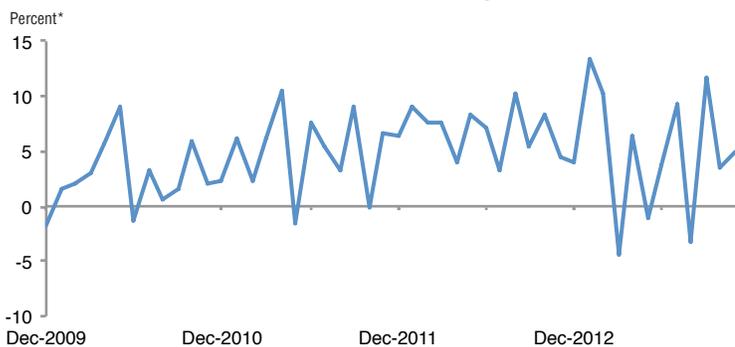


## Economic Activity

### Houston Business-Cycle Index

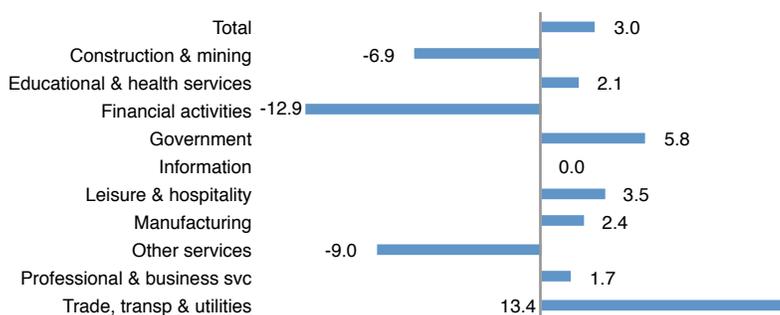


\* Annualized month-over-month growth rate.

▶ The Houston Business-Cycle Index accelerated to a 5.1 percent growth rate in November, up from a revised 3.4 percent rate in October. Oil and gas industry fundamentals look healthy, although industry employment declined. Refining and plastics continue to perform well, and overall labor market conditions improved. Houston seems to have bounced back strongly from late summer softness for what's shaping up to be a strong fourth quarter.

## Employment

### November Employment Growth



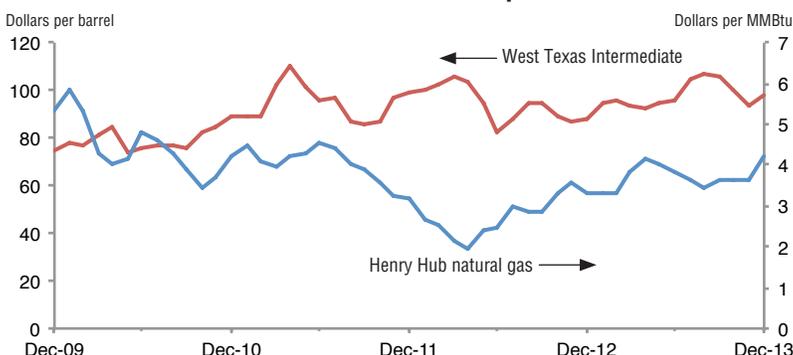
▶ Houston payroll employment grew at an annual rate of 3 percent from October to November. Gains were particularly strong in the broad trade, transportation and utilities industries. Declines were again concentrated in financial activities, but construction and mining also fell. During the three months ending in November, employment grew at an annualized rate of 4.1 percent.

▶ The Houston unemployment rate fell one-tenth of a percent to 6 percent from October to November. The U.S. rate was 7 percent in November. The Conference Board's Help Wanted OnLine Index indicated the number of new job advertisements posted in the Houston area contracted 2.1 percent in December.

NOTE: Figures are seasonally adjusted, annualized monthly growth rates.

## Energy Prices

### Crude and Natural Gas Spot Prices

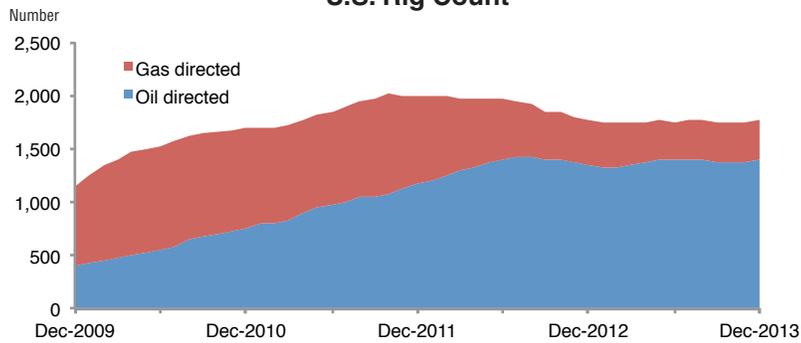


▶ Oil prices increased from November to December. The price spread between Brent and West Texas Intermediate (WTI) climbed as high as \$19.87 as domestic supply grew and international supply tightened. WTI averaged \$97.75 in December. U.S. crude oil inventories remain elevated. Natural gas inventories fell to the bottom of their five-year range as an exceptionally cold winter increased heating demand. Natural gas prices increased 17.1 percent to \$4.24 per MMBtu in December.

