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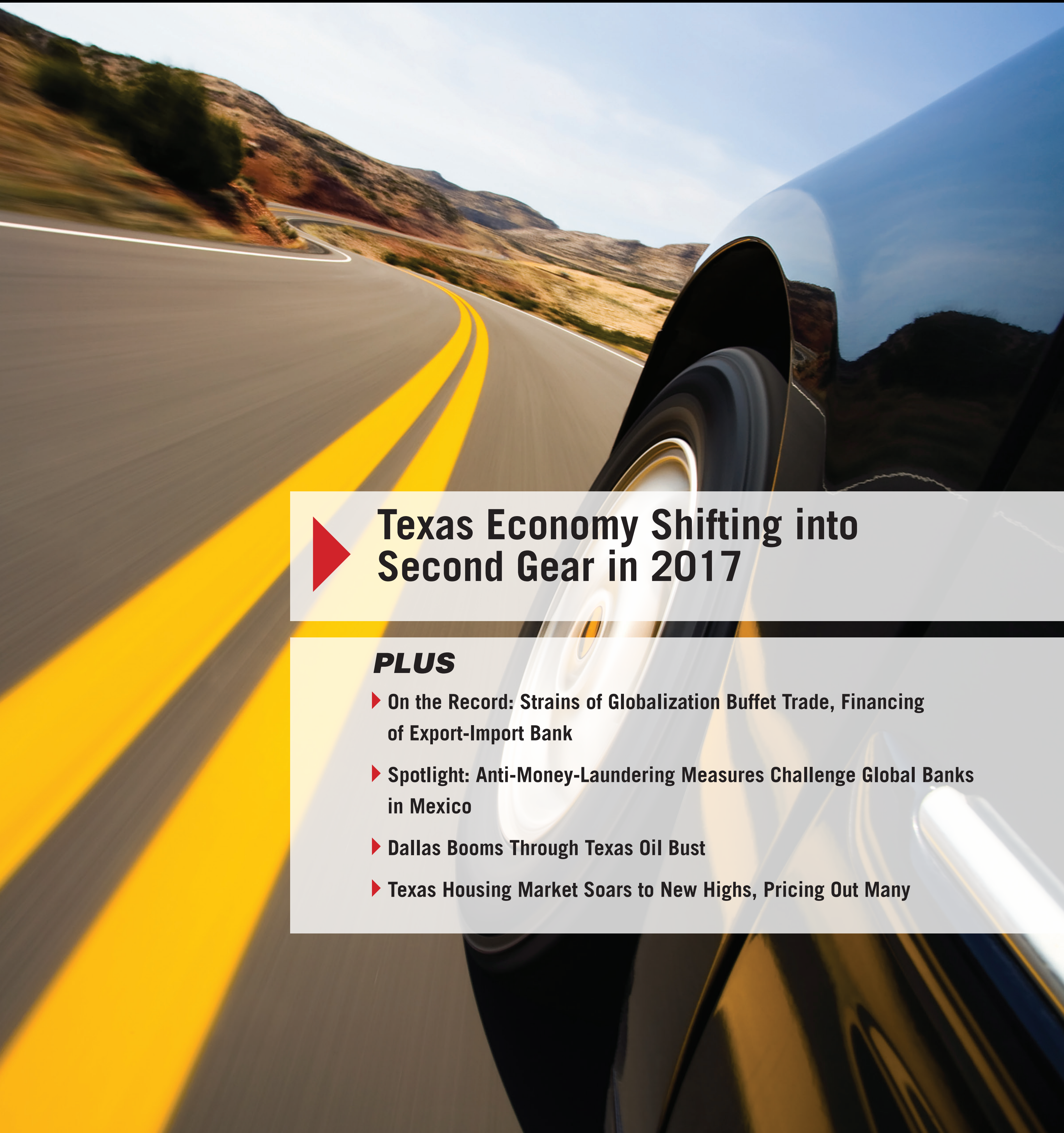

Texas Economy Shifting into Second Gear in 2017

PLUS

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The outlook for the Texas economy has improved considerably from a year ago. We currently expect 2017 job growth of approximately 2 percent, the strongest rate of growth in three years. The improved outlook is explained in greater detail in "Texas Economy Shifting into Second Gear in 2017," by Keith R. Phillips and Christopher Slijk, in this issue of *Southwest Economy*.

Texas continues to benefit from diversification of the regional economy and the migration (as well as immigration) of people and firms to the state. The population of Texas is estimated to have grown by more than 5 million people since 2005, reaching nearly 28 million in 2016. Based on these trends, as the headwinds from a weak energy sector continue to dissipate, I am very optimistic about the growth prospects for Texas and the rest of the Eleventh District.

Of course, there are risks as well as potential growing pains associated with our outlook. Laila Assanie examines the challenges of growth relating to the residential housing market in "Texas Housing Market Soars to New Highs, Pricing Out Many."

In addition, Federal Reserve Bank of Dallas economists are closely monitoring policy decisions that could impact our economic outlook—in particular, policy decisions that could adversely affect U.S. trading and cross-border investment relationships with Mexico. Mexico is the top destination for Texas exports, reaching $93 billion in 2016. Dallas Fed research shows that the trading relationship with Mexico has been important to enhancing job growth and competitiveness in the U.S. as well as in the Eleventh District. It has particularly helped various industries in the state gain global competitiveness. Additionally, Texas border cities have benefited tremendously from increased U.S.–Mexico economic integration—leading to job gains, primarily in service sectors, that have boosted wages and improved living standards for many Texans.

Dallas Fed research shows that the trading relationship with Mexico has been important to enhancing job growth and competitiveness in the U.S., as well as in the Eleventh District.

As we look ahead, I am very optimistic about the prospects for more robust growth in the Eleventh District. Texas is the largest exporting state in the country and is home to 52 Fortune 500 companies. The characteristics of our district help give the Dallas Fed particular insight into energy, trade, immigration and other key aspects of the regional, national and global economies. Drawing on these insights, we at the Dallas Fed will continue to work to understand economic conditions and share our distinctive research with policymakers, businesses and the public in a manner that is insightful and informative.

Robert S. Kaplan
President and Chief Executive Officer
Federal Reserve Bank of Dallas

Texas Economy Shifting into Second Gear in 2017

By Keith R. Phillips and Christopher Slijk

ABSTRACT: Amid an energy sector recovery in the second half of 2016, the Texas economy is positioned to return to its long-term pace of growth this year. However, a significant change in oil prices or further weaknesses in manufacturing remain risks to the outlook.

Despite unexceptional activity for all of 2016, the Texas economy accelerated moderately in the second half of the year. This momentum is likely to continue into 2017, shifting the state economy into second gear.

Texas jobs are expected to increase between 1.5 and 2.5 percent, as the energy sector improves and the service sector grows at a moderate pace.

The largest risk to the outlook is a sharp change in oil prices. A continued appreciation of the U.S. dollar, making Texas goods more expensive abroad, also poses a significant risk to Texas exporters.

The Texas economy maintained restrained growth in 2016, despite continued declines in the energy and manufacturing sectors. Low oil and natural gas prices and a strong dollar led to weakness in the two, particularly during the first half of the year.

Growth in service-producing sectors such as retail and leisure and hospitality slowed from a strongly expansionary mode in 2015. Growth was uneven across the major metropolitan areas, as Houston continued to be weak, but Dallas, San Antonio and Austin remained relatively unscathed by sharp declines in the energy sector.

The state unemployment rate ended the year where it began—4.6 percent—after dipping to as low as 4.3 percent and rising to 4.8 percent during the 12 months. Over the last two years, the jobless rate has remained steady following a persistent decline from October 2009 through January 2015.

Even as job growth slowed in the past two years, many businesses reported difficulties finding workers. In some regions such as Austin where labor markets are extremely tight, difficulty finding qualified workers has likely significantly hindered job expansion.

Continued Mild Growth

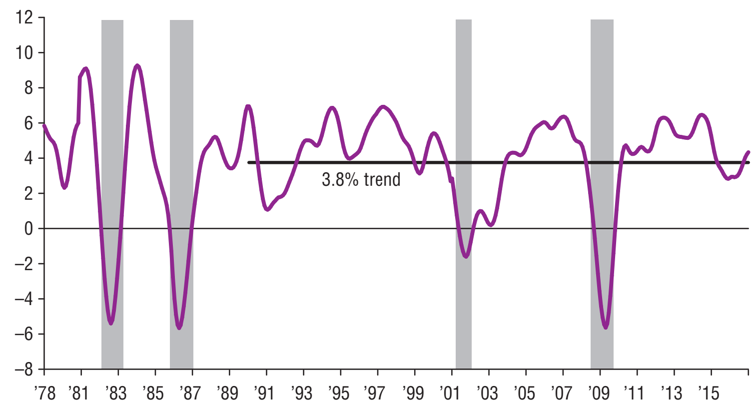
Texas employment grew 1.4 percent in 2016—toward the upper end of the 0–1.5 percent range forecast last year.[1] This compared with 1.3 percent growth in 2015 but was below the national average for a second consecutive year following 13 years of stronger growth. U.S. job expansion was 1.9 percent in 2015 and 1.6 percent in 2016. Texas employment growth was stronger than other energy states. North Dakota, Oklahoma, Louisiana and Alaska each experienced job losses.

Despite this comparative performance, the Texas economy failed to match growth levels achieved since the end of the recession in 2009. This can be seen in the Texas Business-Cycle Index, a broad measure of economic performance based on changes in employment, the state unemployment rate and inflation-adjusted state gross domestic product. It shows that while economic growth was below trend much of the year, the economy continued expanding (*Chart 1*).

Energy sector declines drove state weakness during the first half of 2016. The price of West Texas Intermediate (WTI) crude oil fell sharply from a monthly average of $46 per barrel in October 2015 to $30 by February 2016 (reaching a daily low of $26 in mid-February). The state's drilling rig count fell to its lowest level since 1999, triggering broader concerns that energy prices would remain very low or fall further in the second half of 2016. Energy sector

Toward the end of the year, expectations of fewer regulatory burdens under the new presidential administration and an OPEC agreement to cut production further boosted the energy sector.

Chart 1 Business-Cycle Index Shows Texas Economy Returned to Trend Growth by Year-End 2016



*Seasonally adjusted.
NOTE: Shaded areas represent Texas recessions.
SOURCE: Federal Reserve Bank of Dallas.

