

Outlook for the Texas Economy



LUIS TORRES
RESEARCH ECONOMIST

WESLEY MILLER
RESEARCH ASSOCIATE

BAILEY CUADRA
RESEARCH INTERN



REAL ESTATE CENTER
TEXAS A&M UNIVERSITY

TECHNICAL REPORT
2046
MAY 2018

TR

Contents

About this Report	3
March 2018 Summary	4
Economic Activity	8
Gross State Product	8
Texas Business Cycle Index and Leading Index	8
Major Metros Business Cycle Index	9
Consumer Confidence Index	9
Financial Activity	10
30-Year Mortgage Rate and 10-Year Bond Yield	10
Housing	10
Housing Sales	10
Residential Construction Coincident and Leading Indicator	11
Texas Construction Values	11
Major Metros Total Construction Values	12
Energy	12
Crude Oil and Natural Gas Prices	12
Texas Production of Crude Oil and Rig Count	13
Employment	13
Employment Growth Rate	13
Major Metros Employment Growth Rate	14
Unemployment Rate	14
Major Metros Unemployment Rate	15
Unemployment Insurance Claims: Initial Applications	15
Labor Force Participation Rate	16
Manufacturing Employment	16
Major Metros Manufacturing Employment	17
Construction Employment	17
Total Private Employee Hourly Earnings	18
Major Metros Total Private Employee Hourly Earnings	18
Manufacturing Employee Hourly Earnings	19



Major Metros Manufacturing Employee Hourly Earnings.....	19
Manufacturing	20
Manufacturing Outlook Survey.....	20
Services	20
Texas Retail Sector.....	20
Services Sector Outlook Survey	21
CPI Inflation Rates.....	21
CPI Inflation Rates (Dallas Components)	22
Trade	22
Exports (All Commodities)	22
Manufacturing Exports	23
Crude Oil Exports	23
Real Trade Weighted Value of U.S. Dollar	24
Texas Exports by Country.....	24



About this Report

Real Estate Center economists continuously monitor many facets of the global, national, and Texas economies. *Outlook for the Texas Economy* summarizes significant state economic activity and trends. All monthly measurements are calculated using seasonally adjusted data, and percentage changes are calculated month-over-month, unless stated otherwise.

This publication is designed to be a one-stop resource for economic indicators. We hope you find them as useful as we do. Your feedback is always appreciated. Send comments and suggestions to info@recenter.tamu.edu.

Dr. Luis Torres, Wesley Miller, and Bailey Cuadra

Data current as of May 4, 2018

© 2018, Real Estate Center. All rights reserved.



March 2018 Summary¹

The Texas economy grew faster than any other state in 4Q17 at 5.2 percent. The growth reflected the short-term stimulus from hurricane-related reconstruction combined with improvements in the energy and manufacturing industries. Texas' crude oil production and rig count are on the rise in response to higher oil prices, but pipeline constraints may hinder short-term growth. The state's employment expansion extended its 21-month streak, adding 111,400 jobs in the first quarter for the strongest start since 1990. Despite historically low unemployment rates, real hourly wages have not emerged from their stagnation. Flat incomes combined with relentless housing cost increases continued to weaken Texas' relative affordability advantage. This challenge, as well as energy price volatility and trade uncertainty, present the largest headwinds to the Texas economy.

Recently released **gross domestic product** (GDP) data for 4Q17 revealed a heightened level of economic activity in Texas. The state's fourth-quarter growth topped the nation at a seasonally adjusted annualized rate (SAAR) of 5.2 percent in real terms, led by booms in mining, construction, and hurricane recovery. The late-year stimulus pushed annual growth above 2.6 percent, a stark rebound from the 2016 contraction.

Solid readings in the **Dallas Fed's Business-Cycle Index** suggested similar growth patterns through 1Q18. The index posted 5.4 percent SAAR growth in March amid a thriving labor market. The metropolitan business cycle indices were positive across the Texas Urban Triangle, led by Austin at 7.7 percent. Fort Worth and San Antonio maintained moderate growth at 3.0 and 2.4 percent, respectively. The Houston index decelerated for the third straight month to 6.1 percent as the post-Harvey boost continued to dissipate. In Dallas, payroll expansions and low unemployment pushed the index from 4.4 to 5.1 percent.

The **Texas Leading Economic Index** (a measure of *future* directional changes in the business cycle) rose 5.7 percent year over year (YOY) to a new cycle high. Higher oil prices, low unemployment, and a favorable currency market signal favorable economic conditions as the year progresses. Despite robust economic data, the **Texas Consumer Confidence Index** slid 9.4 points amid rising trade tensions and NAFTA uncertainty. International commerce is a critical component to the Texas economy, supporting over 900,000 jobs in primarily higher-wage manufacturing subsectors.

Mortgage rates diverged from U.S. government bonds, placing additional pressure on housing affordability. The **Federal Home Loan Mortgage Corporation's 30-year fixed-rate** jumped 11 basis points to 4.4 percent, the highest since 2013. In contrast, rising trade tensions outweighed investors' optimism on the national economy, holding the **ten-year U.S. Treasury bond yield** at 2.84 percent.

Shortages of homes priced less than \$300,000 and a downturn in new-home inventories weighed **Texas housing sales** down 2 percent and heightened affordability challenges. Current residential

¹ All monthly measurements are calculated using seasonally adjusted data, and percentage changes are calculated month-over-month, unless stated otherwise.

construction activity, measured by the **Residential Construction Cycle (Coincident) Index**, inched forward as industry employment and wage growth offset weakened construction values. A slowdown, however, in weighted building permits and housing starts flattened the **Residential Construction Leading Index (RCLI)**, signaling supply-side challenges as the year progresses. (For additional housing commentary and statistics, see [Texas Housing Insight](http://recenter.tamu.edu) at recenter.tamu.edu.)

The average **West Texas intermediate crude oil spot price** rose to \$62.72² per barrel, up 9.5 percent this year. Reductions in the oil glut, spurred by robust U.S. and global demand and extended OPEC output cuts, supported higher prices despite prolific production in Texas. Accelerated drilling activity in the Permian and Eagle Ford Basin lifted Texas' **active rig count** to 492², up 23 percent YOY. Texas crude oil production accounted for 39 percent of national output at four million barrels per day². Insufficient pipeline capacity out of the Permian Basin hindered additional growth and could force producers to slow drilling activity in coming months. An excess of natural gas byproducts from oil drilling contributed to pipeline bottlenecks. The **Henry Hub natural gas spot price** held below \$2.70 per million BTU² (British thermal units) and could drop further as producers rush to free energy transportation capacity.

Texas added 32,000 **nonfarm jobs** this month, marking 21 consecutive months of employment growth and its strongest first quarter since 1990. The statewide **unemployment rate** balanced at 4 percent for the fourth straight month, remaining slightly below the national level (4.1 percent). In Austin and San Antonio, the local unemployment rate held firm at 3.1 and 3.5 percent, respectively, while the DFW rate ticked up to 3.7 percent. Houston was the exception with unemployment at 4.7 percent but remained well below its 5.7 long-run average. Payroll expansions held **initial unemployment insurance claims** below 60,000 and boosted the **labor force participation rate** to 63.7 percent, just above the 2017 average.

Houston posted the largest monthly increase with 8,000 jobs, half of which occurred in professional and business services (often linked with the region's energy sector). Initial employment projections for Houston forecasted 55,000 to 60,000 new jobs in 2018. The MSA added 30,000 jobs in the first quarter alone amid strength in the energy and manufacturing industries. Robust growth in professional and business services generated 5,600 new jobs in Dallas. Improvements in trade, transportation, and the information sector contributed to the local job creation. The building boom in Fort Worth supported a net increase of 1,700 jobs despite over 1,000 lost in both the education/health services and leisure/hospitality industries. Austin added just 600 jobs but extended a six-month stretch of growth. San Antonio lost 3,400 jobs as monthly employment cuts spread across the service-providing industry. The leisure and hospitality subsectors, along with retail trade, should see a short-term boost after hosting the NCAA Men's Final Four Basketball Tournament in early April.

Hiring momentum rolled on in Texas' goods-producing sector, adding 10,600 jobs to last month's upwardly revised 13,500. The growth was distributed evenly between mining, construction, and

² Nonseasonally adjusted.

manufacturing, all of which added more than 3,000 employees. Rising oil prices stimulated the energy industry, but employment levels remained 24 percent below its 2014 peak.

Increased drilling activity and weakness in the U.S. dollar supported 5,800 manufacturing jobs over the past two months. At the metro level, manufacturing employment surpassed 4 percent growth SAAR in both Austin and Houston, translating to 900 and 1,800 industry jobs this year, respectively. San Antonio manufacturing employment burst out of its four-month contraction, rising 6.4 percent to lead the major metros in quarterly growth. In contrast, North Texas manufacturing employment decelerated every month in the first quarter, slowing to 2.7 percent in Dallas and contracting 1.2 percent in Fort Worth.

Texas manufacturers expressed concerns regarding steel and aluminum tariffs in the **Dallas Fed's Manufacturing Outlook Survey** with 7 percent of respondents reporting worsened business expectations in the next six months. The production index dropped 15 points but remained positive for the 21st straight month. In general, the industry maintained substantial momentum from last year's tax reform and robust global demand.

The construction industry added 12,200 jobs in the first quarter, down from 22,300 in 4Q17. The slowdown represents a normalization after last year's hurricane-induced reconstruction activity. That said, the industry added 34,500 jobs since Hurricane Harvey as labor demand in the residential sector increased. The **total value of construction** rose 3 percent on a three-month moving average, on top of upward revisions for January and February. Major multifamily investment across the Texas Urban Triangle accounted for most of the quarterly increase. In the nonresidential sector, completions of San Antonio schools and Austin hotels offset large gains in warehouse construction in DFW.

The service-providing sector posted another strong hiring month with 21,400 new jobs after revisions improved February numbers from 27,900 to 36,300. Trade, transportation, and utilities recorded the largest private-industry employment gain (including the goods-producing sector) with 7,500 positions added. The wave of professional and business service jobs grew higher, adding more than 50,000 jobs across the state in just six months. Many of these jobs supplement the energy industry and are located in the financial sectors of Dallas and Houston.

The **Dallas Fed's Service Sector Outlook Survey** corroborated solid job growth in the industry. More than 20 percent of respondents noted full-time hiring increases and higher wages and benefits. Inflationary pressures heightened as 32 percent saw higher input prices; many reiterated tariff concerns. The current business environment, however, remained favorable as 32 percent of retailers reported increased revenue.

Retail employment flattened after a solid 5,700 job increase last month. The health of the Texas economy supported over 4 percent (YOY) growth in retail sales in the first two months of the year³.

³ Retail sales data is compiled by the Texas Comptroller of Public Accounts. Its release typically lags the *Outlook for the Texas Economy* by one month.

The **Dallas Fed's Retail Outlook Survey** reflected improved conditions as the revenue index jumped 15 points after a two-month weather-related contraction.

