



Federal Reserve  
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# The Texas Economic Outlook

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March 2018

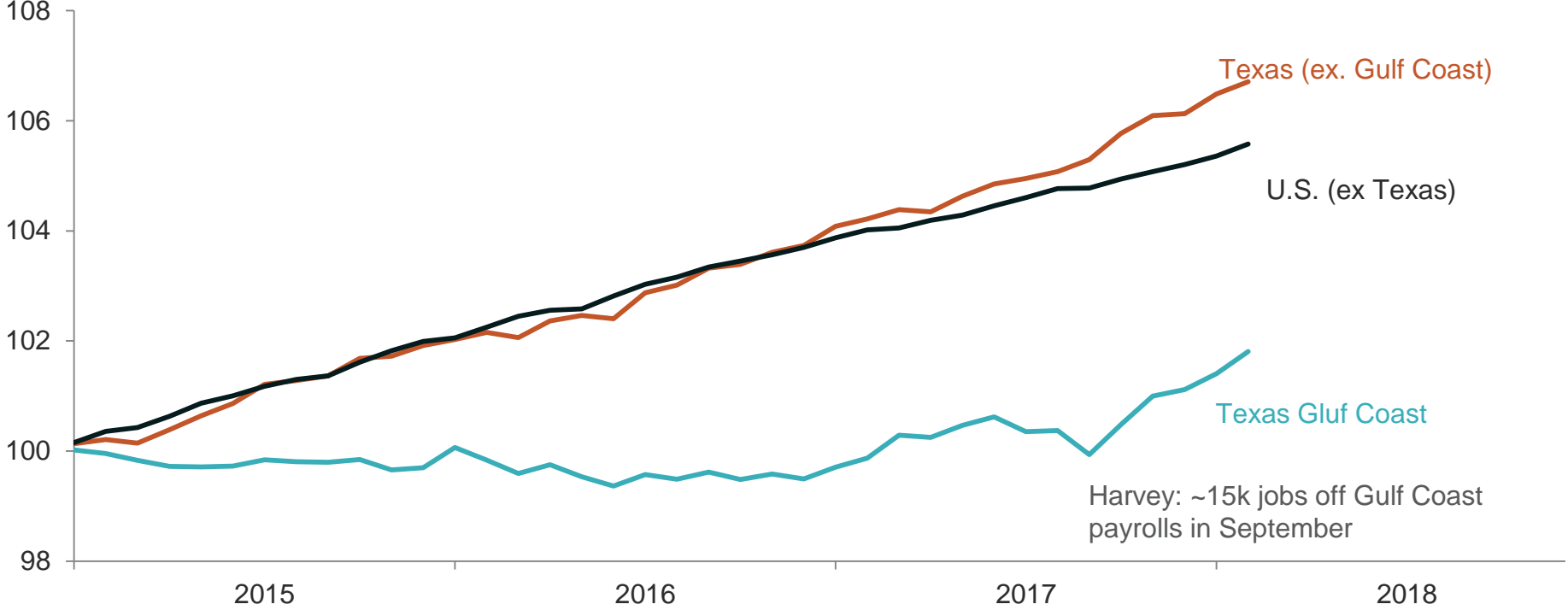
# Texas Economy Back to Growth

- 2010-2014: energy, construction, & exports provided strong stimulus.
- 2015 & 2016: Oil Bust and strong dollar were headwinds.
- 2017: Energy & manufacturing recover; Texas grew 2.4% (+292,252 jobs)
- Hurricane Harvey macro impact largely transitory, no effect on jobs forecast
- 2018 Forecast: 3.2% job growth

# Overview

# Employment: Gulf Coast Metro Employment Plateaus in Oil Bust

Index, Dec.2014=100

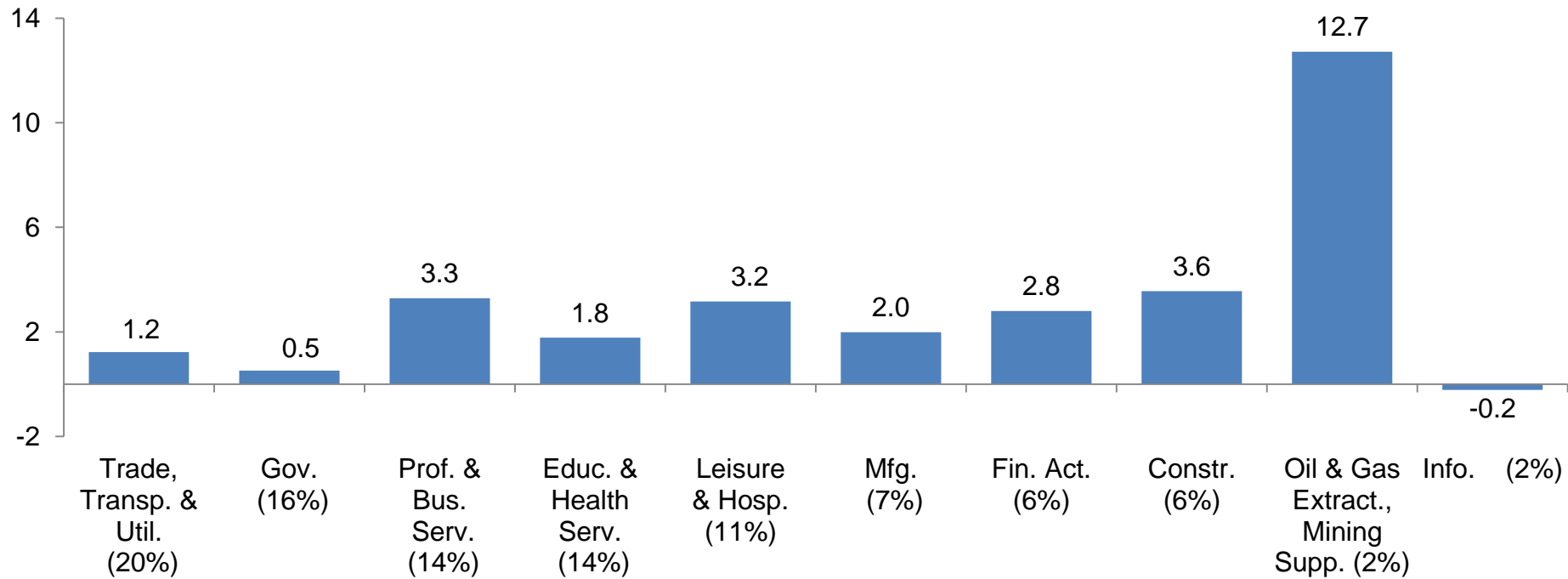


Harvey: ~15k jobs off Gulf Coast payrolls in September

SOURCE: Bureau of Labor Statistics; adjustments by the Dallas Fed.

# 2017: After two years, energy, and manufacturing move from headwind to tailwind.

Percent change, SAAR

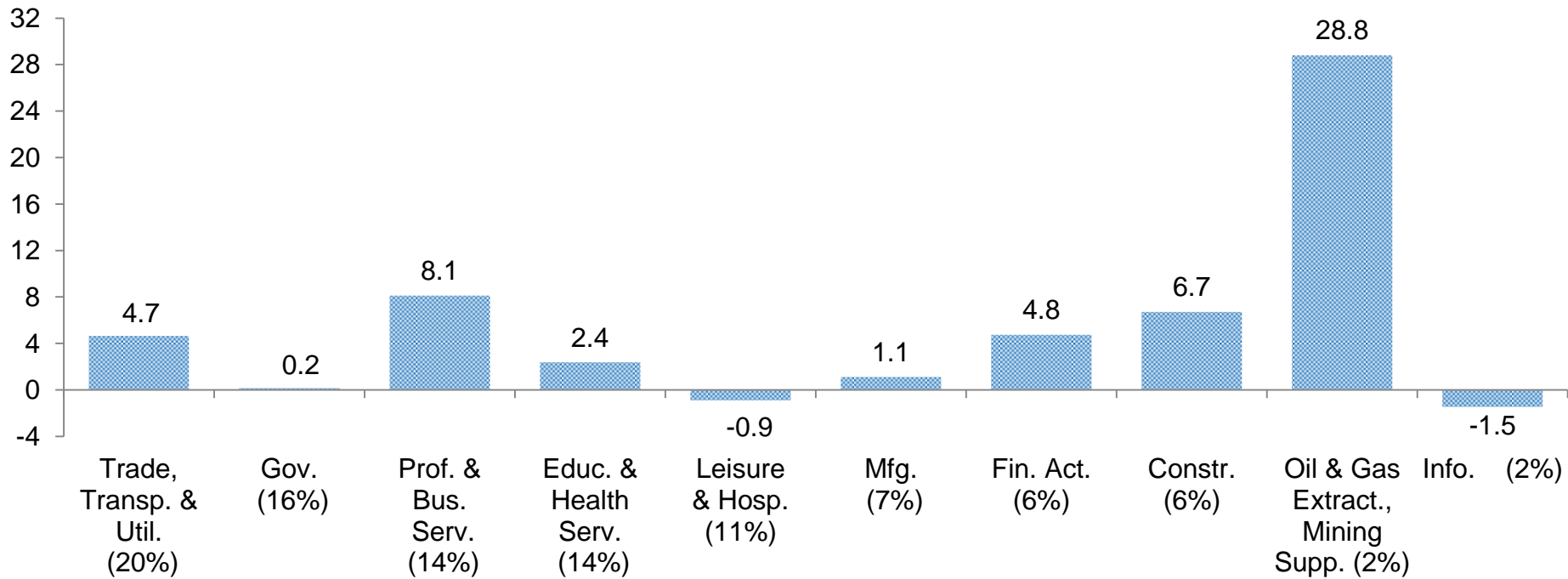


NOTE: Percent of Dec. 2017 total state employment in parentheses.