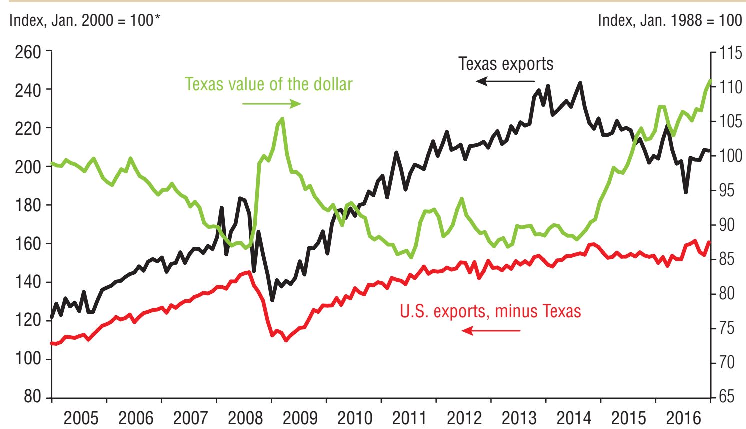
employment followed suit, declining an annualized 19 percent in the first half of 2016. This weakness spilled over into manufacturing sectors that support energy, such as fabricated metals and oilfield machinery.

At the same time, the value of the dollar continued its rise, appreciating nearly 7 percent in 2016—26 percent since mid-2014 (*Chart 2*). A significant share of Texas' manufacturing output is exported and, as of 2015, the state had the third-highest share of jobs tied to exports among all the states.[2] As a result, the rise of the dollar has been an ongoing drag on the manufacturing sector.

Manufacturing output continued trending lower in the first half of 2016, the Federal Reserve Bank of Dallas' Texas Manufacturing Outlook Survey (TMOS) shows (*Chart 3*).

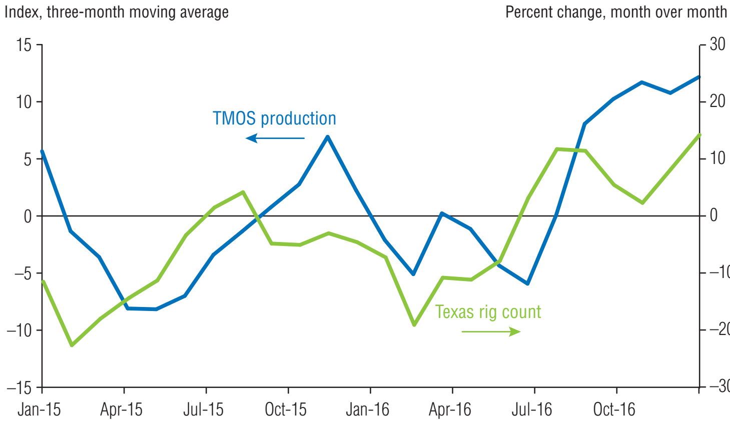
By comparison, growth in the second half of 2016 was relatively robust. The price of WTI picked up, holding steady above $44 per barrel beginning in May and providing a greater sense of stability in energy markets. Toward

Chart 2 Dollar Appreciation Continues to Pressure Texas Exports



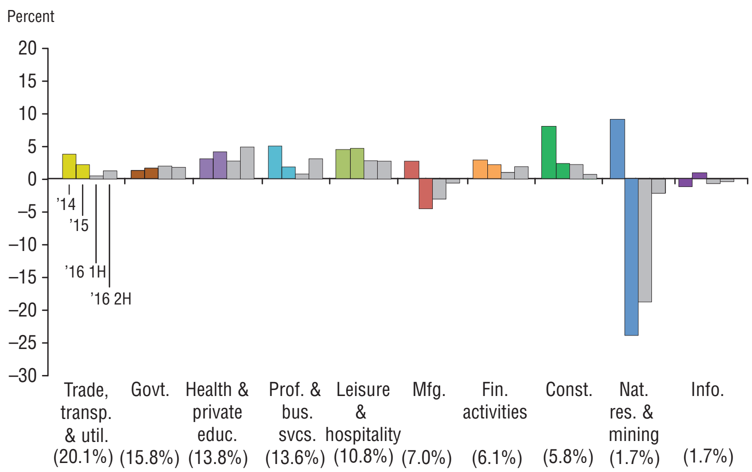
*Seasonally adjusted, real.
SOURCES: Census Bureau; Bureau of Labor Statistics; WISERtrade; Federal Reserve Bank of Dallas.

Chart 3 Texas Energy, Manufacturing Sectors Turn Around in Second Half 2016



SOURCES: Federal Reserve Bank of Dallas' Texas Manufacturing Outlook Survey (TMOS); Baker Hughes.

Chart 4 Job Growth Weak in First Half 2016, Strengthens in Second Half (Job growth, 2014–16)



NOTES: Nongray bars represent December over December growth; gray bars represent annualized growth in the first and second halves of 2016. Figures in parentheses represent shares of total nonfarm employment as of December 2016.

SOURCES: Bureau of Labor Statistics, adjustments by the Federal Reserve Bank of Dallas.

the end of the year, expectations of fewer regulatory burdens under the new presidential administration and an OPEC agreement to cut production further boosted the energy sector.

Prices picked up more in December, averaging $52 a barrel, the highest since mid-2015. Declines in energy employment slowed significantly in the second half of the year, with 2,300 jobs shed compared with 22,800 jobs in the first half. The rig count turned around near mid-year, steadily rising from 179 rigs in May to 336 in January 2017.

Manufacturing output also improved in the second half of the year with employment losses declining to just 2,600 jobs from 13,300 in the first half. The TMOS production index increased for six consecutive months, the longest such streak since the end of 2014.

Service sector jobs experienced a similar pattern of growth—relatively weak growth in the first half of the year and improvement in the second half (*Chart 4*).

Trade, transportation and utilities, in particular, experienced a sharp first-half slowdown as retail and wholesale trade employment growth softened considerably. Administrative services (the largest component of professional and business services) declined slightly, while health care employment slowed due to easing of the pass-through of stimulative effects derived from rising Medicaid enrollments during the prior two years. Only government employment accelerated, rising an annualized 2.0 percent in the first half after a weak 1.4 percent in 2015.

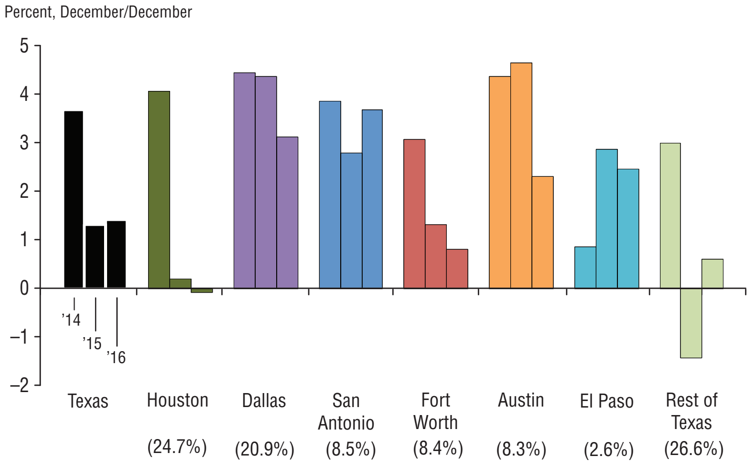
Mixed Metro Performance

Growth since the energy bust has been very uneven across Texas' major metropolitan areas. Performance has been defined in large part by regional exposure to the energy industry, with oil-and-gas-intensive regions such as Midland–Odessa continuing to shed jobs at a more rapid pace than diversified energy areas such as Houston. Meanwhile, locations with a relatively small share of energy jobs grew strongly (*Chart 5*).

Houston, a global energy hub, has continued to demonstrate resilience despite softness in its core industry. Diversification into downstream energy—evidenced in a petrochemical plant construction boom—has helped offset some sector weakness. Additionally, due to continued growth in other large sectors such as health care and retail, total Houston employment declined only 0.3 percent from its most recent peak of 2,993,000 jobs in January 2016.

The Dallas metropolitan area, a region with a large finance industry and stronger ties to the U.S. economy than other large Texas metros, slowed slightly in 2016 compared with 2015 but continued to be unfazed by the issues affecting overall state growth.[3] While neighboring Fort Worth slowed due to weakness in its large manufacturing base, the DFW metroplex added 84,600 of the net 168,100 jobs gained in the state last year and

Chart 5 Metro Job Growth Remained Mixed in 2016
(Job growth, 2014–16)



NOTES: Figures in parentheses represent shares of total state employment.
SOURCES: Bureau of Labor Statistics; Federal Reserve Bank of Dallas.

added more jobs than any metro area in the country except New York City.

San Antonio was one of the few areas where job growth accelerated last year, making it the fastest-growing metro in Texas. Despite its proximity to the Eagle Ford Shale, the metro has little reliance on energy. Employment in health care, leisure and hospitality, and government—the core sectors of the metro economy—grew at its fastest pace since 1994.

Austin slowed, as several sectors including construction and leisure and hospitality decelerated from very strong growth rates in 2015. These sectors likely had difficulty finding workers, and online help-wanted advertising shows most service sectors and construction labor demand holding near highs reached in 2014 and 2015. Austin's unemployment rate was 3.2 percent in December 2016, well below its long-term average and indicative of very little slack.

2017 Forecast

Leading economic indicators suggest that job growth will shift into a higher gear in 2017. The components of the Texas Leading Index increased in fourth quarter 2016, pushing the index moderately higher (*Chart 6*). A sharp rebound in permits for drilling new wells (610 permits in September, 909 in December) was the largest positive contributor to the index. A modest increase in oil prices also added to the gain.

Appreciation in the Texas trade-weighted value of the dollar was the largest negative contributor. The U.S. dollar strengthened against the currencies of Texas' trading partners in the fourth quarter, particularly Mexico—Texas' largest trading partner—weakening the outlook for export-sensitive industries.

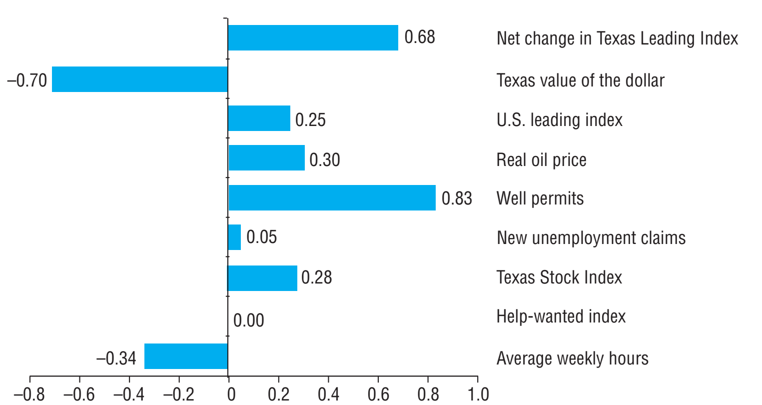
Broad indicators of labor market conditions were somewhat mixed. New claims for unemployment insurance in the state fell slightly (a positive contributor to the index). Help-wanted advertising, meanwhile, held flat. Average weekly hours worked in manufacturing declined, reflecting the ongoing stresses in the manufacturing sector.

