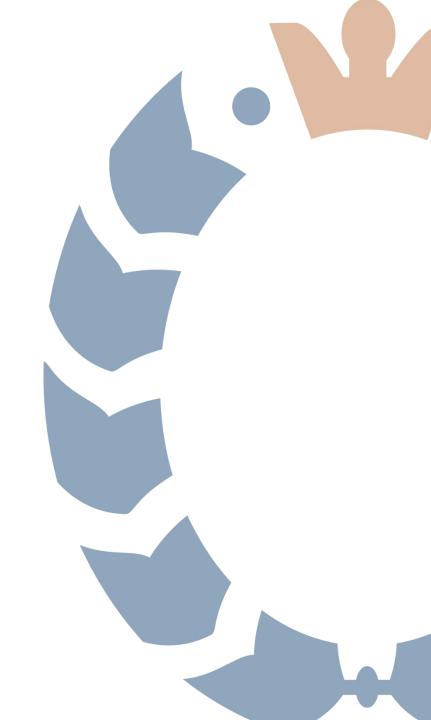


Investor Presentation

Third Quarter 2020 ——



"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 release 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. 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 the Bank's operating income, financial condition and cash flows. These forward-looking 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; 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, 2019, Quarterly Report on Form 10-Q for the period ended June 30, 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 PB http://www.prosperitybankusa.com.

2020 Third Quarter Highlights

- Net income of \$130.1 million and earnings per share (diluted) of \$1.40 for three months ended
 September 30, 2020
- Assets of \$33.2 billion, total loans of \$20.8 billion, and deposits of \$26.5 billion at September 30,
 2020
- Common equity tier 1 ratio of 13.17% and leverage ratio of 9.57% at September 30, 2020
- Nonperforming assets to average earning assets remain low at 0.24% or \$69.5 million for the third quarter 2020
- Allowance for credit losses on loans and on off-balance sheet credit exposure of \$353.6 million
- Allowance for credit losses to total loans, excluding Warehouse Purchase Program and SBA Paycheck Protection Program loans, of 1.94%
- Efficiency ratio of 40.2% for the third quarter 2020
- Increase cash dividend 6.5% to \$0.49 for the fourth quarter 2020

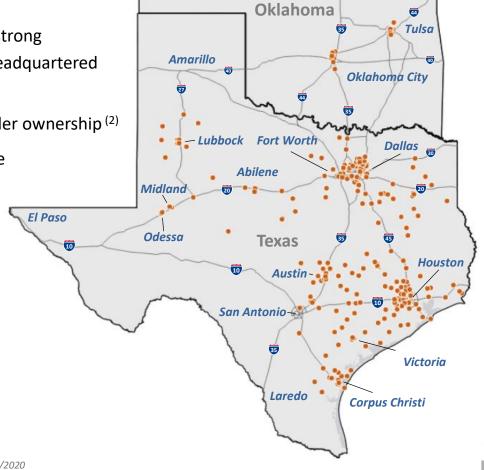


Strong Presence in Texas and Oklahoma

- A Texas-based financial holding company with \$33.2 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 4.0% fully diluted insider ownership (2)
- Successful completion of 43 acquisitions (whole bank, branch and failed bank transactions)

275 Full-Service Locations

- 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

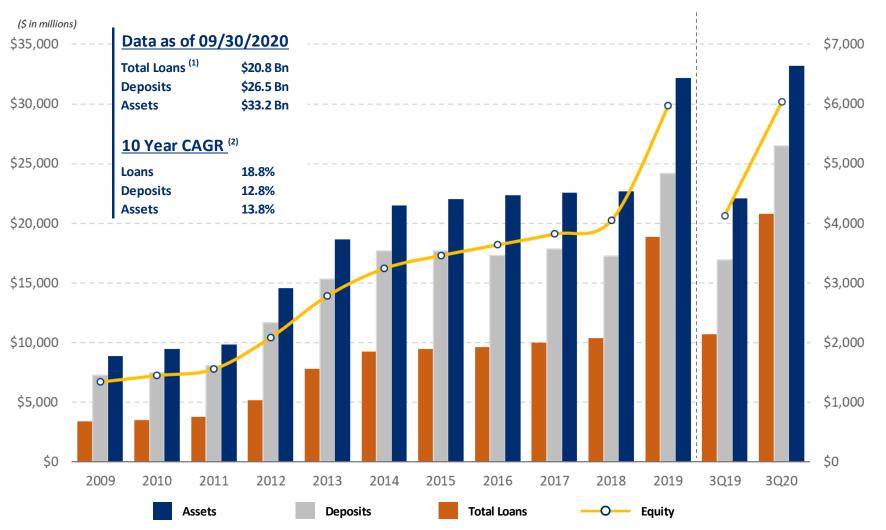


Source: SNL Financial

(2) Per proxy statement (Form DEF 14A) filed on 3/14/2020

⁽¹⁾ Per FDIC; Includes Texas headquartered commercial banks; Deposits as of 6/30/2020

