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IN FOCUS

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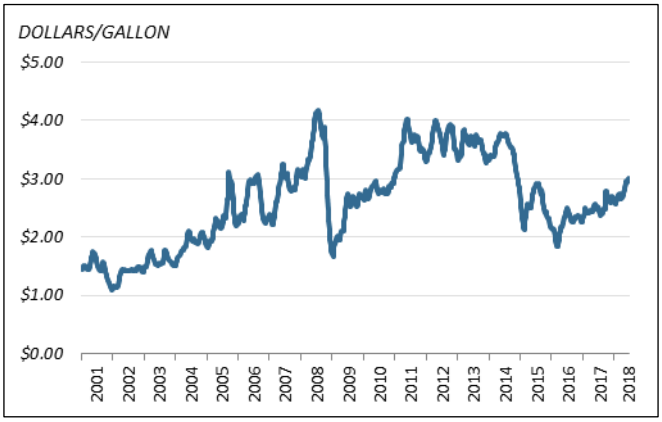
Global Oil Markets and U.S. Gasoline Prices 2018

As the 2018 U.S. summer driving season begins, crude oil and gasoline prices have reached their highest levels since 2014. The international crude oil price benchmark (Brent) has increased by approximately 20% since the start of the year, with spot prices reaching just over $80 per barrel in mid-May. As a result, average U.S. retail gasoline prices—including taxes—have reached $2.99 per gallon (see **Figure 1**). Currently, crude oil contributes close to 60% of the price of gasoline. The remaining 40% is from refining, distribution and marketing, and taxes. Prices for other petroleum products such as diesel fuel and kerosene have risen as well.

Numerous factors can impact oil and petroleum product prices. Price drivers explored in this In Focus, namely market fundamentals (supply, demand, and stocks) and geopolitical risks, affect the nearly 100 million barrels per day (bpd) global market. However, other factors such as the strength of the U.S. dollar, global spare production capacity, and financial market expectations can also impact price levels.

Figure 1. U.S. Average Retail Gasoline Prices
Nominal Dollars



Source: Energy Information Administration

Oil and Petroleum Product Market Fundamentals

Fundamental factors affecting the price of crude oil and petroleum products include global supply and demand, and the amount of, and changes to, global oil and petroleum product stocks. According to the U.S. Energy Information Administration (EIA), since the beginning of 2018 global supply has declined, demand has increased, and inventories have been subsequently reduced. Each of these changes to market fundamentals has resulted in upward price pressure that is reflected in current oil and gasoline prices.

Supply

On a quarterly basis, EIA reports that world oil and petroleum liquids production declined by approximately 150,000 bpd from the fourth quarter of 2017 through the first quarter of 2018. One oil market development that has been directly affecting global supply is an oil production agreement between the Organization of the Petroleum Exporting Countries (OPEC) and several other oil producing countries. In November 2016, 11 of the then-active 13 OPEC members (Libya and Nigeria were exempt) announced an agreement to reduce oil production by approximately 1.2 million bpd (Iran was allowed a small increase) from October 2016 levels. The following month OPEC announced that 11 non-OPEC countries, led by Russia, had agreed to reduce oil production by an additional 560,000 bpd. This "Declaration of Cooperation" by 22 countries to reduce oil production by approximately 1.8 million bpd came into effect in January 2017 and is currently scheduled to expire at the end of 2018. The agreement has been extended twice.

Group-level compliance with the OPEC/Non-OPEC agreement has exceeded the commitment, and oil production by the parties has been reduced by approximately 1.9 million barrels per day since the agreement took effect. A large portion of this "over-compliance" is due to unanticipated production declines in Venezuela (discussed further below).

Counter-balancing the OPEC supply reduction to some degree, U.S. oil production has risen month-over-month by 1.4 million bpd between January 2017 and February 2018. Higher oil prices have benefited U.S. oil producers and are providing incentives to further increase production.

Demand

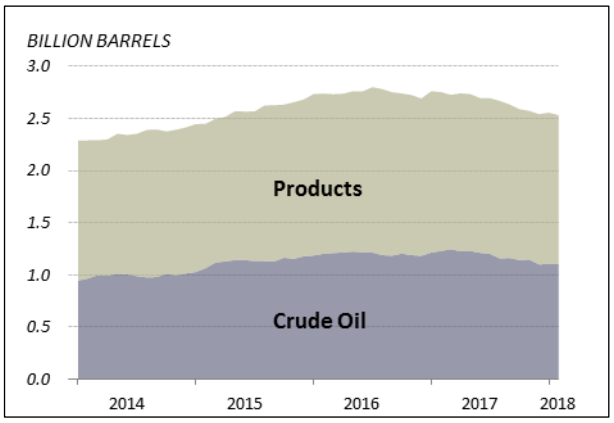
In its May report, the International Energy Agency (IEA) projected 2018 global oil demand to increase by 1.4 million bpd compared to 2017. While this was a downward revision of 100,000 bpd from the April report—attributed to anticipated demand declines from higher prices—demand growth in 2018 is expected to be relatively high. This demand increase is driven primarily by the high growth rate of worldwide gross domestic product (GDP), which the International Monetary Fund (IMF) estimates to be 3.9% for both 2018 and 2019.

