2018 Real Estate & Economic Outlook

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Chief Economist

recenter.tamu.edu
REC’s Economic Crystal Ball
Newton’s Law #1: Inertia and Motion

An object at rest stays at rest.

An object in motion stays in motion, with the same speed and direction, unless some other force intervenes.
U.S. Outlook

• Uncertain impact of “Tax Cut and Jobs Act”
• Rising GDP growth – 8 years avg. 2.2%; 2018 2.5%-3%
• Interest rates likely to rise… maybe!
• Inflation 2% - 2.5%
• Industrial production and manufacturing positive but little help on employment
• Housing improving still not fully recovered
• Jobs expand 1.5% - 2%; Unemployment rate ~4.0%
• Incomes show more robust increase
The Future

• Rising interest rates
• Inflation and monetary policies (create more $s)
• Rising debt, especially sovereign debt around the world, consumer debt, local area government debt
• Jobs disappearing and new jobs invented
  • Qualified labor availability
• Energy change from fossil fuels to renewables: the demise of the internal combustion engine?
• Major asset price moves: RE, stocks & bonds
Texas and U.S. Economic Growth

Annual Percent Change in Real GDP

Sources: BEA; Real Estate Center at Texas A&M University
Monthly Change in Total Nonfarm U.S. Employment

Average of ~197,000 jobs per month since October 2010

Sources: BLS; Haver Analytics; Real Estate Center at Texas A&M University
Inflation Remains Relatively Low
Consumer Price Index for All Urban Consumers: All Items; Y/Y % change in index

Source: BLS
Consumer Confidence Index

[Graph showing the Consumer Confidence Index from January 2007 to July 2018 for the U.S. and Texas.

Source: The Conference Board (1985=100); Haver Analytics]
NFIB Small Business Optimism Index
(Overall Index SA 1986 = 100)

Source: National Federation of Independent Businesses; based on ten survey indicators
30-Year FRM rate is projected to rise in 2018 by 25bp to 100bp; thru Feb. 22
+40bp

Jan 03 – Jan 07
30-Yr. FRM averaged 6%
Texas Economy

2017 Recovery Year – A Very Good Year

2018: Probably Better
REC’s Economic Crystal Ball: Texas’ Economy...
Texas Economic Outlook: 2018 Better Than 2017

- **Employment:** +2.5% - 3.0%; Energy & Manufacturing, Healthcare, Business & Professional Services; Leisure & Hospitality
- **GDP:** 4.1% 2018 from 3.6% 2017
- **Energy sector downturn** mostly over; oil prices $55 - $60/bl.+
- **Population** expansion continues but at slower pace
- **Local Growth Issues** becoming more pressing, causing greater strain on state and local resources and causing some cost impacts on local housing
- **Rebound from Harvey** will contribute to economic growth in 2018; impact on property values in affected counties & neighborhoods ongoing
Texas Annual Jobs

2011-2017 +1,851,000 jobs; average 264,429/year; +2.4%

Sources: Texas Workforce Commission, Real Estate Center at Texas A&M University
Weekly Active Texas Rig Count & Price of WTI

Rig Count (left)

WTI $/bl (right)

Rig Count up 309, +179% since May 2016

Source: Baker Hughes; EIA; RE Center at Texas A&M University
San Antonio Economy
San Antonio 2017 Employment by Industry

- Government, 16.5%
- Mining, Logging and Construction, 5.7%
- Manufacturing, 4.7%
- Trade, Transportation, and Utilities, 17.5%
- Financial Activities, 8.6%
- Professional and Business Services, 13.0%
- Education and Health Services, 15.5%
- Leisure and Hospitality, 12.9%
- Other Services, 3.6%
- Information, 2.0%

Sources: Texas Workforce Commission; Real Estate Center at Texas A&M University
Annual Employment Growth Rates for US, Texas and San Antonio

Source: BLS, Real Estate Center at Texas A&M University
San Antonio Annual Jobs

Average 2.6% increase per year since 2010
2016 +2.9%; 2017 +2.3%; 2018p +2.8%

Sources: Texas Workforce Commission; Real Estate Center at Texas A&M University
## San Antonio Employment Change

