

Energy

2012 in Review

Fourth Quarter 2012

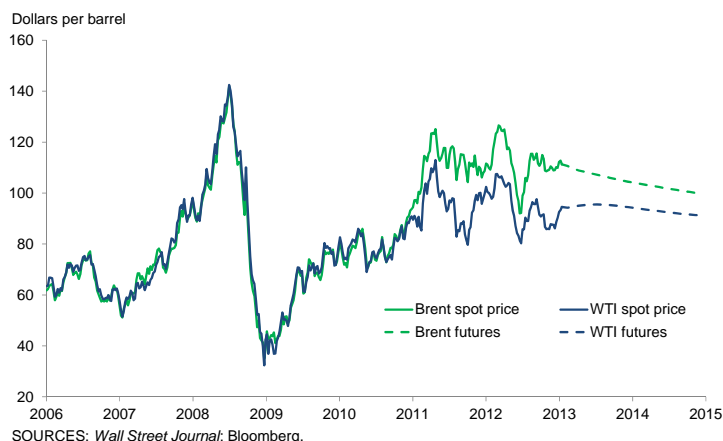
The price of West Texas Intermediate (WTI) crude oil averaged \$94 per barrel in 2012, largely unchanged from average 2011 levels (*Table 1*).

A bottleneck at Cushing, Okla., and continued high levels of crude in storage kept WTI prices low relative to Brent (*Chart 1*). The expansion of the Seaway pipeline, which runs 500 miles from Cushing to Texas City, Texas, increased capacity in mid-January 2013 from 150,000 barrels per day (b/d) to 400,000 b/d, helping firm WTI prices.

Increased production of crude oil in the U.S. is putting downward pressure on domestic prices because much of the production is landlocked (*Chart 2*). Oil from the Permian Basin, priced in Midland, Texas, averaged \$90 per barrel in 2012 and sold at a discount to WTI. Bakken crude from North Dakota, which relies on railroads to be transported to refineries in the East, is closing the gap with WTI as BNSF Railway Co. adds more capacity. Bakken crude averaged \$88 per barrel for 2012. Louisiana Light Sweet, a Gulf Coast crude, traded at world levels and averaged \$112.

Retail prices for gasoline averaged \$3.69 per gallon in 2012, about 3 percent above the 2011 average. Retail diesel prices averaged \$3.97 per gallon in 2012, slightly more than 3 percent above the 2011 average. U.S. exports of diesel continued to increase during 2012, boost-

Chart 1
Brent, WTI Differential Remains High Through Most of 2012



ing retail diesel prices.

World Demand and Supply

Global oil demand was up in 2012. Except for the U.S. and Germany, demand increased in the top 10 oil-consuming countries (*Table 2*). World consumption of oil in 2013 is forecast by the International Energy Agency (IEA) to be 90.8 million b/d, up 1 percent from 2012.

Global oil supplies grew by 2.5 million b/d in 2012, according to the IEA. Organization of the Petroleum Exporting Countries (OPEC) crude oil production accounted for 60 per-

Table 1							
Average Petroleum Prices Mostly Unchanged from Last Year							
	2012 average*	2012 high	2012 low	2011 average*	2011 high	2011 low	Percent change 2011–12
Oil, West Texas Intermediate (\$ per barrel)	94.20	107.49	80.29	95.14	112.93	79.71	-1.0
Oil, Brent (\$ per barrel)	111.76	126.57	92.02	111.39	125.14	94.43	0.3
Natural gas, Henry Hub (\$ per MMBtu)	2.75	3.67	1.86	3.99	4.86	2.84	-31.1
Retail gasoline, U.S. all grades (\$ per gallon)	3.69	4.00	3.32	3.58	4.02	3.12	3.1
Retail diesel (\$ per gallon)	3.97	4.15	3.65	3.84	4.12	3.33	3.4

*Average of daily closing prices.
SOURCES: Wall Street Journal; Financial Times; Energy Information Administration

Table 2 Oil Demand Increases Year Over Year for Most of the Top 10 Consumers		
Country	Demand 2012 (Thousand barrels per day)	Annual change (Percent)
United States	18,696	-1.6
China	9,595	3.8
Japan	4,698	5.2
India	3,645	3.7
Russia	3,370	3.6
Saudi Arabia	3,040	5.8
Brazil	3,018	4.3
Germany	2,349	-2.1
Canada	2,329	1.7
Mexico	2,151	0.8

SOURCE: International Energy Agency.

cent of this increase. OPEC production began declining in third quarter 2012, largely because of decreased production from Saudi Arabia. However, OPEC's overall 2012 output hit a record high, according to the IEA. OPEC excess capacity has been rising since September (Chart 3).

Non-OPEC production rose by 560,000 b/d in 2012 to average 53.3 million b/d for the year, according to the IEA.

The supply increase came mainly from North America, where production grew by 1.2 million b/d in the fourth quarter, and Norway, where several North Sea fields returned from maintenance.

U.S. Production

U.S. crude oil production in 2012 was 6.43 million b/d, according to the U.S. Energy Information Administration (EIA). The EIA is forecasting 7.32 million b/d for 2013—the highest production level in 20 years.

The overall rig count was 2,007 at the beginning of 2012 and trended down throughout the year, ending at 1,763. Similarly, the number of gas rigs fell throughout 2012, from 811 to 431. The number of oil rigs began declining in August, ending the year at 1,327, up from 1,191 at the start of the year (Chart 4). Increasing production coupled with a decreasing rig count suggests improved rig productivity.