Despite low unemployment levels, **real Texas private hourly earnings** fell half a percent YOY. Houston and San Antonio wages suffered disproportionately, contracting 2.8 and 3.3 percent YOY, respectively. Wages stagnated in North Texas, contracting 0.5 percent in Dallas and inching up 0.6 percent in Fort Worth. Austin's ultra-tight labor market boosted wages by 1.2 percent YOY, increasing its lead as the highest paying metro in Texas at an hourly average of \$11.60.

Texas hourly wages lagged the national average by \$0.51, but Texas *manufacturing* jobs paid an \$0.88 premium. This gap has slipped from more than a \$1.00 difference in May 2016. Since July 2017, manufacturing wages have contracted 3.9 and 2.4 percent, respectively, in Dallas and Fort Worth with little sign of reversing trend. Manufacturing wages in Houston were even with last year's levels, signaling the industry's recovery from operational damage after Hurricane Harvey. After rising 24.5 percent in the past two years, San Antonio's manufacturing wages simmered to a more sustainable rate of 5 percent, remaining the lowest paid region at \$1.67 below the state average.

The **U.S. Consumer Price Index (CPI)** surpassed 2 percent growth YOY for the seventh consecutive month, a consequence of the extended economic expansion. The core inflation rate, which excludes the often-volatile energy and food sectors, reached an annual high of 2.1 percent YOY. Dallas observed a larger increase around 3 percent YOY amid more expensive transportation and recreational costs, as well as rising rental rates for housing.

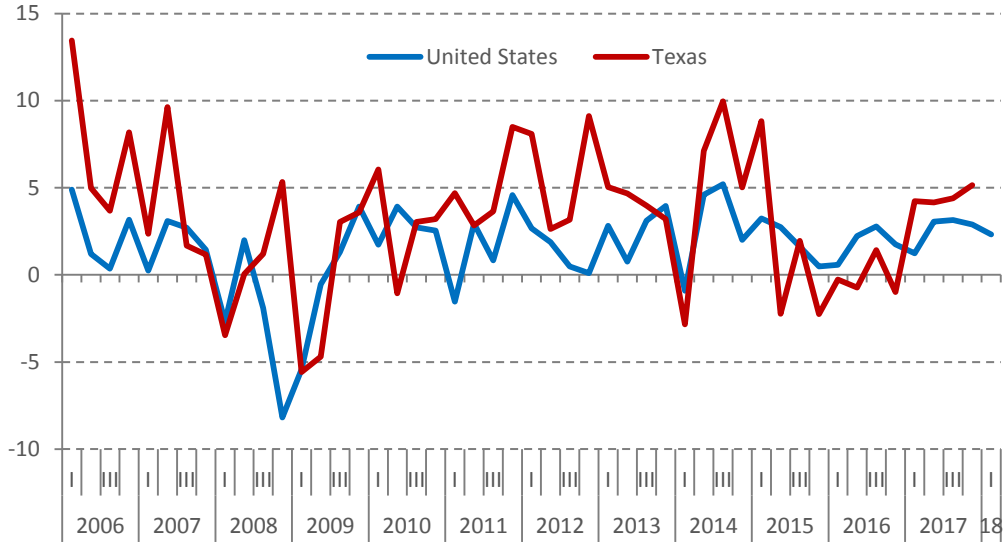
Texas' total commodity exports increased 14.5 percent to a record \$19.9 billion. **Manufacturing exports** posted a similar 14.5 percent YOY spike as the petroleum and chemical industries continued to flourish. Exports increased in 16 of the 20 manufacturing subsectors, bolstered by the strong global economy and favorable currency fluctuations. **Texas crude oil** also benefited from this economic environment, surpassing 200 percent YOY growth in exports—accounting for 88 percent of the national total. The **Texas trade-weighted value of the dollar**⁴ extended its year-long downward trend, falling 8.8 percent YOY, thereby boosting the attractiveness of Texas goods and services to foreign consumers.

Mexico and Canada received nearly half of this year's exports from Texas, remaining the state's primary trade partners. This trilateral relationship highlights the importance of a successful NAFTA renegotiation. The potential of increased tariffs and global trade conflicts present a serious headwind to Texas trade activity and its economy in general.

⁴ The Texas trade-weighted value of the dollar is generated by the Federal Reserve Bank of Dallas. Its release typically lags the *Outlook for the Texas Economy* by one month.

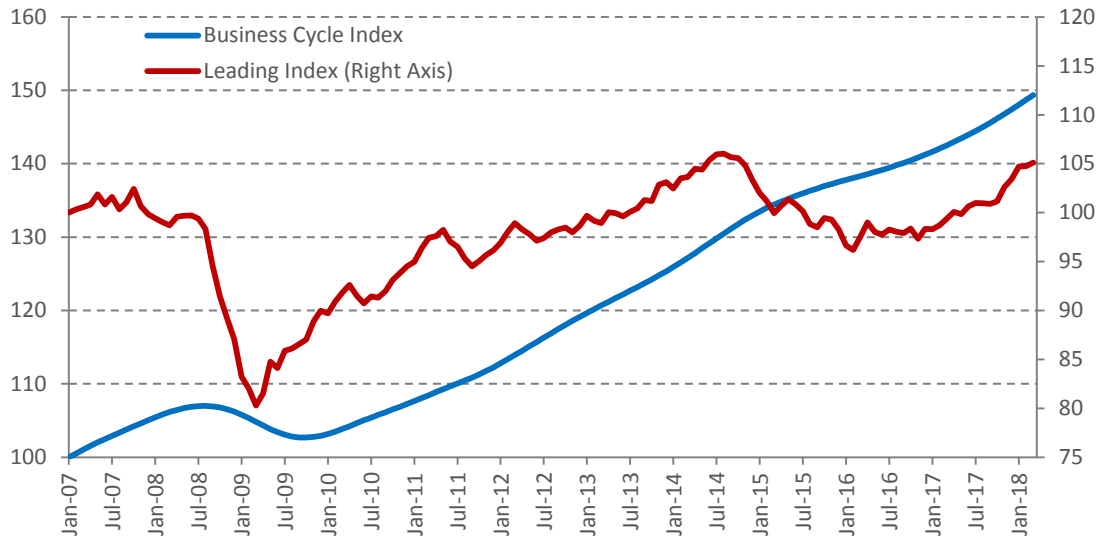
Economic Activity

Gross State Product
(Quarter-over-Quarter Percent Change)



Note: Seasonally adjusted annualized rate.
Source: Bureau of Economic Analysis

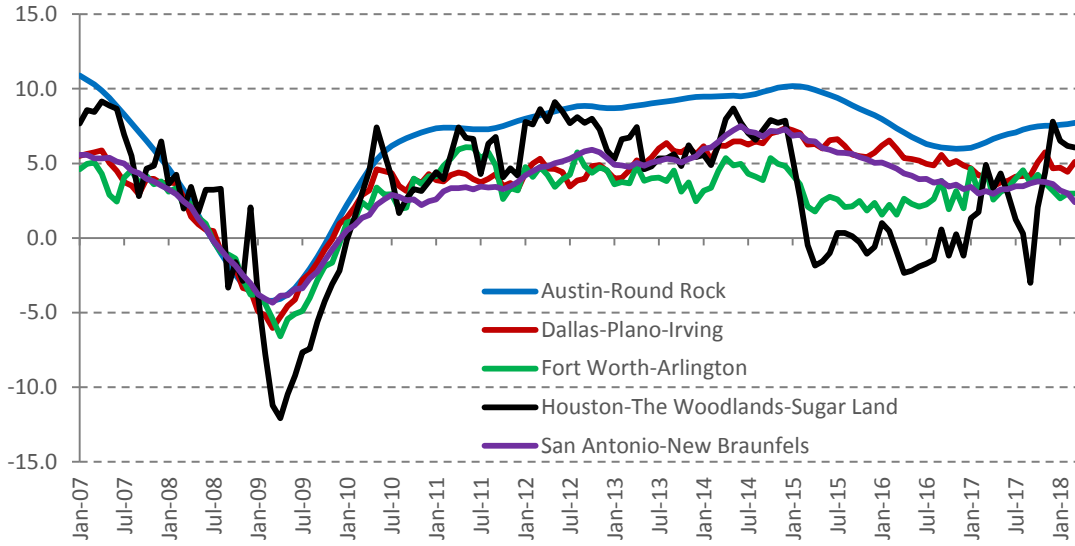
Texas Business Cycle Index and Leading Index
(Index Jan 2007 = 100)



Note: Seasonally adjusted. For more information, see [Texas Business Cycle Index](#).
Source: Federal Reserve Bank of Dallas

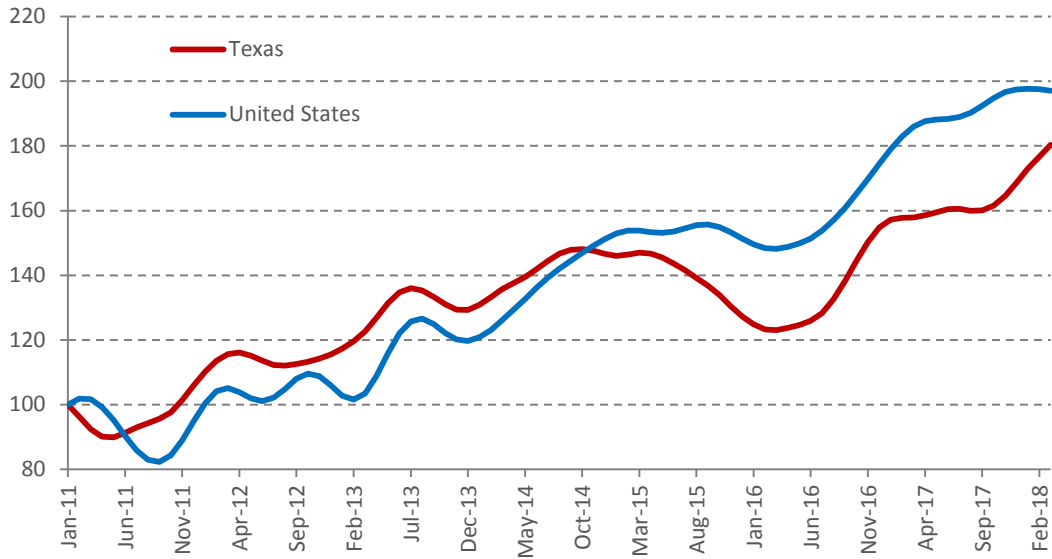


**Major Metros Business Cycle Index
(Quarter-over-Quarter Percent Change)**



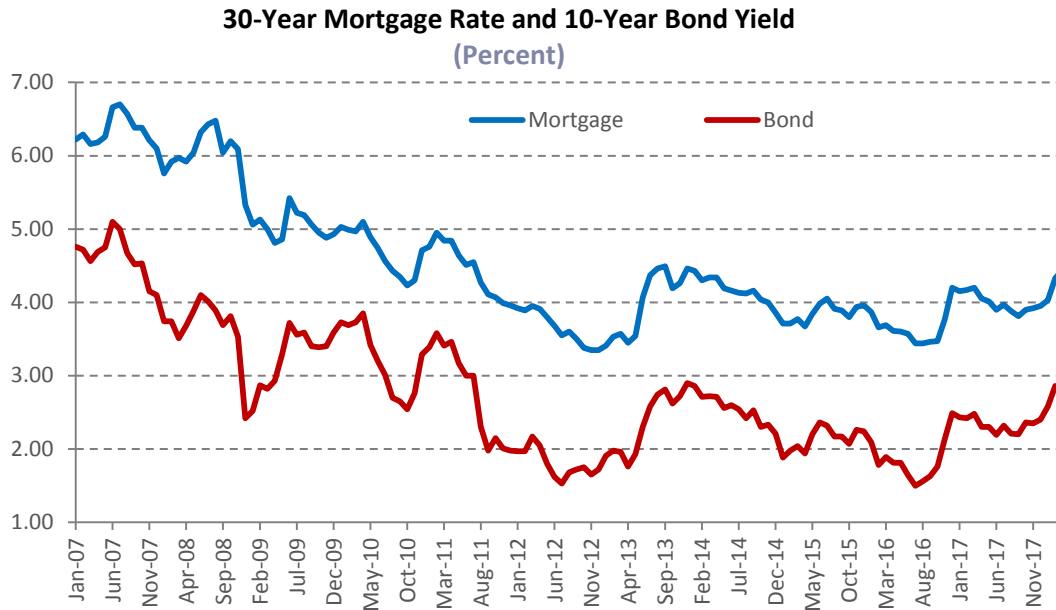
Note: Seasonally adjusted. For more information, see [Texas Business Cycle Index](#).
Source: Federal Reserve Bank of Dallas

