7,596
Net income available to common shareholders	\$ 545,550	\$ 512,131	\$ 304,725

CONDENSED STATEMENTS OF CASH FLOWS

	2022	2021	2020
Operating activities:			
Net income	\$ 560,742	\$ 527,323	\$ 312,321
Adjustments to reconcile net income to net cash provided by (used in) operating activities:			
Amortization and accretion	882	1,886	1,122
Stock-based compensation expense	39,552	24,952	18,737
Increase (decrease) in income tax payable, net	28,281	—	(2,467)
Deferred tax expense	1,760	2,850	3,876
Income from equity method investments, net	(33,817)	(33,169)	(22,587)
Dividends received from equity method investment	10,365	12,214	9,251
Excess tax benefit from stock compensation	(3,027)	(2,475)	(417)
Gain on other investments, net	(2,563)	(10,223)	(195)
Decrease (increase) in other assets	(32,609)	19,478	(39,981)
Increase (decrease) in other liabilities	3,881	2,032	(764)
Equity in undistributed income of bank subsidiaries	(461,004)	(424,978)	(205,327)
Equity in undistributed income of nonbank subsidiaries	(1,187)	(1,840)	(1,511)
Net cash provided by operating activities	111,256	118,050	72,058
Investing activities:			
Investment in consolidated banking subsidiaries	—	—	—
Increase in other investments	(15,776)	(11,668)	(2,454)
Net cash used in investing activities	(15,776)	(11,668)	(2,454)
Financing activities:			
Proceeds from subordinated debt and other borrowings, net of issuance costs	—	—	(93)
Repayment of subordinated debt and other borrowings	—	(120,000)	(80,000)
Issuance of common stock pursuant to restricted stock unit agreement, net of shares withheld for taxes	(5,462)	(3,790)	(2,488)
Exercise of common stock options, net of shares surrendered for taxes	(4,714)	(3,130)	(2,577)
Issuance of preferred stock, net of issuance costs	—	—	217,126
Repurchase of common stock	—	—	(50,790)
Common dividends paid	(68,194)	(55,504)	(49,389)
Preferred stock dividends paid	(15,192)	(15,192)	(7,596)
Net cash provided by (used in) financing activities	(93,562)	(197,616)	24,193
Net increase (decrease) in cash	1,918	(91,234)	93,797
Cash and cash equivalents, beginning of year	184,654	275,888	182,091
Cash and cash equivalents, end of year	\$ 186,572	\$ 184,654	\$ 275,888

The investment in BHG previously held by Pinnacle Financial was contributed to Pinnacle Bank in an amount of \$134.7 million, net of deferred tax liabilities associated with the investment, effective September 30, 2022.

Pinnacle Bank is subject to restrictions on the payment of dividends to Pinnacle Financial under Tennessee banking laws. Pinnacle Bank paid dividends of \$110.8 million, \$99.8 million and \$119.1 million, respectively, to Pinnacle Financial in each of the years ended December 31, 2022, 2021 and 2020.

Note 22. Quarterly Financial Results (unaudited)

A summary of selected consolidated quarterly financial data for each of the years in the three-year period ended December 31, 2022 follows:

<i>(in thousands, except per share data)</i>	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
2022				
Interest income	\$ 258,617	\$ 292,376	\$ 371,764	\$ 451,178
Net interest income	239,475	264,574	305,784	319,460
Provision for credit losses	2,720	12,907	27,493	24,805
Net income before taxes	157,590	181,131	183,843	174,929
Net income	129,110	145,127	148,658	137,847
Net income available to common shareholders	125,312	141,329	144,860	134,049
<i>Basic net income per common share</i>	\$ 1.66	\$ 1.87	\$ 1.91	\$ 1.77
<i>Diluted net income per common share</i>	\$ 1.65	\$ 1.86	\$ 1.91	\$ 1.76
2021				
Interest income	\$ 251,917	\$ 259,236	\$ 260,868	\$ 259,193
Net interest income	222,870	233,225	237,543	238,763
Provision for credit losses	7,235	2,834	3,382	2,675
Net income before taxes	153,648	162,458	169,405	166,394
Net income	125,428	131,790	136,577	133,528
Net income available to common shareholders	121,630	127,992	132,779	129,730
<i>Basic net income per common share</i>	\$ 1.61	\$ 1.70	\$ 1.76	\$ 1.72
<i>Diluted net income per common share</i>	\$ 1.61	\$ 1.69	\$ 1.75	\$ 1.71
2020				
Interest income	\$ 263,069	\$ 251,738	\$ 249,188	\$ 257,047
Net interest income	193,552	200,657	206,594	220,985
Provision for credit losses	105,045	72,832	16,758	9,180
Net income before taxes	26,691	73,674	137,049	133,944
Net income	28,356	62,444	110,645	110,876
Net income available to common shareholders	28,356	62,444	106,847	107,078
<i>Basic net income per common share</i>	\$ 0.37	\$ 0.83	\$ 1.42	\$ 1.42
<i>Diluted net income per common share</i>	\$ 0.37	\$ 0.83	\$ 1.42	\$ 1.42