SOURCES: Bureau of Labor Statistics; Texas Workforce Commission; seasonal and other adjustments by Dallas Fed.

# 2018: Energy and professional services lead robust start to the year.

Percent change, SAAR

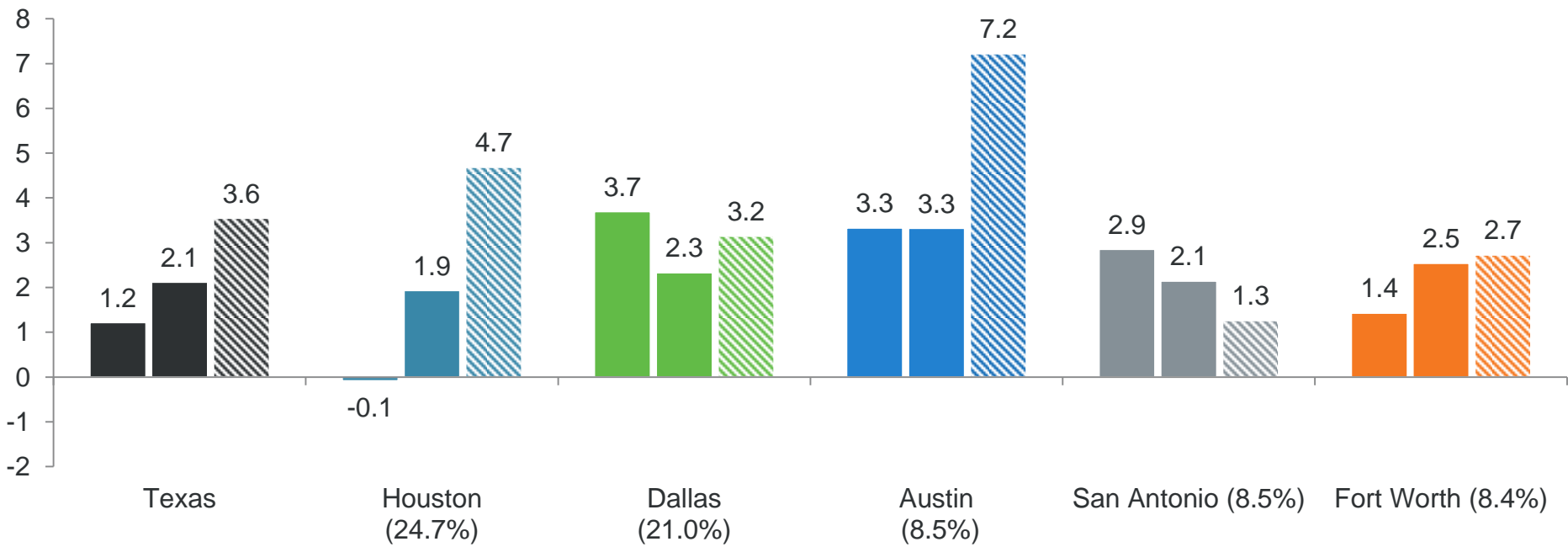


NOTE: Percent of Feb. 2018 total state employment in parentheses.

SOURCES: Bureau of Labor Statistics; Texas Workforce Commission; seasonal and other adjustments by Dallas Fed.

# Texas Triangle: Job growth estimates start 2018 strong for most metros.

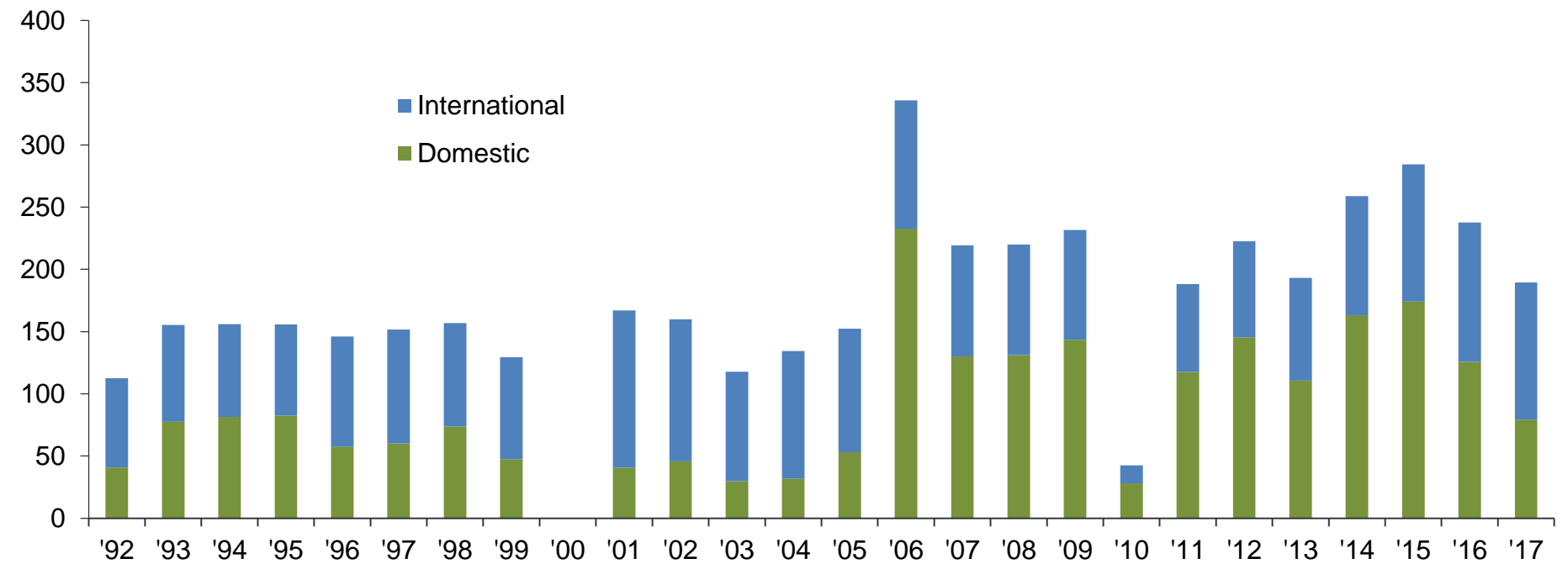
Percent, Dec./Dec.



NOTES: Figures in parentheses represent shares of total state employment. Each region's job growth shown for 2015, 2016, and 2017 YTD (through Nov.).  
 SOURCES: Bureau of Labor Statistics; Texas Workforce Commission; seasonal and other adjustments by Dallas Fed.

# Net Migration: A lagging indicator, fewer people moved to Texas 2016 & 2017— particularly from other states.

Net migration (thousands)

