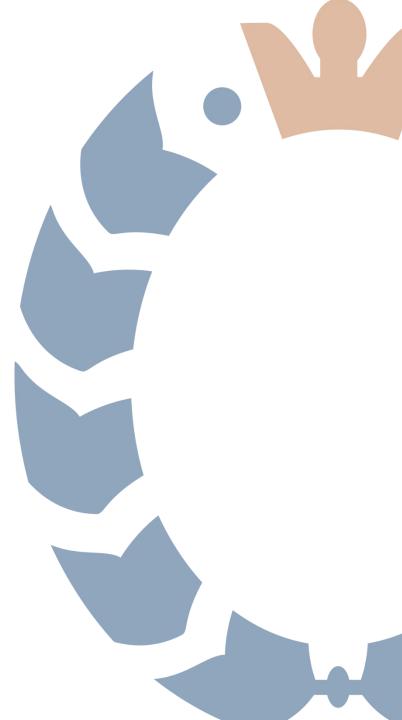


Investor Presentation

First Quarter 2021



"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 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. Forward-looking statements are typically, but not exclusively, identified by the use in the statements of words or phrases such as "aim." "anticipate." "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 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 loan 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 loan losses, 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 the proposed transaction, and statements about the assumptions underlying any such statement, as well as expectations regarding the effects of the COVID-19 pandemic on Prosperity's operating income, financial condition and cash flows. These forwardlooking statements are not guarantees of future performance and are subject to risks and uncertainties, many of which are outside of Prosperity's control, which may cause actual results to differ materially from those expressed or implied by the forward-looking statements. 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 LegacyTexas Financial Group ad LegacyTexas Bank (collectively "LegacyTexas"); 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, including the LegacyTexas 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; the effect, impact potential duration or other implications of the COVID-19 pandemic; and weather. These and various other factors are discussed in Prosperity Bancshares' Annual Report on Form 10-K for the year ended December 31, 2020 and other reports and statements Prosperity Bancshares has filed with the Securities and Exchange Commission ("SEC"). Copies of the SEC filings for Prosperity Bancshares may be downloaded from the Internet at no charge from http://www.prosperitybankusa.com.

2021 First Quarter Highlights

- Net income of \$133.3 million and earnings per share (diluted) of \$1.44 for three months ended March 31, 2021
- Assets of \$35.6 billion, total loans of \$19.6 billion, and deposits of \$28.8 billion at March 31, 2021
- Common equity tier 1 ratio of 14.60% and leverage ratio of 9.68% at March 31, 2021
- Nonperforming assets to average earning assets remain low at 0.15% or \$44.2 million for the first quarter
 2021
- Allowance for credit losses on loans and on off-balance sheet credit exposure of \$337.2 million
- Allowance for credit losses on loans to total loans, excluding Warehouse Purchase Program and SBA Paycheck Protection Program loans, of 1.89%
- Efficiency ratio of 41.3% for the first quarter 2021
- Declared cash dividend of \$0.49 for the second quarter 2021
- Prosperity Bank has been rated the 2nd best bank in America in 2021 by Forbes and has been rated in the Top 10 of Forbes America's Best Banks since 2010



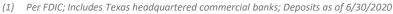
Strong Presence in Texas and Oklahoma

- A Texas-based financial holding company with \$35.6 billion in total assets
- Ranked #3 in deposit market share in Texas ⁽¹⁾
- Texas and Oklahoma continue to benefit from strong economies, and are home to 55 Fortune 500 headquartered companies
- Shareholder driven with 4.2% fully diluted insider ownership⁽²⁾
- Successful completion of 43 acquisitions (whole bank, branch and failed bank transactions)

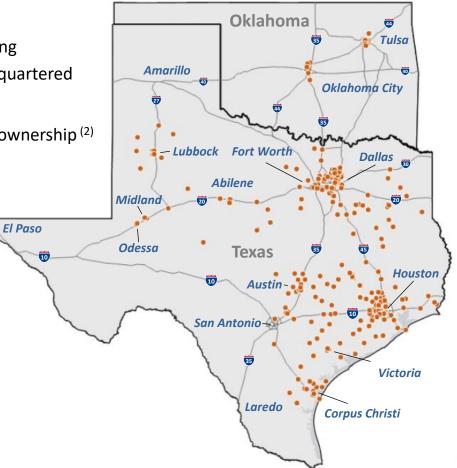
275 Full-Service Locations

- 16 in Bryan/College Station Area
- 6 in Central Oklahoma Area
- 29 in Central Texas Area
- 65 in Dallas/Fort Worth Area
- 22 in East Texas Area
- 65 in Houston Area
- 30 in South Texas Area
- 8 in Tulsa Area
- 34 in West Texas Area