Balance Sheet Summary



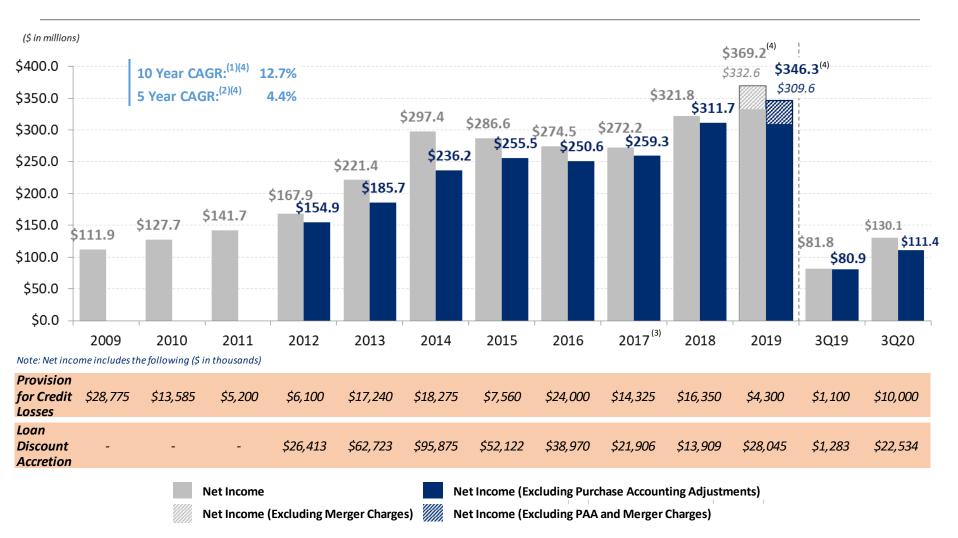


⁽¹⁾ Total loans include Warehouse Purchase Program (WPP) loans



Represents the Compound Annual Growth Rate from 12/31/2009 – 12/31/2019

Net Income



Source: Company Documents

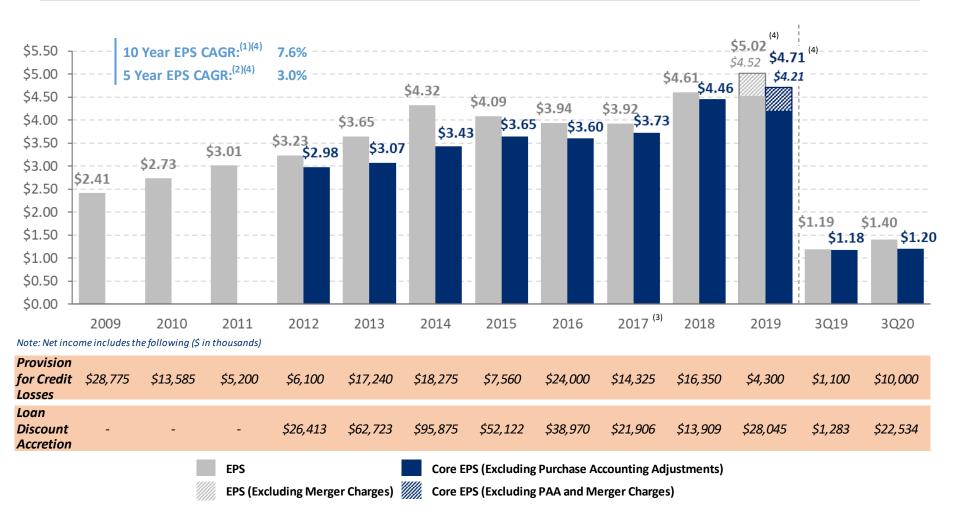
⁽¹⁾ Represents the Compound Annual Growth Rate of net income from 12/31/2009 – 12/31/2019

⁽²⁾ Represents the Compound Annual Growth Rate of net income from 12/31/2014 – 12/31/2019

⁽³⁾ Net income includes a one-time non-cash charge of \$1.431 million related to the "Tax Cuts and Jobs Act" enacted on December 22, 2017

⁽⁴⁾ Excludes after-tax merger related charges of (\$36.658) million for the fourth quarter 2019

