“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.
1Q17 Highlights

- Net Income of $68.565 million and earnings per share (diluted) of $0.99 for three months ending March 31, 2017
- Assets of $22.477 billion, loans of $9.739 billion, and deposits of $17.036 billion at March 31, 2017
- Common equity tier 1 ratio was 14.45% and leverage ratio was 8.62% at March 31, 2017
- Sound asset quality with annualized net charge offs/average loans of 0.16% for the first quarter 2017
- Non-performing assets to average earning assets remain low at 0.21% or $41.199 million for the first quarter 2017
- Declared cash dividend of $0.34 per share for the first quarter 2017
Corporate Profile

- A Texas based financial holding company with approximately $22.477 billion in assets, and the 3rd largest Texas-based commercial bank
- Shareholder driven with 4.9% fully diluted insider ownership
- Successful integration of 42 acquisitions (includes branch and failed bank transactions)

244 Full Service Locations

- 16 in Bryan/College Station Area
- 29 in Central Texas Area
- 35 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
Balance Sheet Summary

Totals as of 03/31/2017
Loans = $9.739 Billion
Deposits = $17.036 Billion
Assets = $22.477 Billion

10 year CAGR
Loans = 16.0%
Deposits = 16.6%
Assets = 17.1%
Net Income

10 Year CAGR 16.1% (excluding PAA 15.0%)

5 Year CAGR 14.1% (excluding PAA 12.1%)

$ in millions
EPS Growth Diluted

10 Year CAGR 7.3\% (excluding PAA 6.4\%)
5 Year CAGR 5.5\% (excluding PAA 3.6\%)
Net Interest Margin

- Net Interest Margin (Tax Equivalent)
- Net Interest Margin (excluding Purchase Accounting Adjustments)
Acquisitions & Efficiency Ratio*

*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.

$ in millions
Return on Average Tangible Common Equity

Interim periods annualized.
Return on Average Assets

Interim periods annualized.
Loan Growth

Loans/Deposits Ratio

Loans

$ in millions

2007: $3,093, 59.1%
2008: $3,567, 48.8%
2009: $3,377, 46.5%
2010: $3,485, 46.7%
2011: $5,180, 44.5%
2012: $7,775, 50.8%
2013: $9,244, 55.6%
2014: $9,439, 55.0%
2015: $9,622, 56.0%
2016: $9,654, 55.6%
1Q16: $9,739, 57.2%
1Q17: $9,739, 70.0%

$3,093, $3,567, $3,377, $3,485, $3,766, $5,180, $7,775, $9,244, $9,439, $9,622, $9,654, $9,739

30.0% 35.0% 40.0% 45.0% 50.0% 55.0% 60.0% 65.0% 70.0%

0 1,000 2,000 3,000 4,000 5,000 6,000 7,000 8,000 9,000 10,000

2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 1Q16 1Q17

Loan Growth

PROSPERITY BANCSHARES, INC.
Loan Portfolio

March 31, 2017
Loans/Deposits: 57.2%
Energy Portfolio
As of March 31, 2017

Outstanding Balance

<table>
<thead>
<tr>
<th></th>
<th>Producers</th>
<th>Servicers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Producers</td>
<td>$108.2</td>
<td>$159.2</td>
</tr>
<tr>
<td>Servicers</td>
<td>$68.5</td>
<td>$84.6</td>
</tr>
<tr>
<td>%</td>
<td>40%</td>
<td>60%</td>
</tr>
</tbody>
</table>

Unfunded Commitments

<table>
<thead>
<tr>
<th></th>
<th>Producers</th>
<th>Servicers</th>
</tr>
</thead>
<tbody>
<tr>
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<tr>
<td>Servicers</td>
<td>$108.2</td>
<td>$159.2</td>
</tr>
<tr>
<td>%</td>
<td>45%</td>
<td>55%</td>
</tr>
</tbody>
</table>