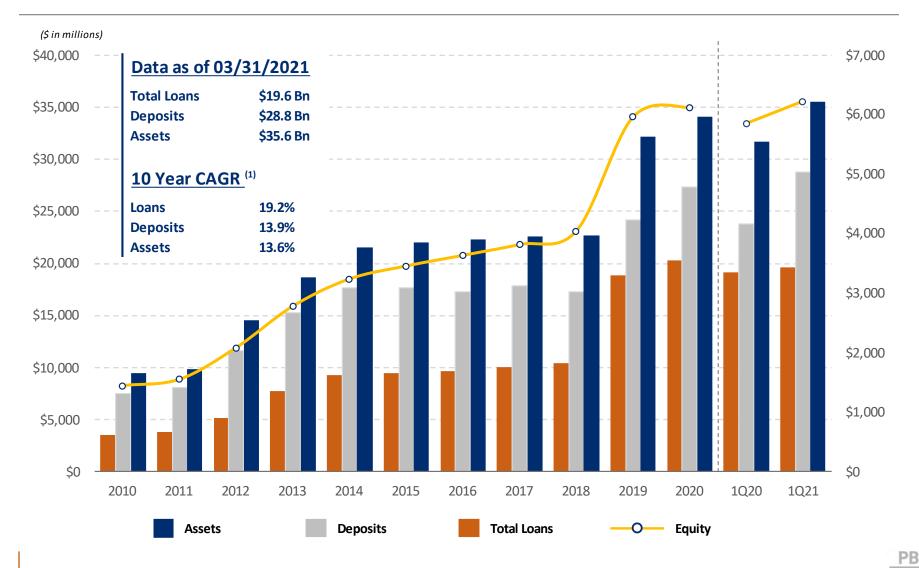




(2) Per proxy statement (Form DEF 14A) filed on 3/15/2021



Balance Sheet Summary



NYSE

Source: Company Documents

(1) Represents the Compound Annual Growth Rate from 12/31/2010 – 12/31/2020

Net Income



Net Income

Net Income (Excluding Purchase Accounting Adjustments)

Source: Company Documents

6

(1) Represents the Compound Annual Growth Rate of net income from 12/31/2010 – 12/31/2020

(2) Represents the Compound Annual Growth Rate of net income from 12/31/2015 – 12/31/2020

(3) Includes NOL tax benefit of \$20.145 million related to the CARES Act

Earnings Per Share



EPS

Core EPS (Excluding Purchase Accounting Adjustments)

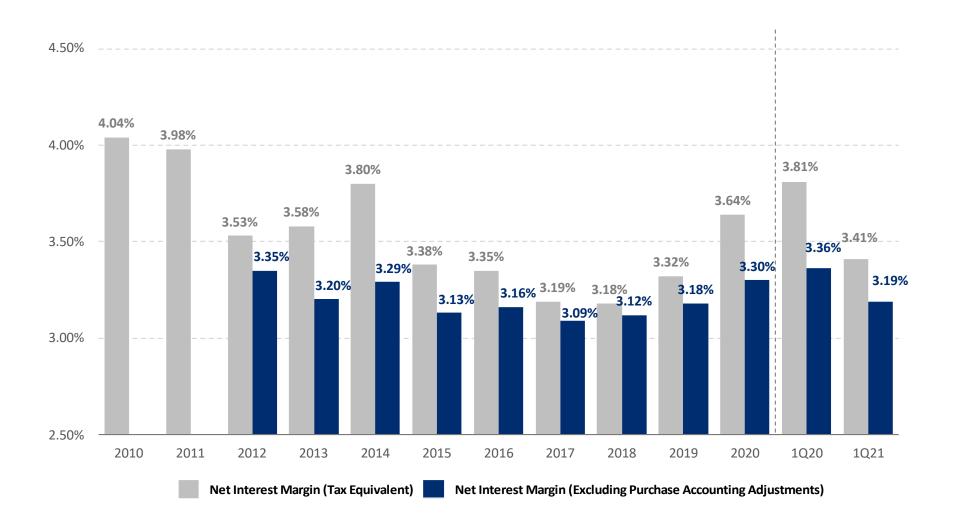
Source: Company Documents

(1) Represents the Compound Annual Growth Rate for EPS from 12/31/2010 – 12/31/2020

(2) Represents the Compound Annual Growth Rate for EPS from 12/31/2015 – 12/31/2020