Earnings Per Share



Source: Company Documents



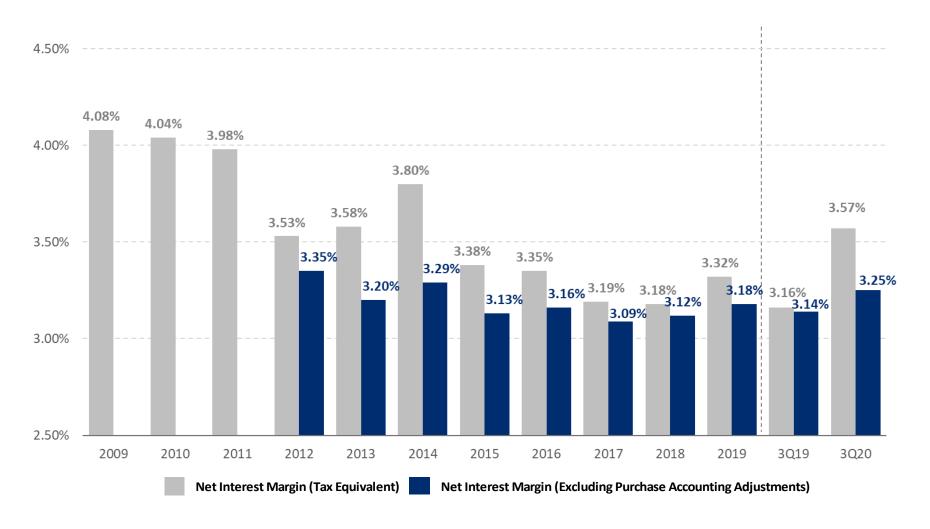
⁽¹⁾ Represents the Compound Annual Growth Rate for EPS from 12/31/2009 – 12/31/2019

⁽²⁾ Represents the Compound Annual Growth Rate for EPS from 12/31/2014 – 12/31/2019

³⁾ Net income includes a one-time non-cash charge of \$0.02 per diluted share related to the "Tax Cuts and Jobs Act" enacted on December 22, 2017

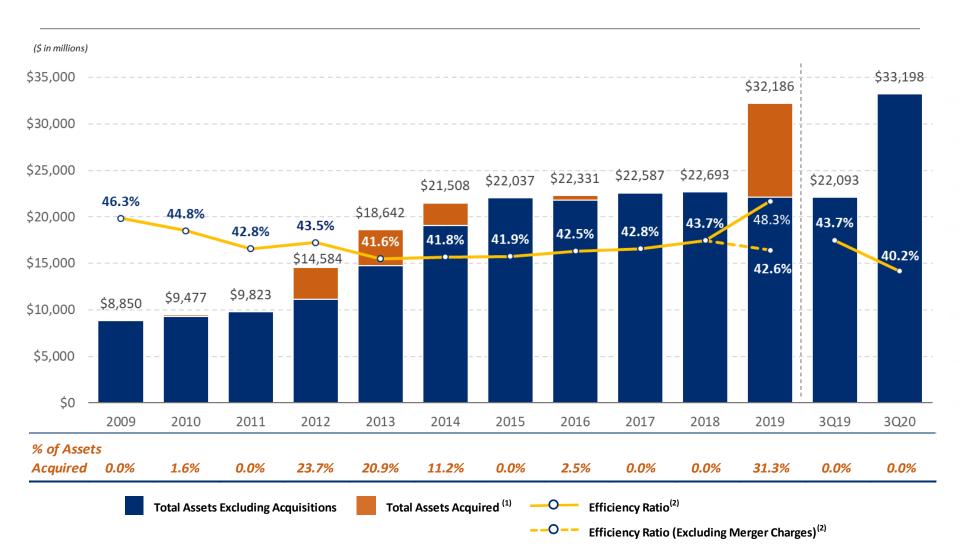
⁴⁾ Excludes after-tax merger related charges of (\$0.50) per share for the year ended 2019