<table>
<thead>
<tr>
<th>Industry</th>
<th>2016</th>
<th>2017e</th>
<th>Change</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Nonfarm</td>
<td>1,016,517</td>
<td>1,042,167</td>
<td>25,650</td>
<td>2.5%</td>
</tr>
<tr>
<td>Construction</td>
<td>51,425</td>
<td>55,083</td>
<td>3,658</td>
<td>7.1%</td>
</tr>
<tr>
<td>Mining and Logging</td>
<td>6,842</td>
<td>7,325</td>
<td>483</td>
<td>7.1%</td>
</tr>
<tr>
<td>Education and Health Services</td>
<td>156,933</td>
<td>167,425</td>
<td>10,492</td>
<td>6.7%</td>
</tr>
<tr>
<td>Transportation, Warehousing, and Utilities</td>
<td>29,250</td>
<td>30,642</td>
<td>1,392</td>
<td>4.8%</td>
</tr>
<tr>
<td>Professional and Business Services</td>
<td>130,708</td>
<td>134,975</td>
<td>4,267</td>
<td>3.3%</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>47,750</td>
<td>48,983</td>
<td>1,233</td>
<td>2.6%</td>
</tr>
<tr>
<td>Other Services</td>
<td>36,992</td>
<td>37,883</td>
<td>892</td>
<td>2.4%</td>
</tr>
<tr>
<td>Government</td>
<td>170,100</td>
<td>172,967</td>
<td>2,867</td>
<td>1.7%</td>
</tr>
<tr>
<td>Leisure and Hospitality</td>
<td>128,842</td>
<td>130,333</td>
<td>1,492</td>
<td>1.2%</td>
</tr>
<tr>
<td>Financial Activities</td>
<td>87,425</td>
<td>87,925</td>
<td>500</td>
<td>0.6%</td>
</tr>
<tr>
<td>Retail Trade</td>
<td>114,050</td>
<td>113,900</td>
<td>-150</td>
<td>-0.1%</td>
</tr>
<tr>
<td>Wholesale Trade</td>
<td>35,025</td>
<td>34,283</td>
<td>-742</td>
<td>-2.1%</td>
</tr>
<tr>
<td>Information</td>
<td>21,175</td>
<td>20,442</td>
<td>-733</td>
<td>-3.5%</td>
</tr>
</tbody>
</table>

Sources: Texas Workforce Commission NSA; Real Estate Center at Texas A&M University
San Antonio Monthly Jobs

Sources: Texas Workforce Commission, SA, Real Estate Center at Texas A&M University
San Antonio Unemployment Rate
San Antonio MSA Per Capita Personal Income

Average 3.8% per year growth
2016 +0.4%

Source: BEA; Real Estate Center at Texas A&M University
San Antonio Business-Cycle Index

Average annual 3.5% growth since 2008

Source: Dallas Federal Reserve
San Antonio Real Retail Sales

Millions of 3Q2017 dollars, SA

Source: Federal Reserve Bank of Dallas
Texas Demographics
### Alternative Projections

**Texas Population 2010-2050**

<table>
<thead>
<tr>
<th>Year</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>25,145,561</td>
</tr>
<tr>
<td>2015</td>
<td>30,000,000</td>
</tr>
<tr>
<td>2020</td>
<td>40,502,749</td>
</tr>
<tr>
<td>2025</td>
<td>50,000,000</td>
</tr>
<tr>
<td>2030</td>
<td>54,369,297</td>
</tr>
<tr>
<td>2035</td>
<td>57,386,428</td>
</tr>
<tr>
<td>2040</td>
<td>60,000,000</td>
</tr>
</tbody>
</table>

From 1970 to 2010 (40 years), Texas added 13.9 million people.

From 2010 to 2050 (40 years), Texas will add between 22 and 30 million people.

**Sources:** U.S. Census Bureau, Texas State Demographer 2014 Projections
Estimated Population Change, Texas Counties, 2010 to 2016

96 counties lost population over the 6 year period.