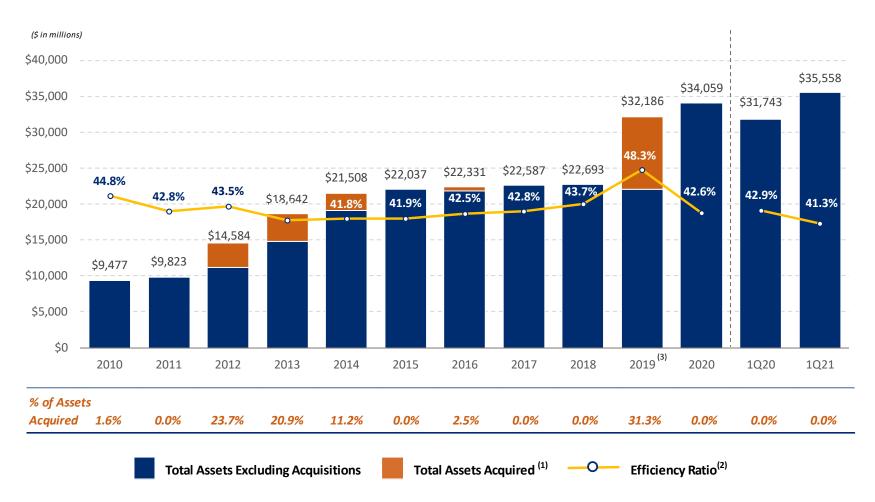
(3) Includes NOL tax benefit of \$20.145 million related to the CARES Act

Net Interest Margin





Acquisitions & Efficiency Ratio



Source: Company Documents

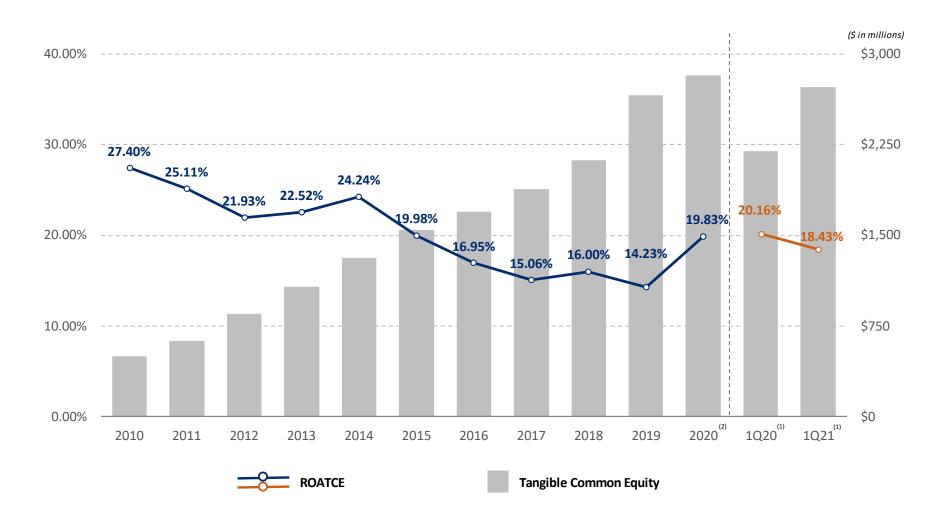
9

(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.

(3) Ratio impacted by the merger with LegacyTexas Financial

Return on Average Tangible Common Equity





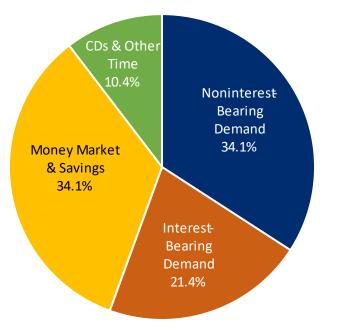
Return on Average Assets





Deposit Composition

As of March 31, 2021 (\$ in millions)



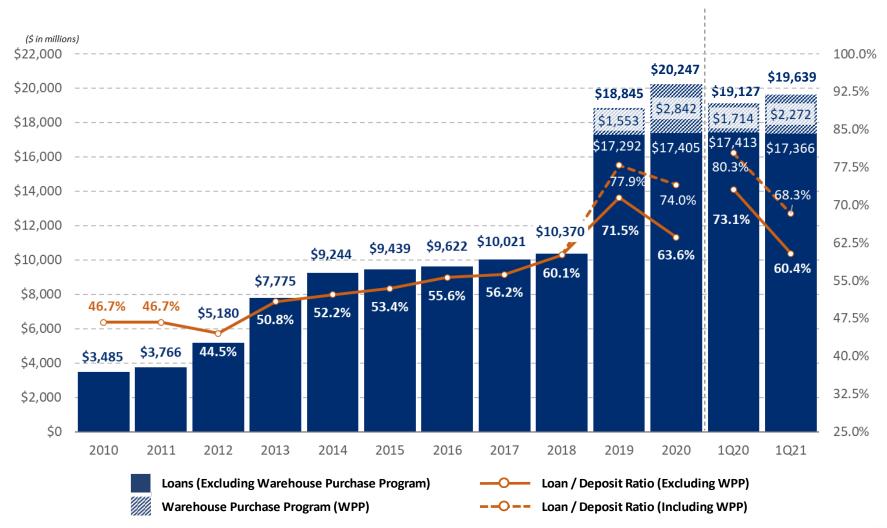
| | \$mm | Cost (%) ⁽¹⁾ |
|----------------------------|---------|-------------------------|
| Noninterest-Bearing Demand | \$9,820 | 0.00% |
| Interest-Bearing Demand | \$6,159 | 0.39% |
| Money Market & Savings | \$9,798 | 0.25% |
| CDs & Other Time | \$2,986 | 0.76% |

