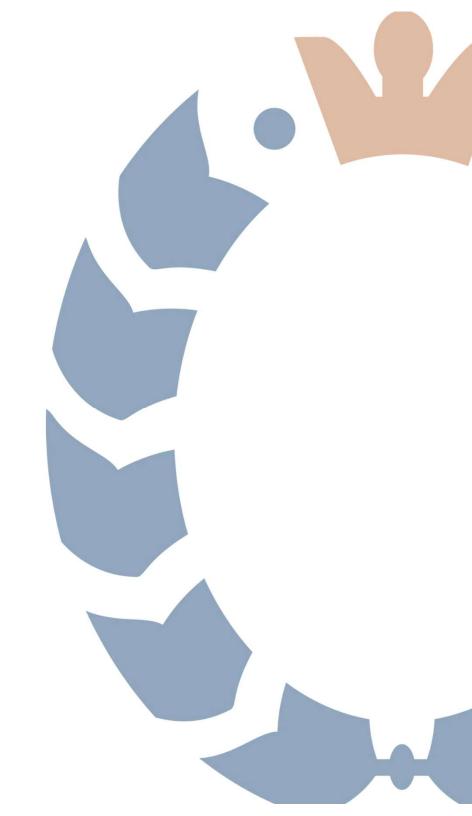


Investor Presentation

— Second Quarter 2024 ——



"Safe Harbor" Statement

Under the Private Securities Litigation Reform Act of 1995

"Safe Harbor" Statement under the Private Securities Litigation Reform Act of 1995: This presentation contains, and the remarks by Prosperity's management on the conference call may contain, forward-looking statements within the meaning of the federal securities laws, including Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. From time to time, oral or written forward-looking statements may also be included in other information released to the public. Such forward-looking statements are typically, but not exclusively, identified by the use in the statements of words or phrases such as "aim," "anticipate," "believe," "estimate," "expect," "goal," "guidance," "intend," "is anticipated," "is expected," "is intended," "objective," "plan," "projected," "projection," "will affect," "will be," "will continue," "will decrease," "will grow," "will impact," "will increase," "will occurrence." incur," "will reduce," "will remain," "will result," "would be," variations of such words or phrases (including where the word "could," "may," or "would" is used rather than the word "will" in a phrase) and similar words and phrases indicating that the statement addresses some future result, occurrence, plan or objective. Forward-looking statements include all statements other than statements of historical fact, including forecasts or trends, and are based on current expectations, assumptions, estimates and projections about Prosperity Bancshares and its subsidiaries. These forward-looking statements may include information about Prosperity's possible or assumed future economic performance or future results of operations, including future revenues, income, expenses, provision for credit losses, provision for taxes, effective tax rate, earnings per share and cash flows and Prosperity's future capital expenditures and dividends, future financial condition and changes therein, including changes in Prosperity's loan portfolio and allowance for credit losses, changes in deposits, borrowings and the investment securities portfolio, future capital structure or changes therein, as well as the plans and objectives of management for Prosperity's future operations, future or proposed acquisitions, the future or expected effect of acquisitions on Prosperity's operations, results of operations, financial condition, and future economic performance, statements about the anticipated benefits of proposed transactions, and statements about the assumptions underlying any such statement. These forward-looking statements are not guarantees of future performance and are based on expectations and assumptions Prosperity currently believes to be valid. Because forward-looking statements relate to future results and occurrences, many of which are outside of Prosperity's control, they are subject to inherent uncertainties, risks and changes in circumstances that are difficult to predict. These risks and uncertainties include, but are not limited to whether Prosperity can: successfully identify acquisition targets and integrate the businesses of acquired companies and banks, including Lone Star State Bancshares; continue to sustain its current internal growth rate or total growth rate; provide products and services that appeal to its customers; continue to have access to debt and equity capital markets; and achieve its sales objectives. Other risks include, but are not limited to: the possibility that credit quality could deteriorate; actions of competitors; changes in laws and regulations (including changes in governmental interpretations of regulations and changes in accounting standards); the possibility that the anticipated benefits of an acquisition transaction, are not realized when expected or at all, including as a result of the impact of, or problems arising from, the integration of two companies or as a result of the strength of the economy and competitive factors generally; a deterioration or downgrade in the credit quality and credit agency ratings of the securities in Prosperity's securities portfolio; customer and consumer demand, including customer and consumer response to marketing; effectiveness of spending, investments or programs; fluctuations in the cost and availability of supply chain resources; economic conditions, including currency rate, interest rate and commodity price fluctuations; and the effect, impact, potential duration or other implications of weather an climate-elated events. Prosperity disclaims any obligation to update such factors or to publicly announce the results of any revisions to any of the forward-looking statements included herein to reflect future events or developments. These and various other factors are discussed in Prosperity's Annual Report on Form 10-K for the year ended December 31, 2023, and other reports and statements Prosperity has filed with the Securities and Exchange Commission ("SEC"). Copies of the SEC filings for Prosperity may be downloaded from the Internet at no charge from http://www.prosperitybankusa.com.



Second Quarter Highlights

- Net income of \$111.6 million, or \$116.6 million excluding merger related expenses and non-recurring items⁽¹⁾
- Earnings per share (diluted) of \$1.17, or \$1.22 excluding merger related expenses and non-recurring items⁽¹⁾
- Assets of \$39.8 billion, total loans of \$22.3 billion, and deposits of \$27.9 billion at June 30, 2024
- Common equity tier 1 ratio of 15.42% and leverage ratio of 10.29% at June 30, 2024
- Net interest margin increased 15 basis points to 2.94% for the second quarter 2024
- Sound asset quality with annualized net charge-offs / quarterly average loans of 0.08%
- Nonperforming assets to average earning assets remain low at 0.25%
- Allowance for credit losses on loans and off-balance sheet credit exposures of \$397.5 million and allowance for credit losses on loans to total loans, excluding Warehouse Purchase Program, of 1.69%
- Declared cash dividend of \$0.56 for the third quarter 2024
- Repurchased 670,518 shares of common stock during the second quarter of 2024
- Completed merger with Lone Star State Bancshares, Inc. on April 1, 2024



Strong Presence in Texas and Oklahoma

• A Texas-based financial holding company with \$39.8 billion in total assets

 Prosperity has been ranked as one of Forbes America's Best Banks since the list's inception in 2010, and was ranked in the Top 10 for 14 consecutive years