Share prices of companies with a major Texas presence were also a moderately positive contributor to the leading index. The Texas stock index is a measure of the share prices of 100 companies across many industries that are headquartered or have large operations in the state. In the fourth quarter, the index rose 5.9 percent, outperforming a broader measure of national equities such as the Standard & Poor's 500, which rose 4.1 percent. Gains in the U.S. leading index suggest that the national economy should continue growing—increasing the demand for goods and services produced in the state.

The Dallas Fed's forecasting model, which uses the changes in the Texas Leading Index along with recent momentum in job growth, predicts that Texas employment growth will be between 1.5 and 2.5 percent in 2017 (approximately 181,000 to 302,000 jobs).

Although energy prices are not expected to rise significantly in 2017, optimism among energy company executives has surged, and drilling activity is expected to pick up. The Dallas Fed's Energy Survey shows a much higher share of respondents reporting

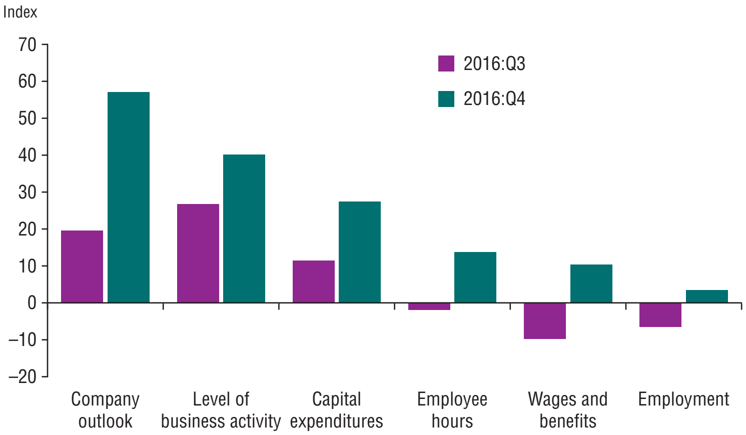
Chart 6 Leading Index Components Mostly Positive at Year-end 2016



NOTE: Three-month percent change October–December 2016, seasonally adjusted.
SOURCE: Federal Reserve Bank of Dallas.

Chart 7

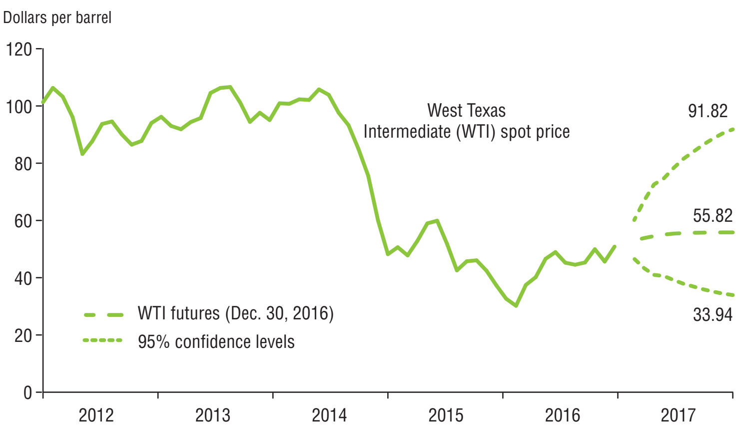
Energy Survey Shows Increasing Optimism Moving into 2017



SOURCE: Federal Reserve Bank of Dallas.

Chart 8

Oil Price Futures Suggest Uncertain Outlook



NOTE: Confidence bands are calculated based on implied volatility of underlying contracts. For more information, see the Energy Information Administration Short-Term Energy Outlook Supplement documentation at www.eia.gov/outlooks/steo/special/pdf/2009_sp_05.pdf.

SOURCES: Bloomberg; Energy Information Administration; Federal Reserve Bank of Dallas calculations.

a positive outlook in exploration and production firms as well as support services companies in fourth quarter 2016 (*Chart 7*). Given this optimism, a more robust recovery is likely this year as capital expenditures rise and oil and gas employment stabilizes.

Risks to the Outlook

The outlook for the coming year is contingent on relative stability in energy markets, particularly in the price of oil. Futures markets early in the year suggest a slightly higher WTI price of about $56 per barrel by year end. However, this estimate is highly uncertain: the 95 percent confidence interval indicates a possible price range of $34 to $92 (*Chart 8*). Just as the steep decline in oil prices between mid-2014 and mid-2015 was not anticipated based on information available in mid-2014—which suggested a gradual decline to around $90—unforeseen events could cause sharply higher or lower prices. This uncertainty, in turn, complicates an employment outlook that could respond with a similar swing.

The manufacturing outlook continues to be mixed. Greater energy activity will boost manufacturers serving that sector, particularly oilfield machinery production and fabricated metals. However, these represent less than 30 percent of total manufacturing employment. Export-related manufacturing, which comprises over 50 percent of employment in the industry (some of which overlaps with energy manufacturing), remains soft. Without some weakening of the persistently strong dollar in 2017, these sectors are unlikely to see significant growth.

Still, optimism among TMOS respondents has increased sharply since fourth quarter 2016. Key indicators such as new orders began the year at their highest levels since 2014, while broader indicators such as the company outlook and general business activity indexes rose to their highest level since 2010. This suggests that producers have become much more optimistic about their industries and the economy as a whole in 2017.

Meanwhile, the outlook for the service sector remains steady, with moderate but slightly stronger growth expected in 2017. Indicators in the Texas Service Sector Outlook Survey picked up toward the end of last year. The headline revenue index rose moderately, while the company outlook and business activity indexes rose to highs last seen during the energy boom in 2014.

Phillips is an assistant vice president and senior economist and Slijk is a senior research analyst at the San Antonio Branch of the Federal Reserve Bank of Dallas.

Notes

[1] "Texas Economy Remains Resilient, but Low Oil Prices Loom as Future Risk," by Keith R. Phillips and Christopher Slijk, Federal Reserve Bank of Dallas *Southwest Economy*, First Quarter, 2016, www.dallasfed.org/research/swe.

[2] "Jobs Supported by State Exports 2015," by Jeffrey Hall and Chris Rasmussen, Office of Trade and Economic Analysis, International Trade Administration, www.trade.gov/mas/ian/build/groups/public/@tg_ian/documents/webcontent/tg_ian_005503.pdf.

[3] "Dallas Booms Through Texas Oil Bust," by Michael Weiss, Pia Orrenius and Laila Assanie, Federal Reserve Bank of Dallas *Southwest Economy*, First Quarter, 2017, www.dallasfed.org/research/swe.

A Conversation with Fred P. Hochberg

Strains of Globalization Buffet Trade, Financing of Export-Import Bank

Fred P. Hochberg just concluded an eight-year tenure as the chairman and president of the Export-Import Bank of the United States. He discussed the bank and the outlook for trade during an appearance at the Houston Branch as part of the Federal Reserve Bank of Dallas' Global Perspectives speakers' series.

Q. What is the Export-Import Bank?

The Ex-Im Bank was started by President Roosevelt in 1934 and does two basic things. First, it levels the playing field when U.S. companies are competing against foreign companies and need financing to close the sale. If the government of China or Germany or France is providing financing, we make sure that U.S. companies are similarly armed so that they can compete on a level playing field.

Take wide-body commercial aircraft for example. Global airlines have a choice between Airbus or Boeing—that's it. We want to make sure that when they are making a decision they are going to purchase the equipment that's right for them, not because the ex-im banks of Germany, France and the U.K. are providing financing to Airbus and we're not.

The second thing we do is fill private-sector financing gaps. About two-thirds of the lending we do is in developing economies, and that is where there is just not the financial capacity.

To stick with aircraft as the example, we have worked on financing for Ethiopian Airways. Given the state of Ethiopia's economy, and its status as one of the lowest-income countries in sub-Saharan Africa, the capital markets are not there to support those purchases. The airline is a major moneymaker for exports and trade and tourism and business, so we are filling that market gap as the company and country grow and build their credibility with private lenders.

Q. What void do you fill by providing financing?

Well, Boeing is an aircraft company; they are not in the finance business. The same goes for all of our major manufacturers. We want them investing in R&D, and building their supply chains, not financing their customers' purchases. Many people have said—and it's anecdotal—that one of the things that actually hurt McDonnell Douglas [later absorbed by Boeing] many years ago was that they were actively financing their purchases and not putting money into R&D. As a result, they ultimately had an obsolete product.

On the other end of the spectrum, 90 percent of the companies we work with are small businesses. I ran a small business, a family business [Lillian Vernon Corp.], and small businesses have a couple of strikes against them. One, they are small, so banks don't like to deal with them, and they (the banks) don't make enough money. Two, if they are exporting, their banks or insurers are frequently reluctant to provide working capital to a company with any amount of export sales, so we fill in that gap for them.

Q. The bank is part of the executive branch, yet operates under congressional oversight. How does that work?

Every four or five years, Congress gives us the authority to make loans and guarantees, and we collect revenue and put aside a loan loss reserve, like any responsible institution. Congress then says, [from] what's left over, we will let you retain about $100 million to run the place, and the rest goes to the taxpayer.

Since I have been at the bank [in 2009], we sent [to taxpayers] $3.8 billion in cash. Think of it in terms of your own business: you start with sales, subtract all costs and what's leftover is referred to as profit.

You know what they call that in the federal government? Negative subsidy.

Q. What's the biggest misconception about trade that you see right now?

I think people confuse trade with outsourcing. They have nothing to do with each other, but they confuse it with outsourcing. I wish we did not call it free trade. I wish we called it fair trade, because goods come into our market with very low tariffs, very low requirements.

When you have a trade deal, some industries and some products will become less competitive because they will have more foreign competition. So you have to have a belief that if you have fewer barriers, less friction, ultimately we will do better because we are a very innovative society. We have relatively inexpensive power, we have good rule of law, a well-trained workforce—our infrastructure could be better but it's still better than many places. So all things being equal, we will do much better.

