DALLASFED Economic Update

Energy

Oil Prices Sink in Third Quarter

Third Quarter 2015

Oil prices fell during a volatile third quarter 2015. Despite low prices, global production of oil and oil products remains high, keeping the market oversupplied and inventories above normal levels. However, low oil prices have finally led to a decline in U.S. oil production and are affecting oil and gas firms.

Energy Prices Back Down

Crude oil prices plunged in July and August due to the Iranian nuclear agreement and mounting concerns about the Chinese economy. Production from the Organization of the Petroleum Exporting Countries (OPEC) also remained at high levels, with more supply expected in 2016 as Iran fully reenters the global oil market. West Texas Intermediate (WTI), the domestic benchmark, fell 24 percent to finish the quarter at $46 per barrel, while Brent, the global benchmark, fell 22 percent to $47 per barrel (*Chart 1*). Oil prices were extremely volatile during the third quarter and expectations point to continued volatility for the foreseeable future.

The Energy Information Administration (EIA) has revised its price forecasts for 2015 and 2016 since the second quarter. The 2015 annual average WTI price forecast was revised to $49 per barrel, down $7 from the June estimate. Forecasts for both Brent and WTI prices in 2016 have been revised down $8 per barrel each, with Brent expected to average $59 and WTI $54. The EIA's price projections for next year remain subject to significant uncertainty.

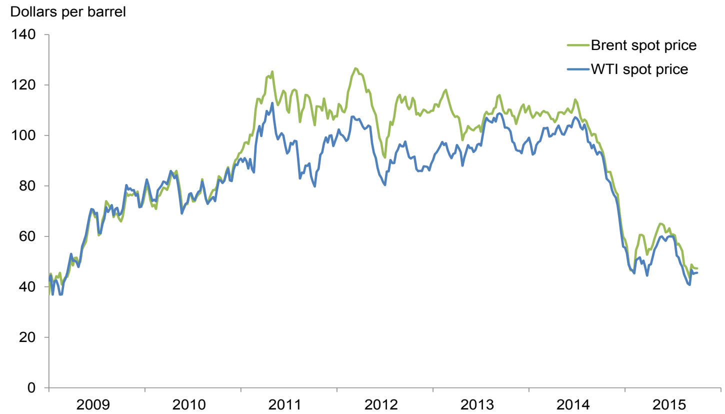
The national average for a gallon of gasoline fell to $2.32 a gallon at the end of the quarter, down 17 percent from June. Prices are currently $1 lower than this time last year. Gasoline prices are expected to decline in the fourth quarter as the market transitions to lower-cost winter-grade gasoline and demand decreases following the end of the summer driving season. Diesel prices also fell 13 percent to end the quarter at $2.48 per gallon.

Global Oil Market Remains Oversupplied

Global production of oil and oil products remains at high levels despite low prices, with the EIA estimate showing supply up 2.8 percent compared with this time last year. A majority of the increase has come from the U.S., Saudi Arabia and Iraq (*Chart 2*). U.S. crude oil inventories have come down from recent record highs but remain elevated. Strong production has kept crude oil inventories from returning to normal levels, a situation likely to continue until at least late 2016.

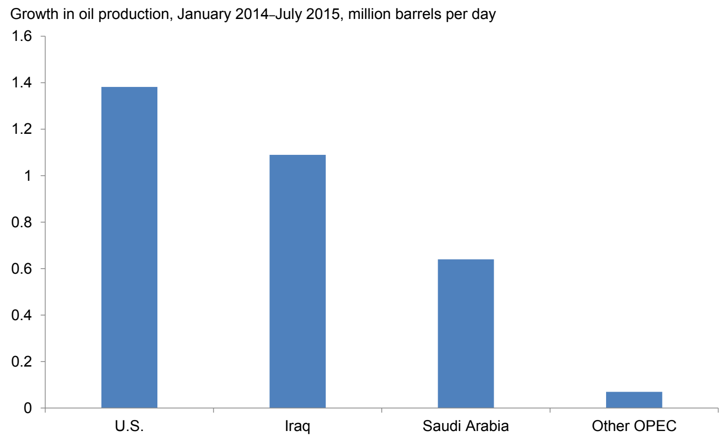
The implications of the agreement on Iran's nuclear program for global oil supply are minimal in 2015 but significant for 2016. In return for meeting the conditions of the agreement, Iran will get sanctions relief from the European Union and the U.S, which currently restrict Iran's ability to fully participate in the global oil market. Compliance is likely to be determined in late 2015.