Net Interest Margin





Acquisitions & Efficiency Ratio



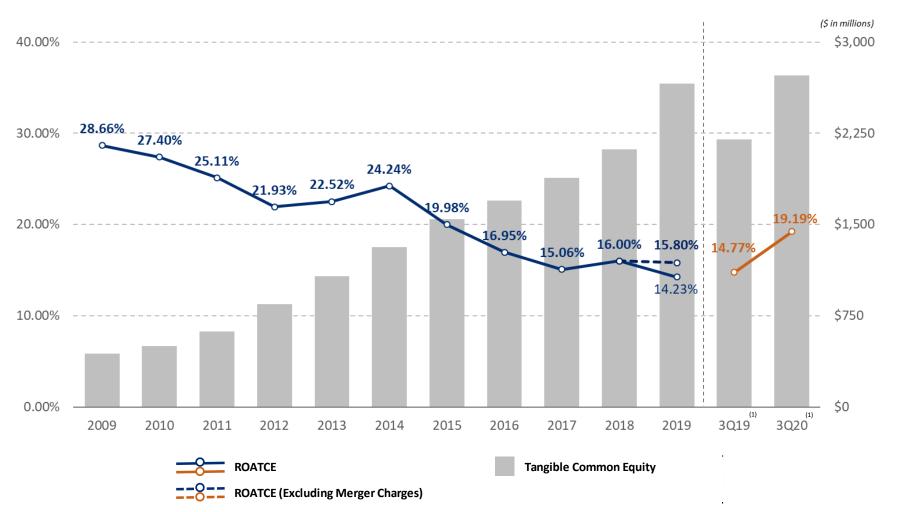
Source: Company Documents



⁽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





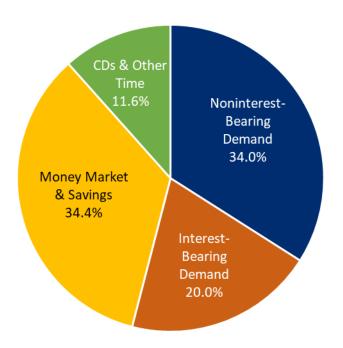
Return on Average Assets





Deposit Composition

As of September 30, 2020 (\$ in millions)



	\$mm	Cost (%) ⁽¹⁾
Noninterest-Bearing Demand	\$8,998	0.00%
Interest-Bearing Demand	\$5,298	0.38%
Money Market & Savings	\$9,097	0.35%
CDs & Other Time	\$3,066	1.23%

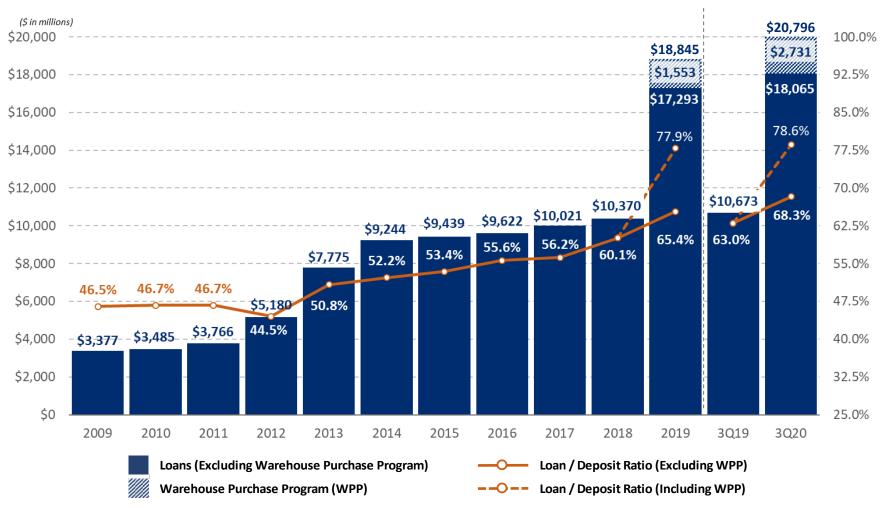
Total Deposits: \$26.5Bn

Total Cost of Deposits: 0.34%⁽¹⁾

Cost of Interest-Bearing Deposits: 0.52%⁽¹⁾



Loan Growth

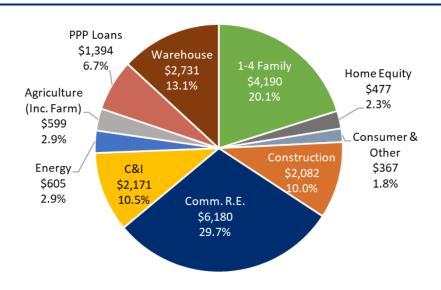




Loan Portfolio Overview

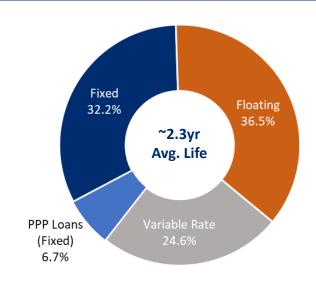
As of September 30, 2020 (\$ in millions)

Loan Portfolio by Category & Geography



Loans By Area (4)	<u>Amount</u> (2)(4)	% of Total
Bryan / College Station	\$690	3.8%
Central Oklahoma	\$683	3.8%
Central Texas	\$1,662	9.2%
Dallas / Ft. Worth	\$7,736	43.0%
East Texas	\$506	2.8%
Houston	\$3,698	20.6%
South Texas	\$1,373	7.6%
Tulsa	\$631	3.5%
West Texas	\$1,029	5.7%