Q. What's the Ex-Im Bank's impact in Texas?

Well, I counted it up, I visited Texas 11 times as chairman; I came to Houston nine of those times.

This is a major exporting hub. One great expertise we have as a country is our knowledge in oil and gas and energy. That is one of our strongest export categories, whether it be power, whether it be equipment used in oil and gas operations, whether it be LNG (liquid natural gas). That's why I have been here.

Q. Mexico is Texas' biggest trading partner, much of it cross-border manufacturing. What has that relationship meant?

One of the views has been that between Canada, the U.S. and Mexico,

> The world is more integrated from supply chains than it has ever been, and yet countries around the world are becoming more nationalistic and more tribal and putting up more barriers.

there are a half-billion people. If we can get more integrated on manufacturing, innovation and product development, we could become a much better counterweight to Asia than if we all try and go in alone.

And the barriers are really more political than they are commercial or economic.

The world is more integrated from supply chains than it has ever been, and yet countries around the world are becoming more nationalistic and more tribal and putting up more barriers. And maybe it's just simply the changes happen so fast that people are unable to absorb it at the rate of speed it's been happening. The benefits of an integrated market are spread widely. People have argued that the benefits of globalization and integration between Canada and Mexico adds about $10,000 worth of purchasing power to each American household, which is a lot.

Q. How has trade become such a hot-button issue?

The downsides [of trade] are narrowly based, because somebody loses their job or a factory closes, but part of that is also mixed up in automation. Part of that is mixed up in the fact that trade is an easy thing to blame, but I think a lot of it has to do with other factors.

There was an article about a textile mill that closed down, laying off 4,000 employees. Then Marriott Corp. decided to make all of its towels in the United States, to bring that work back. But the plant will only hire a few hundred employees. So it's not about trade; things are being automated.

Q. When you see companies that are deciding to hold off on locating a plant in Mexico and saying they are going to keep these jobs in the United States, what's your reaction?

At the end of the day, companies need to make economic decisions by which they can deliver goods to the marketplace at a price the market will pay for them.

We are actually seeing an onshoring of many jobs. I mean, there are companies that had moved to China that are now moving back to the United States. As costs have gone up in China, and the fact that we are automating factories here, it has made more and more economic sense to actually do the work here because the labor portion that might be relatively expensive is a smaller and smaller percentage of the cost of goods.

We are going to get to a point, for example, where, if you want to order a pair of Nike sneakers, you can decide what it looks like, what the color is, and they will deliver it in 24 or 48 hours. As we get to that, we are going to have more manufacturing close to the consumer, because they are going to locate that factory next to the FedEx hub or next to the UPS hub, not 8,000 miles away and put it on a boat that takes 25 days to get here.

Q. The Ex-Im Bank operated without a full board and was thus limited to loans not to exceed $10 million for the past few years. What was the impact?

Well, we have lost a number of transactions. We have lost three satellite transactions that went to France, because France is our main competitor when it comes to satellites. And when it comes to satellite launches, we compete with France, China and Russia. So if we can't finance them, they will go to China and Russia or France.

In the satellite space, we were doing in the range of a $1 billion a year in satellite and satellite launches financing. Commercial satellites are a major U.S. industry. We have a real competitive edge, and they are very hard to finance. So we lost some satellite transactions. We lost a number of [sales of] aircraft that put Rolls-Royce engines on them instead of GE engines.

And the impact of that is very long term. I mean, it's a little bit like the Gillette razor—it's not the razor, it's the blades [that are the profit maker], and if you buy a GE engine versus a Rolls-Royce engine, you have got 20 years of maintenance that will exceed the acquisition costs. So this is having a pronounced impact.

Q. What are the prospects for global trade?

Global trade was at one point growing at about two times global GDP. So if the global GDP was growing at 5 percent, global trade was growing 10 percent. In the last few years, all of a sudden, global trade instead of growing at two times global GDP is growing at about half, and we are still trying to figure out why. My hunch would be that part of it is because the oil industry has slowed down.

We have a lot more digitization, so a lot of transactions are really happening digitally and over the internet, so there is less transfer of goods.

We are also finding that the era is over when a U.S. company could make things here, open a small sales office in Addis Ababa or Johannesburg and have a salesperson and two or three people, and that was all it needed in that country to have a foothold. If you are going to sell farm equipment, rail, power equipment, countries now say, 'Well, that's all great, but we want you to set up the manufacturing in our country.'

Anti-Money-Laundering Measures Challenge Global Banks in Mexico

By Michael Perez

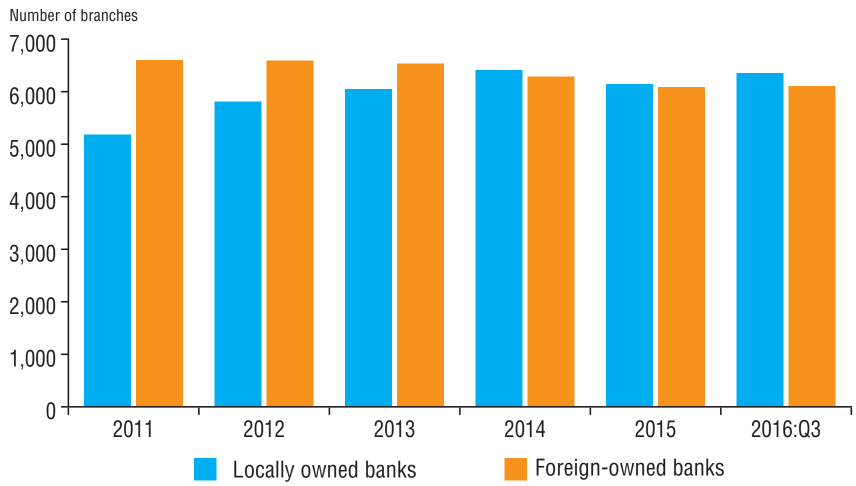
Global banks are taking precautions in Mexico amid tighter anti-money-laundering regulations that have prompted some institutions to leave the market. The total number of foreign-owned bank branches operating in Mexico fell 7.4 percent between 2011 and 2016, partially the result of stricter regulations. Meanwhile, the number of domestically owned branches grew 22.5 percent (*see chart*).

The stricter standards were promulgated in 2012 by the Financial Action Task Force, an independent intergovernmental agency that works to combat money laundering. The measures mandate that banks and regulators identify, assess and take action to mitigate money laundering and terrorist financing risks.[1]

Proximity to the U.S. makes banks, especially those with branches or correspondent relationships on both sides of the border, attractive to launderers attempting to move funds inconspicuously between the two countries. Correspondent banking involves one bank (the correspondent) providing a deposit account, liability account or related service to another bank (the respondent).

The measures also subject domestic and foreign-owned banks in Mexico to strict oversight by U.S. regulators, who seek to prevent illicit funds from entering the U.S. financial system.

Chart 1 Foreign-Owned Bank Branches in Mexico Edge Lower



SOURCE: Mexican National Banking and Securities Commission (Comisión Nacional Bancaria y de Valores).

Longstanding Concern

Anti-money-laundering concerns are not new or unique to Mexico. Illegal financial outflows from Mexico are sizable, estimated at over $50 billion per year.[2] However, while the revised standards are improving practices, they are costly. For many foreign banks, the added expense and potential legal liability can't be justified given the amount of money earned in Mexico.

As a result, many foreign banks are withdrawing or consolidating financial services in Mexico by closing branches and accounts and channeling investment toward improving their existing infrastructure. This makes it difficult for local customers, who are losing access to convenient branches where they can safely deposit cash and finance their businesses.

The effects are felt on the U.S. side of the border as well. Some U.S. banks have terminated remittance services between the U.S. and Mexico and have begun refusing to accept deposits from third-party money transmitters. This raises the cost of sending money across the border.

The foreign banking retrenchment also makes it harder for regional and small Mexican banks to process payments involving dollar clearing. Most of Mexico's biggest banks can use their U.S. units to clear dollars. But the exit of foreign correspondents from the Mexican financial system has forced smaller banks, which lack the economies of scale to clear U.S. currency on their own, to look for often more-expensive alternative clearing partners abroad.

U.S. regulators' heightened money-laundering vigilance prompted Mexico's oversight change. "Know your customer" rules are of particular importance to banks. They restrict the size of account balances, the cumulative value of transactions and/or the channels to access funds for "low-information clients"—those without the documentation to open a traditional, unrestricted account.

Mexican authorities are working to remedy the unintended consequences of foreign-bank closures and consolidations. Mexico's publicly owned development banks, for example, have augmented their presence to provide banking services to the financially underserved in communities deemed too risky by commercial banks.

To support dollar clearing, Mexico's central bank has developed a domestic payment system to settle same-day payments in dollars for Mexican banks. The system allows banks to process payments safely and efficiently and improves traceability.

Notes

[1] See "International Standards on Combating Money Laundering and the Financing of Terrorism and Proliferation," Financial Action Task Force, February 2012 (updated October 2016).

[2] See "Illicit Financial Flows from Developing Countries: 2004–2013," by Dev Kar and Joseph Spanjers, Global Financial Integrity, December 2015.

Dallas Booms Through Texas Oil Bust

By Michael Weiss, Pia Orrenius and Laila Assanie

ABSTRACT: The Dallas metropolitan division's economy, buttressed by business relocations and consolidations, has expanded steadily since 2010, following the Great Recession. Growth sectors, which included business and financial services, defense and security, and transportation, powered Dallas and helped it pace the Texas economy after the energy price collapse.

As the price of West Texas Intermediate crude oil began its collapse from more than $107 per barrel in June 2014 to less than $30 eight months later, the Texas economic outlook seemed uncharacteristically clouded. With diminished prospects for even nonoil-patch metros such as Dallas, many analysts forecast a state recession.

State job growth fell below the national average in 2015, the first time Texas had trailed the U.S. since 2003. Still, the state economy kept expanding, albeit slowly, with the once-buoyant energy sector laying off tens of thousands and exerting a marked drag.

The Dallas–Plano–Irving metropolitan division was in part the reason the state managed to continue growing. Coming out of the Great Recession in 2010, the greater Dallas metro area has been a consistent source of strength, benefiting from expanding business and financial services, defense and security, transportation, recreation and food services, health, construction and retail (*Chart 1*).[1]

These are all large "star" industries, denoted by their high location quotients—their relatively large local presence compared with their standing in the national economy—and rapid growth during the 2010–15 period. Dallas employment expanded by more than 3.5 percent annually—from 2 million jobs in January 2010 to 2.5 million by December 2016. This outsized performance continued in the oil bust years even as growth stalled in the state's other formerly booming metros, such as Houston, and slowed significantly in Fort Worth (*Chart 2*).