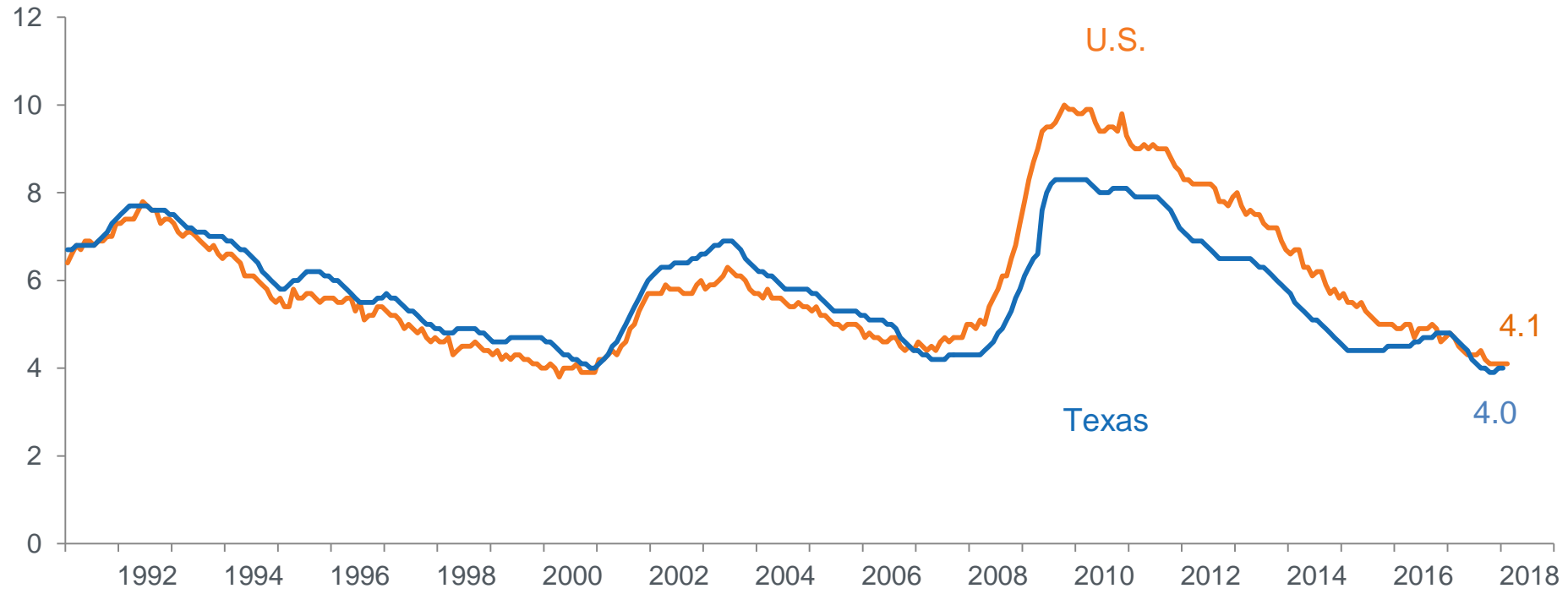


NOTE: Data are for July of the previous year to July of the year indicated, and are not available for decennial Census years.  
SOURCE: U.S. Census Bureau.



# Unemployment: Texas sees tightest labor market on record at end of 2017.

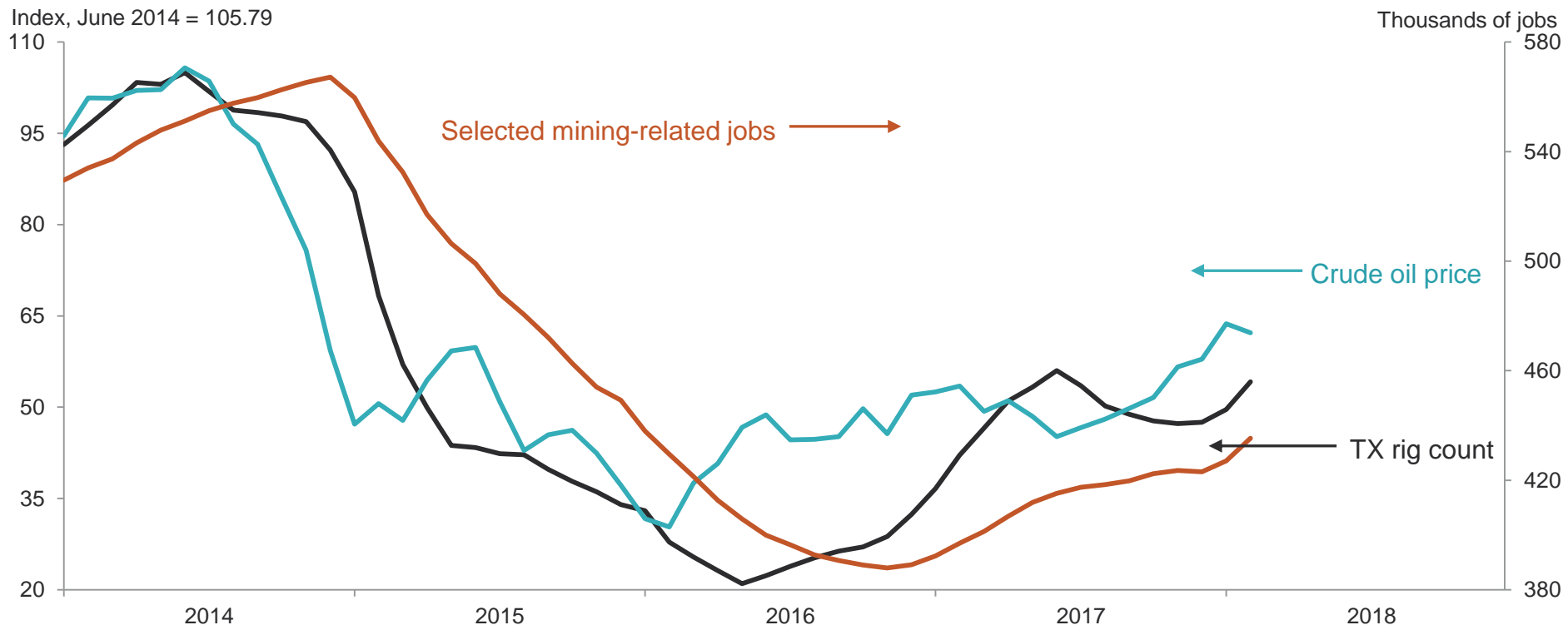
Unemployment rate, percent, SA



NOTE: Data through Nov. 2017 for Texas and Dec. 2017 for the U.S.  
SOURCES: Bureau of Labor Statistics; Texas Workforce Commission; seasonal and other adjustments by Dallas Fed.

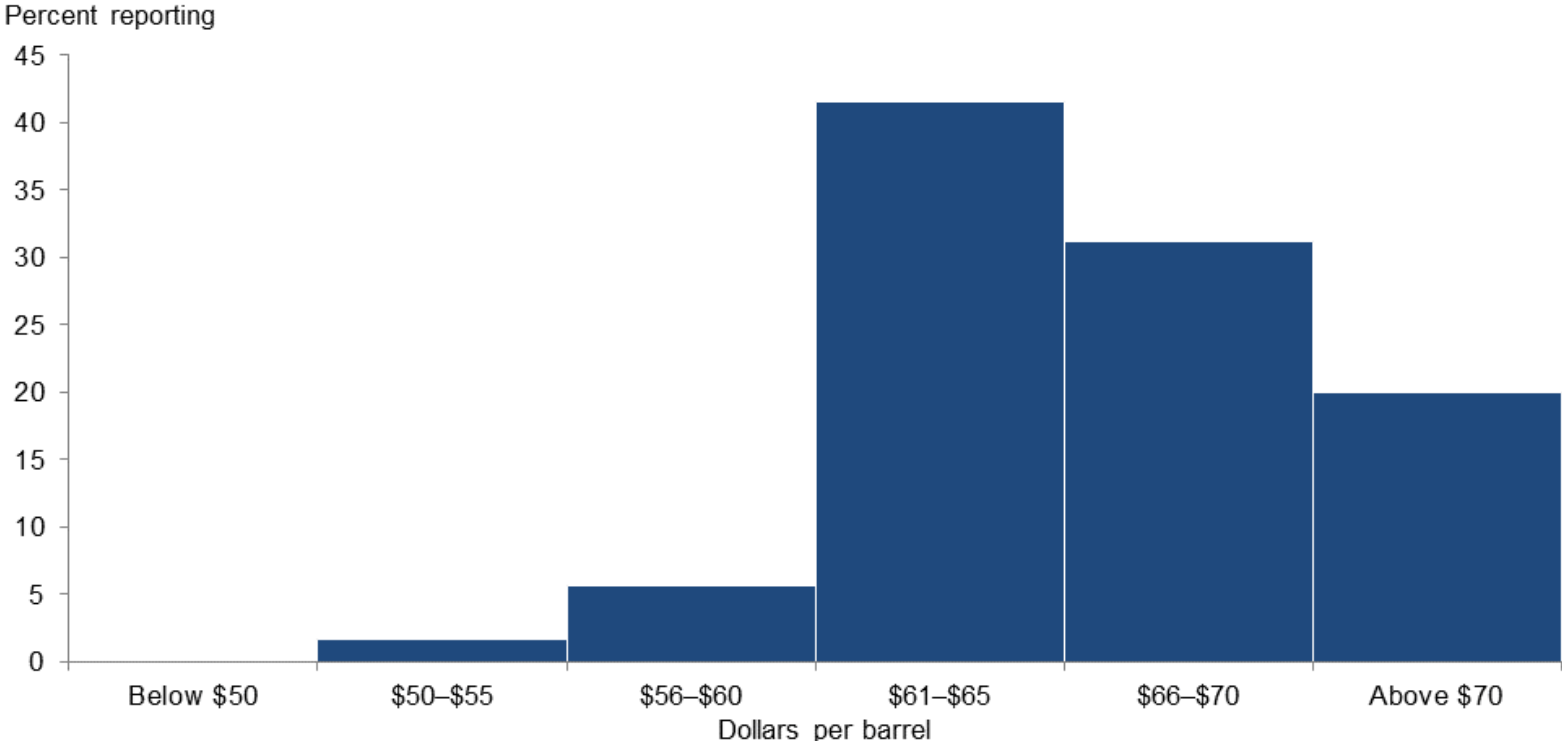
# Energy

# Energy Cycle: Statewide recovery continues, oil supportive of increased activity



NOTES: Rig count and nominal price of West Texas Intermediate crude oil indexed to June 2014 = 105.79.  
 SOURCES: Energy Information Administration; Baker Hughes; Bureau of Labor Statistics; adjustments by the Dallas Fed.

