Hurricane Harvey Response and Outlook

As of September 8, 2017
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.
Response to Hurricane Harvey

Quick Return to Normal Operations

Bank Operations at 100%

- Rapid re-opening of banking centers in affected areas thanks to dedicated staff and contingency operations
  - Prosperity Bank operates 94 banking centers in the Houston and South Texas areas
  - As of September 8, 95% of all impacted banking centers had re-opened and banking services are currently available to all affected areas. We expect all but 2 locations to be opened within one week.

- Thanks to our diverse operational footprint, combined with providing temporary lodging near the office for certain operational staff in Sugar Land, customer support functions remained operational

- Technology environment remained fully operational and supported throughout the storm

- Continued telephone access remained available for all customers through use of call centers

Hurricane Harvey Timeline

<table>
<thead>
<tr>
<th>Late Friday Night</th>
<th>Monday</th>
<th>Wednesday</th>
<th>Friday</th>
<th>September 8th</th>
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</thead>
<tbody>
<tr>
<td>Hurricane Harvey makes landfall in Rockport Texas</td>
<td>36% of affected banking centers open (34 of 94)</td>
<td>66% of affected banking centers open (62 of 94)</td>
<td>91% of affected banking centers open (86 of 94)</td>
<td>All but 5 banking centers are open. All customers have access to banking services</td>
</tr>
</tbody>
</table>

8/25/17 8/28/17 8/30/17 9/1/17 9/8/17
Prosperity Bank is committed to helping our customers, our community and our associates in the affected areas. In addition to specific programs defined below, the Bank is committed to the deployment of resources and community services throughout the recovery process.

- Waiving or refunding of foreign ATM transaction fees through September 8
- Waiving overdraft fees related to the storm event
- Providing extensions on loan payments
- Waiving late payment fees and suspending adverse credit reporting on amortizing loans through September 2017
- Waiving late payment fees and suspending adverse credit reporting on consumer mortgage and home equity loans for 90 days
- Providing one-page unsecured loans payable in 12 months
- Ensuring available cash in all accessible banking centers and ATMs
- Establishing a relief fund for our associates that were affected, in which every dollar contributed by fellow associates will be matched by the Bank
Outlook After Hurricane Harvey
Credit Impact

- Based upon preliminary feedback from borrowers, we do not currently anticipate material losses

- Reaching out to all lending relationships of $1 million or more in the affected areas
  - Represents $2.6 billion in loans outstanding
  - Conducting an enhanced review of all loans in areas directly impacted

- The Company has approximately $227 million in CRE loans in the South Texas area (including Corpus Christi and Victoria), 49% ($111 million) of which is owner occupied

- The Company has approximately $1.1 billion in CRE loans in the Houston MSA, 44% ($487 million) of which is owner occupied

- The Company has approximately $315 million in 1-4 family loans in the South Texas area and $723 million in the Houston MSA

  - FEMA flood models estimate that there are ~90 thousand residential structures in Harris, Galveston and Fort Bend County that could have been damaged by floods, of which ~10 thousand are estimated to have sustained major damage (1)

- Harris County has ~1.5 million total properties

Note: Loan data as of 6/30/17
(1) Per FEMA and the Houston Chronicle; Data as of 9/5/2017
While Hurricane Harvey was a catastrophic event, we expect to see only temporary adverse impacts on job growth and economic opportunities going forward.

Houston metro and South Texas areas make up one of the largest U.S. economies and Harvey is not expected to derail the positive job and economic growth for any extended period.

- Metro areas of Houston, Beaumont, Port Arthur, Corpus Christi and Victoria include 7.7 million people, 3.4 million jobs and produce $556 billion in GDP (~3% of U.S. output) (2)

Credit trends are expected to rebound quickly and favorably based on conversations with borrowers in affected areas.

While we are early in the evaluation process, we continue to consult with our borrowers and remain optimistic.

(2) Source: Federal Reserve Bank of Dallas