“Safe Harbor” Statement

Under the Private Securities Litigation Reform Act of 1995

Statements contained in this presentation which are not historical facts and which pertain to future operating results of Prosperity Bancshares, Inc. ® and its subsidiaries constitute “forward-looking statements” within the meaning of the Private Securities Litigation Reform Act of 1995. These forward-looking statements involve significant risks and uncertainties. Actual results may differ materially from the results discussed in these forward-looking statements. Factors that might cause such a difference include, but are not limited to, those discussed in the company’s periodic reports and filings with the SEC. Copies of the SEC filings for Prosperity Bancshares, Inc. ® may be downloaded from the Internet at no charge from www.prosperitybankusa.com.
• Net income of $81.597 million and earnings per share (diluted) of $1.17 for three months ended June 30, 2018

• Assets of $22.571 billion, loans of $10.147 billion, and deposits of $16.979 billion at June 30, 2018

• Loans increased 5.4% (annualized) in the second quarter 2018

• Common equity tier 1 ratio was 15.65% and leverage ratio was 9.68% at June 30, 2018

• Sound asset quality with annualized net charge offs/average loans of 0.10% for the quarter ended June 30, 2018

• Nonperforming assets to average earning assets remain low at 0.16% or $31.585 million for the second quarter 2018

• Efficiency ratio of 43.95% for the second quarter 2018

• Declared cash dividend of $0.36 per share for the third quarter 2018

Source: Company Documents
Strong Presence in Texas and Oklahoma

- A Texas-based financial holding company with approximately $22.571 billion in total assets
- Ranked #3 in deposit market share in Texas (1)
- Shareholder driven with 5.1% fully diluted insider ownership (2)
- Successful integration of 42 acquisitions (whole bank, branch and failed bank transactions)

242 Full Service Locations

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

Source: SNL Financial
(1) Per FDIC; Includes Texas headquartered banks; Deposits as of 6/30/2017
(2) Per proxy statement (Form DEF 14A) filed on 3/13/2018
Balance Sheet Summary

Data as of 06/30/2018

Loans $10.147 Bn
Deposits $16.979 Bn
Assets $22.571 Bn

10 Year CAGR (1)

Loans 12.3%
Deposits 13.6%
Assets 13.5%

Source: Company Documents
(1) Represents the Compound Annual Growth Rate from 12/31/2007 – 12/31/2017
Net Income

$84.2 $84.5 $111.9 $141.7 $167.9 $185.7 $214.4 $221.4 $236.2 $237.5 $250.6 $259.3 $272.2 $286.6 $274.5 $272.2

Note: Net income includes the following ($ in thousands)

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>$760</td>
<td>$9,867</td>
<td>$28,775</td>
<td>$13,585</td>
<td>$5,200</td>
<td>$6,100</td>
<td>$17,240</td>
<td>$18,725</td>
<td>$7,560</td>
<td>$24,000</td>
<td>$14,325</td>
<td>$2,750 $4,000</td>
</tr>
</tbody>
</table>

| Loan Discount Accretion     | -    | -    | -    | -    | -    | -    | $26,413 | $62,723 | $95,875 | $52,122 | $38,970 | $21,906 | $4,471 | $5,223 |

10 Year CAGR: (1) 12.5%
5 Year CAGR: (2) 10.1%

Note: Net income includes the following ($ in thousands)

Provision for Credit Losses
Loan Discount Accretion

Source: Company Documents

(1) Represents the Compound Annual Growth Rate from 12/31/2007 – 12/31/2017
(2) Represents the Compound Annual Growth Rate from 12/31/2012 – 12/31/2017
(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
Earnings per Share Growth

10 Year EPS CAGR: (1) 7.3%
5 Year CAGR: (2) 3.9%

Note: Net income includes the following ($ in thousands)

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<thead>
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| Loan Discount Accretion | - | - | - | - | - | - | $26,413 | $62,723 | $95,875 | $52,122 | $38,970 | $21,906 | $4,471 | $5,223 |

Source: Company Documents

(1) Represents the Compound Annual Growth Rate from 12/31/2007 – 12/31/2017
(2) Represents the Compound Annual Growth Rate from 12/31/2012 – 12/31/2017
(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
Net Interest Margin