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

Pinnacle Financial maintains disclosure controls and procedures, as defined in Rule 13a-15(e) promulgated under the Securities Exchange Act of 1934 (the "Exchange Act"), that are designed to ensure that information required to be disclosed by it in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms and that such information is accumulated and communicated to Pinnacle Financial's management, including its Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure. Pinnacle Financial carried out an evaluation, under the supervision and with the participation of its management, including its Chief Executive Officer and Chief Financial Officer, of the effectiveness of the design and operation of its disclosure controls and procedures as of the end of the period covered by this report. Based on the evaluation of these disclosure controls and procedures, the Chief Executive Officer and Chief Financial Officer concluded that Pinnacle Financial's disclosure controls and procedures were effective.

Management Report on Internal Control Over Financial Reporting

The report of Pinnacle Financial's management on Pinnacle Financial's internal control over financial reporting begins on page 82 of this Annual Report on Form 10-K. The report of Pinnacle Financial's independent registered public accounting firm on Pinnacle Financial's internal control over financial reporting is set forth on page 85 of this Annual Report on Form 10-K.

Changes in Internal Controls

There were no changes in Pinnacle Financial's internal control over financial reporting during Pinnacle Financial's fiscal quarter ended December 31, 2022 that have materially affected, or are reasonably likely to materially affect, Pinnacle Financial's internal control over financial reporting.

ITEM 9B. OTHER INFORMATION

None.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The responses to this Item will be included in Pinnacle Financial's Proxy Statement for the Annual Meeting of Shareholders to be held April 18, 2023 under the headings "Corporate Governance-Code of Conduct," "Proposal #1 Election of Directors-Audit Committee," "Proposal #1 Election of Directors," "Information About Our Executive Officers," and "Delinquent Section 16(a) Reports" and are incorporated herein by reference.

ITEM 11. EXECUTIVE COMPENSATION

The responses to this Item will be included in Pinnacle Financial's Proxy Statement for the Annual Meeting of Shareholders to be held April 18, 2023 under the headings "Proposal #1 Election of the Directors-Director Compensation" and "Executive Compensation" and are incorporated herein by reference.

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

The response to this Item regarding security ownership of certain beneficial owners and management will be included in Pinnacle Financial's Proxy Statement for the Annual Meeting of Shareholders to be held April 18, 2023 under the heading, "Security Ownership of Certain Beneficial Owners and Management" and are incorporated herein by reference.

The following table summarizes information concerning Pinnacle Financial's equity compensation plans at December 31, 2022:

Plan Category	Number of Securities to be Issued upon Exercise of Outstanding Options, Warrants and Rights (1)(2)	Weighted Average Exercise Price of Outstanding Options, Warrants and Rights (1)	Number of Securities Remaining Available for Future Issuance Under Equity Compensation Plans (Excluding Securities Reflected in First Column)
Equity compensation plans approved by shareholders:			
Amended and Restated 2018 Omnibus Equity Incentive Plan	1,489,344	—	1,387,284
Equity compensation plans not approved by shareholders	N/A	N/A	N/A
Total	1,489,344	\$ —	1,387,284

(1) Includes 1,375,173 performance-based restricted stock units and 73,983 time-based restricted stock units under the Plan. These restricted stock units do not have an exercise price because their value is dependent upon continued employment over a period of time or the achievement of certain performance goals, and are to be settled in shares of common stock. Accordingly, they have been disregarded for purposes of computing the weighted-average exercise price.

(2) All of CapitalMark's outstanding stock options vested upon consummation of the CapitalMark merger and were converted into options to purchase shares of Pinnacle Financial's common stock. As of December 31, 2022, 40,188 shares of Pinnacle Financial's common stock remain subject to outstanding options issued to the CapitalMark option holders and the weighted average exercise price of those options is \$25.00.