Source: U.S. Census Bureau, 2016 Vintage Population Estimates; Texas State Demographer’s Office
Projected Population Change, Texas Counties, 2010-2050

Legend
-6,200 - 0
1 - 2,000
2,001 - 10,000
10,001 - 100,000
100,001 - 1,000,000
1,000,001 - 3,480,000

Source: Texas State Data Center 2012 Population Projections 2000-2010 Migration Scenario
Percent Change from 2010 to 2050 by Age Groups in the Texas Population

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Percent Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALL</td>
<td>116.2%</td>
</tr>
<tr>
<td>&lt;18</td>
<td>79.6%</td>
</tr>
<tr>
<td>18-44</td>
<td>105.1%</td>
</tr>
<tr>
<td>45-64</td>
<td>112.5%</td>
</tr>
<tr>
<td>65+</td>
<td>262.9%</td>
</tr>
</tbody>
</table>

Sources: Texas State Demographer's Office 2014 Projections 2000-2010 Scenario; Real Estate Center at Texas A&M University
San Antonio MSA Population
Atascosa, Bandera, Bexar, Comal, Guadalupe, Kendall, Medina, & Wilson Counties

Source: U.S. Census Bureau; Texas State Demographer’s Office 2014
Projection; 2000-2010 Scenario
Bandera County Population

Source: U.S. Census Bureau; Texas State Demographer’s Office 2014
Projection: 2000-2010 Scenario

2010-2050 56% increase
Comal County Population

Source: U.S. Census Bureau; Texas State Demographer’s Office 2014 Projection; 2000-2010 Scenario

2010-2050 182% increase

[Graph showing Comal County Population from 1960 to 2050 with a 182% increase projected from 2010 to 2050.]
Kendall County Population

2010-2050 165% increase

Source: U.S. Census Bureau; Texas State Demographer’s Office 2014 Projection; 2000-2010 Scenario
Guadalupe County Population

2010-2050 210% increase

Source: U.S. Census Bureau; Texas State Demographer’s Office 2014 Projection; 2000-2010 Scenario
Median Household Income, Texas Counties, 2011-2015

Median HH Income 2011-2015 $53,207

- $22,741.00 - $35,000.00
- $35,000.01 - $45,000.00
- $45,000.01 - $55,000.00
- $55,000.01 - $65,000.00
- $65,000.01 - $89,152.00

Source: U.S. Census Bureau, 2015 American Community Survey, 5-Year Samples; Texas State Demographer’s Office
Texas Housing Market
REC’s Economic Crystal Ball: Housing Market...
Since 2011
Sales + 58%
Average Price + 42%
Median Price + 52%
2018p sales +6-7%
Prices +4%
2017 Change in Home Sales and Median Prices by Metro Areas

Source: Real Estate Center at Texas A&M University
# Texas Sales by Price Distribution

<table>
<thead>
<tr>
<th>Price Range</th>
<th>Percent Distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>$0 - $69,999</td>
<td>15.1</td>
</tr>
<tr>
<td>$70,000 - $99,999</td>
<td>12.5</td>
</tr>
<tr>
<td>$100,000 - $149,999</td>
<td>23.6</td>
</tr>
<tr>
<td>$150,000 - $199,999</td>
<td>17.5</td>
</tr>
<tr>
<td>$200,000 - $249,999</td>
<td>9.8</td>
</tr>
<tr>
<td>$250,000 - $299,999</td>
<td>6.9</td>
</tr>
<tr>
<td>$300,000 - $399,999</td>
<td>7.1</td>
</tr>
<tr>
<td>$400,000 - $499,999</td>
<td>3.0</td>
</tr>
<tr>
<td>$500,000 - $749,999</td>
<td>2.7</td>
</tr>
<tr>
<td>$750,000 - $999,999</td>
<td>0.9</td>
</tr>
<tr>
<td>$1,000,000 +</td>
<td>0.9</td>
</tr>
</tbody>
</table>

Source: ABOR; TAR Data Relevance Project; Real Estate Center at Texas A&M University
Texas SF Building Permits

1990-2016 average 95,529/year

Source: US Census Bureau; NAHB; Real Estate Center at Texas A&M
Texas SF Building Permits per 1,000 New Households

2008-2016, added 1.33 million HHs. Would have built 1.1 million SF homes at average/year; actually built 776k. About 315,000 units short.