Chart 1
Oil Prices Dip in Third Quarter



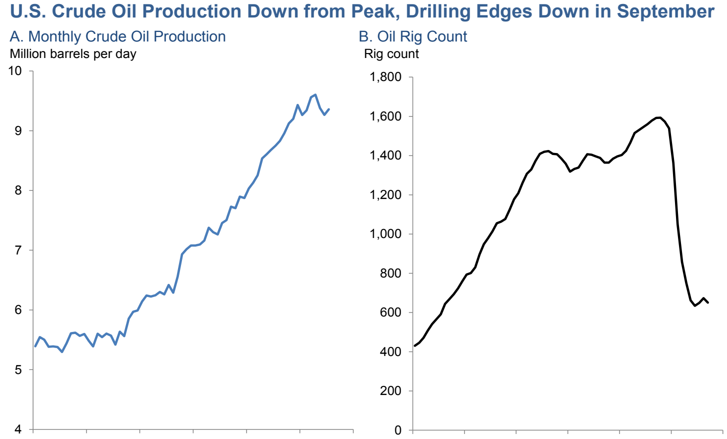
SOURCES: Chicago Mercantile Exchange; Energy Information Administration.

Chart 2
U.S. and OPEC Keep Oil Market Oversupplied



SOURCES: Bloomberg; Energy Information Administration; Oil Market Report.

Chart 3
U.S. Crude Oil Production Down from Peak, Drilling Edges Down in September



SOURCES: Baker Hughes; Energy Information Administration.

It is expected that Iran will be able to boost production by a nonnegligible amount in 2016, although estimates vary on the extent and timing of these increases. Iran also has a stockpile of crude oil stored on ships that will likely be sold sometime in 2016, prolonging the period of oversupply in the global oil market.

Low Prices Finally Hit U.S. Production

U.S. crude oil production has begun declining. After peaking at 9.6 million barrels per day (mb/d) in April, production averaged a little under 9.4 mb/d in July, the month with the latest data available (*Chart 3A*). Lower production in Texas accounted for a significant portion of the decline, with state production falling from 3.6 mb/d in April to 3.45 mb/d in July. Weekly estimates from the EIA suggest that U.S. production fell further during the third quarter and hit 9.1 mb/d in September. The weekly estimates are preliminary and subject to revision.

Lower oil prices have reversed much of the uptick seen in the number of rigs drilling for oil that occurred at the start of the third quarter (*Chart 3B*). The U.S. oil rig count ended the third quarter at 640 rigs, exactly where it was at the beginning of July.

International Demand Expected to Expand

Global oil consumption is forecasted to continue growing in both 2015 and 2016. The increase in 2015 is expected to be 1.2 mb/d, or 1.3 percent above 2014, while the increase in 2016 is expected to be 1.3 mb/d, or 1.4 percent above 2015 levels. Recent events in China, now the second-largest consumer of oil in the world, have raised concerns that forecasts for consumption growth could be cut in the upcoming quarter.

While concerns have grown about demand in China and other emerging markets, all signs point to healthy U.S. demand due to the strong response of U.S. consumers to lower gasoline prices. Preliminary estimates of U.S. gasoline demand in the third quarter average 9.4 mb/d, 2.7 percent above demand in third quarter 2014 and 3.7 percent above the previous five-year average (*Chart 4*).