**Consumer Confidence Index
(Index Jan 2011 = 100)**



Note: Trend-cycle Component.
Source: Conference Board

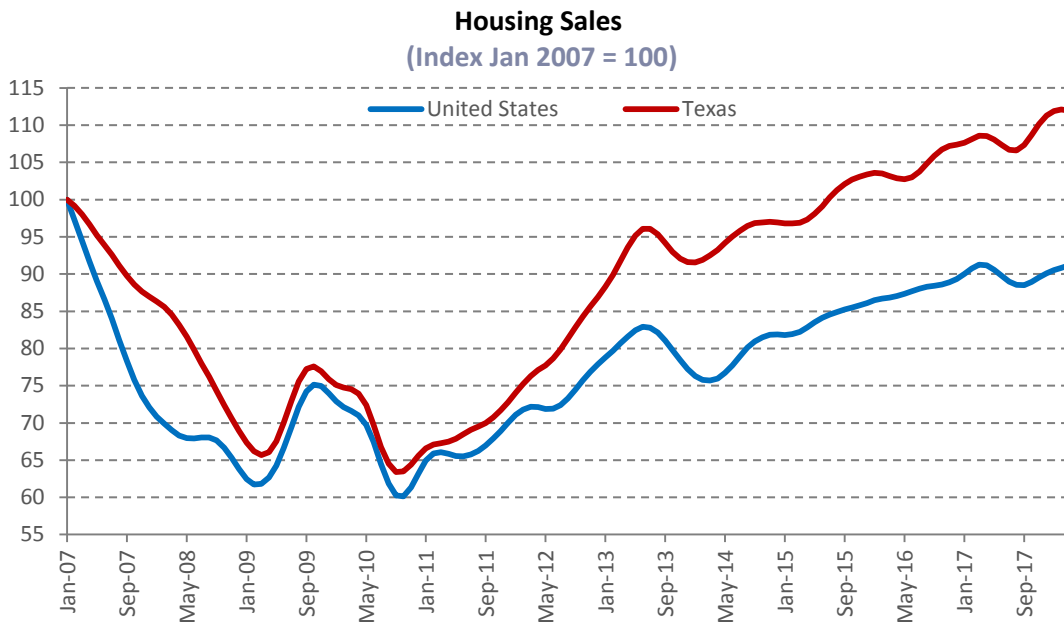
Financial Activity



Note: Seasonally adjusted.

Sources: Federal Home Loan Mortgage Corporation and Federal Reserve Board

Housing



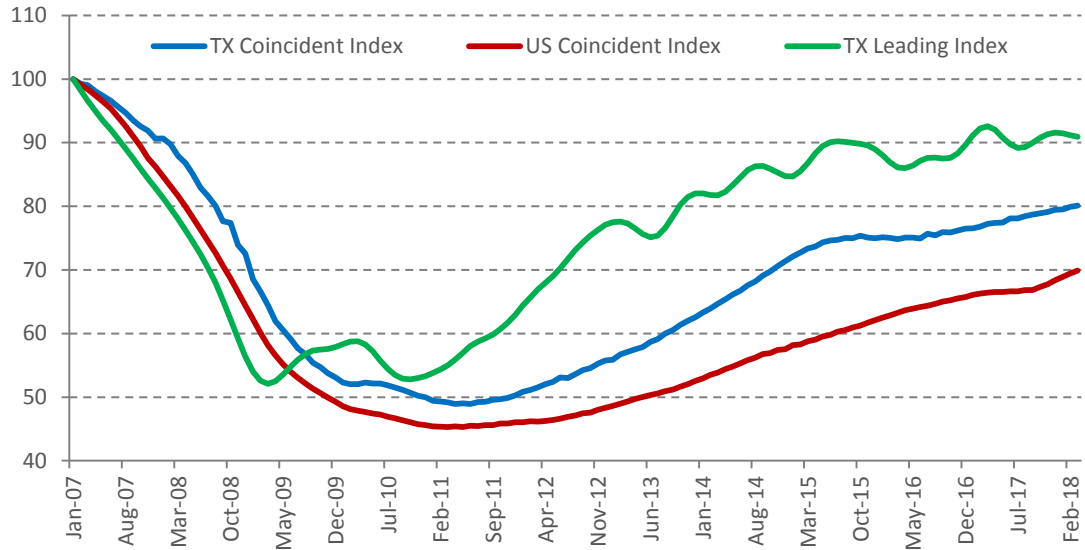
Note: Trend-cycle component. Sales for the United States include all existing homes and new single-family homes; new non-single-family homes are not included. Texas includes all existing and new homes.

For more information, see [Housing Sales](#).

Sources: U.S. Census Bureau, National Association of Realtors, and Real Estate Center at Texas A&M University



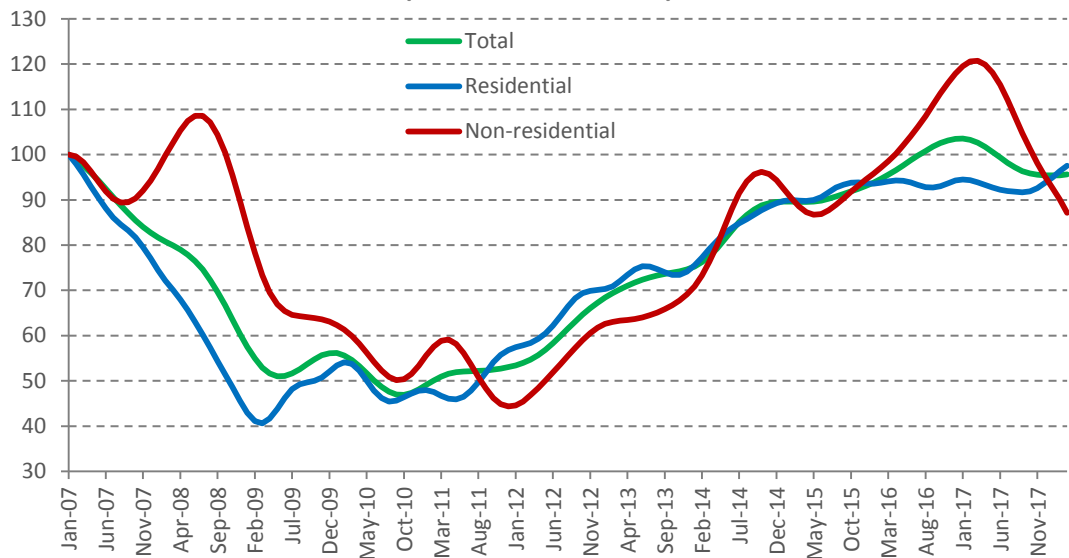
Residential Construction Coincident and Leading Indicator
(Index Jan 2007 = 100)



Note: Trend-cycle component.

Sources: Real Estate Center at Texas A&M University and Federal Reserve Bank of Dallas

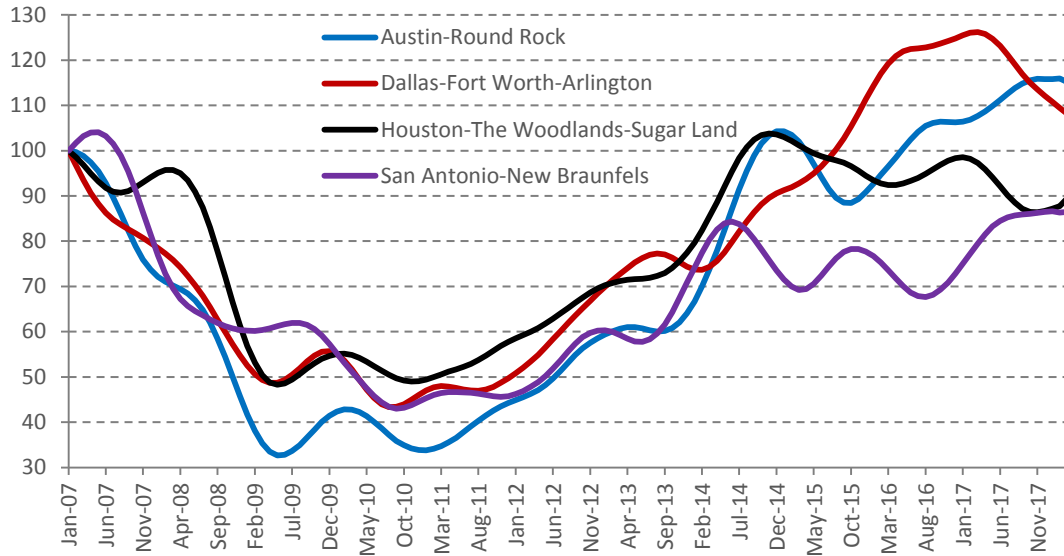
Texas Construction Values
(Index Jan 2007 = 100)



Note: Inflation adjusted trend-cycle component.