ITEM 13. CERTAIN RELATIONSHIPS, RELATED TRANSACTIONS AND DIRECTOR INDEPENDENCE

The responses to this Item will be included in Pinnacle Financial's Proxy Statement for the Annual Meeting of Shareholders to be held April 18, 2023 under the headings, "Certain Relationships and Related Transactions," and "Corporate Governance-Director Independence" and are incorporated herein by reference.

ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

The responses to this Item will be included in Pinnacle Financial's Proxy Statement for the Annual Meeting of Shareholders to be held April 18, 2023 under the heading, "Independent Registered Public Accounting Firm" and are incorporated herein by reference.

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

(a)

Exhibits

Exhibit No.	Description
3.1	Amended and Restated Charter, as amended (restated for SEC filing purposes only), incorporated herein by reference to Exhibit 3.1 to the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2020 filed on August 7, 2020.
3.2	Third Amended and Restated Bylaws of Pinnacle Financial Partners, Inc., effective as of October 18, 2022, incorporated herein by reference to Exhibit 3.1 to the Company's Current Report on Form 8-K filed on October 24, 2022.
4.1.1	Specimen Common Stock Certificate, incorporated herein by reference to Exhibit 4.1 to Amendment No. 1 to the Company's Registration Statement on Form SB-2 filed on July 12, 2000.
4.1.2	See Exhibits 3.1 and 3.2 for provisions of the Charter and Bylaws defining rights of holders of the Common Stock.
4.2	Description of the Company's Securities.*
4.3	Form of 4.875% Fixed-to-Floating Rate Subordinated Note due July 30, 2025, incorporated herein by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K filed on August 5, 2015.
4.4	Form of 5.25% Fixed-to-Floating Rate Subordinated Note due November 16, 2026, incorporated herein by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K filed on November 18, 2016.
4.5	Subordinated Indenture, dated as of September 11, 2019, between Pinnacle Financial Partners, Inc. and U.S. Bank National Association, as trustee, incorporated herein by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K, filed on September 11, 2019.
4.6	First Supplemental Indenture, dated as of September 11, 2019 between Pinnacle Financial Partners, Inc. and U.S. Bank National Association, as trustee, incorporated herein by reference to Exhibit 4.2 to the Company's Current Report on Form 8-K, filed on September 11, 2019.
4.7	Form of 4.125% Fixed-to-Floating Rate Subordinated Note due 2029 (included as Exhibit A in Exhibit 4.6 hereto).
4.8	Deposit Agreement, dated June 3, 2020, by and among the Company, Computershare Inc. and Computershare Trust Company, N.A. acting jointly as the depositary, and the holders from time to time of the depositary receipts described therein (incorporated herein by reference to Exhibit 4.3 of the Company's Registration Statement on Form 8-A, filed June 3, 2020)
4.9	Specimen of Certificate representing the Series B Preferred Stock (incorporated herein by reference to Exhibit 4.2 of the Company's Registration Statement on Form 8-A, filed June 3, 2020)
4.10	Form of Depositary Receipt (included in Exhibit 4.8 hereto)
4.11	Pinnacle Financial is a party to certain agreements entered into in connection with the offering or assumption of its subordinated debentures and certain of its subordinated indebtedness, in each case as more fully described in this Annual Report on Form 10-K. In accordance with Item 601(b)(4)(iii) of Regulation S-K and because no issuance of any such indebtedness is in excess of 10% of Pinnacle Financial's total assets, Pinnacle Financial has not filed the various documents and agreements associated with such indebtedness herewith. Pinnacle Financial has, however, agreed to furnish copies of the various documents and agreements associated with such indebtedness to the Securities and Exchange Commission upon request.
10.1#	Amended Employment Agreement by and among Pinnacle Bank, Pinnacle Financial Partners, Inc. and M. Terry Turner, dated as of January 1, 2008, incorporated herein by reference to Exhibit 10.48 to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2007, filed on March 7, 2008.
10.2#	Amended Employment Agreement by and among Pinnacle Bank, Pinnacle Financial Partners, Inc. and Robert A. McCabe, Jr., dated as of January 1, 2008, incorporated herein by reference to Exhibit 10.49 to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2007, filed on March 7, 2008.
10.3#	Amended Employment Agreement by and among Pinnacle Bank, Pinnacle Financial Partners, Inc. and Hugh M. Queener, dated as of January 1, 2008, incorporated herein by reference to Exhibit 10.50 to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2007, filed on March 7, 2008.
10.4#	Amended Employment Agreement by and among Pinnacle Bank, Pinnacle Financial Partners, Inc. and Harold R. Carpenter, dated as of January 1, 2008, incorporated herein by reference to Exhibit 10.51 to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2007, filed on March 7, 2008.
10.5#	Amendment No. 1 to Amended Employment Agreement by and among Pinnacle Bank, Pinnacle Financial Partners, Inc. and M. Terry Turner, dated November 20, 2012, incorporated herein by reference to Exhibit 10.38 to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2012, filed on February 22, 2013.