Loans by Rate Structure



Total Loans: \$20.8Bn Loans HFI (Excl. WPP): \$18.0Bn

Yield on Total Loans: 4.72%⁽¹⁾
Yield on Loans HFI (Excl. WPP): 4.91%⁽¹⁾⁽⁴⁾
Core Yield on Loans HFI (Excl. WPP): 4.42%⁽¹⁾⁽³⁾⁽⁴⁾

Source: Company Documents

- (1) Data for the three months ended September 30, 2020
- Excludes \$57 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 September 30, 2020 (\$ in millions)

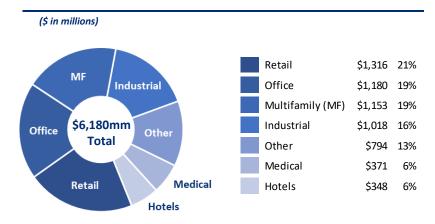
Portfolio Commentary

- 29% 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

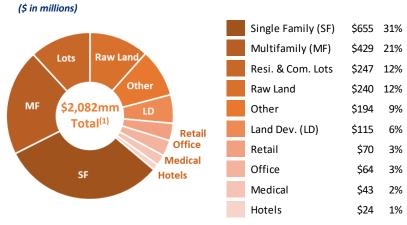
C&I Detail (Excluding Energy Loans)



Commercial Real Estate Detail



Construction Detail



Source: Company Documents

⁽¹⁾ Total includes a net unaccreted discount of (\$0.499) million, not shown in graph

⁽²⁾ Includes State & Political loans

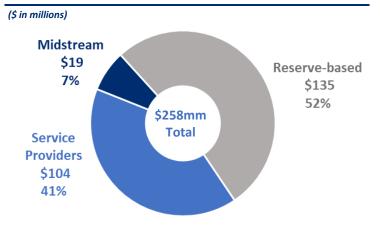
Energy Portfolio Detail

As of September 30, 2020 (\$ in millions)

Energy Detail - Outstanding Balance



Energy Detail - Unfunded Commitments



Portfolio Commentary

- Total energy loan loss reserves of 7.1%, or \$42.7 million (excluding fair value marks)(1)
- \$265.8 million, or 44.0% of energy loans are subject to fair value marks of \$10.4 million in addition to general and specific loan loss reserves
- Portfolio largely company-led with only 2 Shared National Credits (SNCs), with an outstanding balance of \$42.1 million
- Portfolio focused on lending on proven producing reserves and therefore not dependent on ongoing development
- Acquired oil portfolio is 85.4% hedged during 2020 at a weighted average price of \$50.09 and 64.6% hedged during 2021 at a weighted average price of \$45.14
- Acquired gas portfolio is 55.8% hedged during 2020 at a weighted average price of \$2.47 and 45.9% hedged during 2021 at a weighted average price of \$2.22



Changes to Allowance for Credit Losses

(\$ in millions)

1.90% ACL to Total 1.94% ACL to Total Loans (1)(2) Loans (1)(2) \$27.6 \$324.2 \$323.6 (\$10.6)(\$13.2)Allowance for (\$4.4)Allowance for Net Charge-offs **Credit Losses Credit Losses** Net increased reserve PCD recoveries \$8.6 million related related to changes in to PCD loans Outstanding \$7.1 million excess macro-economic resolved within their balances PCD release related conditions and credit marks to loans charged off Historical loss rates qualitative economic during the third outlook quarter \$6.1 million released related to loans without any charge offs during the third quarter Allowance for Allowance for Unfunded Unfunded Commitments **Commitments** (Other Liabilities) (Other Liabilities) \$29.9 \$29.9