Relocations, Expansions

The Dallas-area's spurt has been fed by expansion as well as business relocations and consolidations into the area. Toyota moved its U.S. operations to Plano from Southern California, while State Farm and Liberty Mutual insurance companies pulled together operations into new locations in North Texas. Dallas-based AT&T expanded beyond its telecommunications roots when it acquired satellite program provider DirecTV.

Mergers within the airline industry boosted the headquarters presence of Southwest Airlines following its 2011 acquisition of AirTran Airways. American Airlines emerged from bankruptcy, retaining its name and metroplex headquarters to become the world's largest carrier following its purchase by US Airways in 2015.

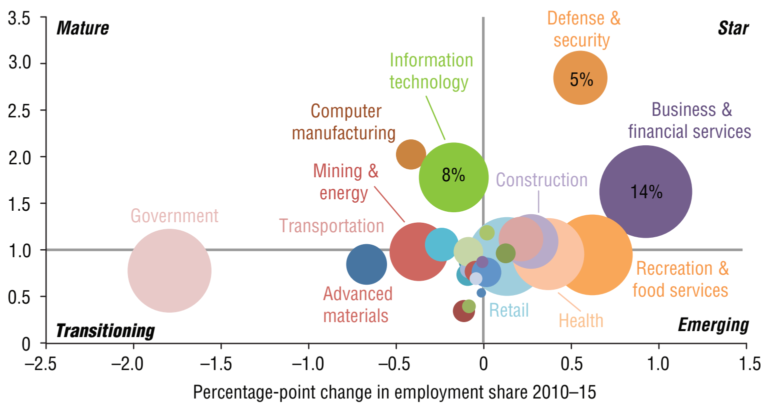
The new and expanded operations helped expand a growing network of support services and businesses that aided Dallas metro growth. The area's job growth rate led the state in 2015–16, a feat made possible by high rates of in-migration of workers primarily from other states but also from other countries (*Chart 3*).

Over the last five years, net domestic migration into the Dallas metropolitan division has averaged 32,276 and international arrivals an additional 17,441. Added to rates of natural increase, the population is averaging about 2.1 percent annual growth, over twice the national average but slower than rates attained prior to the Great Recession. Migration picked up in 2015 despite the spreading malaise from the oil bust.

Broad-Based Growth

Part of the secret behind Dallas' recent economic boom is a diversified industrial base. Since the energy bust, Dallas employment expansion has been broad based, and every major sector outpaced the state and nation over the two-year period from December 2014 to December 2016. Trade, transportation and utilities; professional and business services; and leisure and hospitality each grew at a more than 4 percent annual rate during the period (*Chart 4*).

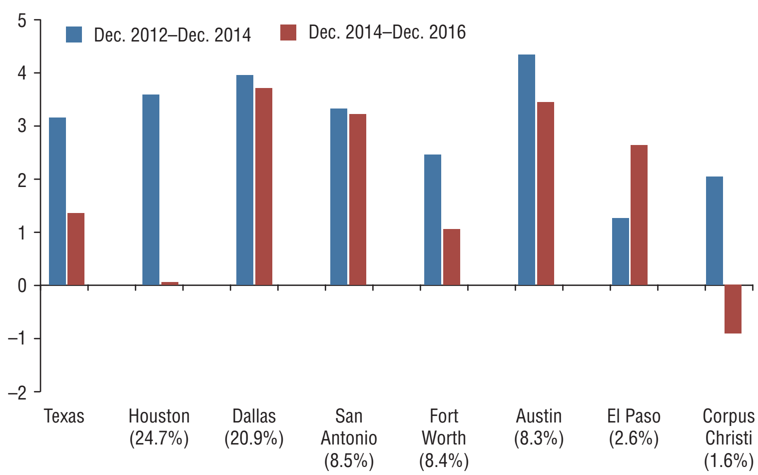
Chart 1: Dallas Area Established as Business and Financial Services Center for State



NOTE: Bubble size represents industry share of metropolitan statistical area employment. For more information on constructing industry clusters, see *At the Heart of Texas: Cities Industry Clusters Drive Growth.*

SOURCES: Texas Workforce Commission; Bureau of Labor Statistics.

Chart 2: Dallas Metro Leads in Job Growth in Oil Bust Years



*Seasonally adjusted.

NOTE: Percentage change from December 2012 to December 2014 and from December 2014 to December 2016 at an annual rate; each metro's share of employment in December 2016 in Texas shown in parentheses.

SOURCES: Bureau of Labor Statistics; Texas Workforce Commission; seasonal and other adjustments by the Federal Reserve Bank of Dallas.

While manufacturing employment increased 2 percent in Dallas, it declined by more than 3 percent statewide. Sector performance reflected weakness in energy and a strengthening Texas trade-weighted value of the dollar that made state exports more expensive abroad. Construction and energy expanded by 3.5 percent in Dallas, while jobs in that sector fell by nearly 4 percent statewide on an annual basis.[2]

Educated Workforce

The emergence of professional sectors is reflected in Dallas' proportion of college graduates and those with graduate or professional degrees; together they make up over 35 percent of adults, which exceeds education levels in the state as a whole and mirrors the national average.[3] Still, Dallas trails Austin, the most highly educated metropolitan statistical area in Texas, where more than 40 percent of adults have at least a college degree (*Chart 5*).

Migrants, both domestic and international, also contribute disproportionately to the Dallas area's skilled workforce. About 50 percent of recent international migrants hold a college degree or higher and about 53 percent of domestic migrants do so; it would be impossible to grow the high-end service industry in Dallas without the influx of workers from elsewhere.[4]

California is the No. 1 origin of domestic migrants who move to Texas, followed by Florida, New York and Illinois. South central Asia (predominantly India) and eastern Asia (largely China) are the two most important origins of college-educated international migrants to Dallas.

Mirroring National Trends

The Dallas area's sectors of employment growth and the region's relative education attainment mirror national trends. They indicate a possible future path of economic expansion as outlined in a study conducted by the Pew Research Center and Markle Foundation.[5]

As of 2015, 36 percent of the nation's employed workers had completed a four-year college program nationally. The college educated accounted for just more than half of jobs requiring higher analytical skills or higher social skills. These are also the areas that experienced the greatest growth—up 77 percent for analytical skills jobs and 83 percent for social skills positions from 1980 to 2015.

The skill sets involved in higher-level jobs are deployed in computer technology or positions requiring analytical, management and interpersonal abilities. By comparison, jobs requiring a higher set of physical skills, machinery operation or tool skills rose a relatively small 18 percent over the period. Overall employment rose 50 percent from 1980 to 2015.

Residential Expansion

Resembling the flourishing local economy, the overall Dallas–Fort Worth real estate market has also boomed. The skyline has changed amid a burst of multifamily housing and office construction for expanding and relocating businesses, much of it in the northern Dallas suburbs. With about 50,000 apartments currently being built, DFW ranks first among the 100 largest U.S. metro areas in multifamily construction, according to data from MPF Research.

Annual rent growth was stunning at 6 percent as of fourth quarter 2016 amid essentially full occupancy (96 percent), despite massive new construction over the past few years.[6] DFW has added about 90,000 new apartments since early 2010, just shy of the existing-apartment base of a mid-sized U.S. city such as Jacksonville, Florida, or Memphis, Tennessee.[7]

Strong housing demand has boosted single-family home building activity as well, with construction permits issued posting double-digit growth every year from 2012 through 2015, albeit from a low base. While issuance of Texas single-family permits moderated in 2015, DFW experienced breakneck growth of nearly 24 percent (*Chart 6*).

Single-family permits in DFW rose 6.3 percent in 2016 from prior-year levels, while statewide activity rose a modest 2.2 percent. Builders started more than 30,000 homes in 2016, placing DFW in the top spot for annual housing starts nationwide, according to Metrostudy data.[8]

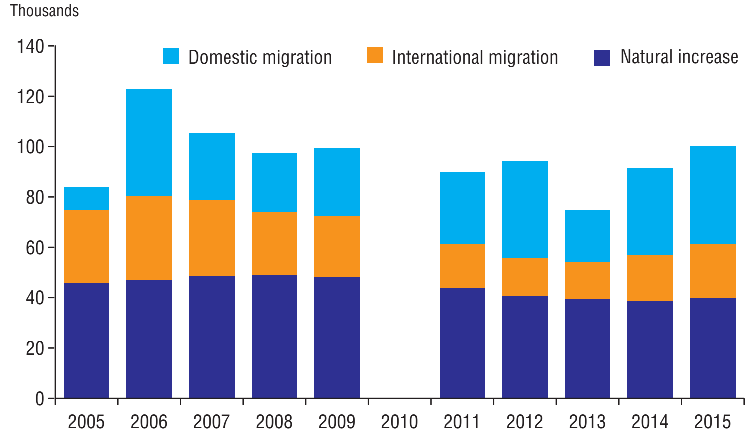
Even as the overall housing stock has increased, the 2.2 months' supply of single-family existing homes is the tightest it has ever been in the Dallas–Fort Worth metroplex, Multiple Listing Service data shows. This compares with 2.5 months in Austin, 3.7 in Houston, 3.5 in San Antonio and 3.7 statewide. Analysts generally regard a six-month inventory as indicating a balanced market.

Tightness in the Dallas-area market has driven home prices to record highs. The real median sales price of existing homes climbed 34 percent in Dallas (20 percent in Fort Worth) from December 2010 to December 2015, pushing prices in Dallas above the U.S. average for the first time in 2014. In 2016, prices rose another 10.9 percent in Dallas (7.5 percent in Fort Worth). The local increases compare with national figures of 3.2 percent in 2016 and 23 percent from December 2010 to December 2015. (See "Texas Housing Market Soars to New Highs, Pricing Out Many" on page 15.)