Source: Dodge Analytics

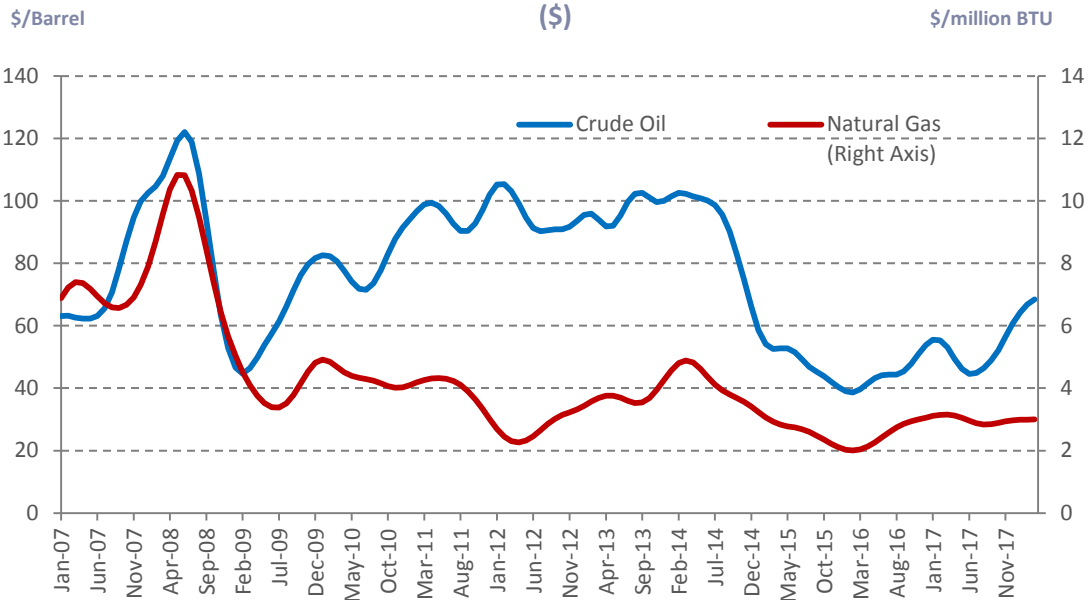
Major Metros Total Construction Values (Index Jan 2007 = 100)



Note: Inflation adjusted trend-cycle component.
Source: Dodge Analytics

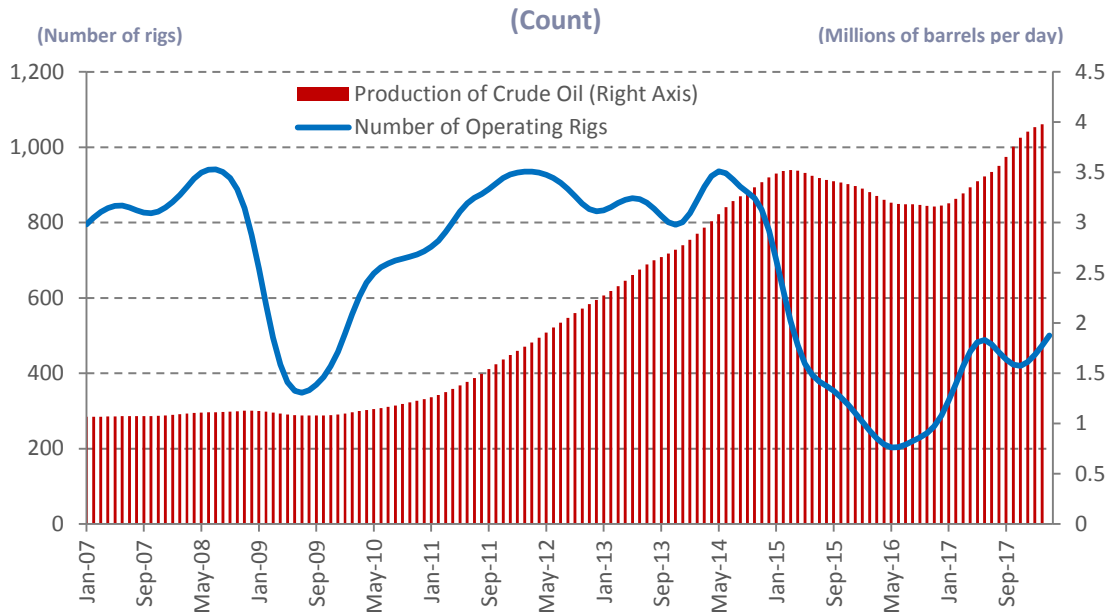
Energy

Crude Oil and Natural Gas Prices (\$)



Note: Trend-cycle component.
For more information, see [Crude Oil and Natural Gas Prices](#).
Source: U.S. Energy Information Administration received from Thomson Reuters

Texas Production of Crude Oil and Rig Count



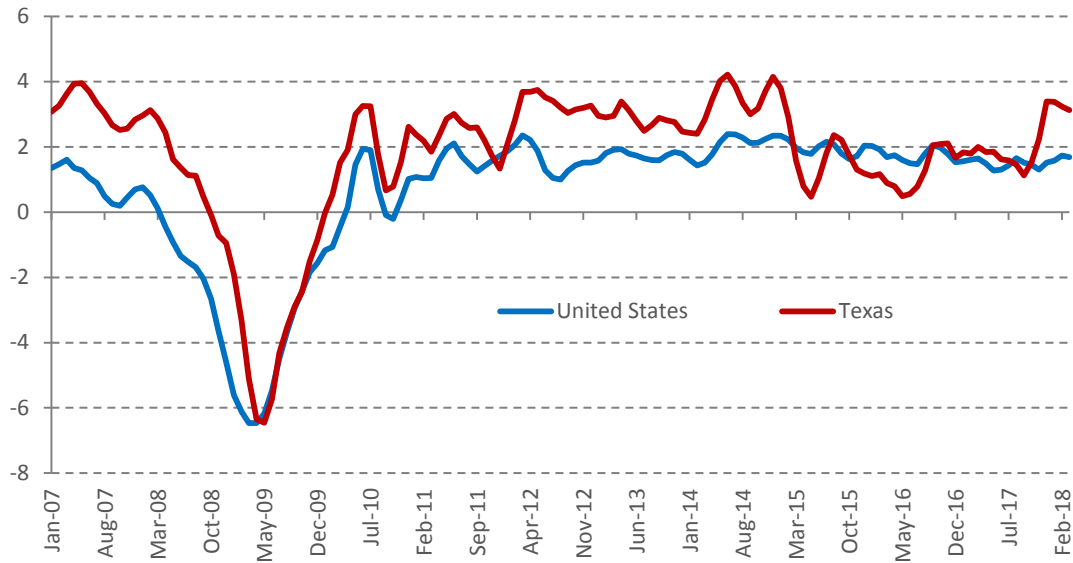
Note: Trend-cycle component.

For more information, see [Texas Production of Crude Oil and Rig Count](#).

Sources: Baker Hughes and U.S. Energy Information Administration

Employment

Employment Growth Rate (Quarter-over-Quarter Annualized Percent Change)



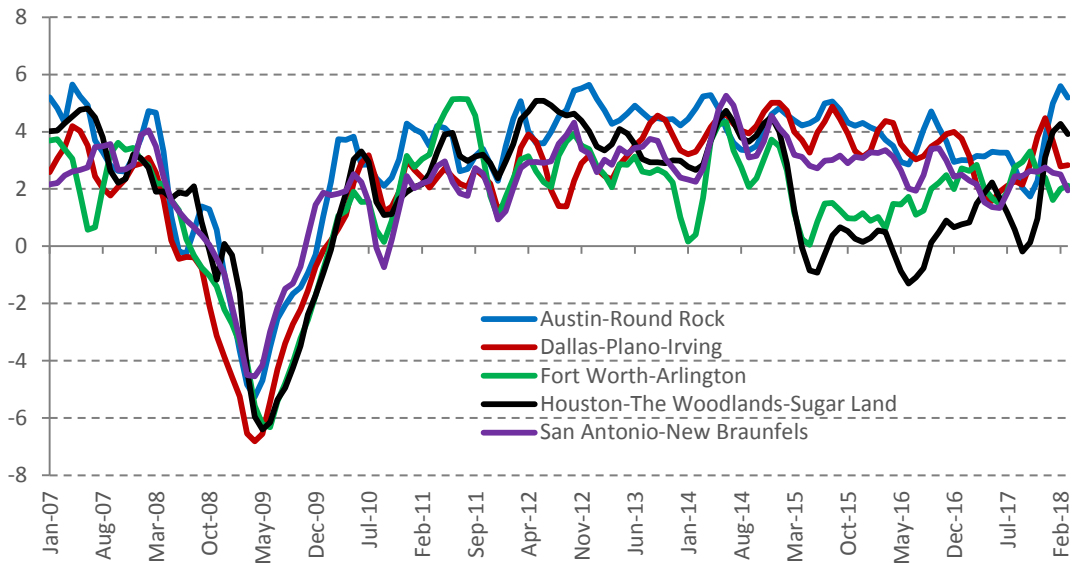
Note: Seasonally adjusted, 3-month moving average. March 2018 is preliminary.

For more information, see [Employment Growth Rate](#).

Source: Bureau of Labor Statistics

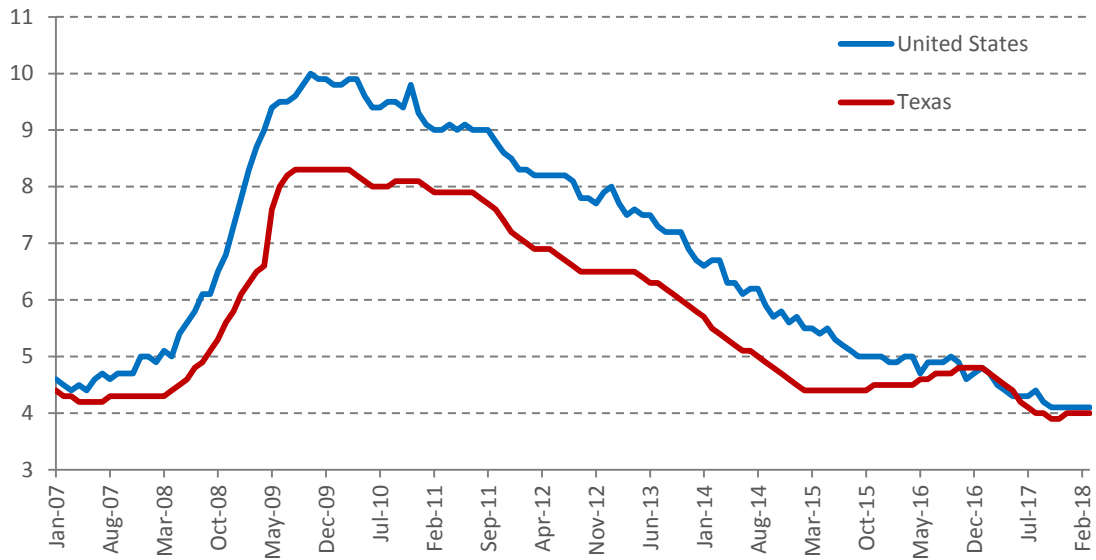


Major Metros Employment Growth Rate (Quarter-over-Quarter Annualized Percent Change)