Stocks

The difference between supply and demand is reflected in stock changes. However, information about global stock levels is limited and stock levels for Organization for Economic Co-operation and Development (OECD) countries is typically the metric used to gauge global stock changes. One of the stated goals of the OPEC/Non-OPEC production agreement was to reduce stock levels, which had reached record levels in 2016, back to their five-year average. Since the OPEC/Non-OPEC production agreement took effect, OECD crude oil and petroleum product stock

levels declined by 230 million barrels (8.3%). In February 2018, OECD stock levels were approximately 2.5 billion barrels (see **Figure 2**).

Figure 2. OECD Crude Oil and Petroleum Product Stocks



Source: International Energy Agency

IEA reported in May that OECD stocks had reached the five-year average. Based on this metric, the OPEC/Non-OPEC agreement has arguably achieved its objective. However, indications from OPEC members suggest that the organization may change the metric used to determine the success of the production agreement.

Geopolitical Risk Factors

Global events with the potential to impact oil and petroleum product supply, demand, and trade can also affect price levels, especially in the short term when financial market sentiment can be influenced by risks and uncertainty. While developments in Syria, Yemen, and North Korea are significant factors, evolving situations in Venezuela and Iran, two major oil producers, could have a direct impact on short-term oil market conditions, including prices. Existing sanctions on Russia's energy sector will likely have limited short-term impacts and are therefore not discussed in this In Focus.

Venezuela

Venezuela is in the midst of a political and economic crisis that has contributed to a steep crude oil production decline. Since January 2016, crude oil production fell by nearly 1 million bpd month-over-month. Under the OPEC/Non-OPEC agreement, Venezuela was to reduce production by 100,000 bpd from its October 2016 reference level of approximately 2.1 million bpd. In April 2018, the actual reduction compared to the reference level was 650,000 barrels per day. Further, the IEA projects that Venezuela production may decline through the end of 2018 by an additional 400,000 bpd. Should this projection materialize, there would likely be upward pressure on global oil prices. Additionally, the Trump Administration has indicated that it is considering petroleum sector sanctions on Venezuela. Depending on the structure of these potential sanctions, Venezuelan oil production could possibly decline further.

Iran

On May 8, 2018, President Trump announced that the Administration would reinstate all U.S. sanctions that were in place prior to the 2015 Joint Comprehensive Plan of Action (JCPOA). For global oil markets, the most relevant of these sanctions are those aimed at reducing Iran's oil exports. The legal framework of these sanctions provides an incentive for oil buyers to "significantly reduce" purchases of Iranian oil. Between 2012 and 2015—when these sanctions were in effect—Iran crude oil production declined by approximately 1 million bpd. Iran oil production has since returned to pre-sanction levels of approximately 3.8 million bpd. Exactly how Iran crude oil production might be affected by the reinstatement of oil sector sanctions is uncertain. Current estimates suggest that Iran crude oil production could be reduced by as little as 100,000 bpd or as much as 1 million bpd. Nevertheless, should Iran oil production decline the resulting effect would likely be upward price pressure.

Policy Considerations

During periods of escalating oil and petroleum product prices there is generally broad congressional interest in exploring policies that might provide some degree of price relief for U.S. consumers. In April, EIA reported that higher gasoline price projections would "result in the average U.S. household spending about $190 more on motor fuel in 2018." In May, the House Judiciary Committee held a hearing regarding the proposed No Oil Producing and Exporting Cartels Act (NOPEC). Subsequently introduced as H.R. 5904, the bill would amend the Sherman Act to make oil producing and exporting cartels illegal.

Additional bills have been introduced in the 115th Congress that can generally be categorized as efforts to address rising gasoline prices. S. 2929 would require the U.S. Trade Representative to pursue a complaint of anticompetitive practices against certain oil exporting countries. S. 2886 would reinstate restrictions on the export of crude oil and natural gas produced in the United States. Crude oil export restrictions were repealed in December 2015.

Conclusion

Generally, recent oil market trends and geopolitical factors have contributed to price escalation since the start of 2018. However, while current market fundamental data indicate demand has been exceeding supply, stock levels have declined, and prices have increased, current EIA projections for the remainder of 2018 and all of 2019 suggest that the situation may reverse and supply could potentially exceed demand. Two assumptions contributing to this supply surplus projection include continued U.S. oil production growth and unwinding the OPEC/Non-OPEC agreement when it expires at the end of 2018. EIA projections are subject to revision as market conditions change and geopolitical risks evolve. Should this occur, market fundamentals would be expected to exert downward pressure on oil and petroleum product prices.

Phillip Brown, Specialist in Energy Policy
Robert Pirog, Specialist in Energy Economics

IF10897

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