Ranked #2 in deposit market share in Texas (1)

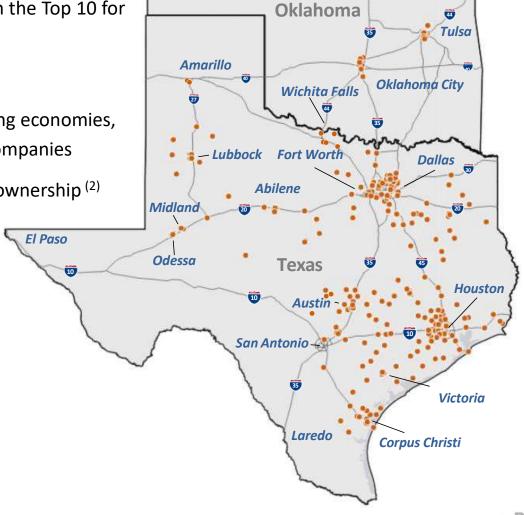
 Texas and Oklahoma continue to benefit from strong economies, and are home to 61 Fortune 500 headquartered companies

Shareholder driven with 4.3% fully diluted insider ownership (2)

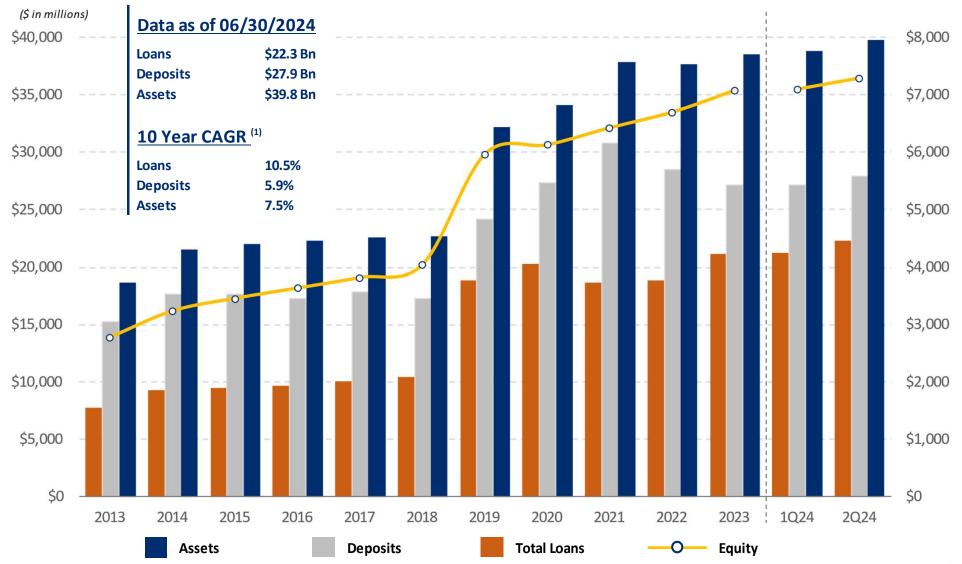
 Successful completion of 45 acquisitions (whole bank, branch and failed bank transactions)

288 Full-Service Locations

- in Bryan/College Station Area
- 6 in Central Oklahoma Area
- 31 in Central Texas Area
- 62 in Dallas/Fort Worth Area
- 22 in East Texas Area
- 65 in Houston Area
- 30 in South Texas Area
- 8 in Tulsa Area
- 49 in West Texas Area

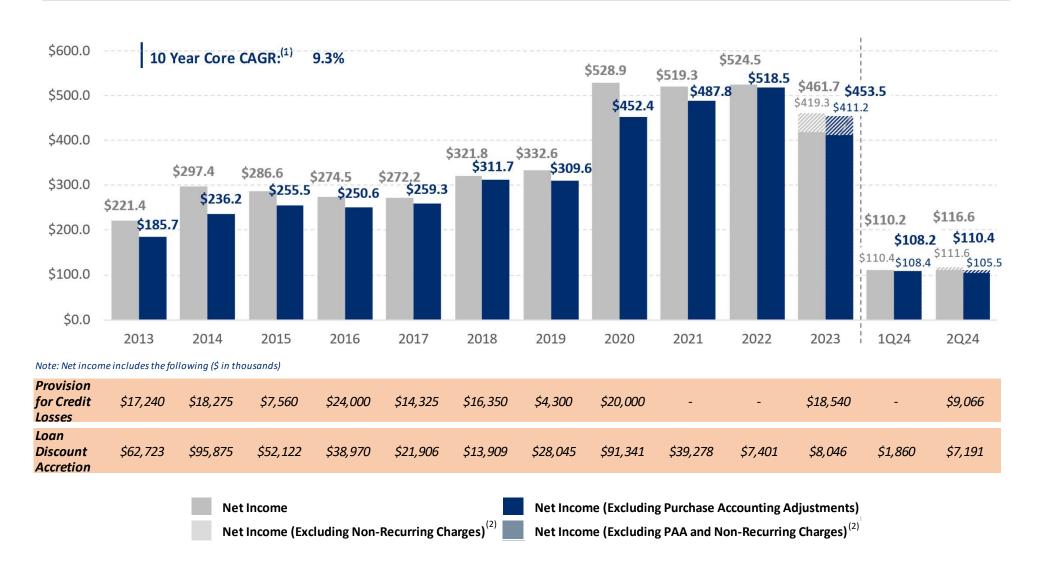


Balance Sheet Summary





Net Income





⁽¹⁾ Represents the Compound Annual Growth Rate of net income (excluding purchase accounting adjustments and non-recurring charges) from 12/31/2013 – 12/31/2023

Excludes after-tax merger related provision and expenses related to recent acquisitions, gain on Visa Class B-1 stock exchange net of investment securities sales and FDIC special assessments NYSE

