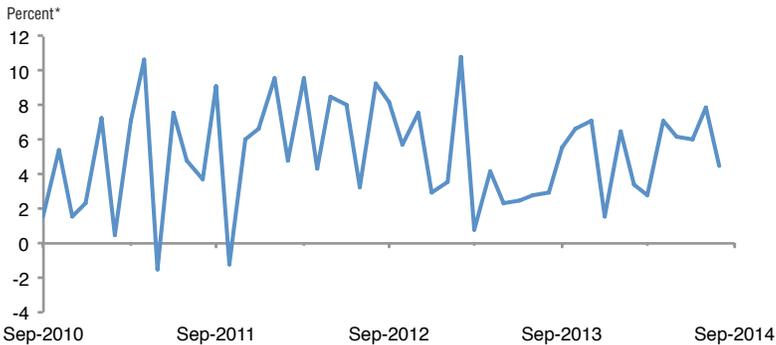


## Economic Activity

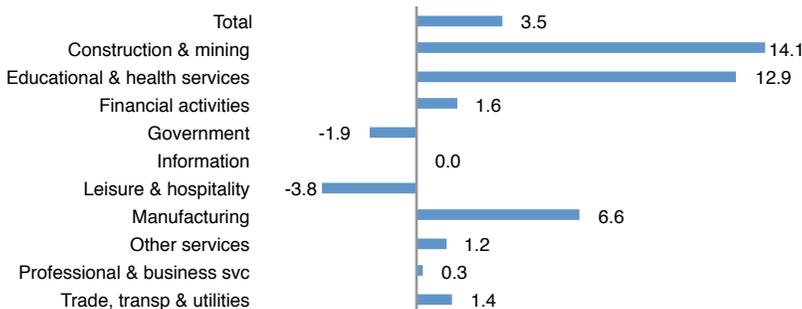
### Houston Business-Cycle Index



▶ The Houston Business-Cycle Index slowed markedly in August to a still-healthy 4.4 percent growth rate from a revised 8 percent rate in July. Energy industry employment accelerated into the second half of the year, while refining and plastics continued to perform well. Overall labor market conditions remained positive despite continued tightness for key skills. Taken together, these indicators continue to imply above-average economic conditions in Houston.

## Employment

### August Employment Growth



▶ Houston payroll employment grew an annualized 3.5 percent from July to August. Gains were particularly strong in construction and mining and in education and health services. Leisure and hospitality and government contracted. Over the three months ending in August, employment grew an annualized 4.1 percent.

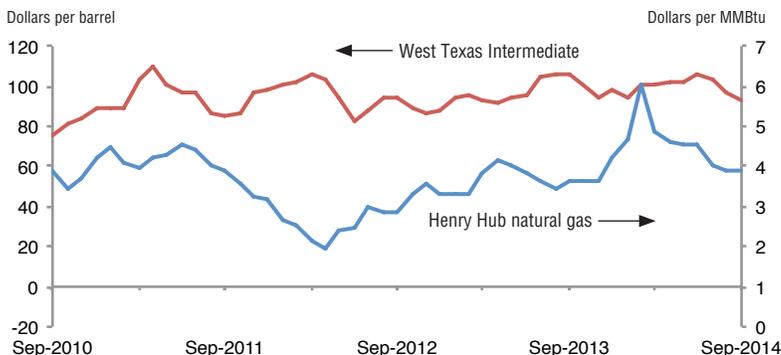
▶ The Houston-area unemployment rate rose modestly to 5.2 percent in August, compared with 5.3 percent for Texas. The U.S. rate stood at 6.1 percent in August but fell to 5.9 percent in September.

▶ The Conference Board's Help Wanted OnLine Index indicated that new job advertisements in the area fell 6.6 percent in September. Total advertisements fell 5.2 percent in September, the third consecutive month of decline. All occupational categories saw less demand. Management, business and financial, professional and related, and sales and office each declined for the third month in a row. The data imply slower employment growth over the next few months.