Total Deposits: \$28.8Bn

Total Cost of Deposits: 0.25%⁽¹⁾ Cost of Interest-Bearing Deposits: 0.38%⁽¹⁾



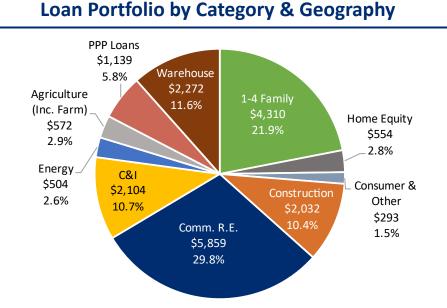
Loan Growth



| - | 12.5 | - | - | - |
|---|------|---|---|-----|
| | IIN. | | | 10. |

Loan Portfolio Overview

As of March 31, 2021 (\$ in millions)



| Loans By Area | <u>Amount</u> ⁽²⁾⁽⁴⁾ | <u>% of Total</u> |
|-------------------------|---------------------------------|-------------------|
| Bryan / College Station | \$678 | 3.9% |
| Central Oklahoma | \$654 | 3.8% |
| Central Texas | \$1,786 | 10.4% |
| Dallas / Ft. Worth | \$6,859 | 39.7% |
| East Texas | \$523 | 3.0% |
| Houston | \$3,769 | 21.8% |
| South Texas | \$1,357 | 7.9% |
| Tulsa | \$617 | 3.6% |
| West Texas | \$1,016 | 5.9% |

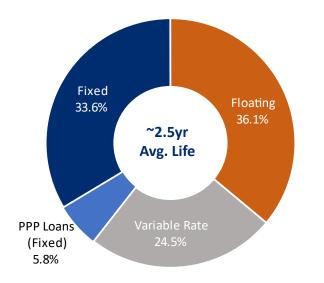
Source: Company Documents

(1) Data for the three months ended March 31, 2021

(2) Excludes \$108 million in loans assigned to the Corporate Group

(3) Core yield excludes purchase accounting adjustments
 (4) Excludes Warehouse Purchase Program (WPP) loans

Loans by Rate Structure



Total Loans: \$19.6Bn Loans HFI (Excl. WPP): \$17.4Bn

Yield on Total Loans: 4.80%⁽¹⁾ Yield on Loans HFI (Excl. WPP): 5.02%⁽¹⁾ Core Yield on Loans HFI (Excl. WPP): 4.64%⁽¹⁾⁽³⁾



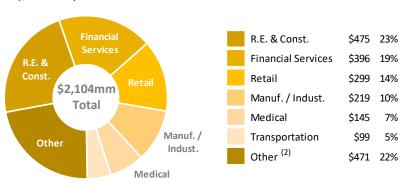
Loan Portfolio Detail

As of March 31, 2021 (\$ in millions)

(\$ in millions)

Portfolio Commentary

- 30% of commercial real estate is owner occupied
- CRE and construction loans conservatively underwritten to cost of collateral
- Hotel loans equal to ~2% of total loans
- Restaurant loans equal to ~1% of total loans



C&I Detail (Excluding Energy Loans)

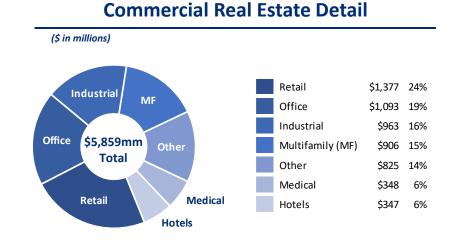
Transportation

Source: Company Documents

15

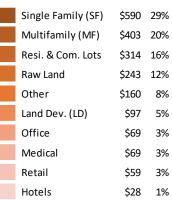
(1) Total includes a net unaccreted discount of (\$0.117) million, not shown in graph

(2) Includes State & Political loans





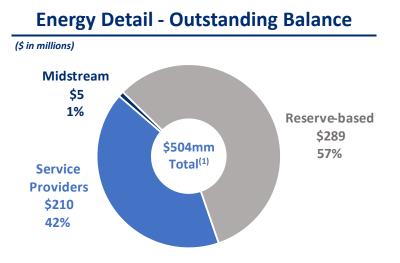




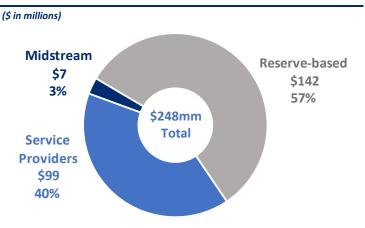
PB LISTED

Energy Portfolio Detail

As of March 31, 2021 (\$ in millions)