U.S. oil product demand was down 1.3 percent in 2012. Gasoline consumption seasonally declines in fall and winter but has been on a downward trend for the past few years due to increased fuel efficiency and a slower economy

Chart 2
Most Domestic Oil Prices Trade Low in 2012

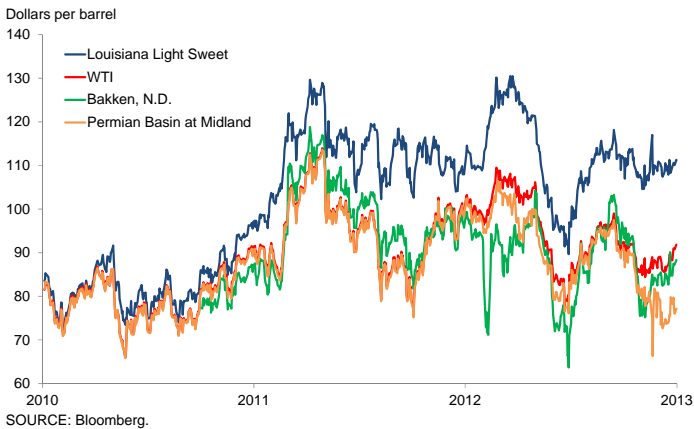


Chart 3
OPEC Excess Capacity Rises in Second Half of 2012



Chart 4
Gas Rig Count Trends Down in 2012; Oil Rig Count Falls in Second Half

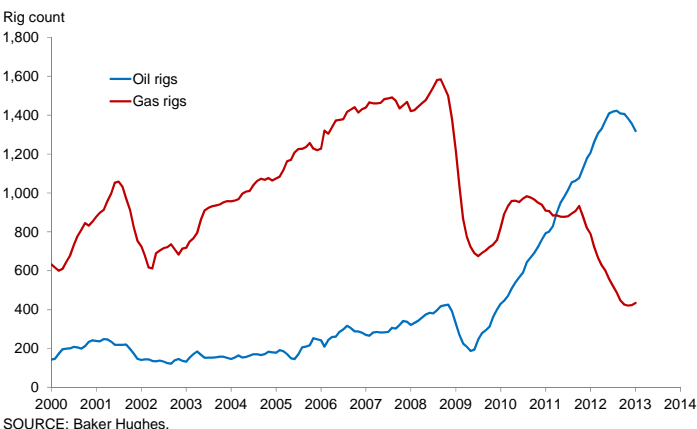
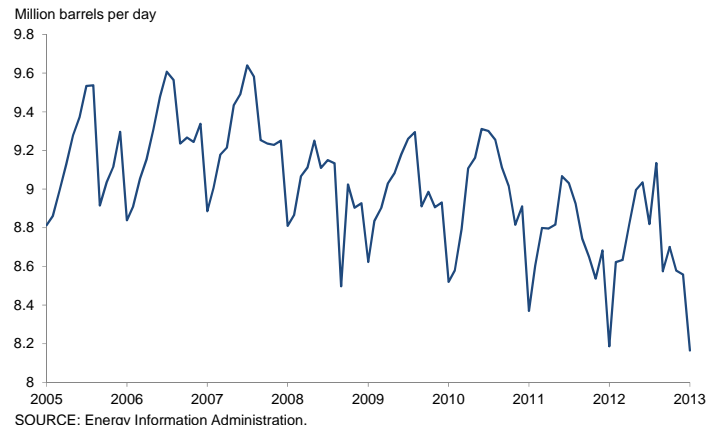


Chart 5
U.S. Gasoline Consumption Continues Downward Trend in 2012



(Chart 5). Gasoline consumption averaged 8.7 million b/d in 2012.

The U.S. is a net exporter of oil products. In 2012, the nation exported 2.8 million b/d of products and imported 2 million b/d, according to the EIA. Exports of diesel averaged 1.1 million b/d in 2012, an increase of 29 percent over 2011 (Chart 6). Diesel exports account for almost 63 percent of total U.S. production of diesel. These exports go mainly to the Netherlands (14 percent), Mexico (12 percent) and Chile (10 percent). Exports of gasoline averaged 0.4 million b/d in 2012, an increase of 27 percent over 2011. Over 50 percent of gasoline exports went to Mexico in 2012.

Natural Gas

Natural gas prices remained low in 2012, with the Henry Hub spot price averaging \$2.75 per MMBtu, 31 percent below the 2011 average. The spot price has been on an upward trend since hitting a low of \$1.86 per MMBtu in April 2012 (Chart 7). U.S. natural gas production was 69.2 billion cubic feet per day in 2012, an increase of almost 5 percent over 2011 production. The EIA forecasts 2013 production to rise to 69.8 billion cubic feet per day.

—Amy Jordan and Mine Yücel

About the Authors

Jordan is a research analyst and Yücel is a vice president and senior economist in the Research Department at the Federal Reserve Bank of Dallas.

Chart 6
U.S. Oil Product Exports Rise

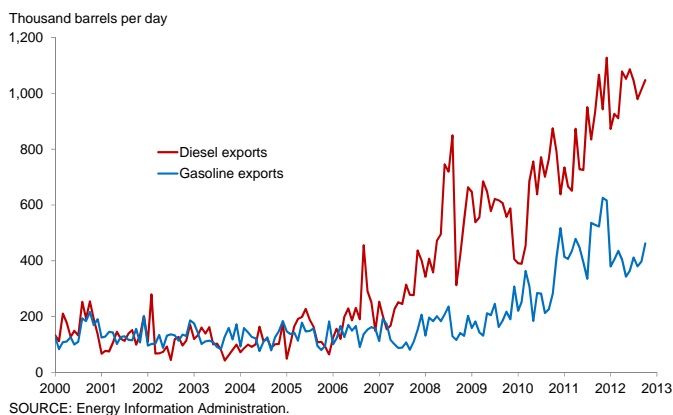


Chart 7
Natural Gas Prices Languish in 2012