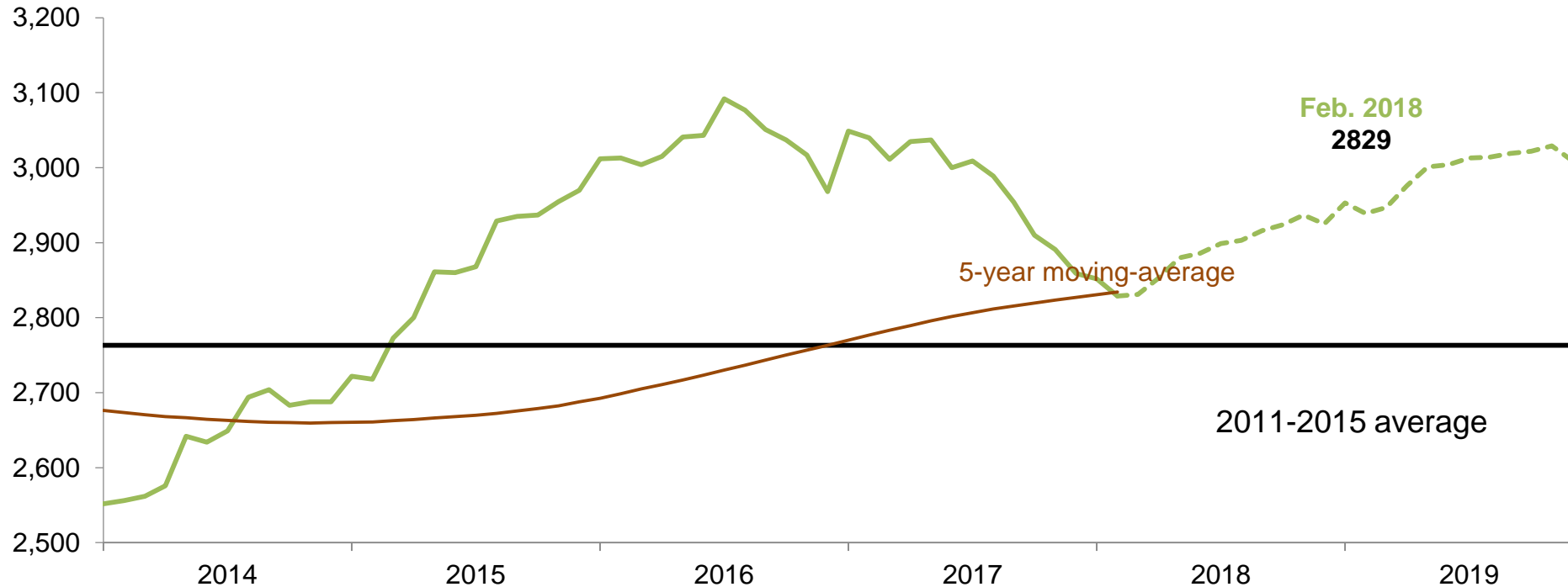
# Energy Survey: Industry looks for WTI > \$60 to substantially grow U.S. oil rig count.



NOTES: Executives from 125 oil and gas firms answered this question during the survey collection period, Dec. 13–21, 2017. For reference, WTI (West Texas Intermediate) spot prices averaged \$57.42 per barrel during the period.  
SOURCES: Federal Reserve Bank of Dallas; Energy Information Administration (reference price).

# OECD Stocks: Petroleum & other liquids inventories falling – supportive of higher prices; Market expects stocks to rise again next year.

Millions of barrels, eop

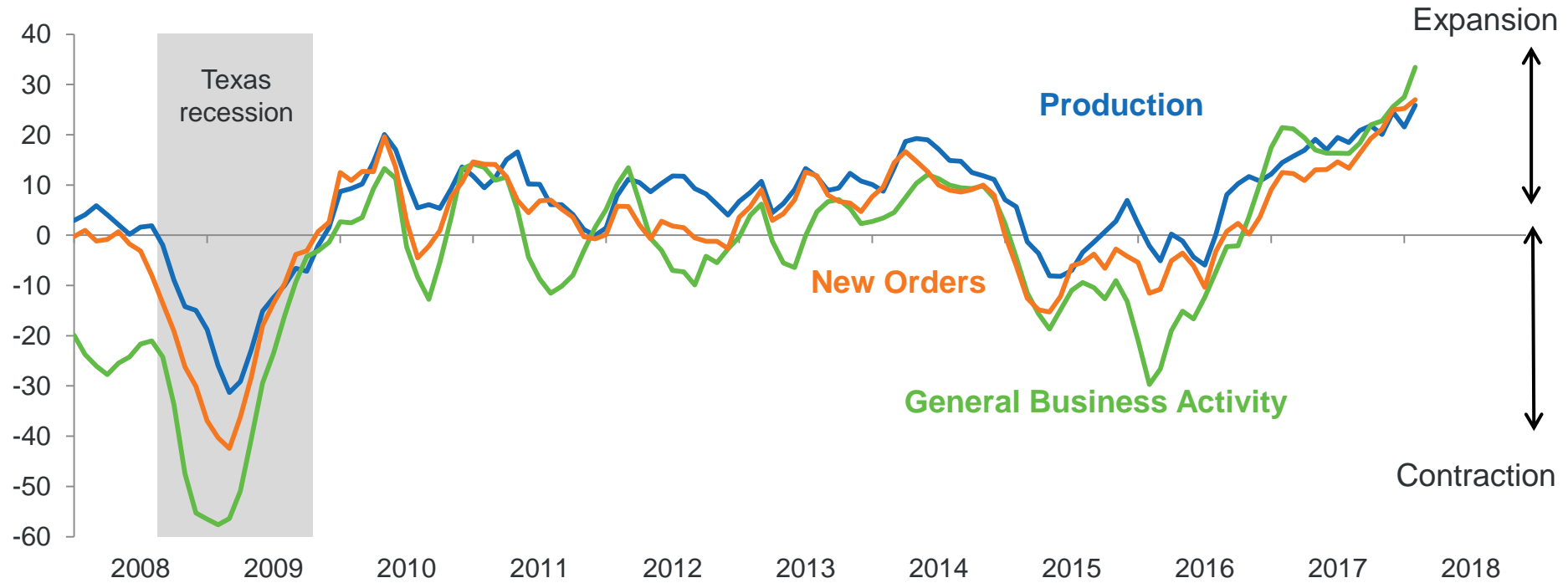


NOTE: Dashed line is a forecast.  
SOURCE: Energy Information Administration.

# Manufacturing & Trade

# TMOS: Manufacturing output returns to growth in 2017; Broader measures of optimism are similarly strong.

Index, three-month moving average, SA



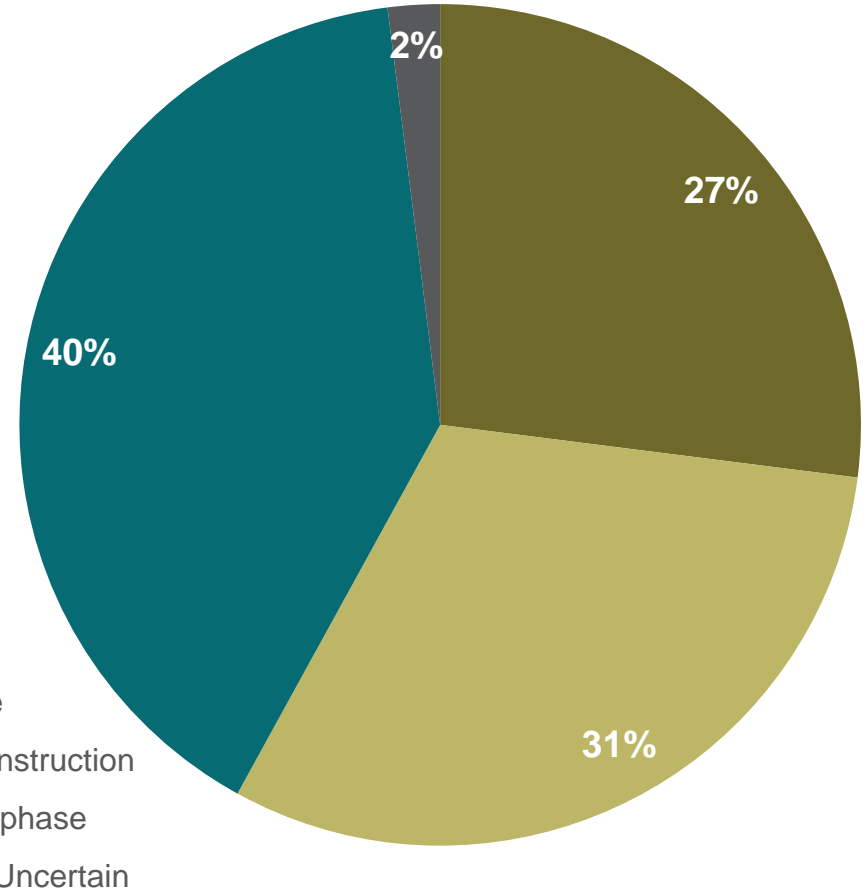
NOTE: Last data point is Dec. 2017.