Energy Detail - Unfunded Commitments



Portfolio Commentary

- Total energy loan loss reserves of 6.0%, or \$30.4 million (excluding fair value marks)⁽¹⁾
- \$104.1 million, or 20.7% of energy loans, are subject to fair value marks of \$3.9 million in addition to general and specific loan loss reserves
- Portfolio company-led with 1 Shared National Credit (SNC)
- Portfolio focused on lending on proven producing reserves and therefore not dependent on ongoing development
- Acquired oil portfolio is 83.6% hedged during 2021 at a weighted average price of \$44.97 and 60.2% hedged during 2022 at a weighted average price of \$38.27
- Acquired gas portfolio is 63.4% hedged during 2021 at a weighted average price of \$2.23 and 48.5% hedged during 2022 at a weighted average price of \$2.56

Changes to Allowance for Credit Losses

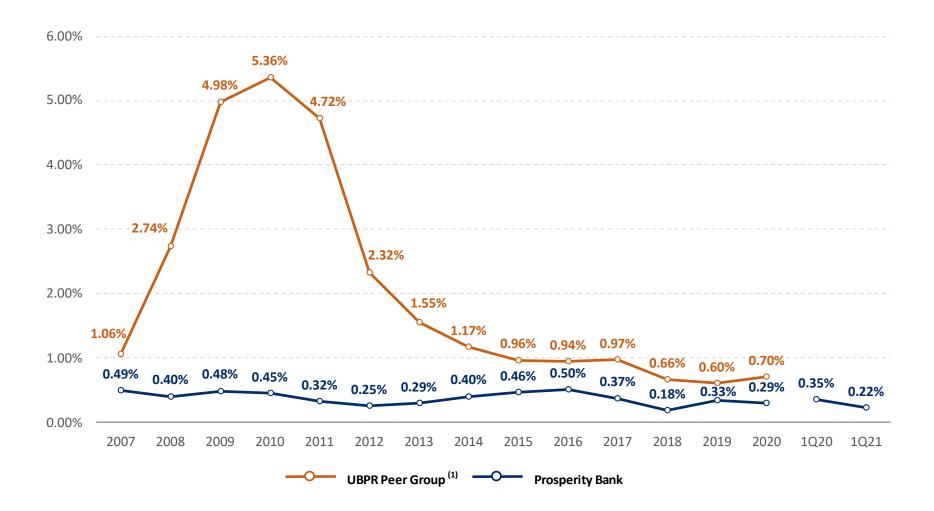
(\$ in millions)

| 1.92% ACL to Total Loans ⁽¹⁾⁽²⁾ | | | | | 1.89% ACL to Total Loans ⁽¹⁾⁽²⁾ |
|---|---|---|---|--|---|
| \$316.1 | (\$2.0) | | | \$12.8 | |
| Allowance for Credit Losses | (\$8.9) Net Charge-offs \$7.1 million related to PCD loans | (\$4.2) PCD recoveries \$4.2 million released related to loans without any charge offs during the first quarter | (\$8.6) Outstanding balances Historical loss rates Non-PCD specific reserves | Net increased reserve related to changes in macro-economic conditions and qualitative economic outlook | \$307.2 Allowance for Credit Losses |
| Allowance for Unfunded Commitments (Other Liabilities) | | | | | Allowance for Unfunded Commitments (Other Liabilities) \$29.9 |
| Q4 2020 ACL | Portfolio Changes | Portfolio Changes | Portfolio Changes | Environmental Outlook | Q1 2021 ACL |



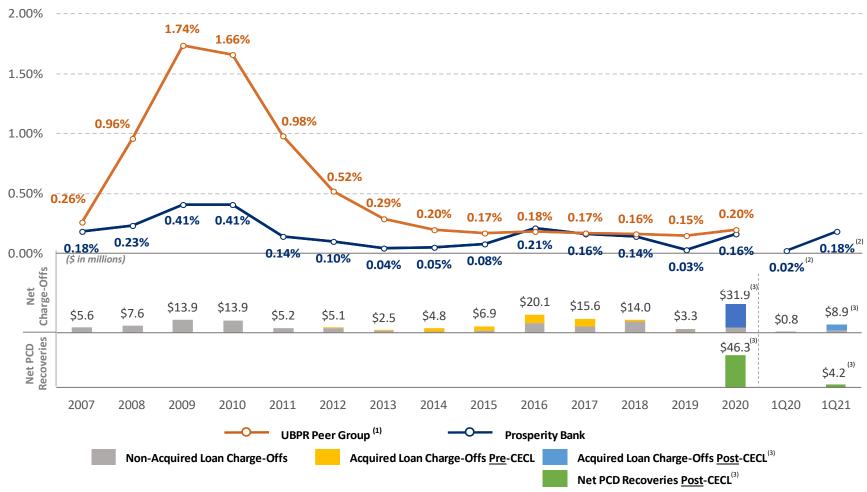
Excludes Warehouse Purchase Program (WPP) and SBA Paycheck Protection Program (PPP) loans
 Excludes allowance for credit losses on off-balance sheet credit exposures (allowance for unfunded commitments)