Earnings Per Share

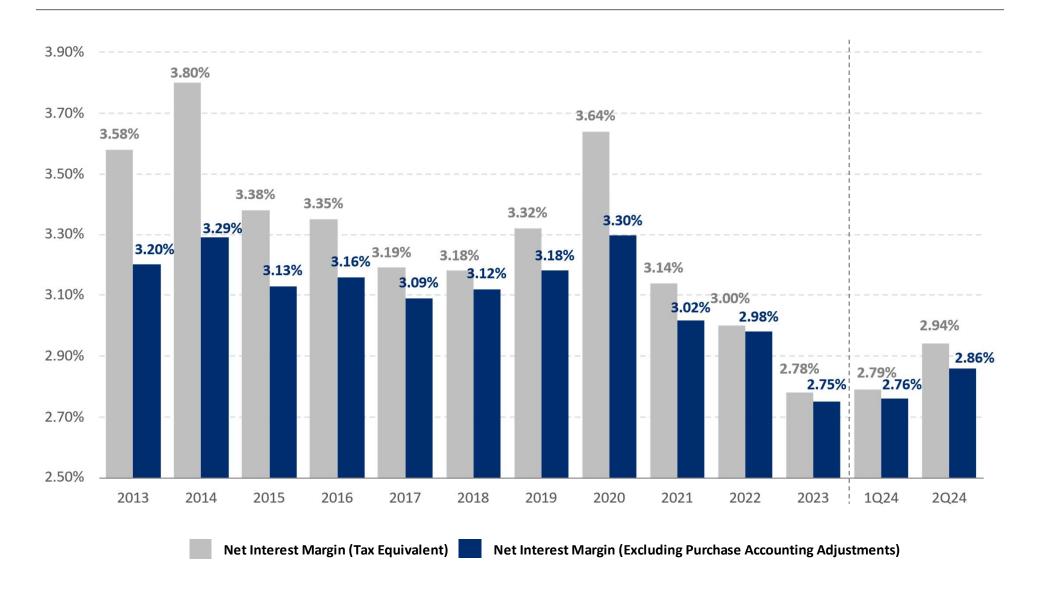




⁽¹⁾ Represents the Compound Annual Growth Rate for EPS (excluding purchase accounting adjustments and non-recurring charges) from 12/31/2013 – 12/31/2023

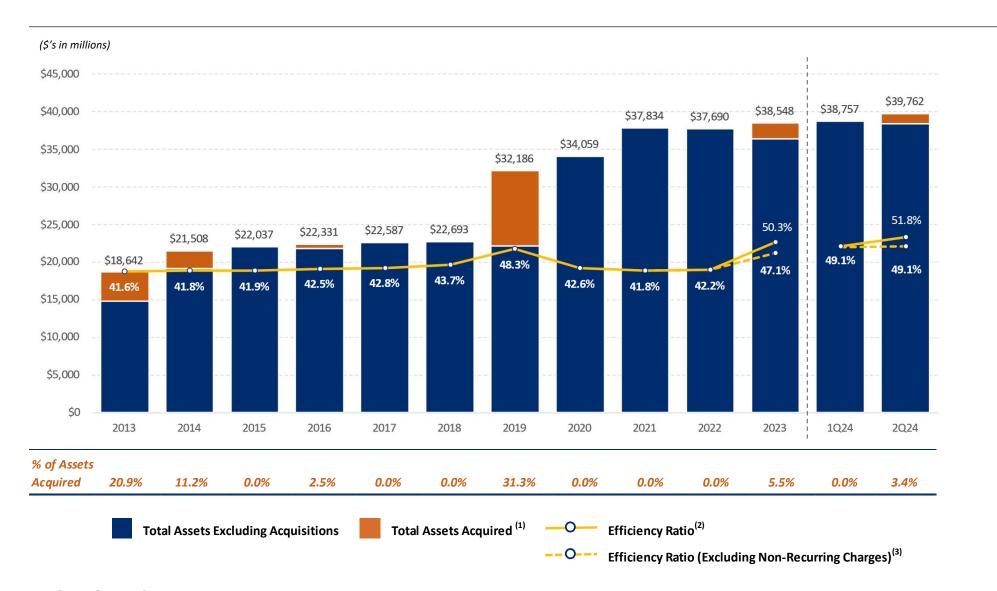
Excludes after-tax merger related provision and expenses related to recent acquisitions, gain on Visa Class B-1 stock exchange net of investment securities sales and FDIC special assessments

Net Interest Margin





Acquisitions & Efficiency Ratio



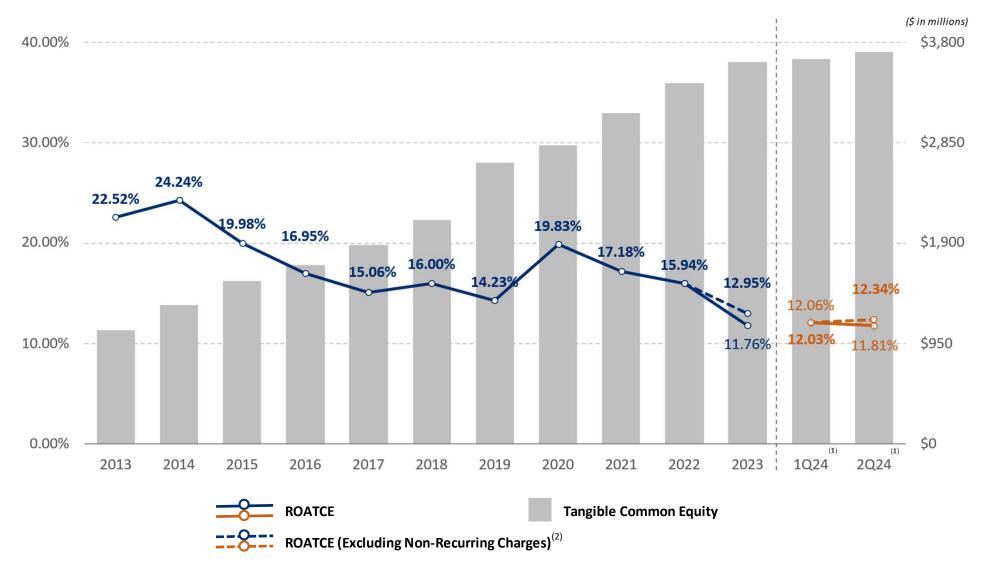
Source: Company Documents

Excludes after-tax merger related provision and expenses related to recent acquisitions, gain on Visa Class B-1 stock exchange net of investment securities sales and FDIC special assessments

¹⁾ Representative of target assets at closing

⁽²⁾ Calculated by dividing total noninterest expense, excluding credit loss provisions, by net interest income plus noninterest income, excluding net gains and losses on the sale or write down of assets and securities. Additionally, taxes are not part of this calculation.