Portfolio Commentary

- Total outstanding balance of $267.4 million, or 2.8% of total loans
- Total unfunded commitments of $153.1 million
- Total energy reserves of 1.9% or $5.1 million
- $16.2 million of energy loans are subject to a fair value mark of $3.4 million
- Three energy loans are Shared National Credits (SNCs) with an outstanding balance of $5.0 million
- Average relationship size for both producers and servicers is under $1.0 million, with only five relationships over $10.0 million
- Reserve-based lending is only on proven producing reserves
- Servicing portfolio is well-diversified
Houston MSA CRE Portfolio
As of March 31, 2017

TOTAL: $1.1 Billion

Shopping Center/Retail - 18.9%
Commercial & Industrial - 9.4%
Office - 7.0%
Medical - 5.6%
Multi-Family - 3.5%
Hotel - 3.1%
Other - 6.3%
Owner Occupied - 46.2%

$ in millions

Shopping Center/Retail - $206.1
Commercial & Industrial - $102.2
Office - $76.4
Medical - $61.6
Multi-Family - $38.0
Hotel - $33.9
Other - $68.3
Owner Occupied - $504.5
Asset Quality
NPA*/Loans + OREO

*Includes loans past due 90 days and still accruing

Source: UBPR = Uniform Bank Performance Report; Peer Group 11 (231 Banks) – insured commercial bank having assets greater than $3 billion
March 31, 2017
Cost of Deposits: 0.23%

Deposit Composition

<table>
<thead>
<tr>
<th>Deposit Type</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>DDA - Non-Interest Bearing</td>
<td>$5,299</td>
</tr>
<tr>
<td>DDA - Interest Bearing</td>
<td>$3,845</td>
</tr>
<tr>
<td>Money Market &amp; Savings</td>
<td>$5,560</td>
</tr>
<tr>
<td>Certificates &amp; Other Time Deposits</td>
<td>$2,331</td>
</tr>
<tr>
<td>TOTAL DEPOSITS</td>
<td>$17,035</td>
</tr>
</tbody>
</table>

$ in millions
(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

Compounded Annual Growth Rate from 2003-2016 was 13.11%
Total Return Performance
IPO (November 12, 1998) to March 31, 2017

$100,000 invested in Prosperity’s IPO on 11/12/98 was worth $1,522,804 on 3/31/17
The Houston Market: Overview

- The Houston MSA created 16,700 jobs in February of 2017, more than the 15,600 jobs created in February of 2016
- Since the 2010 census, the Houston MSA has added 851,971 residents
- The outlook for the energy industry is slowly improving:
  - Baker Hughes reports 420 active drilling rigs as of April 2017, more than two times April 2016 level
- Construction starts in the Houston region totaled $1.3 billion in February of 2017, a 17.4 percent increase from $1.1 billion in February of 2016, according to Dodge Data & Analytics
- The Houston Purchasing Managers Index (PMI), a short-term leading indicator for regional production, registered 54.2 in February of 2017, signaling economic expansion in metro Houston for the fifth consecutive month
- The city of Houston is the fourth most populous city in the nation, with an estimated 2.3 million residents as of the most recently published U.S. Census Bureau report
- Houston is home to 25 Fortune 500 companies, nearly half of the total Fortune 500 companies in Texas (which ranks 2nd nationally)

Source: U.S. Census Bureau, Greater Houston Partnership, SNL Financial, Baker Hughes and Nielsen.
The Houston Market: Economic Diversity

- Houston maintains a diverse and productive economy despite recent turbulence in the oil and gas industry
- The Perryman Group forecasts sustained growth for the Houston metro over the next quarter century

February 2017 Employment by Industry

- Trade, transportation, and utilities: 20%
- Professional and business services: 16%
- Education and health services: 13%
- Government: 14%
- Leisure and hospitality: 10%
- Financial activities: 5%
- Construction: 7%
- Manufacturing: 7%
- Information: 1%
- Mining and logging: 3%
- Other services: 4%

Forecasted Houston MSA Gross Area Product ($bn)


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