- 10.6# Amendment No. 1 to Amended Employment Agreement by and among Pinnacle Bank, Pinnacle Financial Partners, Inc. and Robert A. McCabe, Jr., dated November 20, 2012, incorporated herein by reference to Exhibit 10.39 to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2012, filed on February 22, 2013.
- 10.7# Amendment No. 1 to Amended Employment Agreement by and among Pinnacle Bank, Pinnacle Financial Partners, Inc. and Hugh M. Queener, dated November 20, 2012, incorporated herein by reference to Exhibit 10.40 to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2012, filed on February 22, 2013.
- 10.8# Amendment No. 1 to Amended Employment Agreement by and among Pinnacle Bank, Pinnacle Financial Partners, Inc. and Harold R. Carpenter, dated November 20, 2012, incorporated herein by reference to Exhibit 10.41 to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2012, filed on February 22, 2013.
- 10.9# Amendment No. 2 to Amended Employment Agreement by and among Pinnacle Bank, Pinnacle Financial Partners, Inc. and M. Terry Turner, incorporated herein by reference to Exhibit 10.40 to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2013, filed on February 25, 2014.
- 10.10# Amendment No. 2 to Amended Employment Agreement by and among Pinnacle Bank, Pinnacle Financial Partners, Inc. and Robert A. McCabe, Jr., incorporated herein by reference to Exhibit 10.41 to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2013, filed on February 25, 2014.
- 10.11# Amendment No. 2 to Amended Employment Agreement by and among Pinnacle Bank, Pinnacle Financial Partners, Inc. and Hugh M. Queener, incorporated herein by reference to Exhibit 10.42 to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2013, filed on February 25, 2014.
- 10.12# Amendment No. 2 to Amended Employment Agreement by and among Pinnacle Bank, Pinnacle Financial Partners, Inc. and Harold R. Carpenter, incorporated herein by reference to Exhibit 10.43 to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2013, filed on February 25, 2014.
- 10.13# Pinnacle Financial Partners, Inc. 2014 Equity Incentive Plan, effective as of April 15, 2014, incorporated herein by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on April 17, 2014.
- 10.14# CapitalMark Bank & Trust Amended and Restated Stock Option Plan, effective as of July 31, 2015, incorporated herein by reference to Exhibit 4.4 to Post-Effective Amendment No. 1 to the Company's Registration Statement on Form S-8 filed August 10, 2015.
- 10.15# Supplemental Executive Retirement Plan Agreement between Avenue Bank and Ronald Samuels, dated October 26, 2007, incorporated herein by reference to Exhibit 10.3 to the Company's Current Report on Form 8-K filed on July 7, 2016.
- 10.16# Employment Agreement, effective as of June 16, 2017, by and among Pinnacle Bank, Pinnacle Financial Partners, Inc. and Richard D. Callicutt II, incorporated herein by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed June 16, 2017.
- 10.17# Salary Continuation Agreement dated as of December 12, 2016, between Richard D. Callicutt II and Bank of North Carolina, incorporated herein by reference to Exhibit 10.1 to BNC Bancorp's Current Report on Form 8-K filed on December 16, 2016.
- 10.18# BNC Bancorp 2013 Amended and Restated Omnibus Stock Incentive Plan, incorporated herein by reference to Exhibit 10.3 to the Company's Current Report on Form 8-K filed June 16, 2017.
- 10.19# Form of Pinnacle Financial Partners, Inc. Named Executive Officer Performance Award Agreement, incorporated herein by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed February 26, 2018.
- 10.20# Form of Directors Restricted Stock Agreement, incorporated herein by reference to Exhibit 10.40 to the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2018, filed on May 7, 2018.
- 10.21# Form of Named Executive Officers Performance Unit Award Agreement, incorporated herein by reference to Exhibit 10.41 to the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2018, filed on May 7, 2018.
- 10.22# Form of Associate Time-Vested Restricted Stock Agreement, incorporated herein by reference to Exhibit 10.42 to the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2018, filed on May 7, 2018.
- 10.23# Form of Named Executive Officers 2019 Performance Unit Award Agreement, incorporated herein by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on January 18, 2019.
- 10.24# Form of Named Executive Officers 2020 Performance Unit Award Agreement, incorporated herein by reference to Exhibit 10.1 of the Company's Current Report on Form 8-K filed on January 24, 2020.