Source: Company Documents

<table>
<thead>
<tr>
<th>Year</th>
<th>Net Interest Margin (Tax Equivalent)</th>
<th>Net Interest Margin (Excluding Purchase Accounting Adjustments)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>4.06%</td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td>3.96%</td>
<td></td>
</tr>
<tr>
<td>2009</td>
<td>4.08%</td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td>4.04%</td>
<td></td>
</tr>
<tr>
<td>2011</td>
<td>3.98%</td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td>3.53%</td>
<td>3.35%</td>
</tr>
<tr>
<td>2013</td>
<td>3.58%</td>
<td>3.20%</td>
</tr>
<tr>
<td>2014</td>
<td>3.80%</td>
<td>3.29%</td>
</tr>
<tr>
<td>2015</td>
<td>3.38%</td>
<td>3.13%</td>
</tr>
<tr>
<td>2016</td>
<td>3.35%</td>
<td>3.16%</td>
</tr>
<tr>
<td>2017</td>
<td>3.19%</td>
<td>3.09%</td>
</tr>
<tr>
<td>2Q17</td>
<td>3.14%</td>
<td>3.06%</td>
</tr>
<tr>
<td>2Q18</td>
<td>3.28%</td>
<td>3.18%</td>
</tr>
</tbody>
</table>
Acquisitions & Efficiency Ratio

($ in millions)

% of Assets
Acquired 29.1% 3.5% 0.0% 1.6% 0.0% 23.7% 20.9% 11.2% 0.0% 2.5% 0.0% 0.0%

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 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
Return on Average Assets

(1) Interim periods shown on an annualized basis
Deposit Composition

As of June 30, 2018
($ in millions)

<table>
<thead>
<tr>
<th>Non-Interest Bearing Demand</th>
<th>$mm</th>
<th>Cost (%)&lt;sup&gt;(1)&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Interest Bearing Demand</td>
<td>$5,658</td>
<td>0.00%</td>
</tr>
<tr>
<td>Interest Bearing Demand</td>
<td>$3,809</td>
<td>0.50%</td>
</tr>
<tr>
<td>Money Market &amp; Savings</td>
<td>$5,465</td>
<td>0.50%</td>
</tr>
<tr>
<td>CDs &amp; Other Time</td>
<td>$2,047</td>
<td>0.84%</td>
</tr>
</tbody>
</table>

Total Deposits: $17.0Bn

Total Cost of Deposits: 0.38%<sup>(1)</sup>

Cost of Deposits, Net of NIBD: 0.56%<sup>(1)</sup>

Non-Interest Bearing Demand Deposits

Year over Year Growth: 4.8%

2Q17: $5,397
3Q17: $5,465
4Q17: $5,623
1Q18: $5,708
2Q18: $5,658

Source: Company Documents

Data for the three months ended June 30, 2018
Loan Growth

Loan / Deposit Ratio

Loans

Source: Company Documents
Loan Portfolio Overview

As of June 30, 2018
($ in millions)

Loan Portfolio by Category & Geography

- **1-4 Family**: $2,418, 23.8%
- **Agriculture (Inc. Farm)**: $710, 7.0%
- **Construction**: $1,543, 15.2%
- **Energy**: $353, 3.5%
- **Comm. R.E.**: $3,405, 33.6%
- **C&I**: $1,169, 11.5%
- **Consumer & Other**: $272, 2.7%
- **Home Equity**: $277, 2.7%