Benefits of Diversification

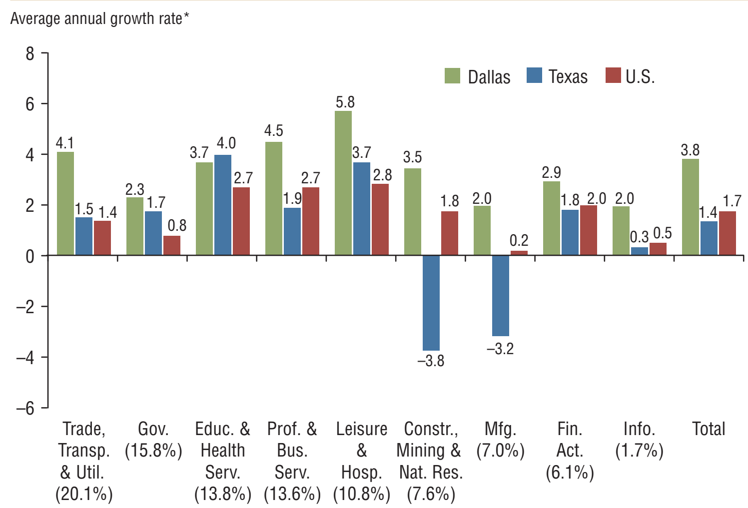
The Dallas area has benefited from its expanding, diversified economy—one that provided opportunities for a range of skill and education levels, particularly those with higher educa-

Chart 3 Domestic Migration to Dallas Accelerates in 2014, 2015



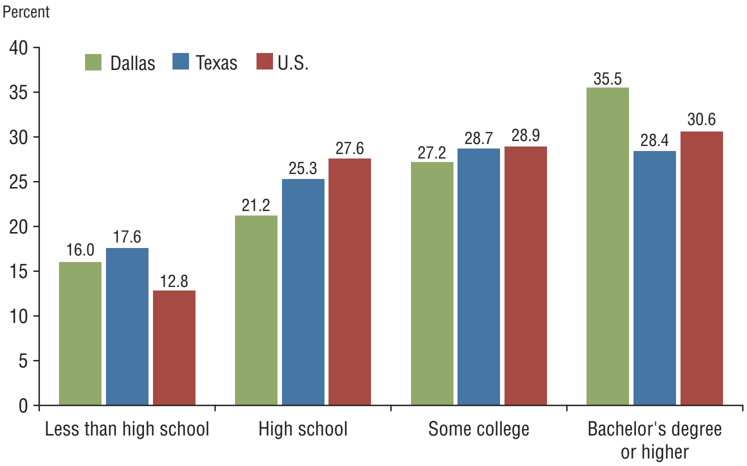
NOTE: Estimates not available for census years.
SOURCE: Census Bureau.

Chart 4 Texas, U.S. and Dallas Employment Change by Industry, December 2014 to December 2016



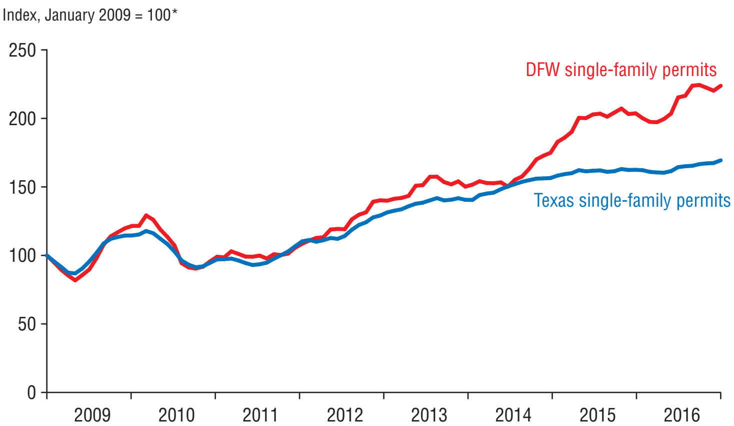
*Seasonally adjusted.
NOTES: Percentage change from December 2014 to December 2016 at an annual rate; each sector's share of employment in December 2016 in Texas shown in parentheses.
SOURCES: Bureau of Labor Statistics; Texas Workforce Commission; seasonal and other adjustments by the Federal Reserve Bank of Dallas.

Chart 5 Share of College Graduates Higher in Dallas Relative to U.S. and Texas



SOURCE: Census Bureau, 2015 American Community Survey one-year estimates.

Chart 6 DFW Single-Family Construction Climbs, While Texas Remains Steady



*Five-month moving average, seasonally adjusted.
NOTE: Last data point is December 2016.
SOURCE: Census Bureau.

tion. The area economy is predominately service-based with little government, so not subject to public spending cycles, while taking advantage of the state's low taxes and flexible labor markets. The energy sector is vibrant but small, which helped Dallas sustain its boom through the state's oil bust, and regulations and planning have facilitated housing construction and expansion of buildings, roads and infrastructure.

The area's economic boom may, however, diminish slightly as other large states pick up speed, slowing migration to North Texas. With unemployment near 4 percent, the local labor market is tight; difficulty hiring can put the brakes on growth. At the same time, absorption and integration of the financial services, transportation and telecommunications operations new to the Dallas area will take time. Their impact will wane even as some support activity surrounding relocations to the area, such as Toyota, continue to build out. The Dallas Fed employment forecast for the Dallas–Plano–Irving area anticipates more than 3 percent growth again in 2017.[9]

The re-emergence of the energy sector, with both natural gas and oil prices moving well past lows of 2015 and 2016, will meanwhile provide greater support to other regions of the state, particularly the Houston metropolitan area, which may vie for human and financial resources that have been drawn to Dallas over the past few years.

There remains room for growth within the city of Dallas, which has experienced some of the effects of the region's booming economy but not the full benefits, many of which have taken root in suburbs, such as Plano and Richardson. Development of Dallas' potential could provide key support to the region during the next growth phase.

Weiss is a senior writer/editor, Orrenius is a vice president and senior economist and Assanie is a senior business economist in the Research Department of the Federal Reserve Bank of Dallas.

Notes

1 *At the Heart of Texas: Cities' Industry Clusters Drive Growth*, by Laila Assanie, Kristin E. Davis, Pia M. Orrenius and Michael Weiss, Federal Reserve Bank of Dallas, 2016, p. 12.

2 Data are unavailable individually for the construction and mining sectors at the metropolitan statistical area level. Hence, they are presented together.

3 See note 1, pp. 28–33.

4 Census Bureau, 2015 American Community Survey One-Year Estimates.

5 For more information, see "The State of American Jobs: How the Shifting Economic Landscape is Reshaping Work and Society and Affecting the Way People Think About the Skills and Training They Need to Get Ahead," Pew Research Center and the Markle Foundation, October 2016.

6 Data are from MPF Research.

7 See note 6.

8 DFW's top ranking is based on the 42 markets that Metrostudy surveys.

9 The forecast is for December-to-December job growth and uses penalized regression techniques, including other state and local economic indicators.

Texas Housing Market Soars to New Highs, Pricing Out Many

By Laila Assanie

ABSTRACT: Texas' low cost of living has been one key long-term factor in the state's growth story—sustaining the economy through oil booms and busts. However, unprecedented home price appreciation and tight supply of starter homes during the housing recovery have eroded this advantage.

Relatively low home prices in Texas—contributing to a lower cost of living than elsewhere in the U.S.—have played an important role in the state's robust long-term economic and population growth that has often led the nation.

However, recent gains in Texas home prices have reduced that cost-of-living advantage, calling into question whether Texas can maintain its superior growth. Following another year of record house price appreciation in 2016, affordability continues to slip; Austin and Dallas have fallen below measures for the country as a whole.

Texas home price gains have uncharacteristically outpaced the U.S. since 2011 (*Chart 1*). Texas home prices were up 42 percent in fourth quarter 2016 from fourth quarter 2010 levels, according to Federal Housing Finance Agency data. U.S. home prices rose 30 percent over the same period. Median real (inflation-adjusted) home sales prices in Texas crossed the $200,000 mark in late 2015.

Thus, a median-income household without a down payment and other obligations, such as a car or student loan payment, could barely afford a median-priced home in 2015 when Texas' median household income was $55,653.[1]

As housing began recovering in 2011, following its collapse nationally, lenders looked more closely at mortgage borrowers' credit ratings and income.

Builders, who also faced escalating land, materials and labor costs and tight lending for land development, responded by constructing fewer "starter" homes, typically priced below $250,000. Starts of homes priced below $250,000 dropped from 62 percent of overall new single-family units in 2011 to 33 percent in 2016, according to data from Metrostudy, a market research company.[2]

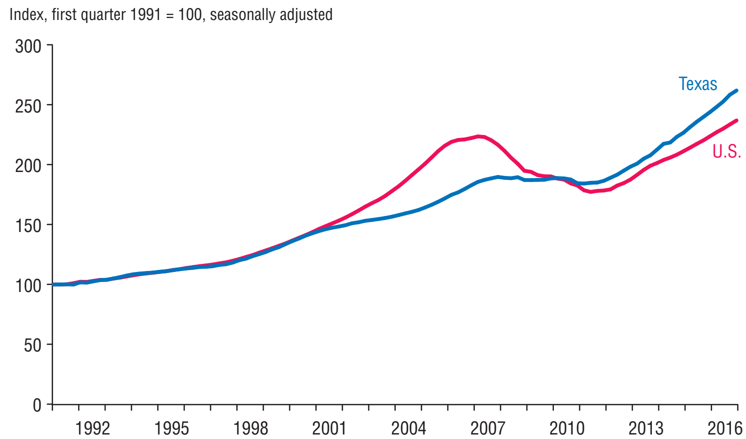
Entry-Level Sale Constraints

Texas' rapid recovery from the Great Recession—in part shale oil-boom driven—produced vigorous job and population growth from 2012 through 2014, fueling housing demand.[3] Texas' existing-home sales began trending upward in mid-2010, finally surpassing the prerecession peak in late 2015. The housing market kept expanding in 2016, surging to new highs. Total sales rose 5.2 percent in 2016, following a 4.1 percent hike in 2015. These increases occurred despite slowing statewide job growth, particularly in Houston, which accounts for one-fourth of the state's existing-home market. Sales there fell in 2015 but increased modestly last year.

Even with healthy gains in overall housing demand, sales growth has varied across price points. Sales of mid- to higher-priced homes (sales price above $250,000) have climbed since early 2012 (*Chart 2*).[4] Sales of homes priced $250,000 to $399,999 rose 16 percent in 2016, following increases of 17 percent in 2015 and 15 percent in 2014, according to the Multiple Listing Service (MLS) data compiled by the Real Estate Center at Texas A&M University. Activity was similarly brisk among homes priced $400,000 to $749,999, with solid gains of units selling for $750,000 and above.

Meanwhile, sales of entry-level homes—those priced below $250,000—grew relatively modestly in 2012 and 2013, dipping in 2014 and 2015, and staying flat last year. Sales of these units dropped 10 percent in Austin, the state's most expensive metro, after declining 8.4 percent in 2015 and 8.7 percent in 2014. Dallas–Fort Worth and Houston also slipped, though less than Austin over the past three years. Starter-home sales grew only in San Antonio, inching up 3.3 percent in 2014 and 5 percent in 2015 and 2016.