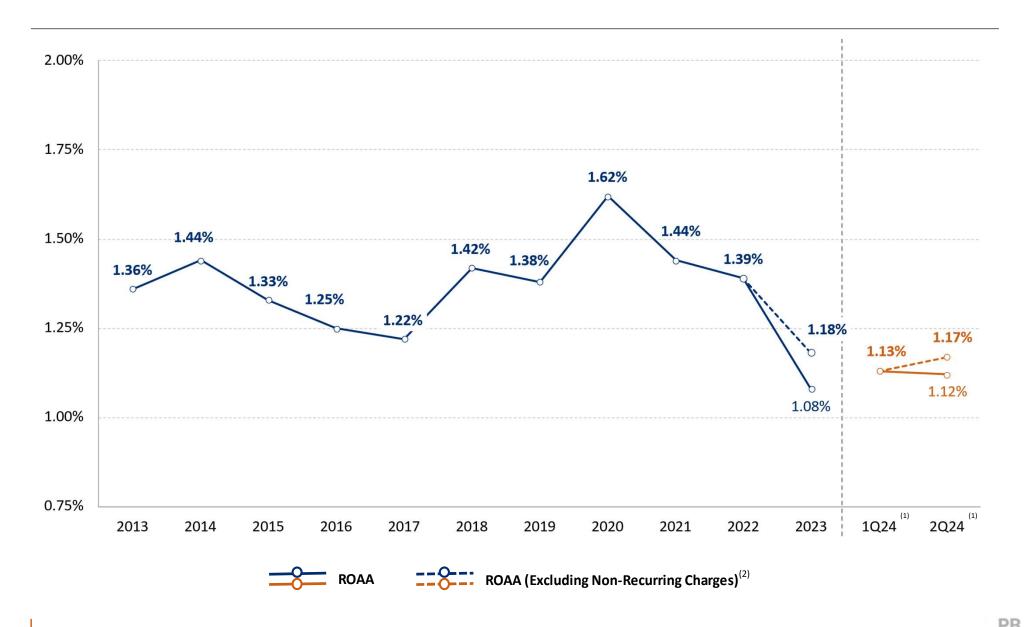
Return on Average Tangible Common Equity



⁽¹⁾ Interim periods shown on an annualized basis

⁽²⁾ Excludes after-tax merger related provision and expenses related to recent acquisitions, gain on Visa Class B-1 stock exchange net of investment securities sales and FDIC special assessments

Return on Average Assets

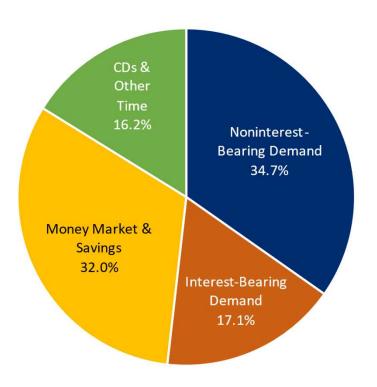




⁽¹⁾ Interim periods shown on an annualized basis

Deposit Composition

As of June 30, 2024 (\$ in millions)



	Şmm	Cost (%)'-'
Noninterest-Bearing Demand	\$9,707	0.00%
Interest-Bearing Demand	\$4,763	0.76%
Money Market & Savings	\$8,946	2.22%
CDs & Other Time	\$4,518	4.27%

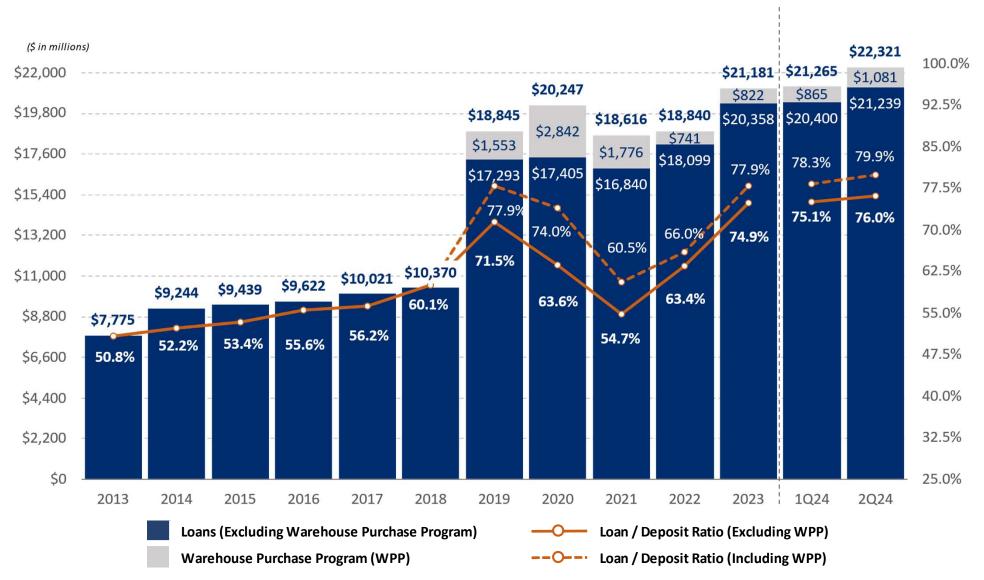
Total Deposits: \$27.9Bn

Total Cost of Deposits: 1.52% (1)

Cost of Interest-Bearing Deposits: 2.33% (1)



Loan Growth

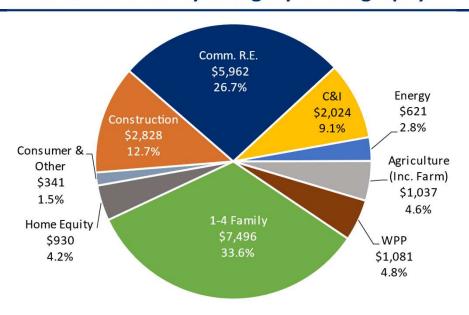




Loan Portfolio Overview

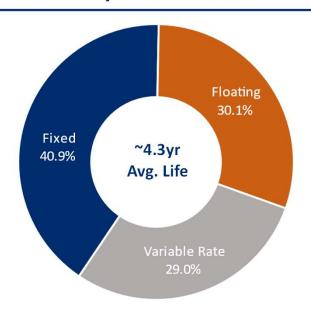
As of June 30, 2024 (\$\\$\frac{1}{2}\$ in millions)