Asset Quality NPAs / Loans + OREO



Source: Company Documents & Uniform Bank Performance Report Note: NPAs include loans past due 90 days and still accruing (1) UBPR = Uniform Bank Performance Report; Peer Group 2 (94 banks) – Insured commercial banks having assets between \$10 billion and \$100 billion

Asset Quality Net Charge-Offs / Average Loans



Source: Company Documents & Uniform Bank Performance Report Note: NPAs include loans past due 90 days and still accruing

(1) UBPR = Uniform Bank Performance Report; Peer Group 2 (94 banks) – Insured commercial banks having assets between \$10 billion and \$100 billion

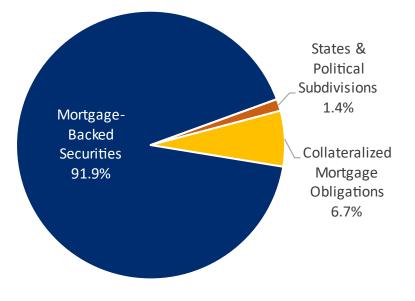
(2) Interim period net charge-off ratios shown on an annualized basis

(3) Reflects charge-offs and Purchased Credit Deteriorated (PCD) loan recoveries resolved within their respective credit marks on acquired PCD 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.



Securities Portfolio Detail

As of March 31, 2021 (\$ in millions)



| | <u> </u> |
|-------------------------------------|----------|
| Mortgage-Backed Securities | \$9,266 |
| Collateralized Mortgage Obligations | \$677 |
| States & Political Subdivisions | \$145 |

Total Securities: \$10.1Bn

Yield on Securities: 1.71%⁽¹⁾ Duration: ~3.6 Yrs.⁽²⁾ Avg. Yearly Cash Flow: ~\$2.0Bn

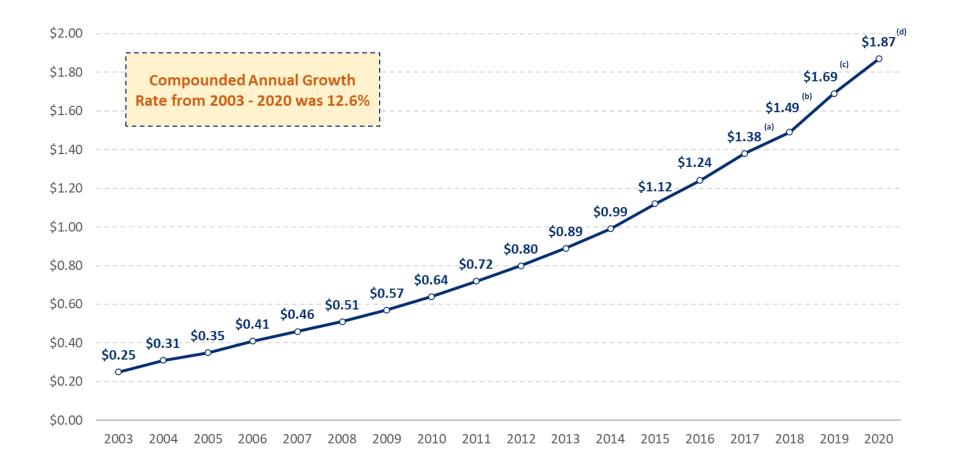
93.7% Held to Maturity 6.3% Available for Sale



\$mm

Source: Company Documents
(1) Data for the three months ended March 31, 2021
(2) Effective duration +300bps shown; Effective duration -300bps equal to (0.3) years; Weighted average life equal to 4.0 years