Chart 1 Texas House Price Gains Exceed U.S. in Housing Recovery



SOURCE: Federal Housing Finance Agency House Price Index, Purchase Only.

The overall lackluster performance doesn't reflect lack of demand, but rather rapid price appreciation combined with tightening supply. With six months' supply of existing for-sale homes considered balanced, inventory in Texas priced below $250,000 fell from more than eight months in early 2011 to 3.4 months in 2016 (*Chart 2*).

The stock of entry-level units is more constrained in the state's major metros, particularly in Austin and DFW, where it dropped from six months of supply in Austin and around seven months in DFW in early 2011 to one month at the end of 2016. Houston and San Antonio inventories also contracted, to about two months in December 2016.

The supply of mid-priced homes ($250,000 to $399,999) is a tight four months, while units from $400,000 to $749,999 have held steady since early 2015. Meanwhile, the supply of homes above $750,000 has slowly increased. The Federal Reserve Bank of Dallas Beige Book reported that sales of higher-priced homes have slowed, particularly in Houston. Inventories of homes there priced above $750,000 have grown from around six months in early 2014 to 11 months in the second half of 2016.

Higher-End Homes' Share

The mix of price points in the Texas housing market has changed. While homes priced under $250,000 still make up the majority of homes sold, they constitute a much smaller share of overall sales than when the housing recovery began in 2011. Sales of entry-level existing homes dropped from 78 percent of the total in 2011 to 62 percent in 2016, while those at higher price points—notably in the $250,000 to $399,999 range—grew from 14 percent to 24 percent (*Chart 3*). Declining share is particularly pronounced for new homes, where inventories of homes priced below $250,000 dropped from 56 percent in third quarter 2011 to 24 percent in third quarter 2016.[5]

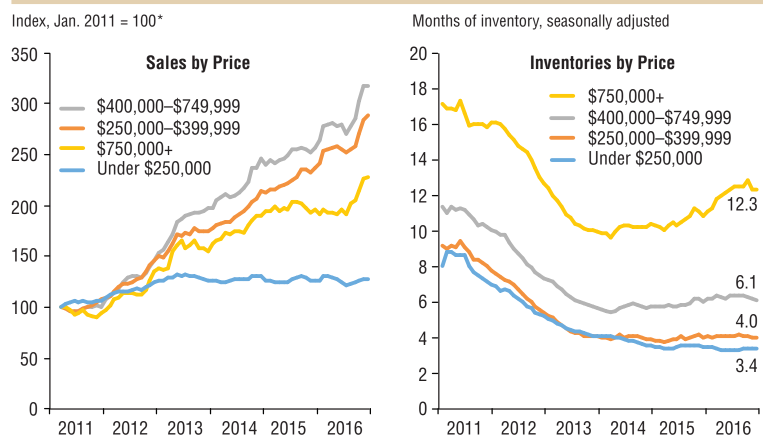
This shift is more notable in the major metros. The share of total entry-level MLS sales dropped in Austin from 66 percent in 2011 to 40 percent in 2016. Declines in DFW of 22 percentage points; Houston, 16 percentage points; and San Antonio, 14 percentage points, are significant as well. Meanwhile, in DFW and Houston, the share of homes sold priced $250,000 to $399,000 climbed from about 15 percent in 2011 to more than 25 percent in 2016. In Austin, that price range made up 35 percent of sales in 2016—up from 21 percent in 2011.

Housing Affordability Diminishes

Beyond absolute increases is the effect on affordability: price rises relative to gains in income and mortgage rates. For a given mortgage rate, if incomes have grown as fast as home prices, then homes can nonetheless remain affordable.

That hasn't occurred. Instead, Texas' nominal median existing-home sales price has climbed 34 percent—from $149,500 in December 2010 to $200,000 in December 2015—more than twice the 14 percent increase in nominal median household income.[6] While mortgage rates dipped between December 2010 and December 2015, the decline was not enough to offset rising home prices.

Chart 2 Tight Inventory Constrains Home Sales at Lower Prices



*Three-month moving average; seasonally adjusted.

SOURCES: Real Estate Center at Texas A&M University; Multiple Listing Service; seasonal and other adjustments by the Federal Reserve Bank of Dallas.

The appreciation continued, despite a slowing state economy, with median home prices up an additional 8 percent in 2016, further eroding housing affordability. Dallas is the least affordable metro area in the state, with 50 percent of homes sold during fourth quarter 2016 viewed as affordable to median-income families, down from 68 percent in fourth quarter 2010, according to the National Association of Home Builders (NAHB)/Wells Fargo Housing Opportunity Index.

The Dallas index is at an all-time low since the series began in 1991. Similarly, affordability in Austin has dropped sharply, the share of sold homes considered affordable was slightly below the national figure at 59.9 percent in fourth quarter 2016. Fort Worth, Houston and San Antonio also experienced declines but remained more affordable than the U.S. as a whole in the fourth quarter.

Despite marked declines, affordability is better than in many other large metropolitan divisions such as New York–Jersey City–White Plains at 35.4 percent and Los Angeles–Long Beach–Glendale at 12.5 percent, although the Texas comparative advantage has shrunk.

With more than 200 U.S. metro areas tracked by the NAHB/Wells Fargo index, Austin's ranking nationally dropped from No. 115 in first quarter 2010 to 157 in fourth quarter 2016. Dallas' ranking plunged 60 spots, to No. 176, and Fort Worth dropped 82 places to No. 135. Rankings for Houston at No. 147 and San Antonio at No. 141 are also down sharply.

Inadequate Lot Supply

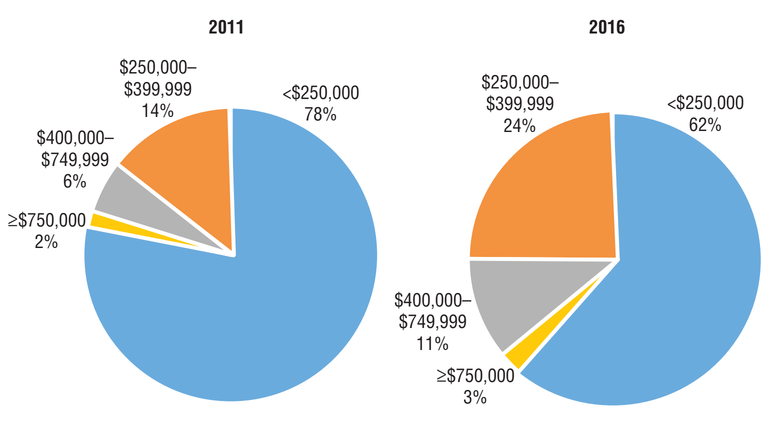
At the outset of the housing recovery, the supply of vacant developed lots for building was plentiful—over 50 months' supply in DFW, more than double the 20–24 months considered balanced.[7] Lot supply began diminishing in 2011, falling rapidly through 2013, as tight credit for land development, delays in land permitting and shortages of skilled construction workers prolonged lot delivery times.[8] Lot supply in Austin and Houston (which both rebounded more immediately from the Great Recession than DFW) fell below the 20-month threshold in early 2013 and has remained below or near that level since.

The situation is slowly easing, with lot supply in Houston and San Antonio just above 20 months in third quarter 2016. Lot supply remains below the norm in Austin at 18 months and DFW at 19 months.[9] The NAHB's 2015 construction cost survey found an average lot cost $4.20 per square foot in 2015—27.3 percent higher than in 2011.[10]

The shortage of lots available for building is most apparent in the under-$250,000 price point. For instance, regulatory costs make up about a fourth of the final price of a new single-family home, according to the NAHB March 2016 survey.[11] Dallas Fed industry contacts also note increased regulatory burden on developers and builders.

Lot supply for homes priced from $200,000 to $249,999 appears to be the tightest statewide, ranging from 10 months in Austin and DFW, to 14 months in Houston and 20 months in San Antonio (*Chart 4*). Meanwhile, lot supply for homes priced $300,000 to $499,999 is at or slightly below normal levels (around two years) across the major metros. Lot supply for homes priced $500,000 to $999,999 is above the 20–24-month equilibrium range.

Chart 3 Higher-Priced Homes Growing Share of Texas Sales



SOURCES: Real Estate Center at Texas A&M University; Multiple Listing Service (MLS).

Labor Shortage, Wages Escalate

Texas residential construction employment declined more than overall employment during the Great Recession and took longer to recover, despite strong statewide job gains (*Chart 5*). Payrolls in residential construction in mid-2016 remained slightly below their prerecession high of 50,550 workers set in early 2008.

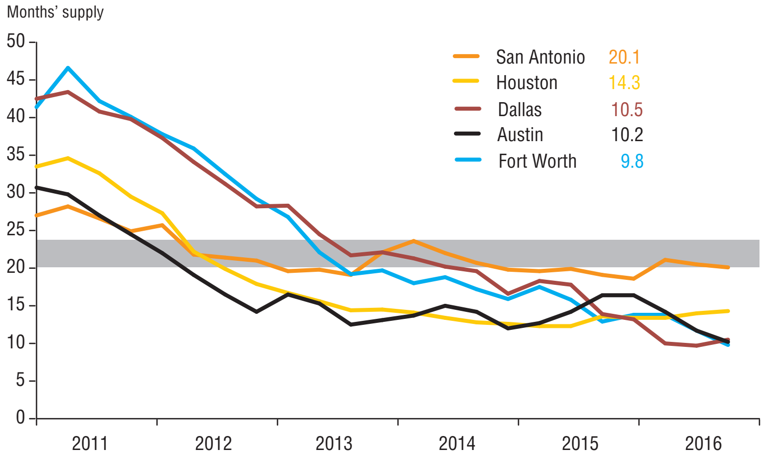
This slow employment rebound was partly a result of the shale oil boom, which absorbed some of the potential residential construction workforce. Labor shortages in residential construction were widespread during most of the recovery. Amid the more recent slowdown in the oil patch, residential construction worker shortages eased in Houston. The market remains tight in Austin and DFW for skilled trades such as framers, masons and bricklayers.

As a result of the tight labor supply, inflation-adjusted average hourly earnings in Texas' construction sector climbed 20.3 percent between 2011 and 2016, nearly quadruple the 4.7 percent increase for the U.S. construction sector and the 5.9 percent growth in Texas total private-sector earnings.