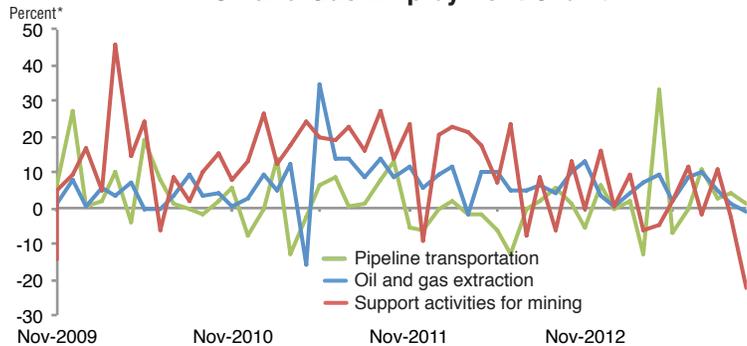
▶ Gulf Coast regular gasoline retailed for \$3.09 per gallon in December, up from \$3.03 the month prior. The Gulf Coast on-highway diesel price increased from \$3.76 per gallon in November to \$3.78 in December.

## Oil and Gas Extraction

### U.S. Rig Count



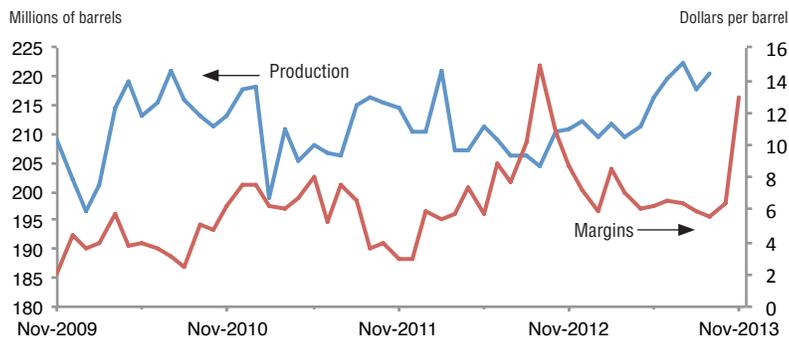
### Oil and Gas Employment Growth



\* Annualized monthly change; seasonally adjusted.

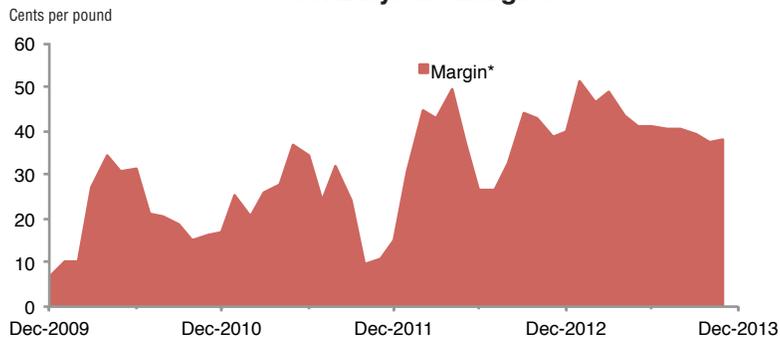
## Refining and Petrochemicals

### Gulf Coast Refineries



NOTE: Data are seasonally adjusted.

### U.S. Ethylene Margins



\*Based on ethane feedstock.

▶ The average weekly U.S. rig count rose by 16 to 1,770 from November to December. Gas-directed rigs were up by seven. December marked the second straight month of increases in oil-directed rigs. The uptick in gas rigs has been concentrated in the Marcellus Shale in the eastern U.S., but a large increase in activity has accrued to Texas due to oil-directed drilling (particularly in the Permian Basin). Global drilling remains healthy and seems unlikely to abate in the near future.

▶ Horizontal drilling accounts for more than 46 percent of the rigs in the Permian Basin as shale-directed activity grows there. Monthly average rig counts in the Eagle Ford and Gulf of Mexico have been essentially flat the past two months. The total U.S. offshore rig count stands at 61.

▶ Monthly growth in Houston energy extraction and oilfield service jobs has been slowing since 2011, when natural gas prices collapsed. This has been particularly true for oil and gas services, which tend to be more sensitive to price movements. Oil and gas extraction declined 0.7 percent in November, and support activities fell a whopping 22.4 percent. Pipeline transportation job growth has been volatile and slowed to 1.4 percent in November. Overall, energy sector employment contracted in November, though industry product prices and outlooks point to healthy fundamentals for the start of the year.

▶ Seasonally adjusted Gulf Coast refinery production increased 2.5 percent from second to third quarter 2013. Refiner margins were higher in November, in part due to a drop in oil prices. Refinery operating rates remained healthy in December, climbing to 94 percent.

▶ Through October, U.S. gasoline inventories spent every month of the year but February at the top of the five-year range. U.S. diesel inventories followed a similar path. Net exports of petroleum products are up, mostly due to an increase in exports (rather than a decrease in imported products), particularly gasoline and propane.

▶ Ethylene plant margins increased to more than 38 cents per pound in November. Chemical industry data were mixed in November. Although Gulf Coast production as of the third quarter was up both year to date and year over year, according to the American Chemistry Council, production growth continues to slow. Ethane prices were nearly flat in the fourth quarter, while propane climbed to its highest average since April 2012. The U.S. natural gas liquids composite price ticked up slightly in August, the most recent month available, to \$10.21 per MMBtu. The real value of exports of plastics and rubber products from Texas increased an annualized 10.8 percent from the second to third quarter.

SOURCES: Business-cycle index: Federal Reserve Bank of Dallas; employment: Bureau of Labor Statistics and Federal Reserve Bank of Dallas; energy prices: U.S. Energy Information Administration; rig count: Baker-Hughes; oil and gas employment growth: Bureau of Labor Statistics; Gulf Coast refineries: Muse, Stancil and Co.; petrochemical margins: Muse, Stancil and Co. and Bloomberg.

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