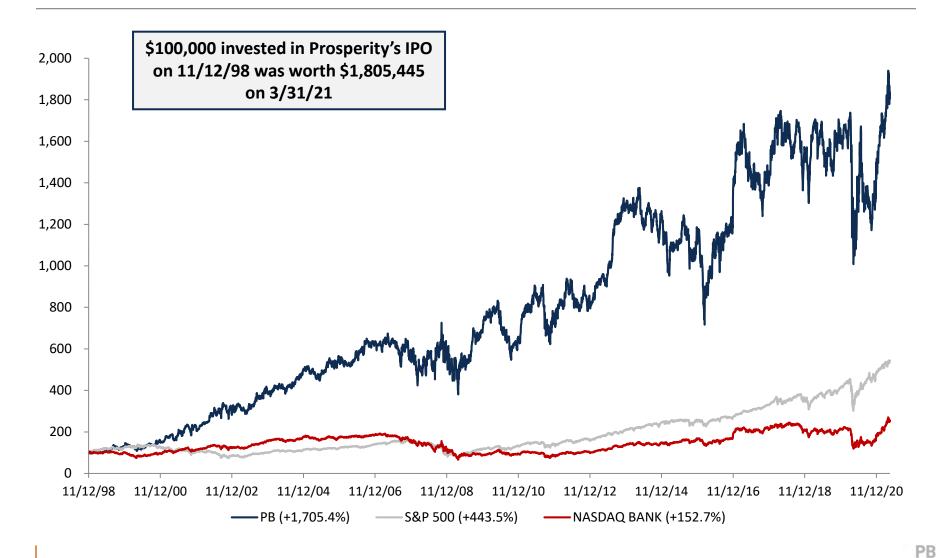
Dividend History





Total Return Performance

IPO (November 12, 1998) to March 31, 2021



Presence in Fast-Growing Markets

Positioned in Strong Markets



- Today, Texas is the 2nd largest state in the U.S., and largest in the 48 contiguous U.S. with over 29 million residents
- Ranked #3 on the Fortune 500 list with 50 headquartered companies in 2020
- Ranked #1 state for business for the 8th consecutive time by U.S. corporate executives in an International Economic Development Council survey
- Oklahoma City and Tulsa MSAs comprise over 50% of the state's population
- Oklahoma is home to five Fortune 500 Companies in 2020
- 4th biggest producer state for both natural gas and crude oil; 3rd for net electricity generation from wind
- Oklahoma is one of the top 5 producers of wheat in the United States

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

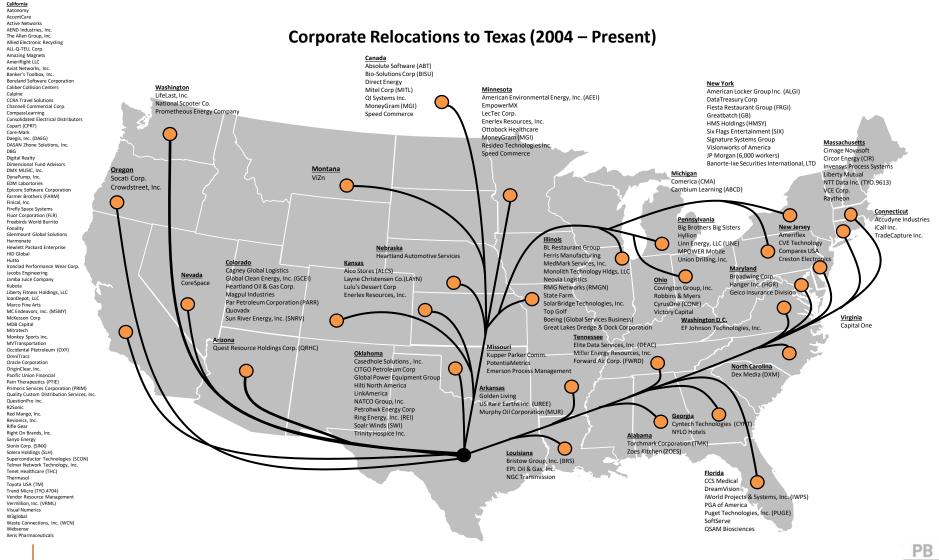
| | Metropolitan Statistical Area | Prosperity Presence | Prosperity Deposits (\$mm) | 2021 - 2026 Population Growth |
|----|--------------------------------------|------------------------|----------------------------------|-------------------------------------|
| 1 | Austin-Round Rock-Georgetown, TX | \checkmark | \$1,140 | 8.5% |
| 2 | San Antonio-New Braunfels, TX | \checkmark | \$436 | 7.6% |
| 3 | Houston-The Woodlands-Sugar Land, TX | \checkmark | \$5,635 | 7.6% |
| 4 | Dallas-Fort Worth-Arlington, TX | \checkmark | \$7,532 | 7.5% |
| 5 | Raleigh-Cary, NC | | | 7.3% |
| 6 | Orlando-Kissimmee-Sanford, FL | | | 7.1% |
| 7 | Denver-Aurora-Lakewood, CO | | | 7.0% |
| 8 | Phoenix-Mesa-Chandler, AZ | | | 6.9% |
| 9 | Las Vegas-Henderson-Paradise, NV | | | 6.8% |
| 10 | Seattle-Tacoma-Bellevue, WA | | | 6.8% |

- Presence in the top four fastest growing MSAs in the United States
- The South is home of 9 of the 15 fastest growing cities with populations greater than 50,000 in the United States



Source: S&P Global, Worldpopulationreview.com, Statista, U.S. Energy Information Administration, and Forbes. (1) Includes MSAs with greater than one million in total population. Deposit data as of 6/30/2020.