Loan Portfolio by Category & Geography



Loans By Area	Amount (2)(4)	% of Total
Bryan / College Station	\$873	4.1%
Central Oklahoma	\$602	2.8%
Central Texas	\$2,682	12.7%
Dallas / Ft. Worth	\$6,349	30.0%
East Texas	\$736	3.5%
Houston	\$4,769	22.5%
South Texas	\$1,430	6.7%
Tulsa	\$587	2.8%
West Texas	\$3,162	14.9%

Loans by Rate Structure



Total Loans: \$22.3Bn Loans HFI (Excl. WPP): \$21.2Bn

Yield on Total Loans: 6.08%⁽¹⁾
Yield on Loans HFI (Excl. WPP): 6.02%⁽¹⁾
Core Yield on Loans HFI (Excl. WPP): 5.89%⁽¹⁾⁽³⁾

Source: Company Documents

- (1) Data for the three months ended June 30, 2024
- (2) Excludes \$49 million in loans assigned to the Corporate Group
- 3) Core yield excludes purchase accounting adjustments
- (4) Excludes Warehouse Purchase Program (WPP) loans



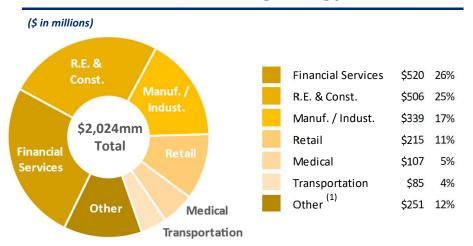
Loan Portfolio Detail

As of June 30, 2024 (\$ in millions)

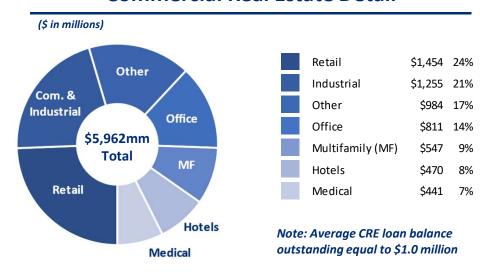
Portfolio Commentary

- Loan portfolio is diversified across the Bank's market areas and by underlying collateral type
- CRE and construction loans conservatively underwritten to cost of collateral
- 35% of commercial real estate is owner occupied
- Average total CRE loan-to value of 52%
- Average office CRE loan-to-value of 52%
- Non-owner-occupied office CRE of \$557 million, or 2.5% of total loans

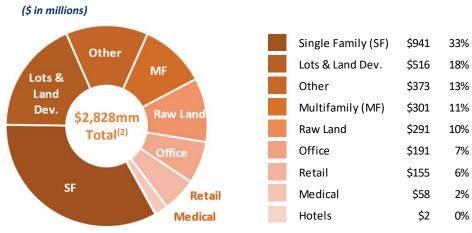
C&I Detail (Excluding Energy Loans)



Commercial Real Estate Detail



Construction Detail





Includes State & Political loans

⁽²⁾ Total includes a net unaccreted discount of (\$1,728,000) not shown in graph

Changes to Allowance for Credit Losses

(\$ in millions)

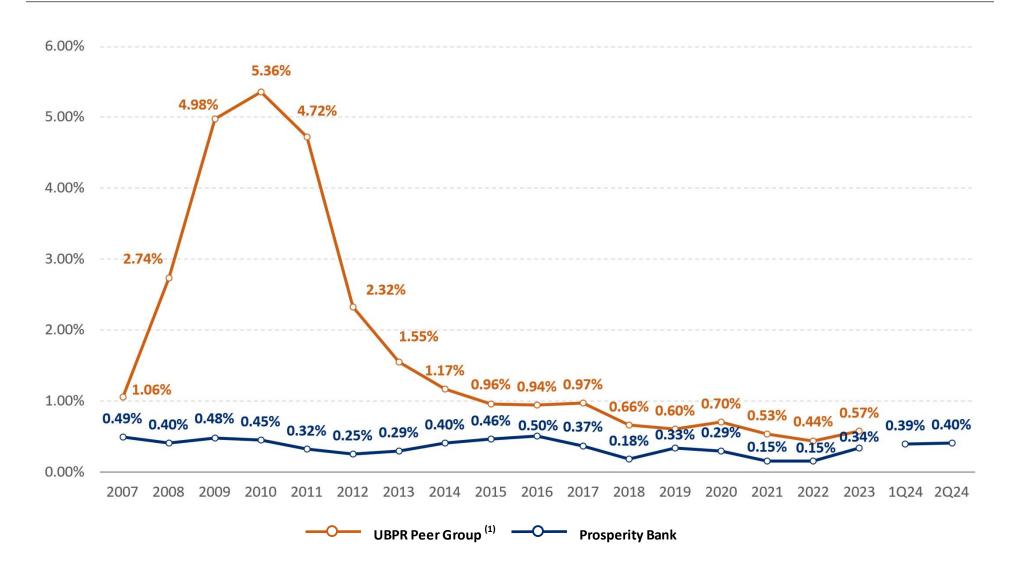
Total Allowance for Credit Losses and Unfunded Commitments \$366.7 million \$397.5 million 1.62% ACL to Total 1.69% ACL to Total Loans (1) Loans (1) \$4.8 \$7.9 \$21.3 \$359.9 \$1.1 \$330.2 Net increased Allowance for Increase in (\$4.4)reserve related to **Credit Losses** allowance for Non-Increase in allowance changes in macro-PCD loans related for PCD loans related Net charge-offs economic recent acquisition of to recent acquisition conditions, Allowance for Includes a (\$0.9) \$7.9 million of \$26.1 million qualitative million charge **Credit Losses** (provision expense) (goodwill) economic outlook, related to acquired Increase in • (\$4.8) million outstanding loan from previous allowance for Nonbalances and released related to merger PCD unfunded resolved PCD loans historical loss rates commitments without any charge related recent offs during the acquisition of \$1.1 second quarter million (provision expense) Allowance for Allowance for Unfunded **Unfunded Commitments Commitments** (Other Liabilities) (Other Liabilities) \$37.6 \$36.5