Portfolio Changes

Increase for Environmental

Outlook



Q3 2020 ACL

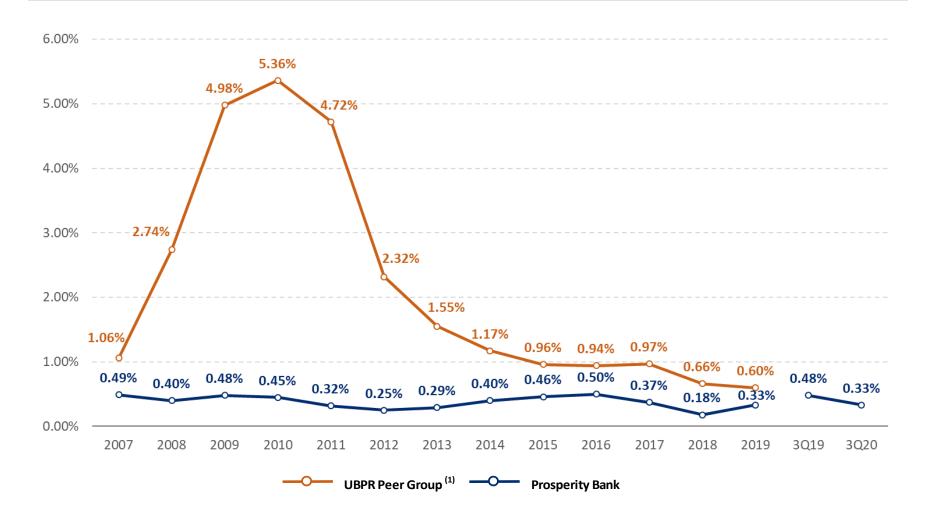
Portfolio Changes

Portfolio Changes

Q2 2020 ACL

Asset Quality

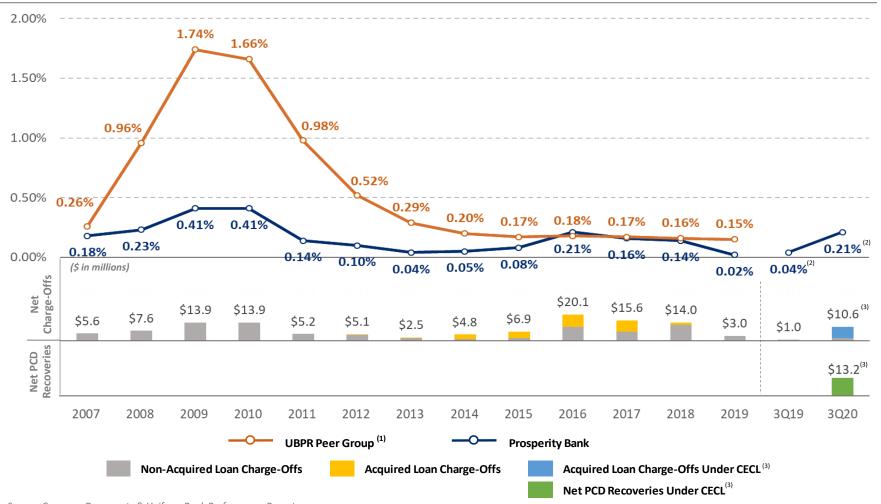
NPAs / Loans + OREO





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

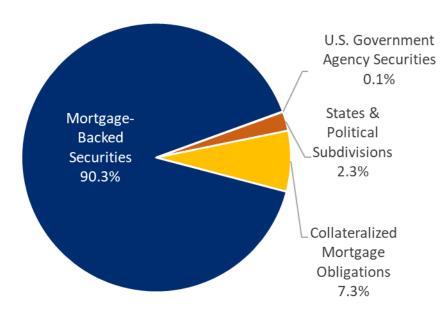
2) Interim period net charge-off ratios shown on an annualized basis



Reflects charge-offs and Purchased Credit Deteriorated (PDD) 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 September 30, 2020 (\$ in millions)



93.8% Held to Maturity 6.2% Available for Sale

	\$mm
Mortgage-Backed Securities	\$6,716
Collateralized Mortgage Obligations	\$542
States & Political Subdivisions	\$170
U.S. Government Agency Securities	\$4

Total Securities: \$7.4Bn

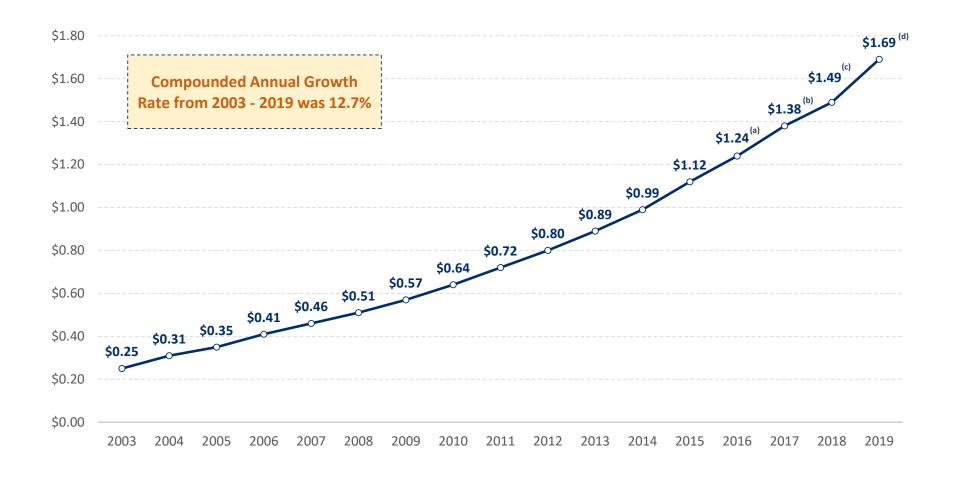
Yield on Securities: 1.99%⁽¹⁾
Duration: ~2.5 Yrs.⁽²⁾