10.25#	Form of 2021 Restricted Share Unit Award Agreement, incorporated by reference to Exhibit 10.1 of the Company's Current Report on Form 8-K filed on January 27, 2021
10.26#	Form of Named Executive Officers 2021 Performance Unit Award Agreement, incorporated by reference to Exhibit 10.2 of the Company's Current Report on Form 8-K filed on January 27, 2021
10.27#	Form of Amendment to Named Executive Officers 2019 Performance Unit Award Agreement, incorporated by reference to Exhibit 10.3 of the Company's Current Report on Form 8-K filed on January 27, 2021
10.28#	Form of Amendment to Named Executive Officers 2020 Performance Unit Award Agreement, incorporated by reference to Exhibit 10.4 of the Company's Current Report on Form 8-K filed on January 27, 2021
10.29#	Second Amended and Restated Limited Liability Company Agreement of Bankers Healthcare Group, LLC, dated February 2, 2021, incorporated herein by reference to Exhibit 10.34 of the Company's Annual Report on Form 10-K for the year ended December 31, 2021 filed on February 26, 2021
10.30#	Pinnacle Financial Partners, Inc. 2022 Annual Cash Incentive Plan, incorporated herein by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on February 25, 2022.
10.31#	Pinnacle Financial Partners, Inc. Amended and Restated 2018 Omnibus Equity Incentive Plan, incorporated herein by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on April 21, 2021.
10.32#	Form of 2022 Restricted Share Unit Agreement, incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on January 21, 2022.
10.33#	Form of Named Executive Officers 2022 Performance Unit Award Agreement, incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K filed on January 21, 2022.
10.34#	Form of Named Executive Officers Special Performance Unit Award Agreement, incorporated by reference to Exhibit 10.3 to the Company's Current Report on Form 8-K filed on January 21, 2022.
10.35#	Form of Named Executive officers 2023 Performance Unit Award Agreement, incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K filed on January 23, 2023.
10.36#	Form of Named Executive officers 2023 Restricted Stock Unit Award Agreement, incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on January 23, 2023.
21.1*	Subsidiaries of Pinnacle Financial Partners, Inc.
23.1*	Consent of Crowe LLP
23.2*	Consent of Crowe LLP
23.3*	Consent of Crowe LLP
31.1*	Certification pursuant to Rule 13a-14(a)/15d-14(a)
31.2*	Certification pursuant to Rule 13a-14(a)/15d-14(a)
32.1**	Certification pursuant to 18 USC Section 1350 - Sarbanes-Oxley Act of 2002
32.2**	Certification pursuant to 18 USC Section 1350 - Sarbanes-Oxley Act of 2002
99.1*	Audited consolidated financial statements of Bankers Healthcare Group, LLC and Subsidiaries as of September 30, 2022 and September 30, 2021 and for each of the years in the two-year period ended September 30, 2022, the notes related thereto and the report of Crowe LLP, independent registered public accounting firm.
99.2*	Audited consolidated financial statements of Bankers Healthcare Group, LLC and Subsidiaries as of September 30, 2021 and September 30, 2020 and for each of the years in the two-year period ended September 30, 2021, the notes related thereto and the report of Crowe LLP, independent registered public accounting firm.
101.INS*	Inline XBRL Instance Document
101.SCH*	Inline XBRL Schema Documents
101.CAL*	Inline XBRL Calculation Linkbase Document
101.LAB*	Inline XBRL Label Linkbase Document
101.PRE*	Inline XBRL Presentation Linkbase Document
101.DEF*	Inline XBRL Definition Linkbase Document
104	The cover page from the Company's Annual Report on Form 10-K for the year ended December 31, 2019, formatted in Inline XBRL (included in Exhibit 101)

Management contract or compensatory plan or arrangement.