16

Asset Quality

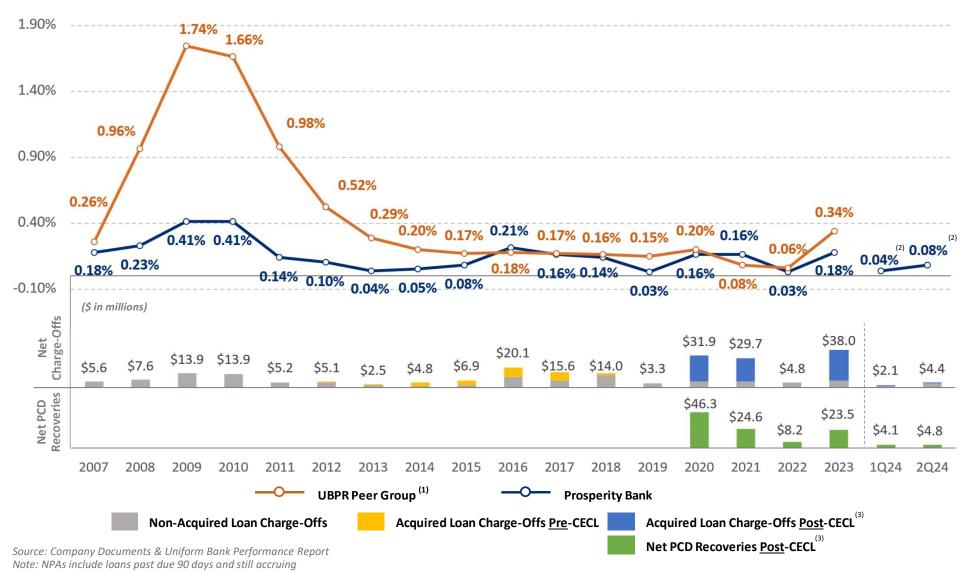
NPAs / Loans + OREO





Asset Quality

Net Charge-Offs / Average Loans



(1) UBPR = Uniform Bank Performance Report; Peer Group 2 (114 banks) – Insured commercial banks having assets between \$10 billion and \$100 billion

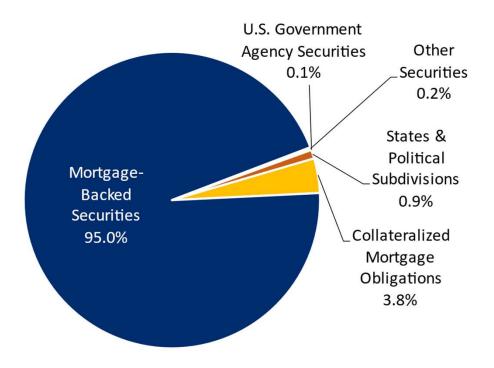
Reflects all charge-offs and recoveries on acquired loans in accordance with CECL accounting practices; Prior to the adoption of CECL in the first quarter of 2020, PCD loans were classified as Purchased Credit Impaired (PCI) loans and their assigned fair-value marks were netted against the outstanding loan balance with a charge-off only being recorded when the loss exceeded the amount of fair-value marks remaining.



⁽²⁾ Interim period net charge-off ratios shown on an annualized basis

Securities Portfolio Detail

As of June 30, 2024 (\$ in millions)



97.3% Held to Maturity 2.7% Available for Sale

	\$mm
Mortgage-Backed Securities	\$11,113
Collateralized Mortgage Obligations	\$442
States & Political Subdivisions	\$112
Other Securities	\$28
U.S. Government Agency Securities	\$8