DUIULIOII. 2.5 113.(2)

Avg. Yearly Cash Flow: ~\$2.2Bn



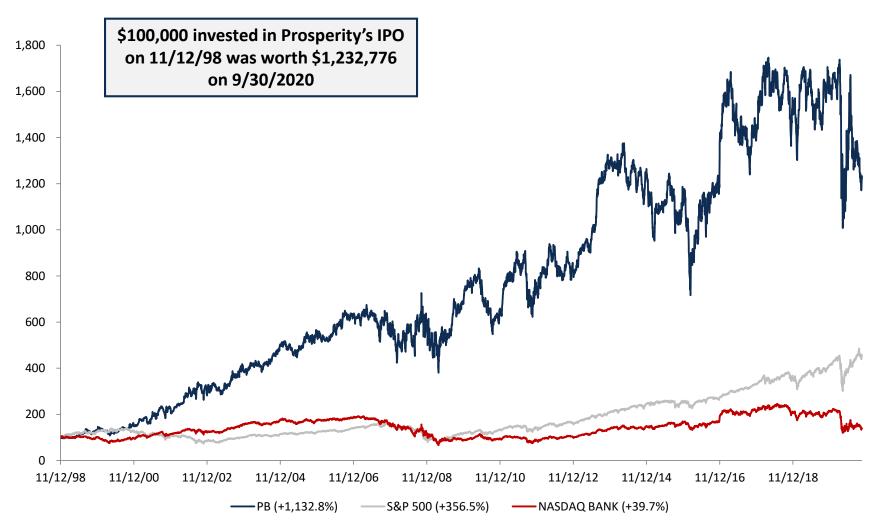
Dividend History





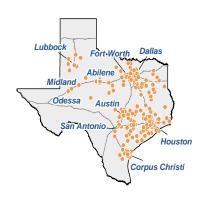
Total Return Performance

IPO (November 12, 1998) to September 30, 2020



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 2nd by Forbes in "Best States for Business", including 1st in current economic growth prospects, 3rd in business costs, and 4th in economic climate as of December 2019



- Oklahoma City and Tulsa MSAs comprise over 50% of the state's population
- Oklahoma is home to five Fortune 500 Companies in 2020
- 3rd biggest producer state for natural gas and 5th biggest for crude oil
- Oklahoma is one of the top five producers of wheat and Natural gas in the United States

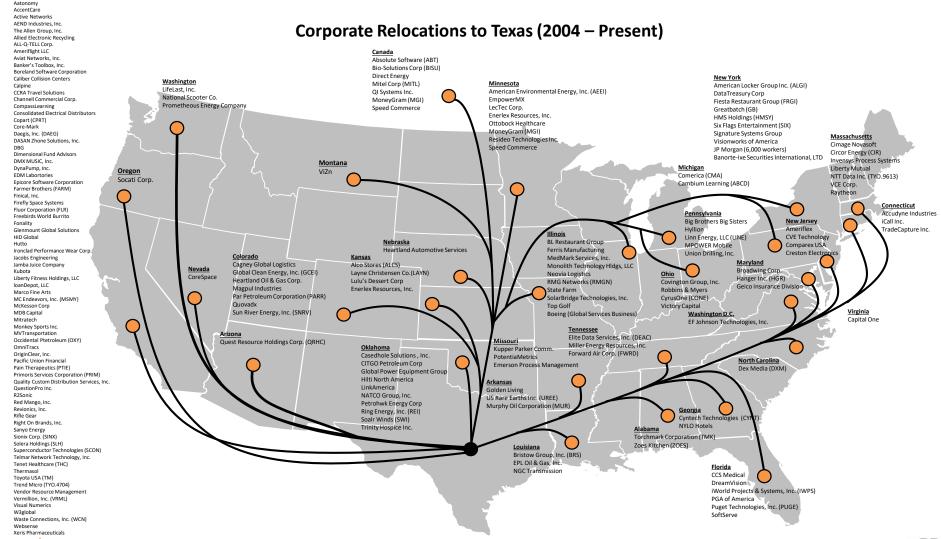
Top 10 Fastest Growing MSAs in the U.S. (1)