* Filed herewith.

** Furnished herewith.

(c) Schedules to the consolidated financial statements are omitted, as the required information is not applicable.

ITEM 16. FORM 10-K SUMMARY

Not applicable.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

PINNACLE FINANCIAL PARTNERS, INC

By: /s/ M. Terry Turner

M. Terry Turner

President and Chief Executive Officer

Date: February 28, 2023

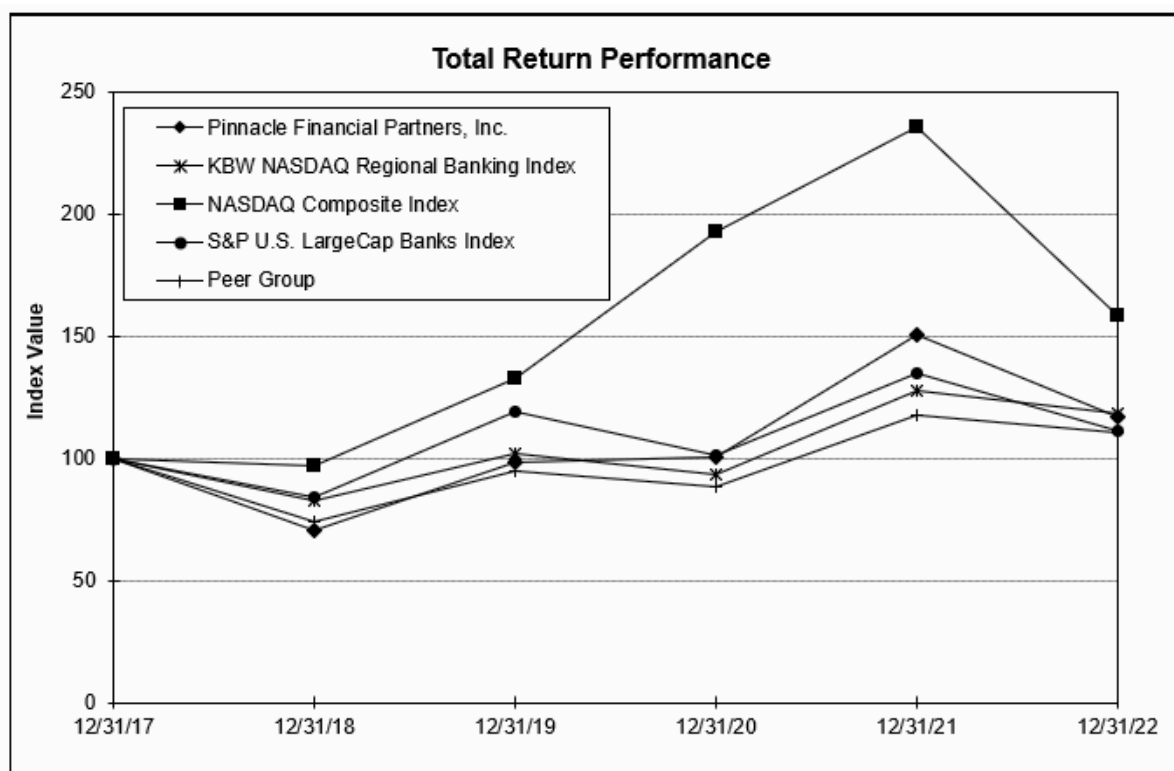
Pursuant to the requirements of the Securities Exchange Act of 1934, this Report has been signed below by the following persons on behalf of the Registrant and in the capacities and on the dates indicated.