Total Securities: \$11.7Bn

Yield on Securities: 2.06%⁽¹⁾
Duration: ~4.1 Yrs.⁽²⁾

Avg. Yearly Cash Flow: ~\$1.9Bn

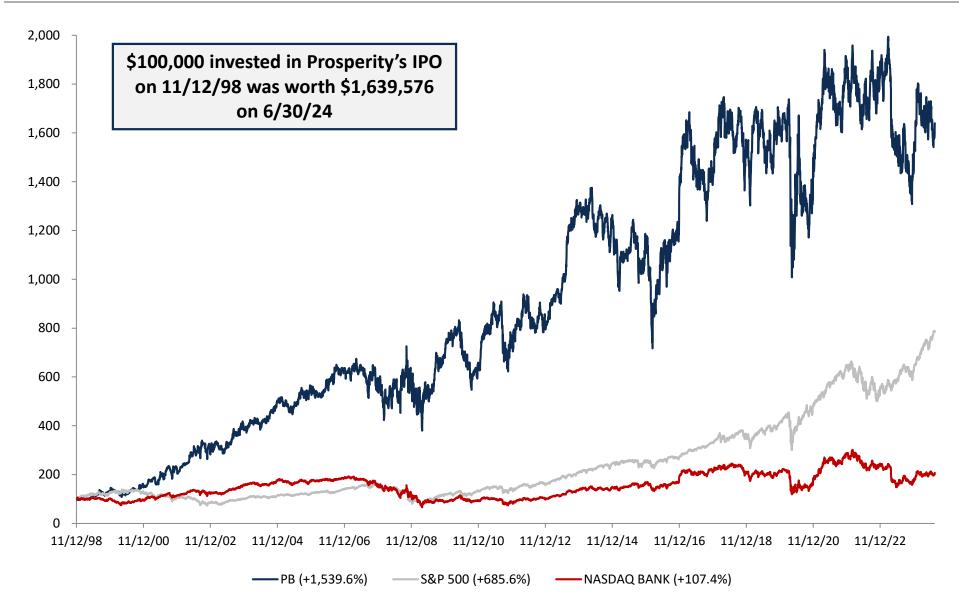


⁽¹⁾ Data for the three months ended June 30, 2024

⁽²⁾ Modified duration shown; Weighted average life equal to 4.9 years

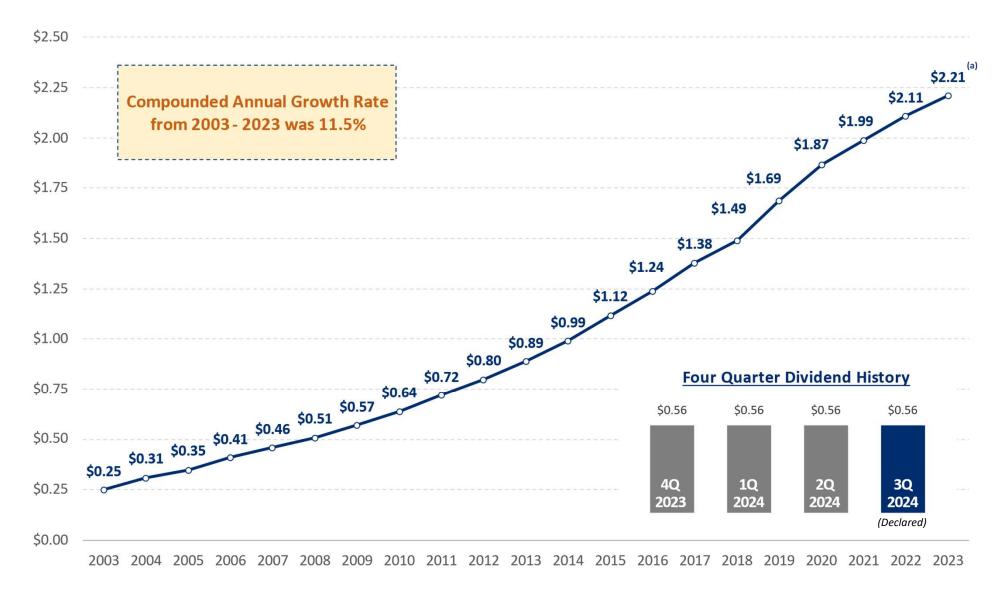
Total Return Performance

IPO (November 12, 1998) to June 30, 2024





Dividend History





Presence in Fast-Growing Markets

Positioned in Strong Markets



- Today, Texas is the 2nd largest state in the U.S by population with ~31 million residents
- Ranked #1 on the Fortune 500 list with 55 headquartered companies in 2023
- Texas was named the "2023 State of the Year" by Business Facilities magazine in recognition of the state's best-in-the-nation business climate, capital investment and job creation



- Oklahoma City and Tulsa MSAs comprise over 60% of the state's population
- Oklahoma is home to 6 of the 2023 Fortune 500 Companies
- Top 5 state for production of natural gas and production of crude oil
- Oklahoma is one of the top 10 producers of wheat in the United States

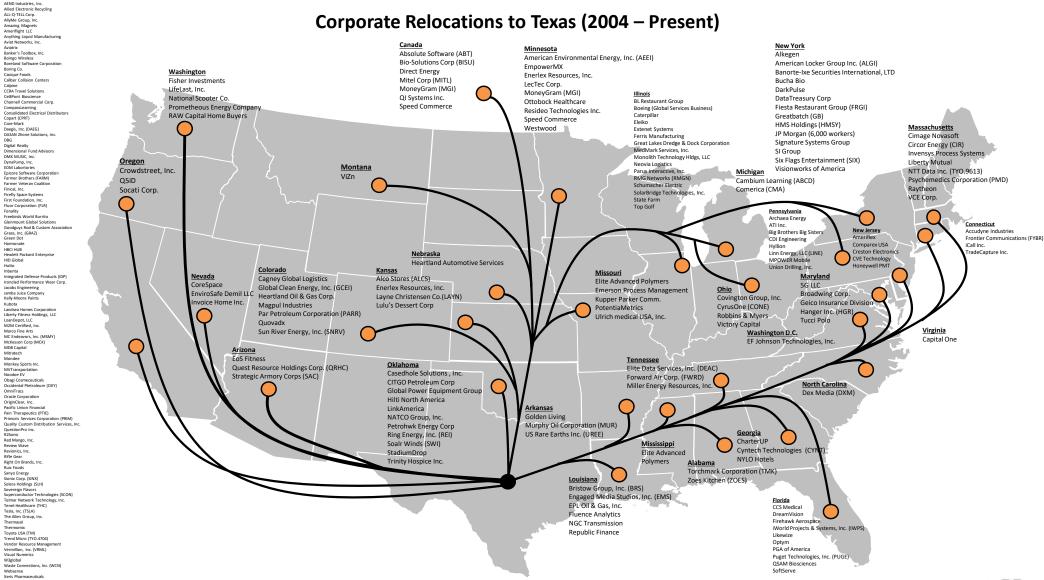
Top 10 Fastest Growing MSAs in the U.S. (1)

Metropolitan Statistical Area	Prosperity Presence	Prosperity Deposits (\$mm)	2024 - 2029 Proj. Population Growth (%)
Austin-Round Rock-Georgetown, TX	✓	\$1,309	9.0%
Raleigh-Cary, NC			7.3%
Jacksonville, FL			6.5%
Orlando-Kissimmee-Sanford, FL			6.3%
San Antonio-New Braunfels, TX	✓	\$541	6.3%
Charlotte-Concord-Gastonia, NC-SC			5.8%
Nashville-Davidson-Murfreesboro-Franklin, TN			5.6%
Tampa-St. Petersburg-Clearwater, FL			5.5%
Dallas-Fort Worth-Arlington, TX	✓	\$6,492	5.1%
Oklahoma City, OK	✓	\$646	5.0%

Presence in four of the fastest growing MSAs in the United States



Corporate Relocations to Texas



AEND Industries. Inc Allied Electronic Recycling

AllyMe Group, Inc. Amazing Magnets Ameriflight LLC Anything Liquid Manufact Aviat Networks, Inc. Aviatrix Banker's Toolbox, Inc. Boingo Wireless Boreland Software Corpor

Caliber Collision Centers

CCRA Travel Solutions
CelliPont Bioscience
Channell Commercial Corp.
CompassLearning
Consolidated Electrical Distributors
Copart (CPRT)

Calpine CCRA Travel Solutions

Core-Mark Daegis, Inc. (DAEG) DASAN Zhone Soluti

DASAN Zhone Solutions, In DBG DBG Digital Realty Dimensional Fund Advisors DMX MUSIC, Inc. DynaPump, Inc. EDM Labortories Epicore Software Corporati Farmer Brothers (FARM) Farmer Veteran Coslition Finical, Inc. Firefly Space Systems First Foundation, Inc. Fluor Corporation (FLR) Fonality

Fluor Corporation (FLR)
Fonality
Freebirds World Burrito
Glenmount Global Solutions
Goodguys Rod & Custom As
Graze, Inc. (GRAZ)
Green Dot
Harmonate
HBCI HUB
HWeltt Packard Enterprise
HID Global

Kubota
Landsea Homes Corporation
Liberty Fitness Holdings, LLC
LoanDepot, LLC
M2M Certified, Inc.
Marco Fine Arts
MC Endeavors, Inc. (MSMY)
McKesson Corp (MCK)
MDB Capital
Mitraterh

Mitratech Mondee Monkey Sports Inc.