Challenges Lie Ahead

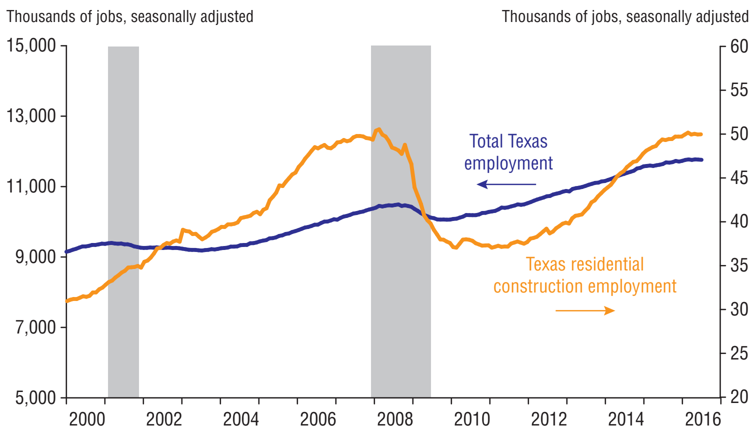
A low supply of lot inventory for lower-priced homes, especially below $250,000, will make it difficult to deliver affordable homes in the near term. Among the major metros, Dallas has the lowest share of vacant developed lot inventory needed to build at this price point.

Chart 4
Vacant Developed Lot Supply Tight at Lower End
(Months' supply: $200,000–$249,999)



NOTES: Last data point is third quarter 2016; gray bar is lot supply equilibrium range.
SOURCE: Metrostudy.

Chart 5
Residential Construction Employment Remains Below Pre-Bust Peak



NOTES: Last data point is June 2016. Shaded areas indicate U.S. recessions.
SOURCE: Bureau of Labor Statistics, Quarterly Census of Employment and Wages.

Some builders, such as LGI Homes and D.R. Horton Express, have expanded their offerings at the entry level by reducing the home's footprint and building in more distant suburbs. Dallas Fed's Beige Book contacts also report that builders are concerned about housing affordability and several are now focused on bringing more affordable product to the market through "defeaturing" and reducing square footage and lot sizes.

Given recent improvements in the energy sector, a pickup in Texas job growth expected this year and potential changes in U.S. immigration policy, construction labor shortages will likely persist this year, making it difficult for builders to contain costs. A nationwide survey of homebuilders puts cost and availability of labor as the group's top concern.[12]

Lastly, rising home prices have been masked by low and falling interest rates, giving buyers more purchasing power to buy larger homes, and hence, damping the impact on affordability. The 30-year fixed mortgage rate has increased about 75 basis points from a low of 3.42 percent in September 2016 to 4.15 percent in mid-February 2017.[13] If rates continue trending upward, as expected, they will further reduce housing affordability and bite into sales, particularly at mid- to higher-price points.

Assanie is a senior business economist at the Federal Reserve Bank of Dallas.

Notes

[1] The median-income household with no money for a down payment and no debt obligations, which spends about 36 percent of its gross annual income on a mortgage payment (including estimated property taxes and mortgage insurance), could buy a $211,000 home, assuming a 4.2 percent, 30-year fixed rate mortgage. Calculated using affordability calculator provided by Nerdwallet, www.nerdwallet.com/mortgages/how-much-house-can-i-afford/calculate-affordability.

[2] Texas data are the sum of annualized starts of homes priced under $250,000 (as of third quarter 2011 and third quarter 2016) for the five major Texas metros: Austin, Dallas, Fort Worth, Houston and San Antonio.

[3] "Game of Homes: The Supply-Demand Struggle," by Laila Assanie, Sarah Greer and Luis B. Torres, *Tierra Grande*, Real Estate Center at Texas A&M, October 2016.

[4] Home sales and inventories by price point data are from the Real Estate Center at Texas A&M University and Multiple Listing Service.

[5] Texas data are the sum of annualized inventory of new homes priced under $250,000 (as of third quarter 2011 and third quarter 2016) for the five major Texas metros: Austin, Dallas, Fort Worth, Houston and San Antonio. Data are from Metrostudy.

[6] Median household income data are from the Census Bureau.

[7] Vacant developed lot data are from Metrostudy.

[8] See note 3.

[9] Overall, the total number of vacant developed lots across the major metros in third quarter 2016 was 13 percent below that of third quarter 2011.

[10] "Cost of Constructing a Home," by Heather Taylor, Special Study for Housing Economics, November 2015.

[11] "Government Regulation in the Price of a New Home," by Paul Emrath, Economics and Housing Policy, National Association of Home Builders, Special Studies, May 2, 2016.

[12] The cost and availability of labor was noted as a significant issue for 78 percent of builders in 2016, and 82 percent expect this will be their top issue in 2017, according to the National Homebuilders Association survey. See "Top Concern for Builders Remains Unchanged," National Association of Home Builders, Jan. 26, 2017.

[13] Thirty-year fixed mortgage rate data are from Federal Home Loan Mortgage Corp.

Mexico's Openness Makes Peso Vulnerable

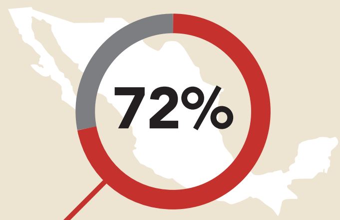
Design: Darcy Melton; Content: Stephanie Gullo and Pia Orrenius

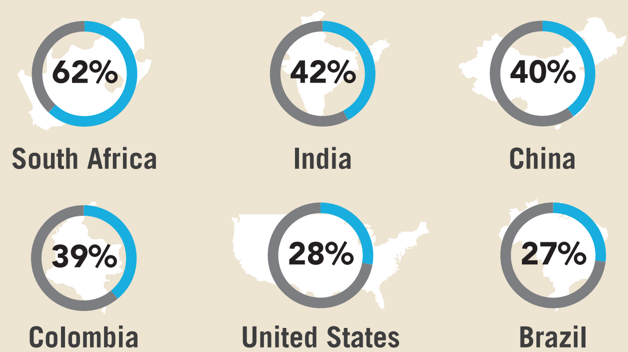
What is an open economy?

A country with an open economy typically has many trading partners and trade is a large percentage of its **GDP**.

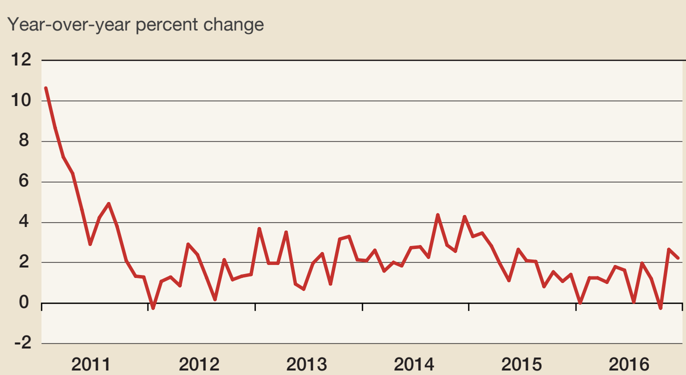
Mexico GDP is heavily dependent on trade

Mexico is one of the world's most open economies with trade agreements with **46 countries**





World trade* isn't growing as rapidly as before …

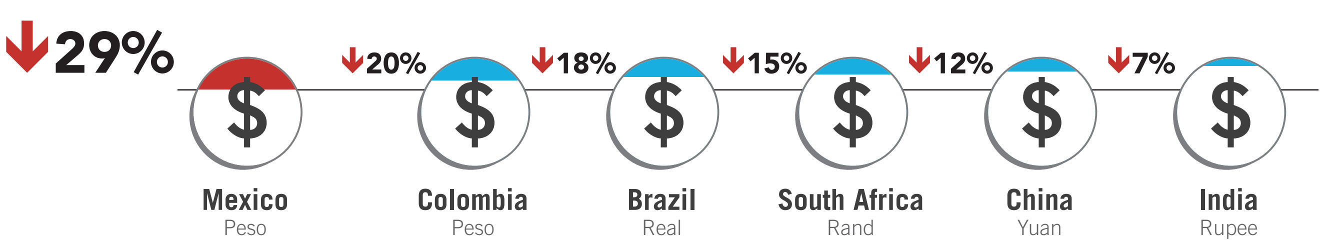


Why?

- Weak **economic growth**
- Reduced **demand for imports**
- Lower **commodity prices**
- Rise of **anti-trade sentiment**

… That's particularly bad for open economies

The Mexican peso falls furthest against the dollar in 2015–16.



NOTE: *Volume of merchandise world trade
SOURCES: CPB World Trade Monitor, International Monetary Fund and national sources.

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SNAPSHOT

Agricultural Land Values Tick Down on Lower Prices for Commodities

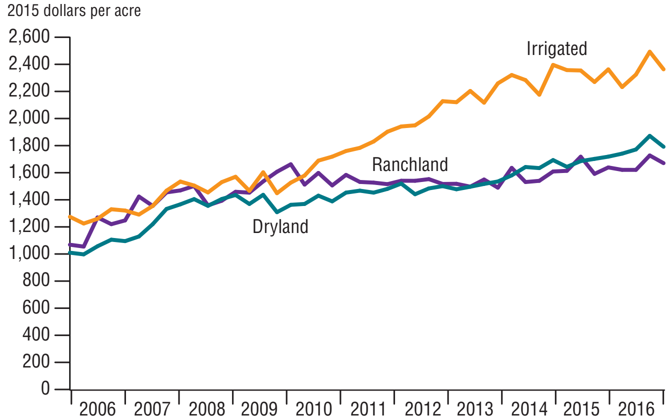
Bankers responding to the Federal Reserve Bank of Dallas' *Agricultural Survey* noted diminished farm producer profitability and land values due to low commodity prices.

Real (inflation-adjusted) agricultural land values drifted lower in the final three months of 2016 (*see chart*). Real irrigated land values fell 5.2 percent from the third quarter. Real dryland values declined 4.3 percent, while real ranchland values were down 3.3 percent. However, according to bankers who responded in the fourth quarter of 2015 and 2016, nominal district land values increased year over year.

The anticipated trend in farmland values index suggests survey respondents expect farmland values to decline in the coming months. The credit standards index indicated continued tightening of standards.

—*Adapted from* Agricultural Survey, *Federal Reserve Bank of Dallas, fourth quarter 2016*

Chart 1 Real Agricultural Land Values Slip at Year-End



NOTE: All values have been seasonally adjusted.
SOURCE: Federal Reserve Bank of Dallas, *Agricultural Survey*, fourth quarter 2016.

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