SOURCE: Federal Reserve Bank of Dallas Texas Manufacturing Outlook Survey.

# Super-cycle of Chemical Investment Underway

Status of Texas Chemical Projects\*

- Chemistry bigger in Texas:
  - Real plastic product exports up 50% from 2010 to 2016.
  - Has 73% of U.S. Steam Cracker Capacity: set to rise by 30%+, targeting export markets
- Texas Projects:
  - \$65 Billion (122 projects)
  - \$42.3 of Foreign Direct Investment



\*As of 2017:Q3; Number of projects.

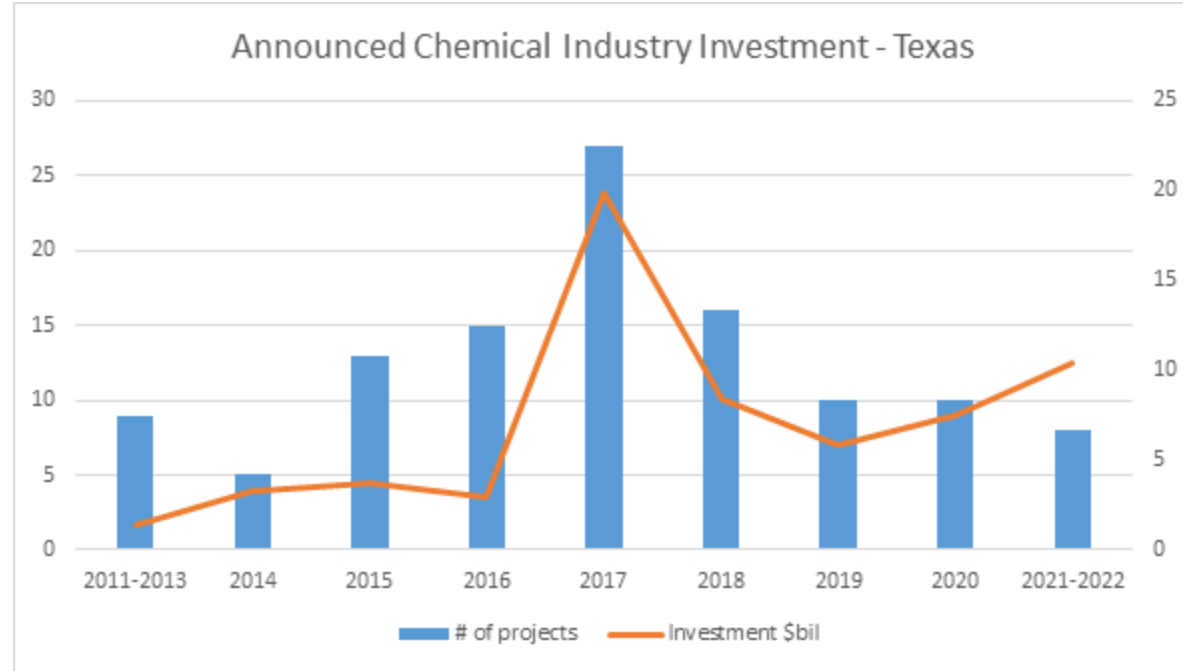
SOURCE: American Chemistry Council; Census data accessed via International Trade Commission; PetroChemWire.



# Super-cycle of Chemical Investment Underway

Construction-related job boom has likely peaked.

- Number and Value of new project *completions* Peak in 2017.
- Some slippage in schedule due to Hurricanes, delays.
- “Second Wave” of projects still coming, along with increased midstream and refinery construction
- Construction labor demand to fall.

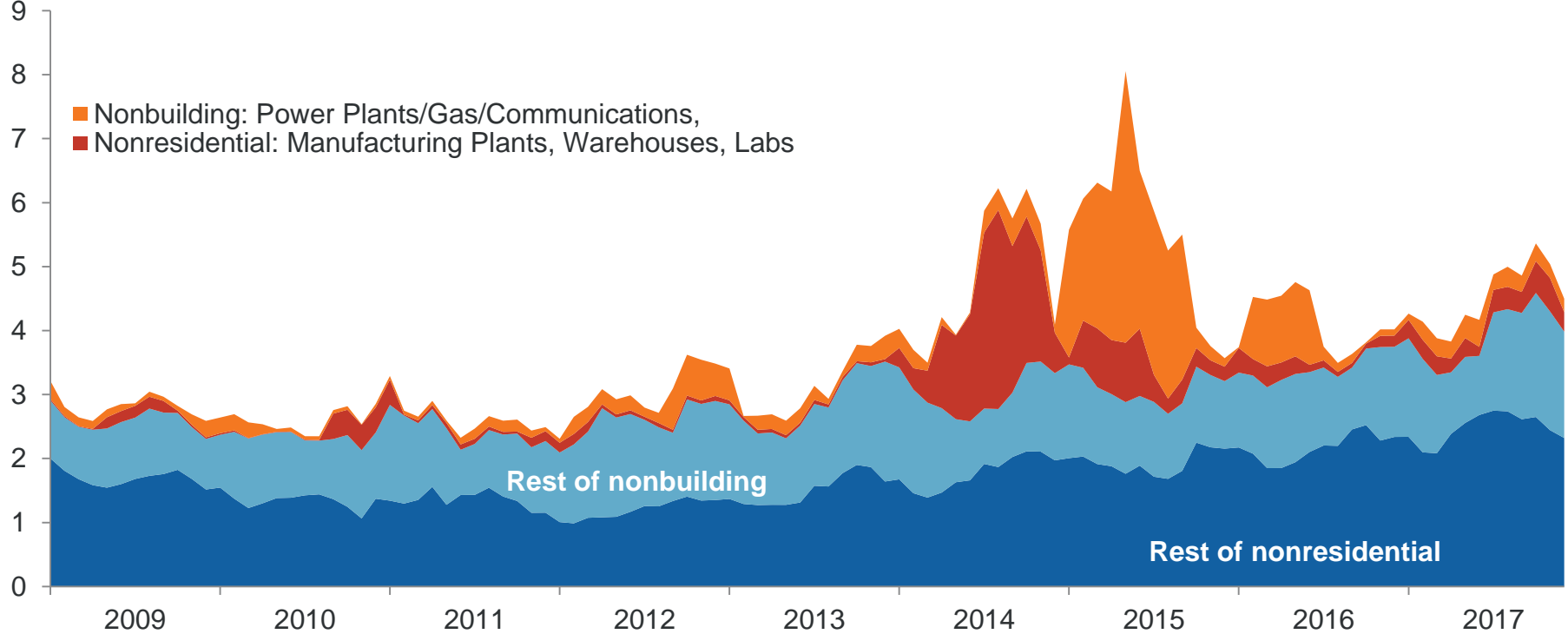


\*As of 2017:Q3

SOURCE: American Chemistry Council

# Construction Contracts: Shale-boom drove 2014-2015 surge in nonresidential and nonbuilding; growth broad based – fell off in 2H:2017

Billions of real dollars

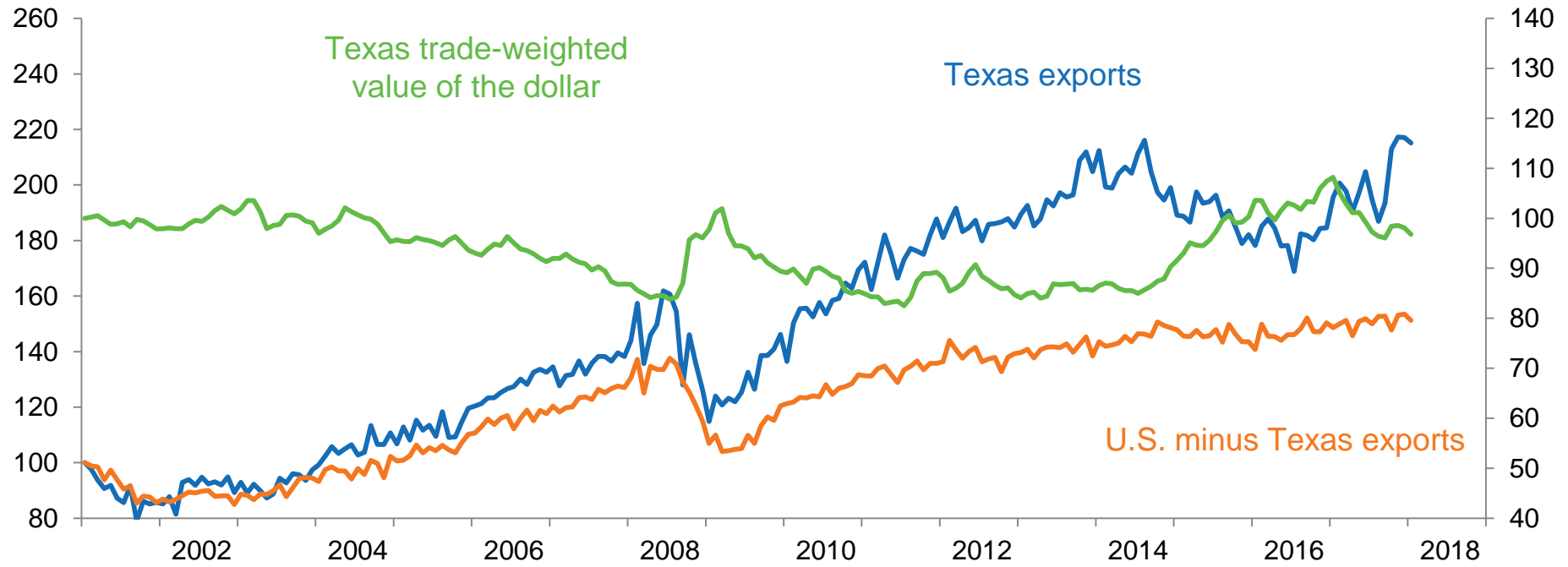


NOTE: Data are five-month moving-averages. Last data point is Dec 2017.  
 SOURCES: F.W. Dodge; adjustments by Federal Reserve Bank of Dallas.