Revionics, Inc. Rifle Gear Right On Brands, Inc.

The Allen Group, Inc.

Thermomix Toyota USA (TM)

Vendor Resource Managemen

W3global Waste Connections, Inc. (WCN)

Boring Co. Cacique Foods

Houston Market Highlights

Market Highlights

- The Houston MSA is the 5th largest in the United States by population with nearly 7.5 million residents
 - Population is expected to grow 4.9% from 2024 2029 (compared to the 2.4% projected growthfor the U.S.)
 - Median Household Income is expected to grow to \$80k by 2029 (compared to \$84k for the U.S.)
- Home to NASA's Johnson Space Center and Texas Medical Center the world's largest medical complex
- As of May 2024, total nonfarm employment has increased 2.4% YoY, compared to the 12 month statewide increase of 2.3% and the nationwide increase of 1.7%
 - Employment in Houston has increased 3.8% YoY in the government sector and 4.7% YoY in the education and health services sector, compared to 2.9% statewide, for both sectors
- Houston is an emerging hub of corporate activity
 - Houston ranked 3rd in corporate facility location and expansion projects in both 2022 and 2023, with over 760 projects in the last two years

Select Fortune 500 Companies





























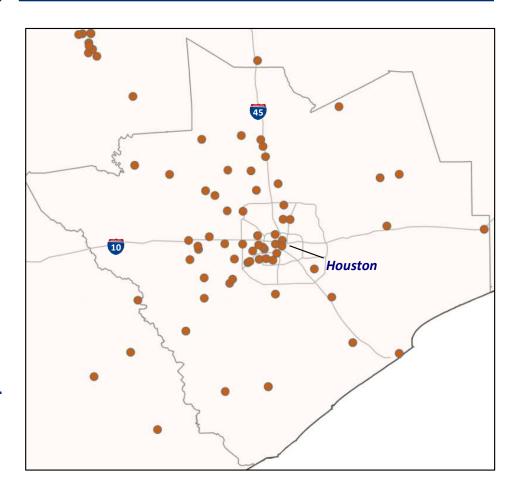






TARGA

Houston Franchise





Dallas/Ft. Worth Market Highlights

Market Highlights

- The Dallas/Ft. Worth MSA is the 4th largest in the United States by population with over 8.1 million residents
 - Population is expected to grow 5.1% from 2024 2029 (compared to the 2.4% projected growth for the U.S.)
 - Median Household Income is expected to grow to \$90k by 2029 (compared to \$84k for the U.S.)
- As of May 2024, total nonfarm employment has increased 1.6% YoY, compared to the 12 month statewide increase of 2.3% and the nationwide increase of 1.7%
 - Employment in Dallas/Ft. Worth has increased 3.6% YoY in the government sector and 1.8% YoY in financial activities sector, compared to 2.9% and 1.8% statewide, respectively
- · Dallas is home to America's fastest growing private companies
 - 188 Dallas-based companies were featured on the Inc. 5000 list of the fastest-growing privately owned companies in the United States, as compared to 125 in Austin and 95 in Houston

Select Fortune 500 Companies

























Kimberly-Clark FLUOR



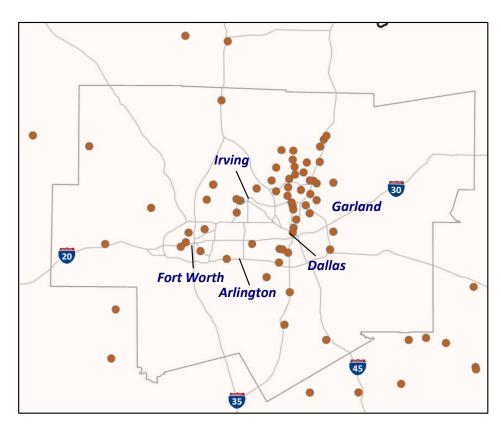








Dallas / Ft. Worth Franchise





Austin Market Highlights

Market Highlights

- The Austin MSA is the 26th largest in the United States by population with over 2.5 million residents
 - Population is expected to grow 9.0% from 2024 2029 (compared to the 2.4% projected growth for the U.S.)
 - Median Household Income is expected to grow to \$104k by 2029 (compared to \$84k for the U.S.)
- As of May 2024, total nonfarm employment has increased 2.1% YoY, compared to the 12 month statewide increase of 2.3% and the nationwide increase of 1.7%
 - Employment in Austin has increased 1.9% YoY in the financial activities sector and 3.6% YoY in education and health services sector, compared to 1.8% and 2.9% statewide, respectively
- Austin is a recent magnet for foreign investment
 - On average, 17 foreign companies have opened up new facilities in Austin each year since 2019

Select Fortune 500 Companies

















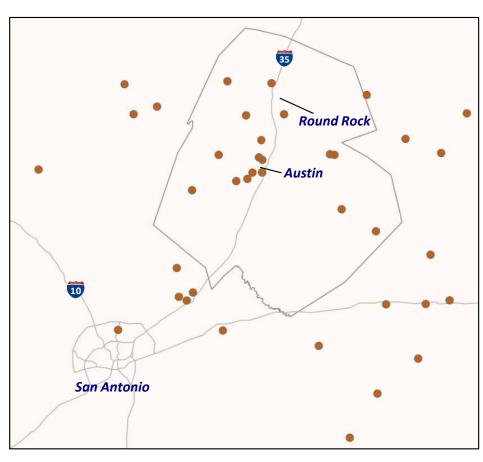








Austin Franchise





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Cullen Zalman

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