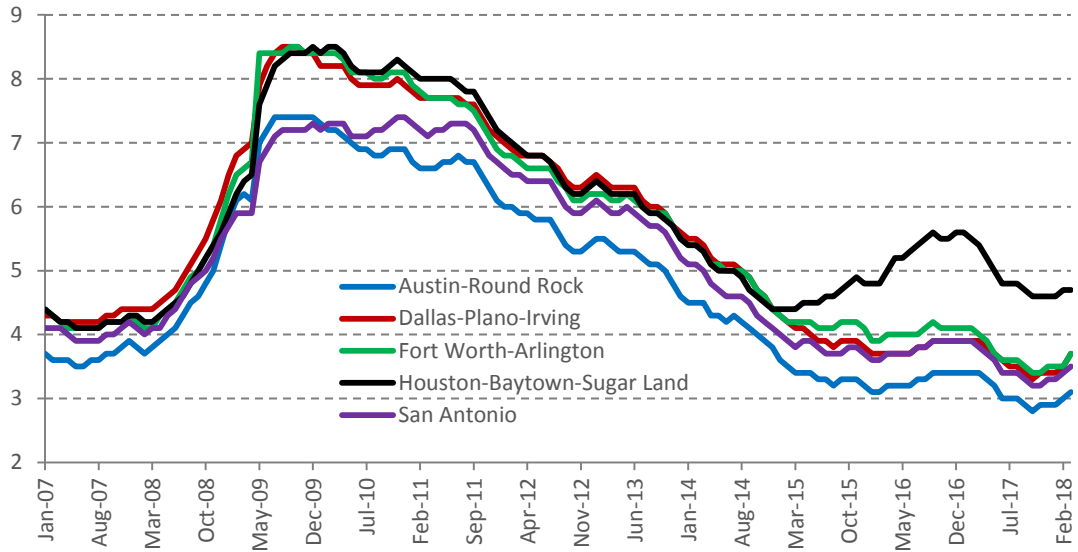
Note: Seasonally adjusted, 3-month moving average. March 2018 is preliminary.
 For more information, see [Employment Growth Rate](#).
 Source: Bureau of Labor Statistics

Unemployment Rate (Percent)



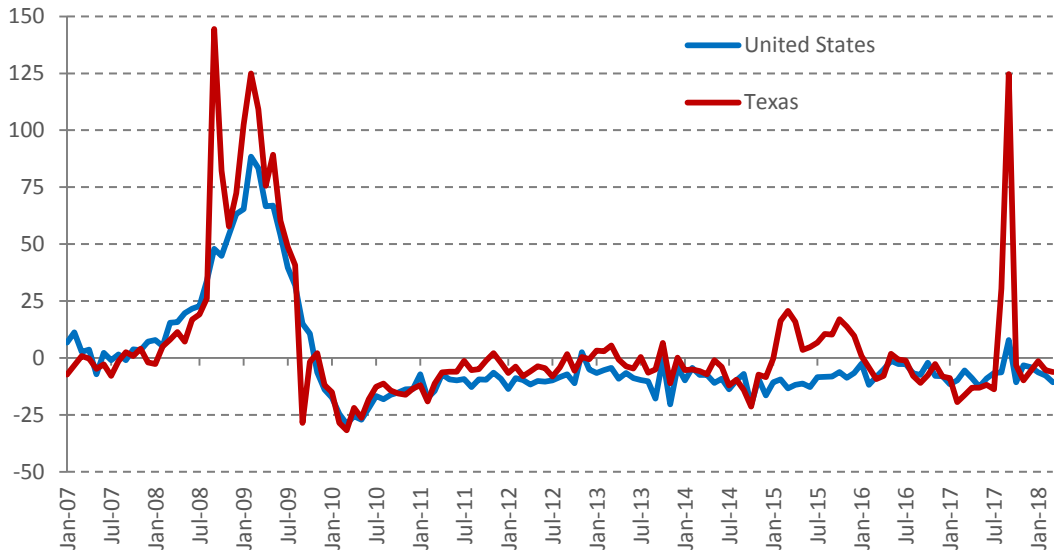
Note: Seasonally adjusted. March 2018 is preliminary. For more information, see [Unemployment Rate](#).
 Source: Bureau of Labor Statistics

Major Metros Unemployment Rate (Percent)



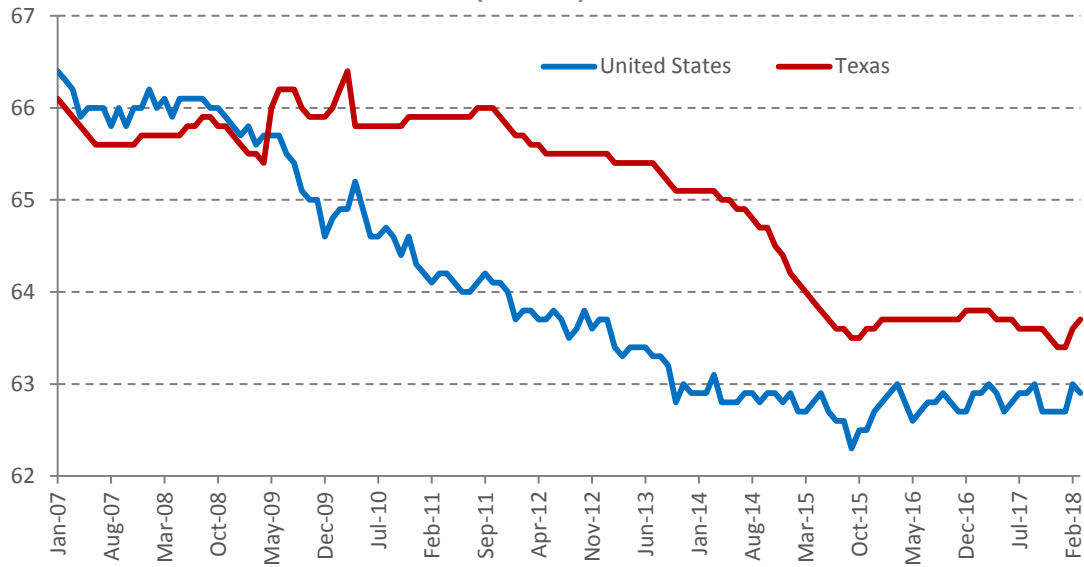
Note: Seasonally adjusted. March 2018 is preliminary. For more information, see [Unemployment Rate](#).
Source: Federal Reserve Bank of St. Louis

Unemployment Insurance Claims: Initial Applications (Year-over-Year Percentage Change)



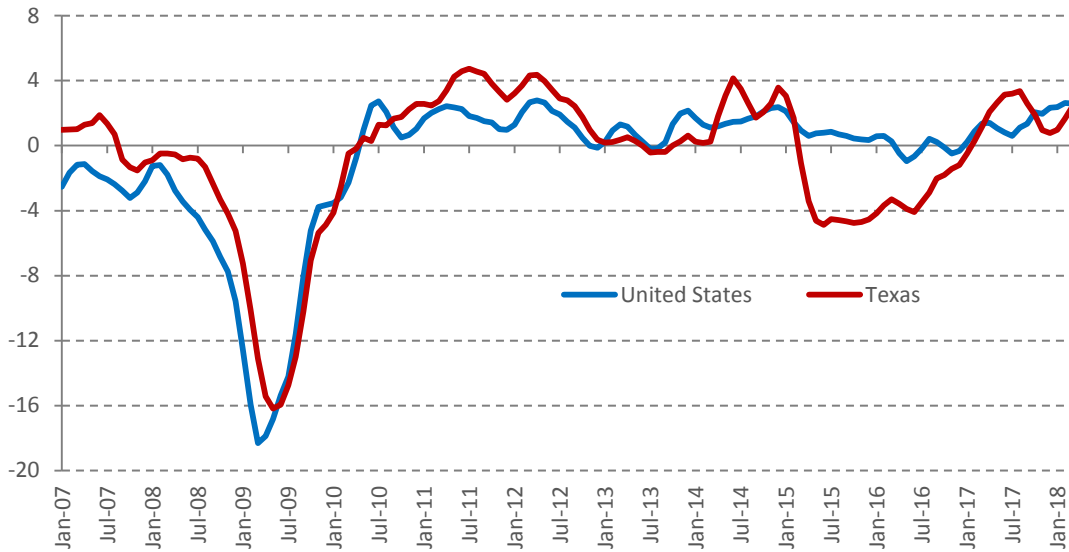
Note: Seasonally adjusted. For more information, see [Unemployment Insurance Claims: Initial Applications](#).
Source: Department of Labor

**Labor Force Participation Rate
(Percent)**



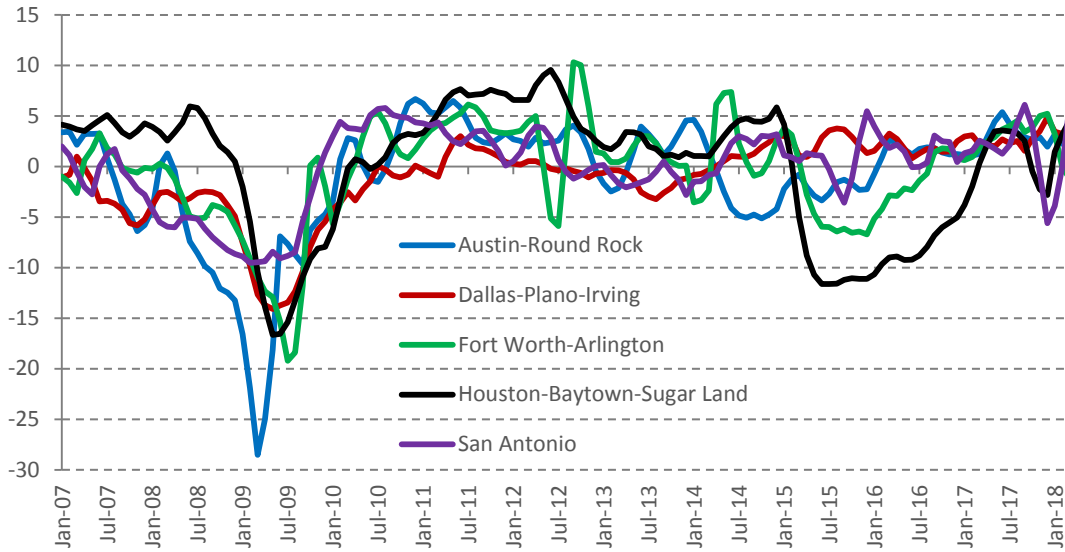
Note: Seasonally adjusted. For more information, see [Unemployment Rate](#).
Source: Bureau of Labor Statistics