# Exports: Value of Texas exports surging on energy prices, weaker dollar, and increased volumes.

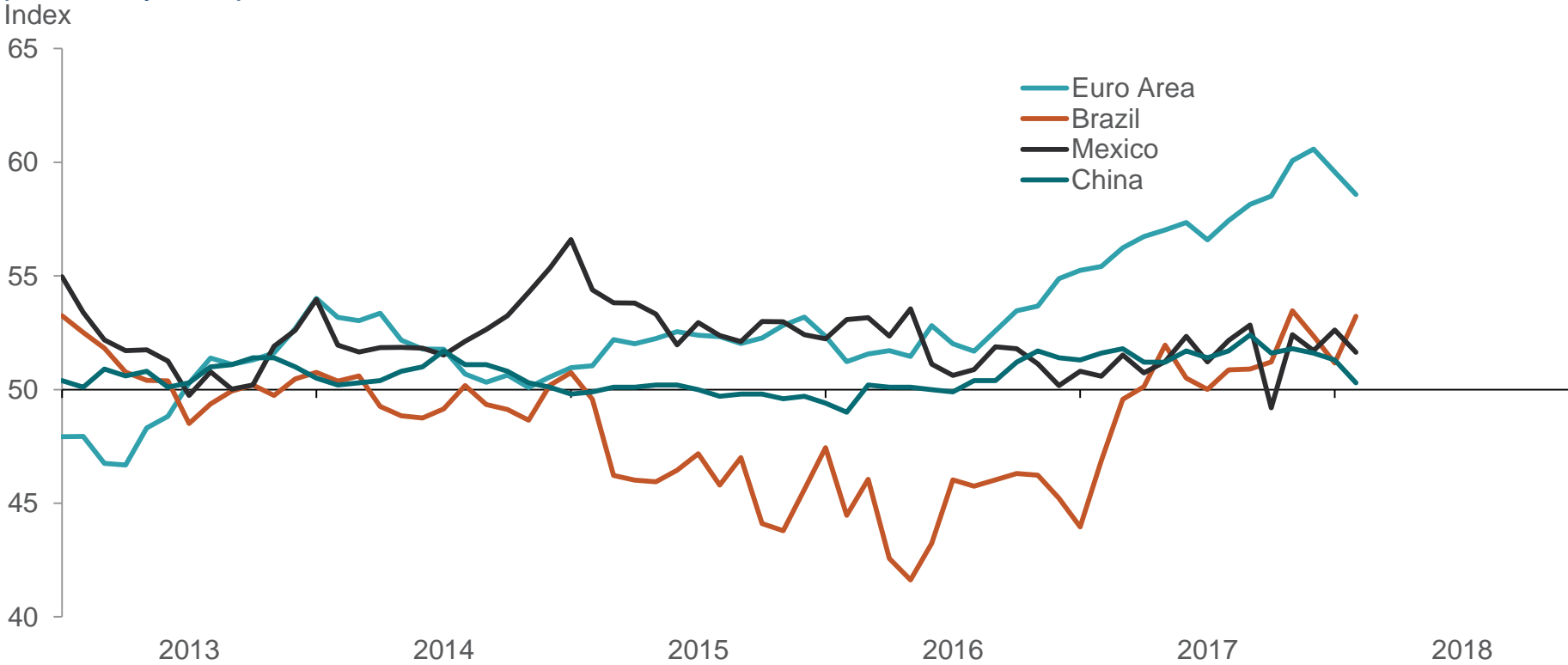
Index, real \$, Jan. '00=100, SA

Index, Jan. '00=100, SA



NOTES: Data is through August  
SOURCES: U.S. Census Bureau; WISERTrade; Federal Reserve Bank of Dallas.

# Purchasing Managers Indexes: Manufacturing improving among trade partners, particularly Europe and Brazil



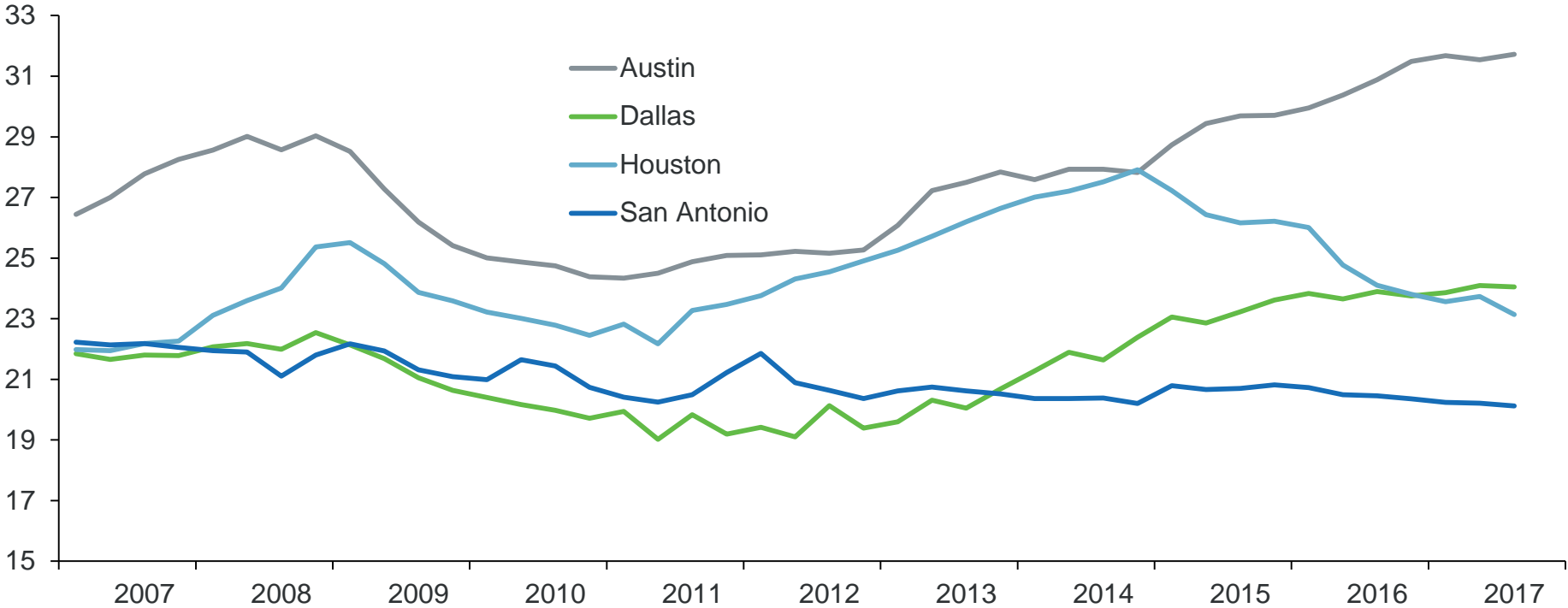
NOTE: Values above 50 indicate expanding economic activity, and vice versa.