Loans by Rate Structure

- **Fixed**: 39.5%
- **Floating**: 36.5%
- **Variable Rate**: 24.0%

~3.2yr Avg. Life

Total Loans: $10.1Bn

Yield on Loans: 5.13%

Core Yield on Loans: 4.92%

Loans By Area

<table>
<thead>
<tr>
<th>Area</th>
<th>Amount (2)</th>
<th>% of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bryan / College Station:</td>
<td>$647</td>
<td>6.4%</td>
</tr>
<tr>
<td>Central Oklahoma:</td>
<td>$541</td>
<td>5.5%</td>
</tr>
<tr>
<td>Central Texas:</td>
<td>$1,387</td>
<td>13.8%</td>
</tr>
<tr>
<td>Dallas / Ft. Worth:</td>
<td>$1,133</td>
<td>11.2%</td>
</tr>
<tr>
<td>East Texas:</td>
<td>$402</td>
<td>4.0%</td>
</tr>
<tr>
<td>Houston:</td>
<td>$3,109</td>
<td>30.8%</td>
</tr>
<tr>
<td>South Texas:</td>
<td>$1,325</td>
<td>13.1%</td>
</tr>
<tr>
<td>Tulsa Oklahoma:</td>
<td>$619</td>
<td>6.1%</td>
</tr>
<tr>
<td>West Texas:</td>
<td>$917</td>
<td>9.1%</td>
</tr>
</tbody>
</table>

Source: Company Documents

(1) Data for the three months ended June 30, 2018
(2) Excludes $67 million in loans assigned to the Corporate Group
(3) Core Yield excludes purchase accounting adjustments
Loan Portfolio Segment Detail

### Commercial Real Estate Detail

- **Total** ($3,405mm)
  - Shopping Center $586 (17%)
  - Office Building $346 (10%)
  - Multi-Family $169 (5%)
  - C&I $285 (8%)
  - Other $528 (16%)
  - Owner Occupied $1,491 (44%)

### Construction Detail

- **Total** ($1,545mm)
  - Single Family $427 (27%)
  - Land Dev. $89 (6%)
  - Raw Land $135 (9%)
  - Resi. Lots $119 (8%)
  - Comm. / Other $775 (50%)

### Energy Detail - Outstanding Balance

- **Total** ($353mm)
  - Servicers $218 (61.8%)
  - Producers $135 (38.2%)

### Energy Detail - Unfunded Commitments

- **Total** ($175mm)
  - Servicers $90 (51.3%)
  - Producers $85 (48.7%)

Source: Company Documents

(1) Total includes a net unaccreted discount of ($1.761) million, not shown in graph
Houston MSA CRE Portfolio

As of June 30, 2018
($ in millions)

- Owner Occupied: $537
- Shopping Center / Retail: $294
- Commercial & Industrial: $136
- Office: $79
- Medical: $31
- Hotel: $38
- Multi-Family: $40
- Other: $49

Total Houston MSA CRE: $1.2Bn
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 11 (231 banks) – insured commercial banks having assets greater than $3 billion
Securities Portfolio Detail

As of June 30, 2018
($ in millions)

Total Securities: $9.6Bn
Yield on Securities: 2.28%(1)
Duration: ~3.6 Yrs.(2)
Avg. Yearly Cash Flow: ~$1.8Bn

98.9% Held to Maturity
1.1% Available for Sale

U.S. Treasury Securities / U.S. Gov. Obligations
0.3%

States & Political Subdivisions
3.0%

Collateralized Mortgage Obligations
0.2%

Mortgage-Backed Securities
96.5%

Source: Company Documents
(1) Data for the three months ended June 30, 2018
(2) Effective duration shown
Dividend History

Compounded Annual Growth Rate from 2003 - 2017 was 13.0%

(a) 2014 dividend consists of $0.24 per share declared in 1Q 2014, 2Q 2014, 3Q 2014 and $0.2725 per share declared in 4Q 2014
(b) 2015 dividend consists of $0.2725 per share declared in 1Q 2015, 2Q 2015, 3Q 2015 and $0.30 per share declared in 4Q 2015
(c) 2016 dividend consists of $0.30 per share declared in 1Q 2016, 2Q 2016, 3Q 2016 and $0.34 per share declared in 4Q 2016
(d) 2017 dividend consists of $0.34 per share declared in 1Q 2017, 2Q 2017, 3Q 2017 and $0.36 per share declared in 4Q 2017
Total Return Performance

IPO (November 12, 1998) to June 30, 2018

$100,000 invested in Prosperity’s IPO on 11/12/1998 was worth $1,531,941 on 6/30/2018