SIGNATURES	TITLE	DATE
<u>/s/ Robert A. McCabe, Jr.</u> Robert A. McCabe, Jr.	Chairman of the Board	February 28, 2023
<u>/s/ M. Terry Turner</u> M. Terry Turner	Director, President and Chief Executive Officer (Principal Executive Officer)	February 28, 2023
<u>/s/ Harold R. Carpenter</u> Harold R. Carpenter	Chief Financial Officer (Principal Financial and Accounting Officer)	February 28, 2023
<u>/s/ Richard D. Callicutt</u> Richard D. Callicutt	Director, Chairman of the Carolinas and Virginia	February 28, 2023
<u>/s/ Abney S. Boxley</u> Abney S. Boxley	Director	February 28, 2023
<u>/s/ Charles E. Brock</u> Charles E. Brock	Director	February 28, 2023
<u>/s/ Renda J. Burkhart</u> Renda J. Burkhart	Director	February 28, 2023
<u>/s/ Gregory L. Burns</u> Gregory L. Burns	Director	February 28, 2023
<u>/s/ Marty G. Dickens</u> Marty G. Dickens	Director	February 28, 2023
<u>/s/ Thomas C. Farnsworth, III</u> Thomas C. Farnsworth, III	Director	February 28, 2023
<u>/s/ Joseph Galante</u> Joseph Galante	Director	February 28, 2023
<u>/s/ Glenda Baskin Glover</u> Glenda Baskin Glover	Director	February 28, 2023
<u>/s/ David B. Ingram</u> David B. Ingram	Director	February 28, 2023
<u>/s/ Decosta E. Jenkins</u> Decosta E. Jenkins	Director	February 28, 2023
<u>/s/ Reese L. Smith, III</u> Reese L. Smith, III	Director	February 28, 2023
<u>/s/ G. Kennedy Thompson</u> G. Kennedy Thompson	Director	February 28, 2023

STOCKHOLDER RETURN PERFORMANCE GROWTH

Set forth below is a line graph comparing the yearly percentage change in the cumulative total shareholder return on the Company's Common Stock against the cumulative total return of the NASDAQ Composite Index, the KBW NASDAQ Regional Banking Index, a peer group consisting of U.S. banks headquartered in the Southeastern United States with an asset size between \$15 billion and \$45 billion as of September 30, 2022, and the S&P U.S. LargeCap Banks index for the period commencing on December 31, 2017 and ending December 31, 2022 (the "Measuring Period"). In the 2021 annual report, the Company included the performance of a peer group consisting of U.S. banks headquartered in the Southeastern United States with an asset size between \$15 billion and \$40 billion as of September 30, 2021 and the S&P 500 Banks Index. As the Company's total assets at December 31, 2022 were approximately \$42.0 billion, the Company has modified the peer group, which now consists of U.S. banks headquartered in the Southeastern United States with an asset size between \$15 billion and \$45 billion as of September 30, 2022. The Company has also removed the S&P 500 banks index and replaced it with the KBW NASDAQ Regional Banking index as it is representative of the peer group utilized for the TSR modifier component of the performance-based equity compensation awarded to the Company's Named Executive Officers. The graph assumes that the value of the investment in the Company's Common Stock and each index was \$100 on December 31, 2017. The change in cumulative total return is measured by dividing the cumulative amount of dividends for the Measuring Period, assuming dividend reinvestment, and the change in share price between the beginning and end of the Measuring Period by the share price at the beginning of the Measuring Period. Cash dividends may impact the cumulative returns of the indices.

Cumulative Total Returns⁽¹⁾
Comparison of
PINNACLE FINANCIAL PARTNERS, INC.
NASDAQ COMPOSITE INDEX, KBW NASDAQ
REGIONAL BANKING INDEX, PEER GROUP⁽²⁾,
S&P U.S. LargeCap Banks Index⁽³⁾



(1) Assumes \$100 invested on December 31, 2017 in Pinnacle Financial Partners, Inc. Common Stock (PNFP) and the five indices noted above.

(2) The peer group consists of U.S. Banks headquartered in the Southeastern United States with an asset size of between \$15 billion and \$45 billion as of September 30, 2022. The peer group was developed by S&P Global Market Intelligence and is a composite of 14 banking institutions.

(3) S&P U.S. LargeCap Banks Index includes all major exchange banks in S&P's coverage universe with assets greater than \$10 billion as of September 30, 2022.

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BOARD OF DIRECTORS

Abney S. Boxley, III

Manager, Boxley Family, LLC
Chairman, Boxley Ready Mix

Charles E. Brock

President
Brock Partnerships, LLC

Renda Burkhart, CPA

Partner
Forvis Private Client

Gregory L. Burns

President
Gregory Burns Consulting
Group, LLC

Richard D. Callicutt, II

Chairman, Carolinas and Virginia
Pinnacle Financial Partners, Inc.

Marty G. Dickens

Retired Regional Executive
BellSouth/AT&T Tennessee

Thomas C. Farnsworth, III

President and Owner
Farnsworth Investment Company

Joseph C. Galante

Retired Chairman
Sony Music, Nashville

**Glenda Baskin Glover,
Ph.D., JD, CPA**

President
Tennessee State University

David B. Ingram

Chairman
Ingram Entertainment, Inc.