SOURCE: IHS

# Real Estate

# Office Rents: Rent growth slows on I35 corridor; Houston Market drifts down on high vacancies.

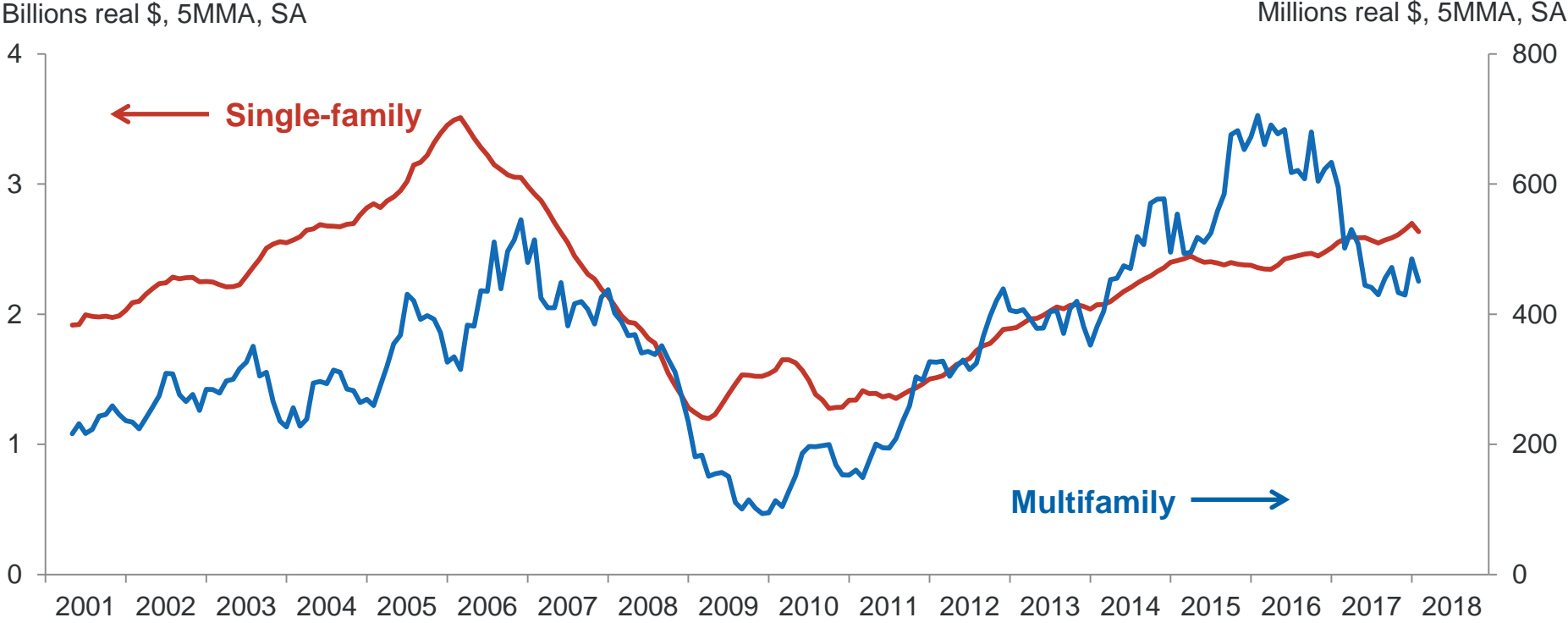
Index (real, \$/sq. ft./year)



NOTE: Last data point is Q3 2017.

SOURCE: CBRE.

# Construction Contracts, Residential: Multifamily contract values falloff as deliveries drove up vacancy rates; Single-family contract values perk up in 2H:2017



NOTE: Last data point is Dec. 2017.  
 SOURCES: F.W. Dodge; adjustments by Federal Reserve Bank of Dallas.

# Existing-home Market Still Tight

	Nominal median prices	Year-over-year % change	Months in inventory
Texas	\$231,972	5.1	3.4
Austin	\$300,756	0.9	2.4
Dallas	\$286,598	2.6	2.3
Fort Worth	\$227,305	3.1	1.9
Houston	\$233,200	-0.9	3.6
San Antonio	\$218,327	3.2	3.3

NOTE: Data as of Feb. 2018.

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

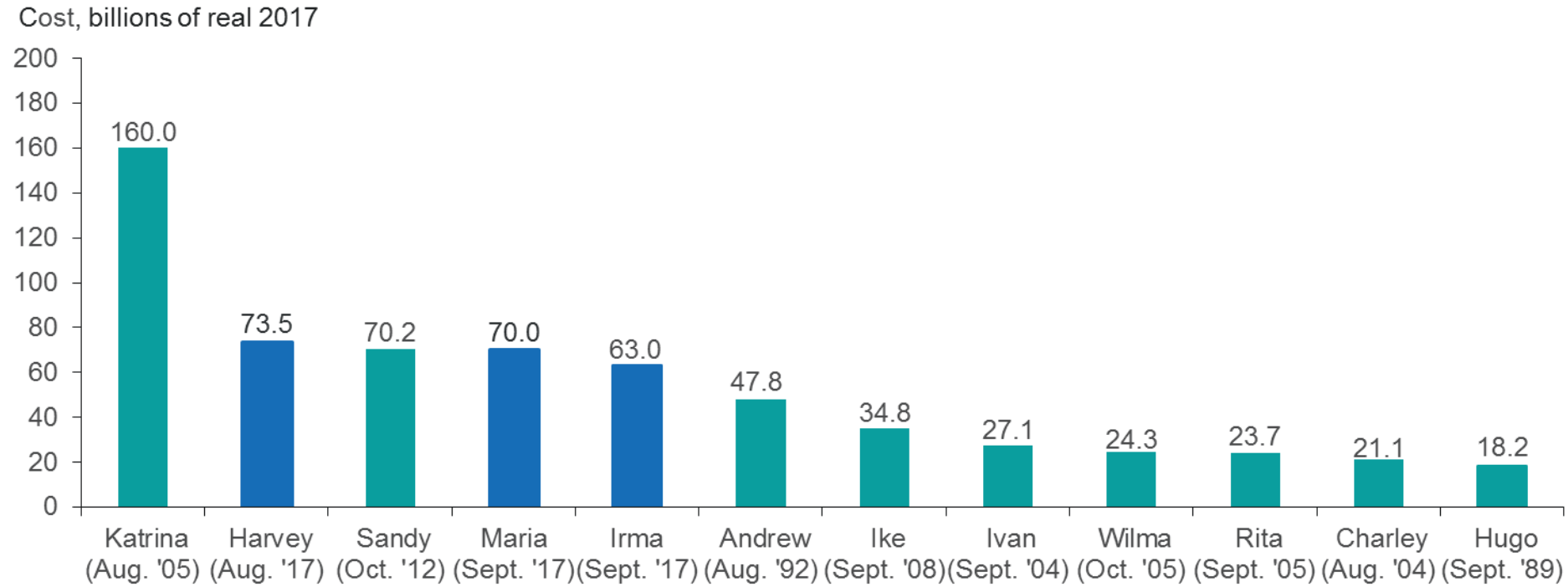


# Hurricane Harvey

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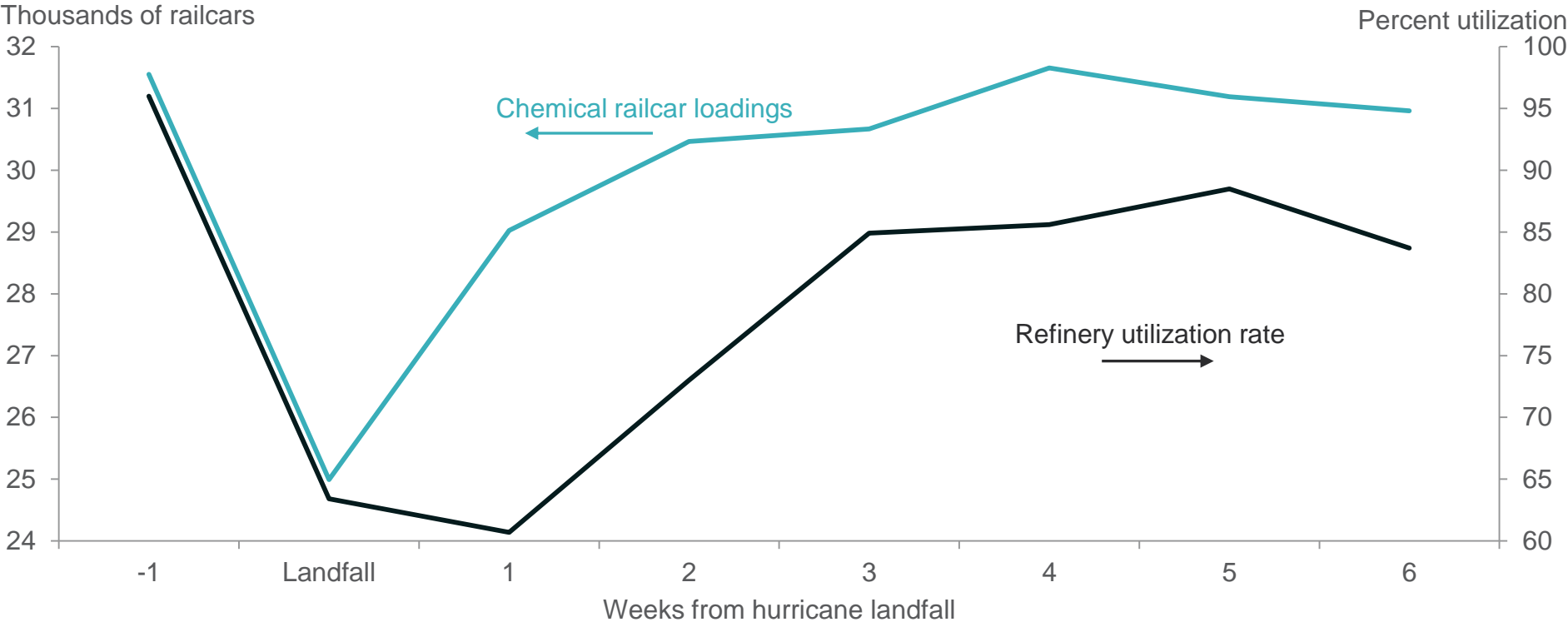
- ~\$60-\$70 Billion in damages - mostly residential and infrastructure.
- Lost Economic Output ~ \$9 Billion
  - Refineries & Chemical facilities offline
  - Ports shut down, operated with restrictions for weeks
  - Everyone stayed home for a week.
- Overall employment effects temporary, no effect on total jobs forecast.