Outlook for Energy Companies Deteriorates

Falling oil prices and poor second-quarter earnings have increased concerns about the viability of many oil companies. Analysis of second-quarter earnings of energy companies in the S&P 500 Index (large cap) and the Russell 2000 Index (small cap) shows that earnings varied greatly depending upon whether a company had any exposure to the refinery sector (*Chart 5*). Companies that only engage in refining saw their adjusted earnings per share skyrocket due to lower oil prices and strong U.S gasoline demand. On the other hand, earnings were bleak for companies primarily focused on oil- and gas-related activities, particularly small-cap companies. The larger integrated firms in the S&P 500 Energy Index were in the middle of the pack, as their refinery operations provided a hedge against their exploration and production activities. With oil prices lower in the third quarter, it's likely that more companies, particularly smaller ones, will run into financial problems in the near future.

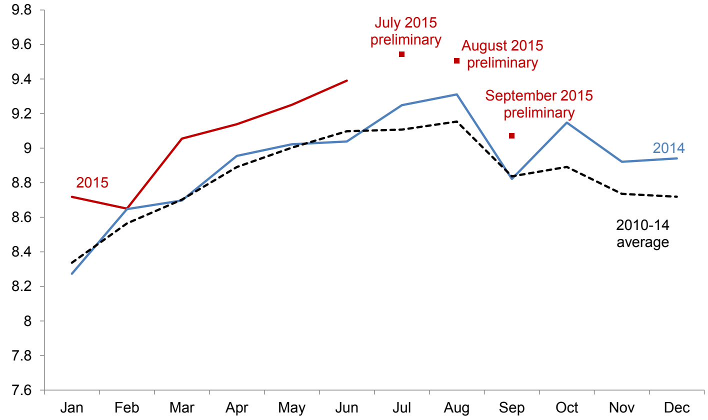
Natural Gas Prices Remain Low, Production Up

Natural gas prices ended the third quarter at $2.57 per million British thermal units, down 7.6 percent from the second quarter. Despite low prices, natural gas production is forecasted to continue increasing, with most growth coming from the Marcellus Shale in the Northeast.

The EIA expects increases in domestic natural gas production to reduce demand for natural gas imports from Canada and support growth in exports to Mexico. Natural gas exports to Mexico surpassed 90 billion cubic feet in June, according to the latest data available. U.S. exports to Mexico, particularly from the Eagle Ford Shale in South Texas, will continue to increase as Mexico's electric power sector demands more natural gas and the country's domestic production remains unchanged.

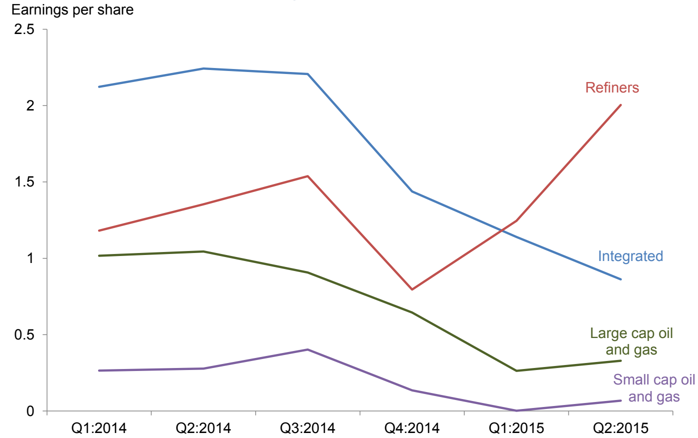
—Michael Plante and Amy Jordan

Chart 4
Gasoline Demand Exceeds Last Year and Five-Year Average



SOURCE: Energy Information Administration.

Chart 5
Low Oil Prices and Poor Earnings Hammer Oil and Gas Stocks



SOURCES: Bloomberg; author's calculations.

About the Authors

Plante is a senior research economist and Jordan is an assistant economist in the Research Department of the Federal Reserve Bank of Dallas.