Decosta E. Jenkins

Retired President and CEO
Nashville Electric Service

Robert A. McCabe, Jr.

Chairman
Pinnacle Financial Partners, Inc.

Reese L. Smith, III

President
Haury & Smith Contractors, Inc.

G. Kennedy Thompson

Retired Partner/Co-head,
Banking and Credit
Aquiline Capital Partners, LLC

M. Terry Turner

President and
Chief Executive Officer
Pinnacle Financial Partners, Inc.

SENIOR LEADERSHIP TEAM

Richard A. Arthur

Executive Vice President,
Consumer and Small Business

Timothy G. Ayala

Chief Risk Officer

Richard D. Callicutt, II

Chairman, Carolinas and Virginia

Harold R. Carpenter

Chief Financial Officer

Robert Garcia, Jr.

Atlanta President

Timothy H. Huestis

Chief Credit Officer

D. Kim Jenny

Chief of Staff

Robert A. McCabe, Jr.

Chairman

Hugh M. Queener

Chief Administrative Officer

Dana M. Sanders

Chief Audit Executive

M. Terry Turner

President and
Chief Executive Officer

Randall L. Withrow

Chief Information Officer

Summer Yeiser

Director, Associate
and Client Experience

MARKET LEADERS

Martin Akin**David Allen****Susan Rogers Apple****Ken Ayers****Kirk Bailey****Jason Baldwin****James Barnett****Andy Beam****Bryan Bean****Sam Belk****Aaron Butner****Lee Campbell****John Cannon****Mark Carlton****Ron Carter****Natanya Chadwick****Kim Ciukowski****Kent Cleaver****Paige Collier****Bill Cox****Tom Crockett****Doug Daugherty****Mike DiStefano****Brad Dunn****Kenny Dyer****Katie Elder****Rob Ellenburg****Mark Feemster****Debbie Flack****Dale Floyd****Mary Garcia****Kim Graham****Susan Hampton****Karen Hargis****Clay Hart****Craig Holley****Matt Holly****Janie Hunley****Mark Imig****Shane Jackson****Bill Jones****Tiffany Kirk****Michael Kohl****Stephanie Kusch****Glenn Layne****Vickie Manning****Reid Marks****Michael Mathis****Phillip May****Blair Miller****Dale Mitchell****Andy Moats****Ryan Murphy****Rick Neal****Paul Neil****Jack Nelson****Randy Nicely****David Pannill****Billie Jo Parker****Carolyn Pelton****Natalie Readett****Caroline Riggsbee****Robert Rogers****Chad Rounder****Mike Scheidt****Alan Scrimager****Rick Seadler****Ted Simpson****Melissa Smith****Shelly Stark****Phil Stevenson****Charissa Sumerlin****Steve Swain****Sarah Sanders Teague****Tony Thompson****Storm Trosdal****Kristin Vest****Missy Wallen****Kevin Watson****Larry Whisenant****Ed White****Harvey White****Scott Williams****David Willingham****Greg Winkler**

For a full list of leadership team members, please visit [PNFP.COM/LT](https://www.pnfp.com/LT).

INVESTOR RELATIONS

Shareholders and others seeking a copy of the Firm's public filings should visit the Investor Relations section of our website at www.pnfp.com or contact our Chief Financial Officer at:

150 3rd Ave. South, Suite 900
Nashville, TN 37201
(615) 744-3742

The common and preferred stocks of Pinnacle Financial Partners, Inc. are traded on the Nasdaq Global Select market under the trading symbols "PNFP" and "PNFPF," respectively.

SHAREHOLDER SERVICES

Shareholders desiring to change address or ownership of stock, report lost certificates or to consolidate accounts should contact:

Computershare Shareholder Services

P.O. Box 43006

Providence, RI 02940-3006

ANNUAL MEETING OF SHAREHOLDERS

The Annual Meeting of Shareholders will convene at 11 a.m. CT on Tuesday, April 18, 2023. The meeting will be held at Pinnacle Financial Partners, Pinnacle at Symphony Place, 150 Third Ave. South, Nashville, TN. Further information regarding this meeting can be found in the firm's proxy statement for the 2023 Annual Meeting.



Pinnacle Financial Partners

150 Third Avenue South, Suite 900
Nashville, TN 37201

615.744.3700

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