Corporate Relocations to Texas



Houston Market Highlights

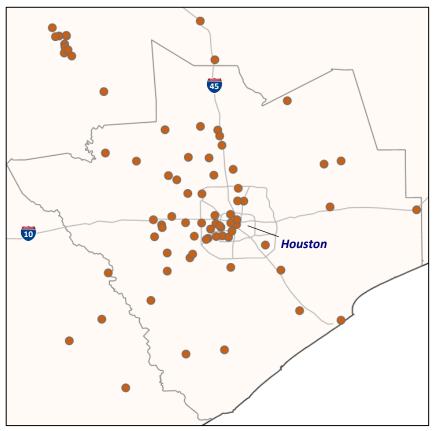
Market Highlights

- Houston MSA is the 5th largest in the United States by population with approximately 7.2 million residents
 - Population is expected to grow 7.6% from 2021 to 2026
- As of March 2021, total nonfarm employment fell by 5.5% YoY, compared to a 3.1% YoY decrease statewide and 4.5% decrease nationwide
 - 8 of the 12 largest MSAs by population experienced greater YoY decreases in nonfarm payrolls than Houston
- Headquarters to 22 Fortune 500 companies
 - Home to the Texas Medical Center the world's largest medical complex, and NASA's Johnson Space Center
 - Hewlett Packard Enterprise is moving its global headquarters to the Houston Area in 2021
 - The Port of Houston is ranked 1st in the U.S. in international waterborne tonnage and in total waterborne tonnage handled

Select Fortune 500 Companies



Houston Franchise



Sources: S&P Global, Houston.org, Bureau of Labor Statistics, Forbes.com, Port Houston, Greater Houston Partnership. References to Houston refer to the Houston – The Woodlands – Sugar Land metropolitan statistical area.

Dallas/Ft. Worth Market Highlights

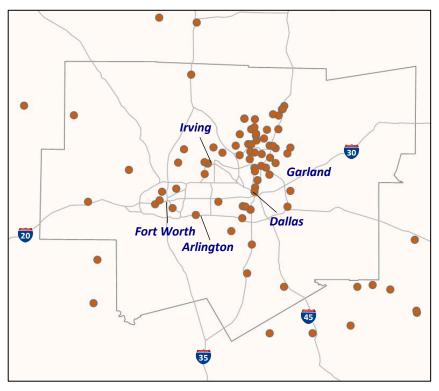
Market Highlights

- Dallas/Ft. Worth MSA is the 4th largest in the United States by population with over 7.7 million residents
 - Population is expected to grow 7.5% from 2021 to 2026
- As of March 2021, total nonfarm employment has only decreased 2.5% YoY, compared to the 12 month statewide decrease of 3.1% and the nationwide decrease of 4.5%
 - Among the 12 largest MSAs by population, Dallas-Fort Worth-Arlington had the second lowest YoY decrease in nonfarm payrolls
- As of March 2021, the financial activities / services industry saw a 0.8% YoY increase in employment – higher than all but one of the other top MSAs – compared to a 0.7% decrease nationwide.
- Headquarters to 23 Fortune 500 companies
 - Ranked the second best job center in the U.S. for technology professionals in 2020

Select Fortune 500 Companies



Dallas / Ft. Worth Franchise



Sources: Bureau of Labor Statistics, S&P Global, Dallasnews.com, Dallasforward.org, Computing Technology Industry Association (CompTIA), and Fortune.com. References to Dallas refer to the Dallas – Fort Worth – Arlington metropolitan statistical area.

Austin Market Highlights

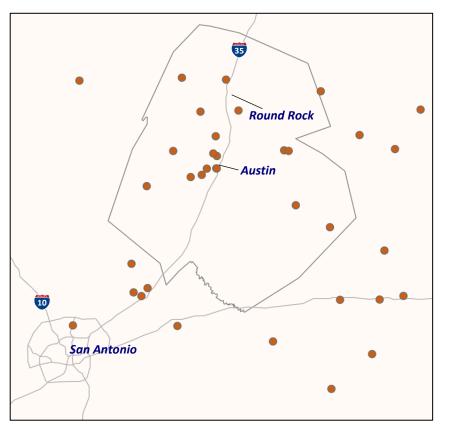
Market Highlights

- Ranked #3 place to live in the U.S. in 2020 by U.S. News and World Report, with expected population growth of 8.5% through 2026
- Ranked as the best city in the U.S. for technology professionals
 - IT job growth is expected to expand 15% over the next 5 years
 - Startups account for a larger share of businesses in Austin than in any other city in the South
- In March 2021, Austin/Round Rock reported a 1.3% year-over-year decrease in nonfarm employment, compared to a 3.1% decrease statewide and 4.5% decrease nationwide
 - Unemployment rate is 5.6%, compared to 6.9% statewide
 - Employment in the financial activities / services sector has increased 2.1% YoY
- 25 companies have begun operations and 25 companies have expanded existing operations in the Austin-Round Rock MSA in 2021

Select Fortune 500 Companies



Austin Franchise Franchise





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