**Manufacturing Employment
(Quarter-over-Quarter Percent Change)**



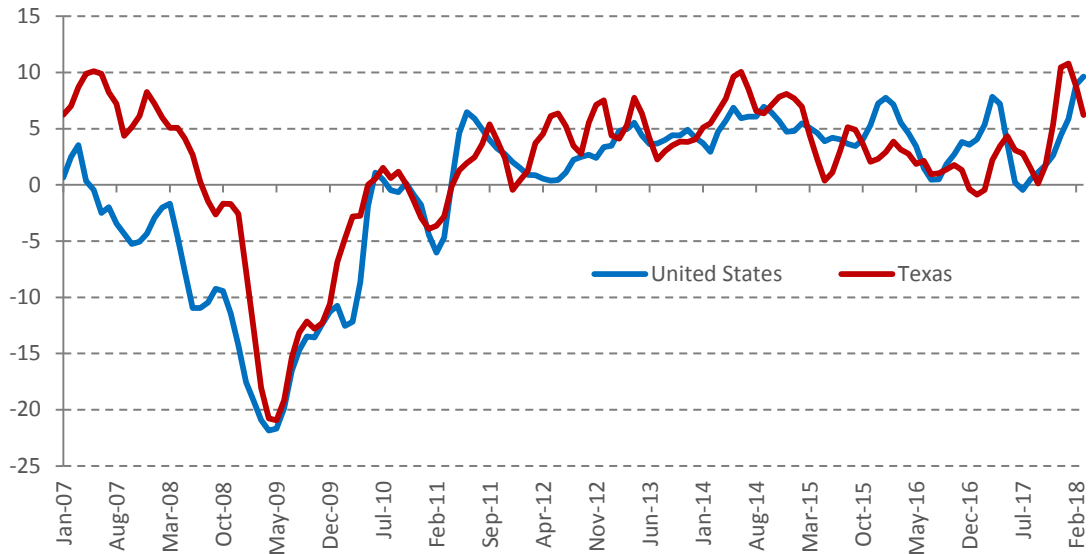
Note: Seasonally adjusted, 3-month moving average. March 2018 is preliminary.
For more information, see [Employment Growth Rate](#).
Source: Bureau of Labor Statistics

Major Metros Manufacturing Employment (Quarter-over-Quarter Percent Change)



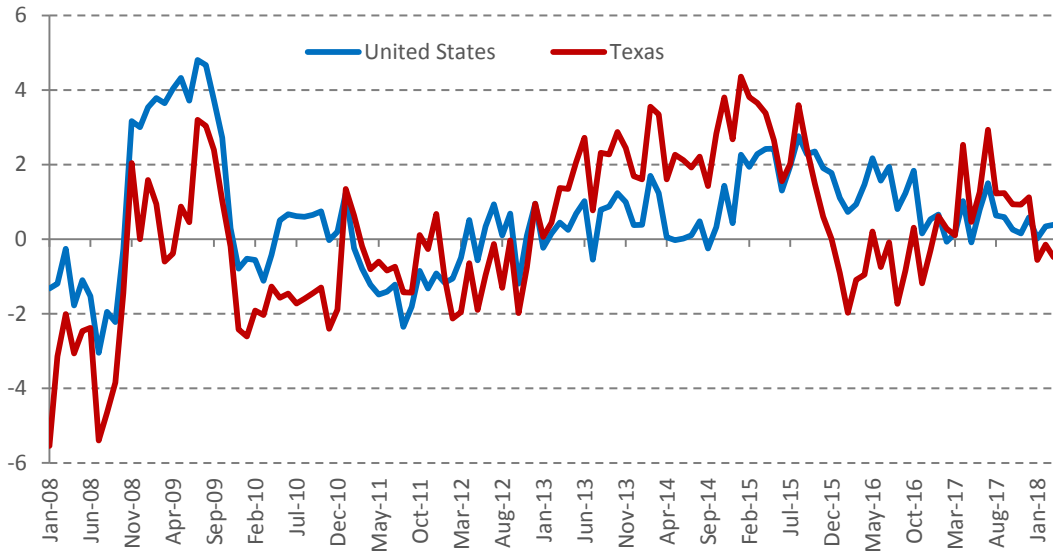
Note: Seasonally adjusted, 3-month moving average. March 2018 is preliminary.
 For more information, see [Employment Growth Rate](#).
 Source: Bureau of Labor Statistics

Construction Employment (Quarter-over-Quarter Percent Change)



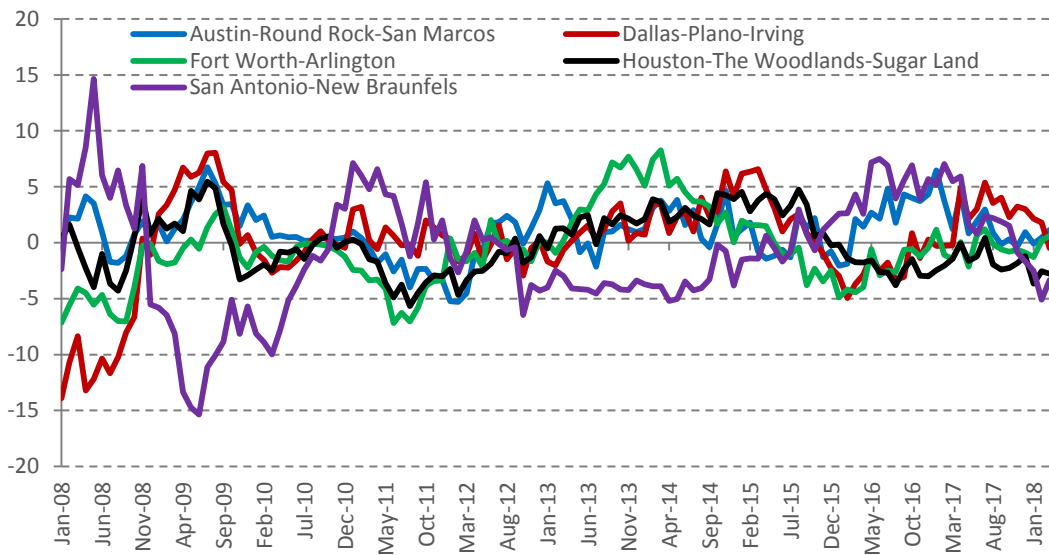
Note: Seasonally adjusted, 3-month moving average. March 2018 is preliminary.
 For more information, see [Employment Growth Rate](#).
 Source: Bureau of Labor Statistics

Total Private Employee Hourly Earnings (Year-over-Year Percent Change)



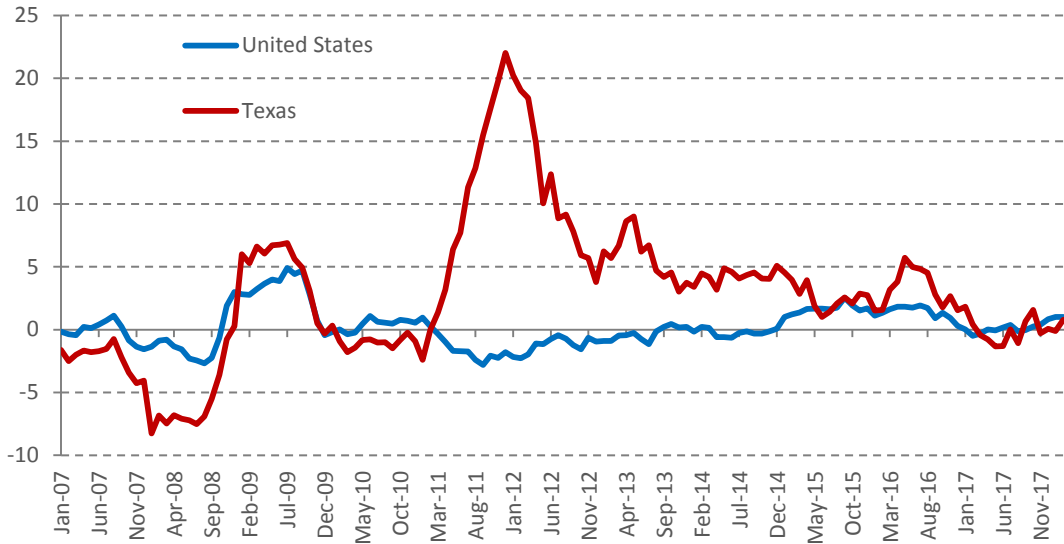
Notes: Inflation adjusted. March 2018 is preliminary.
For more information, see [Total Private Employee Hourly Earnings](#).
Source: Bureau of Labor Statistics

Major Metros Total Private Employee Hourly Earnings (Year-over-Year Percent Change)



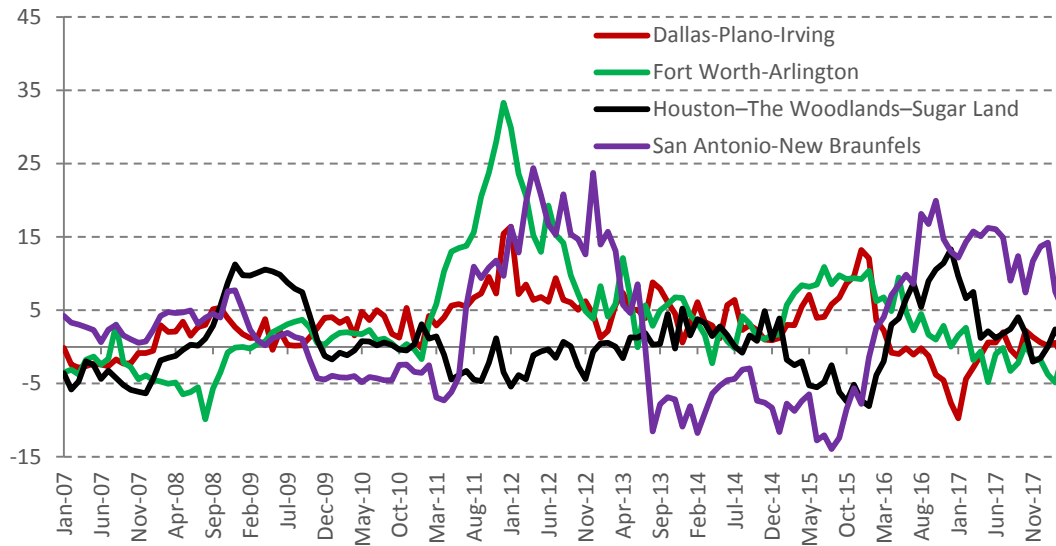
Notes: Inflation adjusted. March 2018 is preliminary.
For more information, see [Total Private Employee Hourly Earnings](#).
Source: Bureau of Labor Statistics

Manufacturing Employee Hourly Earnings (Year-over-Year Percent Change)



Notes: Inflation adjusted. March 2018 is preliminary.
For more information, see [Total Private Employee Hourly Earnings](#).
Source: Bureau of Labor Statistics