NOTE: Chart shows annualized monthly percent growth by employment supersector; data are seasonally adjusted.

## Energy Prices

### Crude and Natural Gas Spot Prices



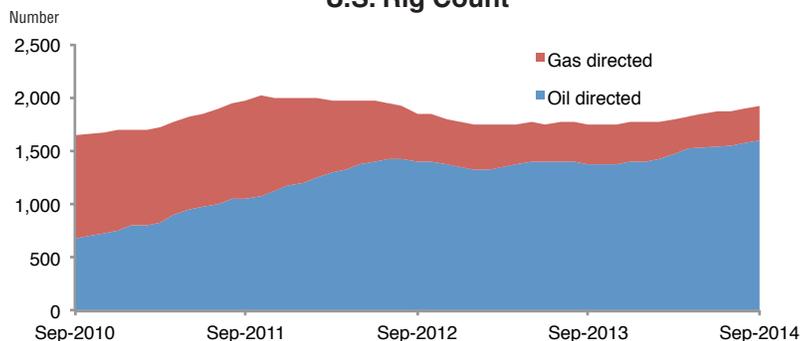
▶ The average spot price of West Texas Intermediate (WTI) crude fell to \$93.21 in September from \$96.54 in August. It was the third consecutive month of decline since WTI reached \$105.79 in June. Brent and Louisiana Sweet prices fell in kind. The spread between WTI and Brent decreased \$1.05 per barrel to \$4.19, and the spread between WTI and Louisiana Sweet fell to \$3.13. The latter difference is on par with the pre-shale-boom period.

▶ Natural gas prices rose slightly from August to September to average \$3.92 per MMBtu. Natural gas liquids prices followed suit, except for ethane, which saw no change. Propane and butane rose 3.2 and 4.5 cents per gallon, respectively.

▶ The Gulf Coast retail price of a gallon of regular gasoline fell from \$3.27 in August to \$3.18 in September. On-highway diesel fell 4 cents to \$3.70.

## Oil and Gas Extraction

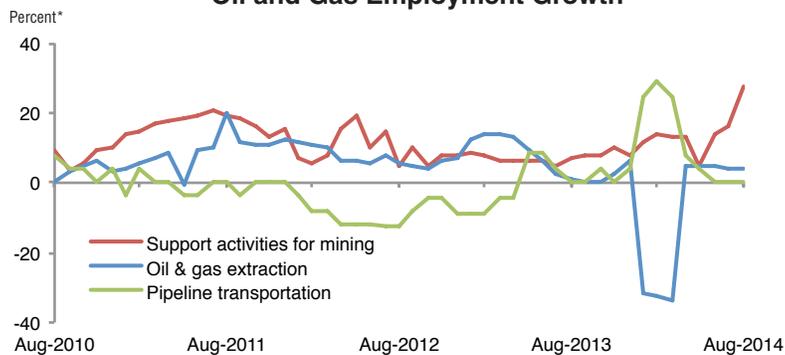
### U.S. Rig Count



▶ The average weekly U.S. rig count climbed by 26 to 1,930 from August to September—the highest the count has been since June 2012. Gas-directed rigs were up by 12, while oil-directed rigs rose by 14. Offshore rigs were up by 2 to 64.

▶ The Texas rig count was up by 2 in September to 902. Both the Permian Basin and Eagle Ford saw slightly higher average rig counts. Horizontal drilling now accounts for 67 percent of rigs in Texas. Outside the major basins, the rig count grew significantly in August and September by stretching the known boundaries of the major basins and through the application of new technology to old resources in regions like southeast Texas.