1995-2015 average 820/year

Source: US Census Bureau, Real Estate Center at Texas A&M
Texas MF Building Permits

1995-2016 average 45,444/year

Source: US Census Bureau, Real Estate Center at Texas A&M
Texas Residential Construction Leading and Coincident Indexes
Jan 2000=100

Source: Real Estate Center at Texas A&M University
The San Antonio Market
San Antonio Annual Home Sales, Average & Median Price

Sales:
- 2016 +8.8%
- 2017 +3.8%
- 2018p +6.2%

Source: SABOR; Real Estate Center at Texas A&M University
## San Antonio Sales by Price Distribution

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>$0 - $69,999</td>
<td>13.3</td>
<td>12.1</td>
<td>8.9</td>
<td>6.6</td>
<td>4.7</td>
<td>3.7</td>
<td>2.6</td>
</tr>
<tr>
<td>$70,000 - $99,999</td>
<td>11.2</td>
<td>10.5</td>
<td>9.5</td>
<td>8.2</td>
<td>6.5</td>
<td>5.2</td>
<td>4.0</td>
</tr>
<tr>
<td>$100,000 - $149,999</td>
<td>24.6</td>
<td>23.3</td>
<td>22.2</td>
<td>20.3</td>
<td>18.2</td>
<td>15.4</td>
<td>13.6</td>
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<tr>
<td>$150,000 - $199,999</td>
<td>20.1</td>
<td>19.8</td>
<td>21.3</td>
<td>23.4</td>
<td>23.8</td>
<td>24.5</td>
<td>24.9</td>
</tr>
<tr>
<td>$200,000 - $249,999</td>
<td>10.7</td>
<td>11.6</td>
<td>12.6</td>
<td>13.6</td>
<td>15.2</td>
<td>17.3</td>
<td>18.7</td>
</tr>
<tr>
<td>$250,000 - $299,999</td>
<td>6.9</td>
<td>7.5</td>
<td>8.6</td>
<td>9.5</td>
<td>10.5</td>
<td>11.8</td>
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<td>9.1</td>
<td>10.2</td>
<td>11.5</td>
<td>12.1</td>
<td>13.0</td>
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<tr>
<td>$400,000 - $499,999</td>
<td>2.6</td>
<td>3.2</td>
<td>3.9</td>
<td>4.1</td>
<td>4.9</td>
<td>5.5</td>
<td>5.9</td>
</tr>
<tr>
<td>$500,000 - $749,999</td>
<td>2.2</td>
<td>2.3</td>
<td>2.7</td>
<td>3.0</td>
<td>3.3</td>
<td>3.4</td>
<td>3.6</td>
</tr>
<tr>
<td>$750,000 - $999,999</td>
<td>0.5</td>
<td>0.6</td>
<td>0.8</td>
<td>0.7</td>
<td>0.8</td>
<td>0.7</td>
<td>0.8</td>
</tr>
<tr>
<td>$1,000,000 +</td>
<td>0.4</td>
<td>0.4</td>
<td>0.4</td>
<td>0.4</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
</tr>
</tbody>
</table>

Source: SABOR; TAR Data Relevance Project; Real Estate Center at Texas A&M University
El Paso 2017 Sales and EoY Months
Inventory by Price

Sources: SABOR; Real Estate Center at Texas A&M University
San Antonio Median Home Price
12MMA

Average 5.3% monthly y/y since January 2012

Source: SABOR; Real Estate Center at Texas A&M University
NEW HOMES IN SAN FRANCISCO

FROM THE LOW $1,000,000s

Summit800Homes.com
Comal Co. Home Sales & Median Price

2011-2017 Sales +124%
Median Price +37%

Source: SABOR; TAR Data Relevance Project; Real Estate Center at Texas A&M University
Guadalupe Co. Home Sales & Median Price

2011-2017 Sales +90%
Median Price +37%

Source: TAR Data Relevance Project; Real Estate Center at Texas A&M University
San Antonio SF Building Permits

Source: Census Bureau; Real Estate Center at Texas A&M University

95-17 Average 8,169
San Antonio & U.S. Apartment Cap Rates

Source: Real Capital Analytics; Real Estate Center at Texas A&M University
San Antonio Overall Office Market

Source: CoStar Group; Real Estate Center at Texas A&M University
San Antonio Retail Market

Source: CoStar Group; Real Estate Center at Texas A&M University
San Antonio Industrial Warehouse Market

Source: CoStar Group; Real Estate Center at Texas A&M University
San Antonio & U.S. Hotel Cap Rates

San Antonio & U.S. Hotel Avg. Price per Unit

Source: Real Capital Analytics; Real Estate Center at Texas A&M University
So What Does Your Crystal Ball Say?
2018 Real Estate & Economic Outlook

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