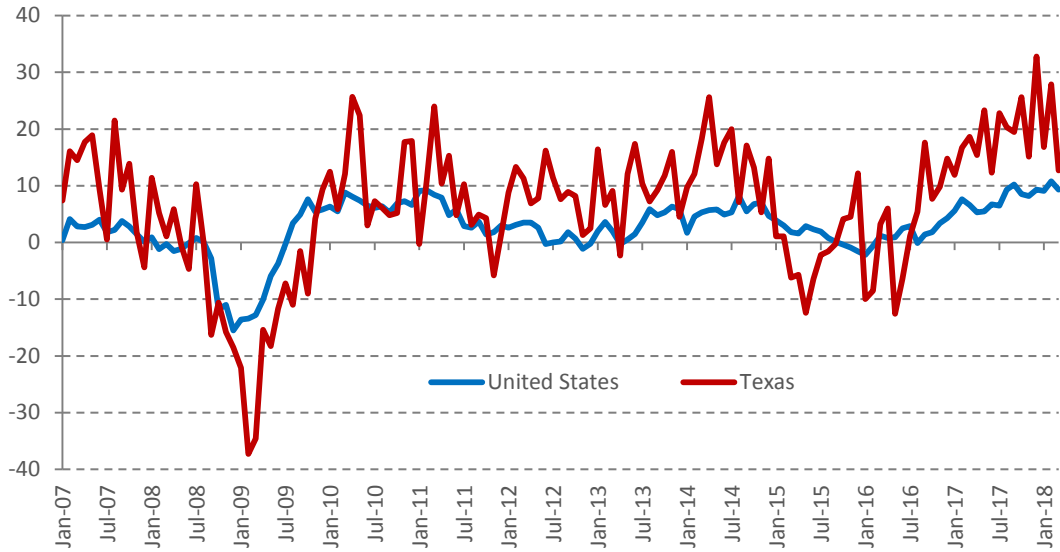
Major Metros Manufacturing Employee Hourly Earnings (Year-over-Year Percent Change)



Notes: Inflation adjusted. March 2018 is preliminary.
For more information, see [Total Private Employee Hourly Earnings](#).
Source: Bureau of Labor Statistic

Manufacturing

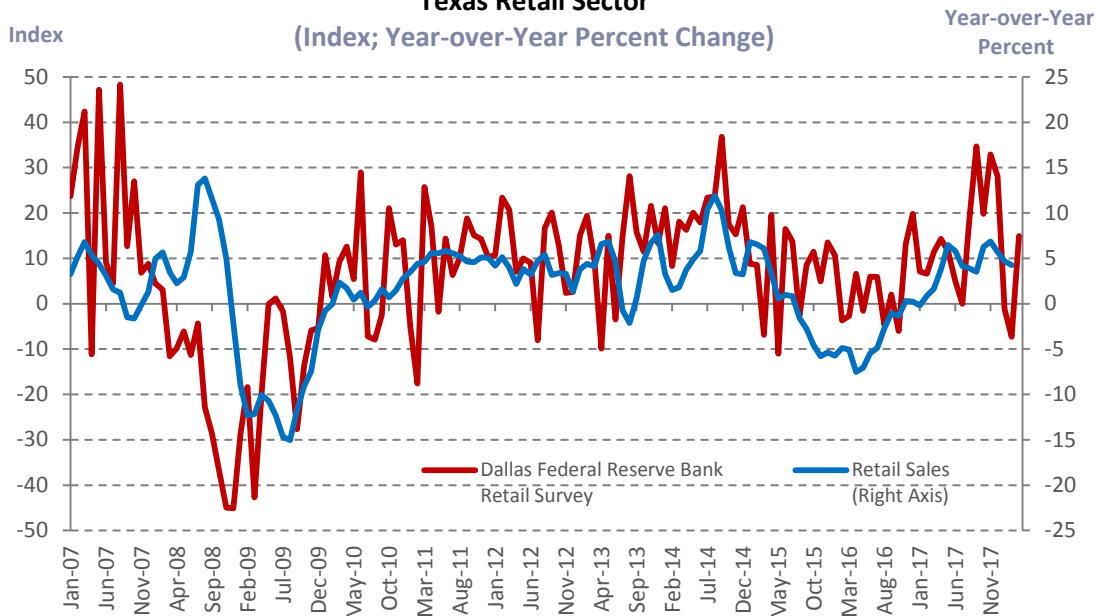
**Manufacturing Outlook Survey
(Index)**



Note: Seasonally adjusted. For more information, see [Manufacturing Outlook Survey](#).
Sources: Federal Reserve Bank of Dallas and Institute for Supply Management. United States index is adjusted -50 to be on scale with Texas index

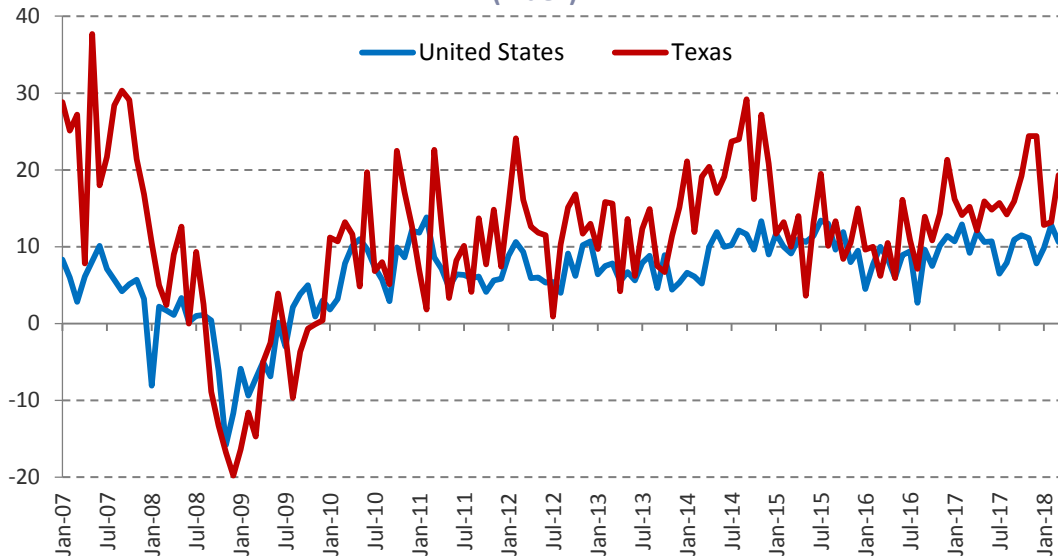
Services

**Texas Retail Sector
(Index; Year-over-Year Percent Change)**



Note: Seasonally adjusted and inflation adjusted. For more information, see [Texas Retail Sector](#).
Sources: Retail Sector Outlook Survey from the Federal Reserve Bank of Dallas, Retail Sales from Texas Comptroller of Public Accounts

Services Sector Outlook Survey (Index)

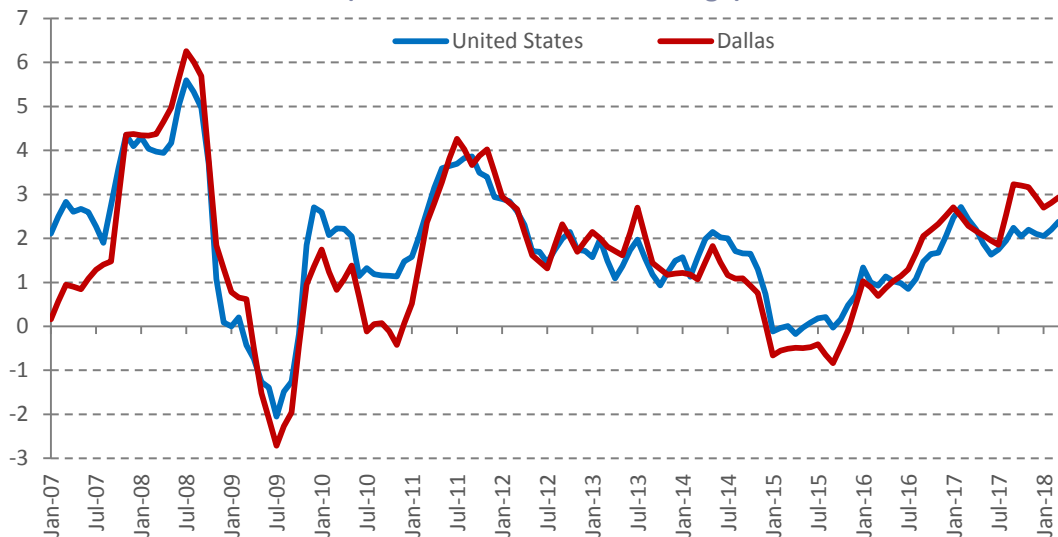


Note: Seasonally adjusted. For more information, see [Services Sector Outlook Survey](#).

Sources: Federal Reserve Bank of Dallas and Institute for Supply Management. United States index is adjusted -50 to be on scale with Texas index.

Prices

CPI Inflation Rates (Year-over-Year Percent Change)

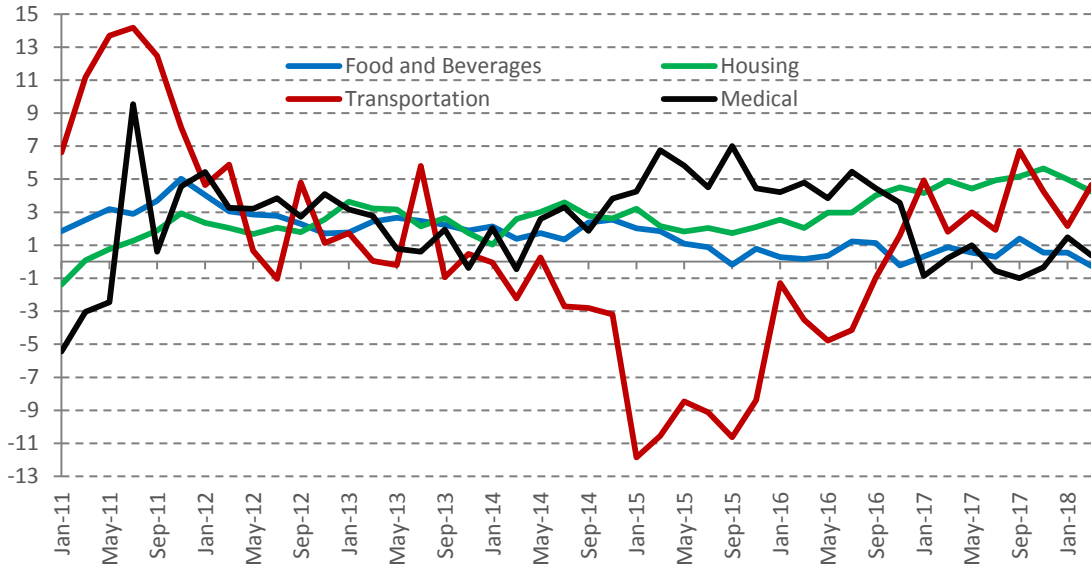


Note: Seasonally adjusted. For more information, see [CPI Inflation Rates](#).