### Oil and Gas Employment Growth

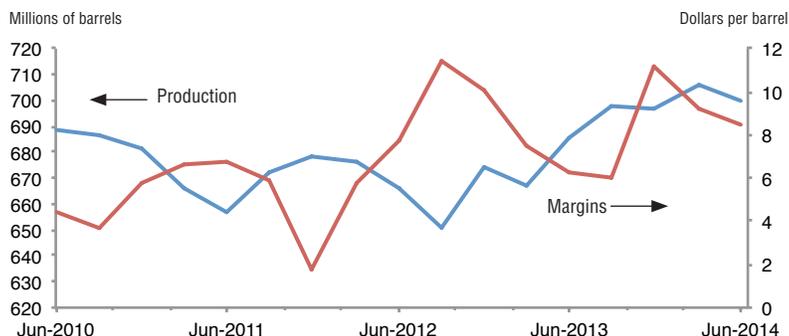


\*Annualized and seasonally adjusted.

▶ Employment growth in energy extraction and in oilfield services in particular accelerated over the summer. In the three months ending in August, oil and gas extraction jobs in Houston grew at an annual rate of 4.3 percent, while support activities grew 27.9 percent and pipeline transportation jobs were flat. Data revisions led to significant shifts in the job counts between and within industry sectors in first quarter 2014, causing volatility in the growth rates at that time.

## Refining and Petrochemicals

### Gulf Coast Refineries

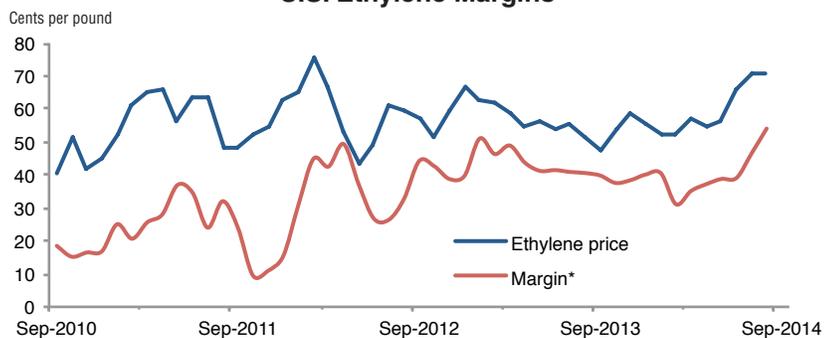


NOTE: Data are seasonally adjusted and aggregated to quarterly.

▶ Seasonally adjusted Gulf Coast refinery production decreased 0.87 percent from the first quarter to the second (the most recent data available). Seasonally adjusted refiner margins softened in the second quarter and declined further in the first half of the third quarter. The Gulf Coast refinery operating rate climbed from a June low of 85 percent to 93.1 percent in August—the second-highest percentage since 2010 on a seasonally adjusted basis. It retreated slightly to 91.3 percent in September.

▶ Gulf Coast gasoline and diesel inventories dropped from August to September. Gasoline inventories are now in the middle of their five-year range, while diesel has fallen to the bottom of its five-year range. Gulf Coast exports of petroleum products strengthened from June to July (the most recent data available), led by distillate fuels and other oils.

### U.S. Ethylene Margins



\*Based on Gulf Coast ethane feedstock prices.

▶ Ethylene production margins rose in August for the sixth consecutive month, reaching 54.1 cents per pound (based on ethane). Ethylene prices were 71.2 cents per pound in August and 71 cents in September. Unplanned outages broadened the spread between ethylene prices and ethane costs, keeping the latter's price down when other natural gas liquids (propane and butane) saw prices increase. Gulf Coast chemical production was flat year over year in August.

SOURCES: **Economic activity:** Federal Reserve Bank of Dallas; **employment:** Bureau of Labor Statistics and Conference Board; **energy prices:** Energy Information Agency and *Wall Street Journal*; **rig count:** Baker-Hughes; **refining and petrochemicals:** American Chemistry Council, Census Bureau, Polymerupdate.com and Muse, Stancil and Co.

CONTACT: For questions or information, contact Jesse Thompson at [jesse.thompson@dal.frb.org](mailto:jesse.thompson@dal.frb.org). Federal Reserve Bank of Dallas, Houston Branch, 1801 Allen Parkway, Houston, TX 77019.