Source: S&P Global. Market data as of 6/29/2018
Presence in Fast-Growing Markets

 Positioned in Strong Markets

• Today, Texas is the 2nd largest state in the U.S. with over 28 million residents

• Ranked #3 on the Fortune 500 list with 54 headquartered companies as of 2017

• Ranked 1st by Forbes for current economic climate thanks to the 2nd fastest economic growth and 3rd fastest job growth over the past five years

• Oklahoma City and Tulsa comprise nearly 50% of the state’s population

• Oklahoma is home to five Fortune 500 Companies

• Business tax climate is one of the best in the country and employers also benefit from energy costs that are roughly 25% below the national average

• 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)

<table>
<thead>
<tr>
<th>Metropolitan Statistical Area</th>
<th>Prosperity Presence</th>
<th>Prosperity Deposits ($mm)</th>
<th>2018 - 2023 Population Growth (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Austin-Round Rock, TX</td>
<td>✓</td>
<td>$842</td>
<td>9.5%</td>
</tr>
<tr>
<td>2 Orlando-Kissimmee-Sanford, FL</td>
<td>-</td>
<td>-</td>
<td>8.2%</td>
</tr>
<tr>
<td>3 Houston-The Woodlands-Sugar Land, TX</td>
<td>✓</td>
<td>$5,029</td>
<td>8.3%</td>
</tr>
<tr>
<td>4 San Antonio-New Braunfels, TX</td>
<td>✓</td>
<td>$366</td>
<td>8.1%</td>
</tr>
<tr>
<td>5 Dallas-Fort Worth-Arlington, TX</td>
<td>✓</td>
<td>$1,453</td>
<td>7.7%</td>
</tr>
<tr>
<td>6 Denver-Aurora-Lakewood, CO</td>
<td>-</td>
<td>-</td>
<td>7.7%</td>
</tr>
<tr>
<td>7 Phoenix-Mesa-Scottsdale, AZ</td>
<td>-</td>
<td>-</td>
<td>7.2%</td>
</tr>
<tr>
<td>8 Las Vegas-Henderson-Paradise, NV</td>
<td>-</td>
<td>-</td>
<td>7.3%</td>
</tr>
<tr>
<td>9 Seattle-Tacoma-Bellevue, WA</td>
<td>-</td>
<td>-</td>
<td>6.7%</td>
</tr>
<tr>
<td>10 Atlanta-Sandy Springs-Roswell, GA</td>
<td>-</td>
<td>-</td>
<td>6.5%</td>
</tr>
</tbody>
</table>

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

(1) Includes MSAs with greater than one million in total population. Deposit data as of 6/30/2017
### Houston Market Highlights

**Market Highlights**

- Houston MSA is the 5th largest in the United States by population with 7.0 million people
- Headquarters to 20 Fortune 500 companies, and only New York City is home to more publicly traded companies
- Home of 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
- Houston’s population is expected to grow 8.3% from 2018 to 2023
- The Houston job market rebounded post Hurricane Harvey, adding 40,500 new jobs between September and November of 2017
- The Houston Museum District attracts over 7 million visitors per year

**Fortune 500 Companies**

Dallas/Ft. Worth Market Highlights

Market Highlights

- Dallas/Ft. Worth MSA is the 4th largest in the United States by population with 7.5 million residents
- Headquarters to 22 Fortune 500 companies
- As of November 2017, Dallas had the 2nd highest year-over-year percent job growth out of any MSA in the country at 2.8%
- Dallas has the largest workforce of any MSA in Texas
- Dallas/Ft. Worth population is expected to grow 7.7% from 2018 to 2023

Fortune 500 Companies

References to Dallas refer to the Dallas – Fort Worth – Arlington metropolitan statistical area.
Austin Market Highlights

Market Highlights

- Ranked #1 place to live in the U.S. in 2017 by U.S. News and World Report
- Ranked by Forbes as the #8 best place in the United States for businesses and careers in 2017
- In the Austin metro, 41.5% of adults have at least a bachelor’s degree, compared to 30.1% nationally, putting Austin in the top 10 among the largest metro areas
- Austin’s population is expected to grow 9.5% from 2018 to 2023

Austin Franchise

Fortune 500 Companies

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