Source: Bureau of Labor Statistics



CPI Inflation Rates (Dallas Components)
(Year-over-Year Percent Change)

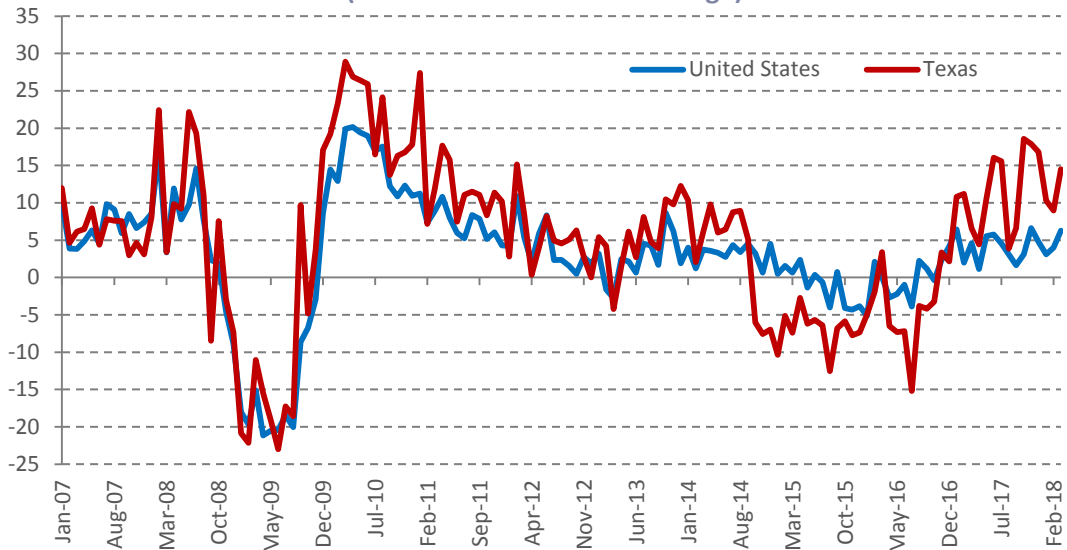


Note: The Dallas CPI is composed of the following major groups: Food and Beverages, Housing, Apparel, Transportation, Medical Care, Recreation, Education and Communication, and Other Goods and Services. The four major components are included in the graph above.

Source: Bureau of Labor Statistics

Trade

Exports (All Commodities)
(Year-over-Year Percent Change)

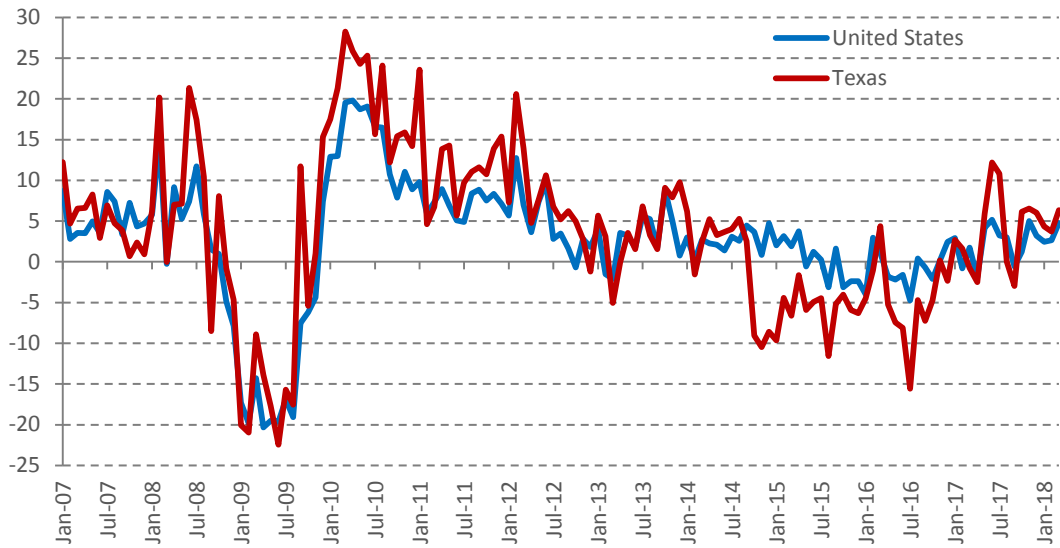


Note: Inflation adjusted with Bureau of Labor Statistics export indices. For more information, see [Exports](#).

Sources: International Trade Administration, Foreign Trade Division, and U.S. Census Bureau

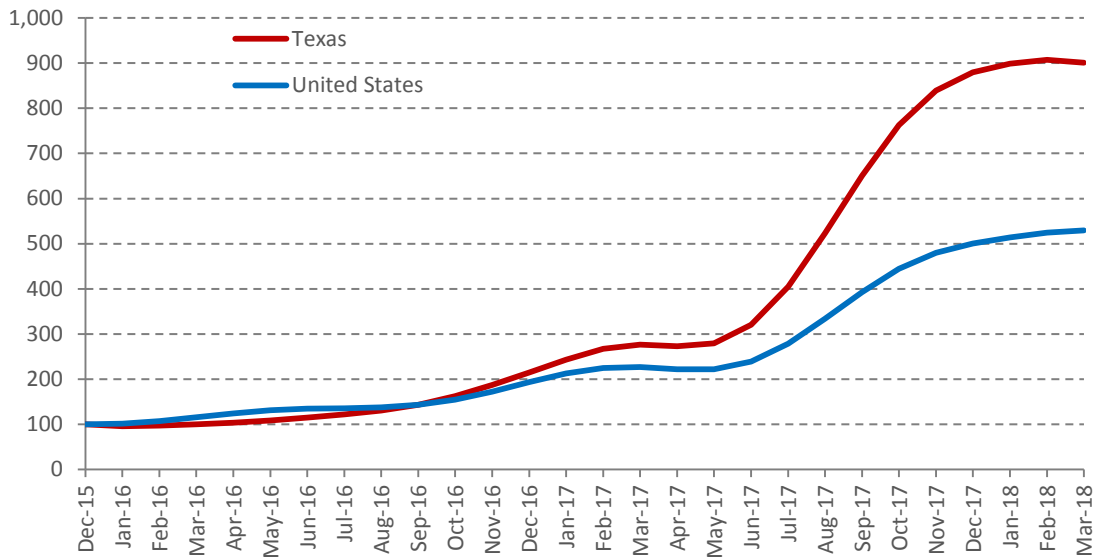


Manufacturing Exports (Year-over-Year Percent Change)



Note: Inflation adjusted with Bureau of Labor Statistics export indices. For more information, see [Manufacturing Exports](#).
Sources: International Trade Administration, Foreign Trade Division, and U.S. Census Bureau

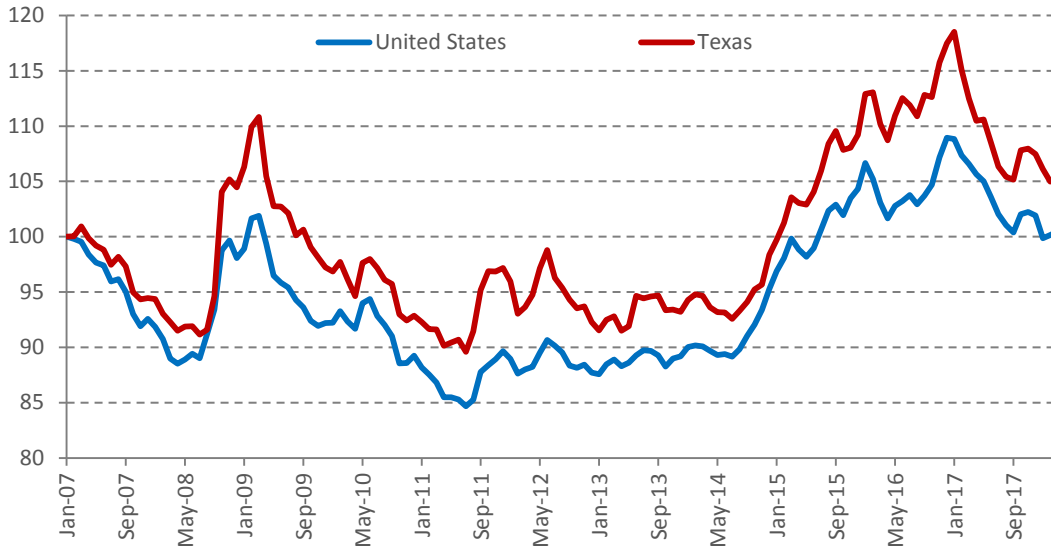
Crude Oil Exports (Index Dec 2015 = 100)



Note: Inflation adjusted trend-cycle component using the Bureau of Labor Statistics export indices. For more information, see [Crude Oil Exports](#).
Sources: International Trade Administration, Foreign Trade Division, and U.S. Census Bureau

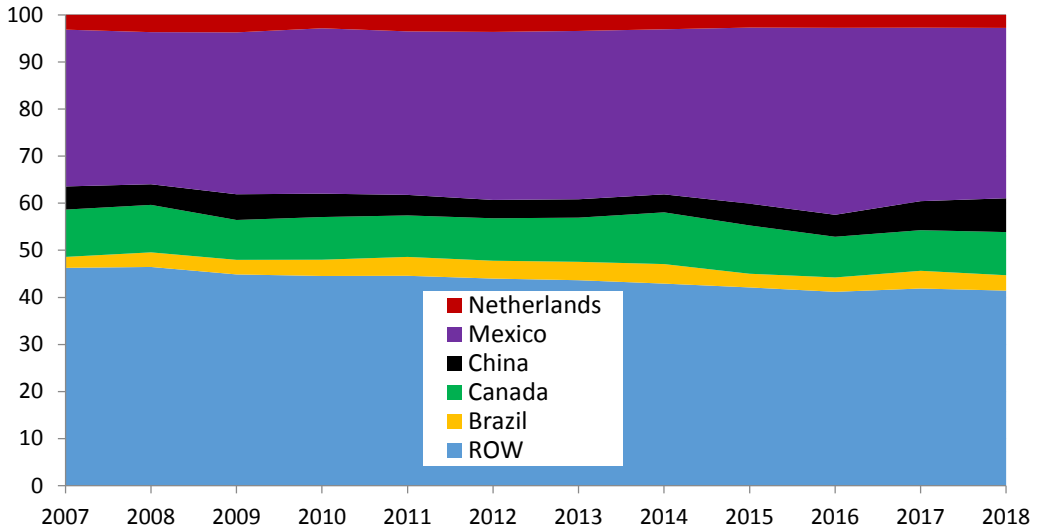


Real Trade Weighted Value of U.S. Dollar
(Index Jan 2007 = 100)



Note: For more information, see [Real Trade Weighted Value of U.S. Dollar](#).
Sources: Federal Reserve Bank of Dallas and Federal Reserve Bank of St. Louis

Texas Exports by Country
(Percent)



Note: For more information, see [Exports](#).
Sources: International Trade Administration, Foreign Trade Division, and U.S. Census Bureau



MAYS BUSINESS SCHOOL

Texas A&M University
2115 TAMU
College Station, TX 77843-2115

<http://recenter.tamu.edu>
979-845-2031

DIRECTOR

GARY W. MALER

ADVISORY COMMITTEE

DOUG JENNINGS, CHAIRMAN Fort Worth	BESA MARTIN, VICE CHAIRMAN Boerne
MARIO A. ARRIAGA Conroe	TED NELSON Houston
RUSSELL CAIN Port Lavaca	DOUG ROBERTS Austin
ALVIN COLLINS Andrews	C. CLARK WELDER Fredericksburg
JACQUELYN K. HAWKINS Austin	JAN FITE-MILLER, EX-OFFICIO Dallas