	Metropolitan Statistical Area	Prosperity Presence	Prosperity Deposits (\$mm)	2021 - 2026 Population Growth
1	Austin-Round Rock-Georgetown, TX	✓	\$1,140	8.5%
	San Antonio-New Braunfels, TX	✓	\$436	7.6%
3	Houston-The Woodlands-Sugar Land, TX	✓	\$5,635	7.6%
4	Dallas-Fort Worth-Arlington, TX	✓	\$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



Corporate Relocations to Texas



California

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
- In July 2020, total nonfarm employment dropped 6.0% YoY compared to the national employment drop of 7.7%
 - Among the 12 largest MSA's, 8 areas had greater percentage losses than Houston
- Houston's diversification in industries including manufacturing, aerospace, biotechnology, digital technology, and transportation / logistics provides one of the best business climates in the nation
 - Home to the Texas Medical Center the world's largest medical complex, and NASA's Johnson Space Center where the Mission Control Center is located
 - The Port of Houston is 1st in the U.S. in international waterborne tonnage handled and 2nd in total cargo tonnage handled

Select Fortune 500 Companies

































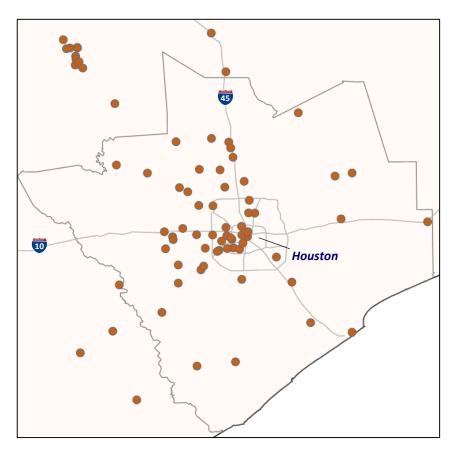








Houston Franchise



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
- In August 2020, total nonfarm employment only decreased 3.7% YoY, compared to the statewide decrease of 4.8% YoY and the nationwide decrease of 7.0% YoY
 - Among the 11 largest MSA's excl. Dallas/Ft. Worth, 10 regions had greater percentage losses in nonfarm payrolls than Dallas/Ft. Worth
- In August 2020, the financial activities / services industry saw a 3.1% YoY increase in employment – higher than any of the other top MSAs – compared to a 1.4% decrease nationwide.
- Headquarters to 23 Fortune 500 companies
- The Dallas Economic Recovery Task Force announced a new initiative, Dallas Forward, to assist small and medium-sized businesses with COVID-19 recovery

Select Fortune 500 Companies































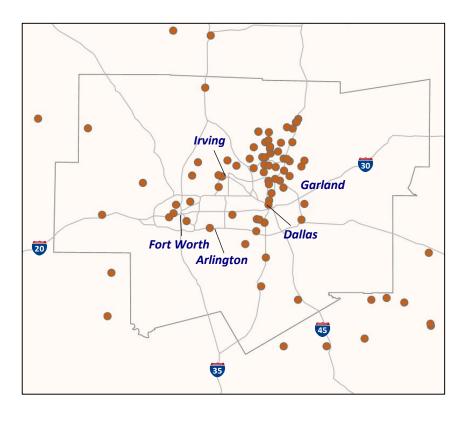








Dallas / Ft. Worth Franchise





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 3rd best city for technology professionals to work
 - IT job growth is expected to expand 15% over the next 5 years
- In August 2020, Austin/Round Rock reported a 2.8% decrease in nonfarm employment, compared to statewide decrease of 4.8% and nationwide decrease of 7.0%
 - Unemployment rate is 5.5%, the lowest since the pandemic began
 - Employment in the financial activities / services sector has increased
 12.4% YoY
- Since the end of June 2020, 21 companies have announced expansions to existing operations and 12 companies have begun operations in the Austin-Round Rock MSA
- Relative to other major Texas cities, Austin has the highest percentage of job postings with a "work from home" option

Select Fortune 500 Companies















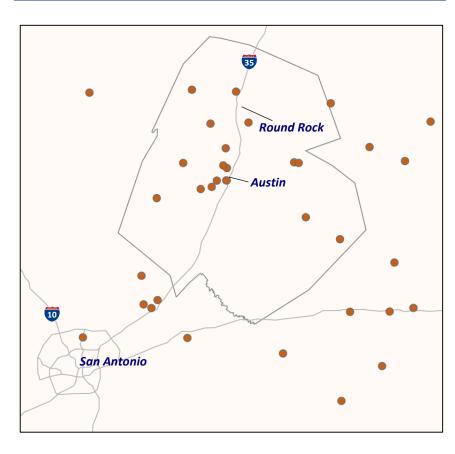








Austin Franchise Franchise





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