# Harvey: Amongst most expensive storms.



NOTE: Costs include loss of personal and commercial property, public and private infrastructure, vehicles, livestock, and time-element losses (e.g., time costs for businesses, and hotel costs for loss of living quarters). Moody's median estimates for Harvey, Maria and Irma as of Oct. 27<sup>th</sup> shown.  
SOURCES: National Oceanic and Atmospheric Administration; Moody's Analytics.

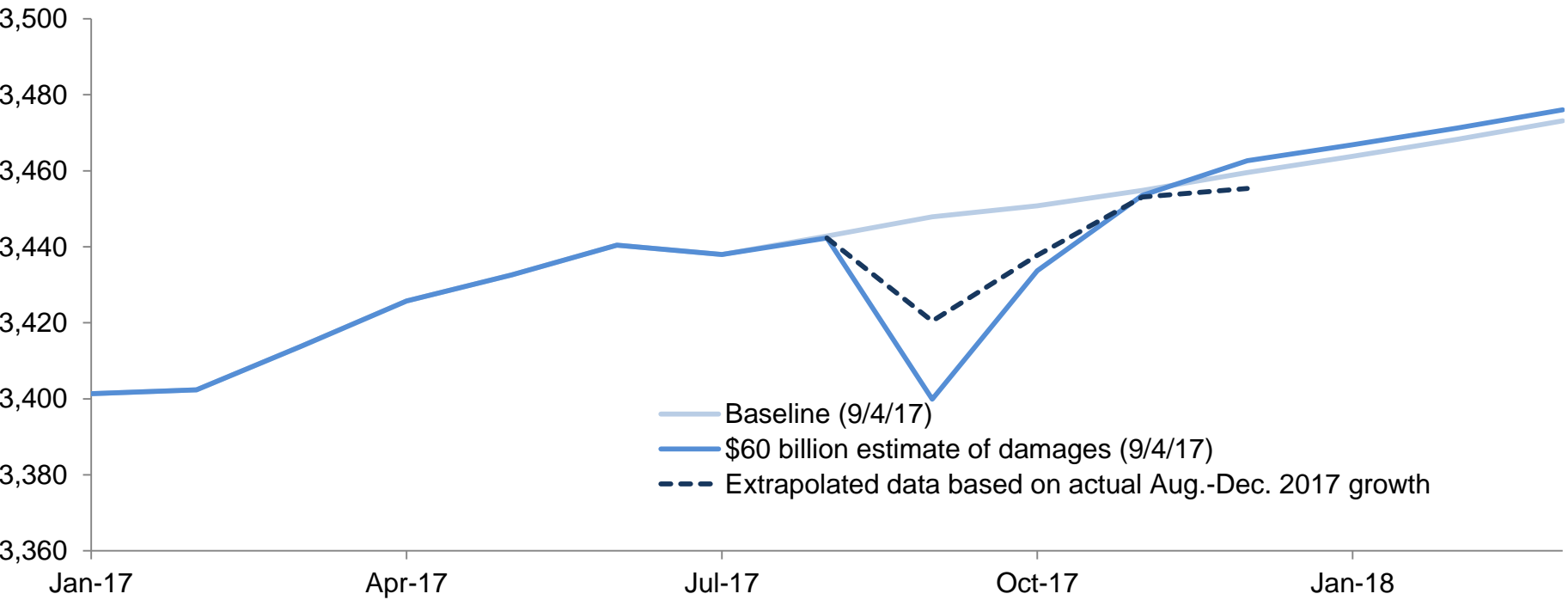
# Downstream activity recovered quickly on the Gulf Coast



SOURCE: Association of American Railroads. Energy Information Administration

# Harvey: No lasting projected impact to Gulf Coast job growth or levels.

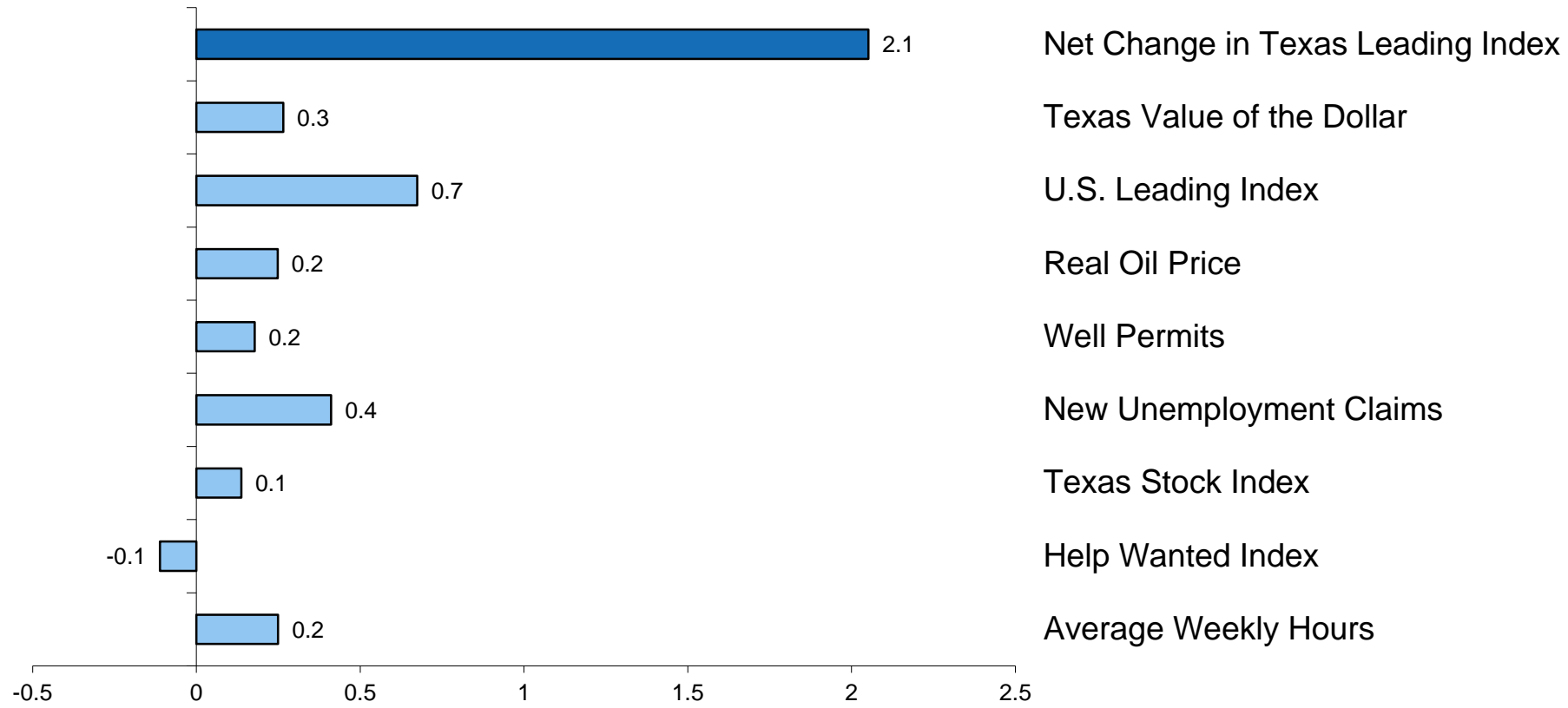
Thousands of jobs, SA



NOTE: Gulf Coast includes the Houston, Beaumont-Port Arthur, Victoria, and Corpus Christi MSAs.  
SOURCES: Bureau of Labor Statistics; National Oceanic and Atmospheric Administration; authors' calculations.

# Outlook

# Texas Leading Index: Seven of eight components point to growth. (Contribution to Dec. 2017 to Feb. 2018)



# Texas Economy Shifting Back to Growth

- 2017: Energy & manufacturing recover
- Hurricane Harvey macro impact largely transitory, no effect on jobs forecast
- Energy, Global economy, and dollar bullish for exports
- 2018 Forecast: 3.4% job growth (~ 419,000 jobs).
- Biggest risk to the forecast is sharp decline in oil prices or exports.



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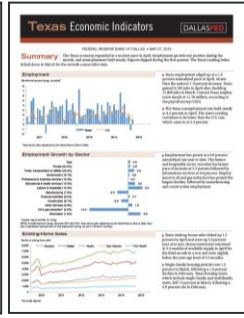
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