OPEC and Infrastructure Won't Threaten Export Boom

Crude prices blink and differentials widen.

Morningstar Commodities Research
June 4, 2018

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Data Sources for This Publication
U.S. Energy Information Administration
CME Group
To discover more about the data sources used, click here.

Virtuous Cycle

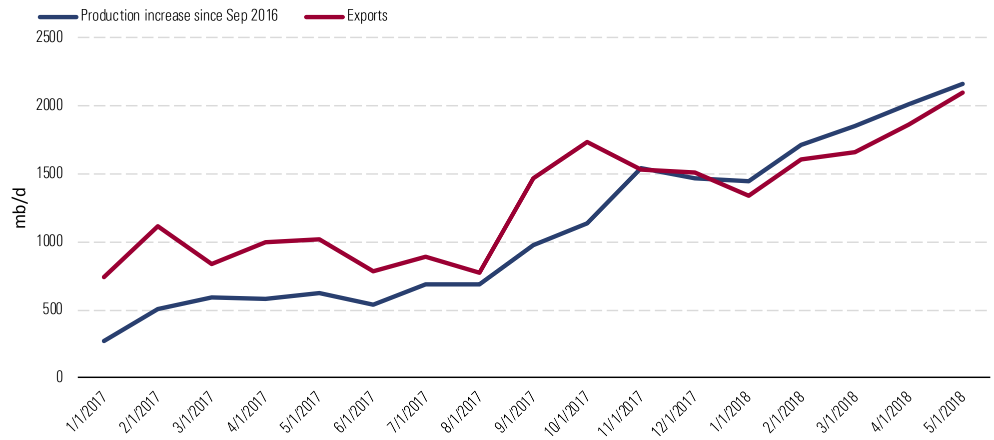
The U.S. Energy Information Administration reported crude exports for the week ending May 25, 2018. of 2.2 million barrels/day, bringing the 2018 weekly average to 1.7 mmb/d. Since mid-2017, a virtuous cycle of increasing crude prices, production, and exports has taken hold in the U.S. market, encouraged by OPEC production restraint. A sudden drop in crude prices during the final week of May in response to talk of OPEC increasing output threatened to burst the U.S. crude bubble. This note reviews the impact of the OPEC threat on crude price differentials and continued production and export growth.

Production and Export Boom

As detailed in our recent outlook, U.S. crude exports more than doubled in the 17 months since January 2017 after restrictions on overseas shipments were lifted 13 months earlier in December 2015 (see "U.S. Crude Exports Takeoff"). The boom has been fueled by increased domestic production, the release of 100 million barrels of crude from inventories, and price discounts for U.S. shale crudes relative to international competitors. An agreement to curb production by OPEC members and other countries, notably Russia, that came into effect in January 2017 tightened world crude supplies and created a ready market for U.S. shippers.

Domestic crude production reached a low of 8.6 mmb/d in September 2016, according to the EIA, after the 2014 price crash. Since then, crude output has increased by more than 2 mmb/d to a weekly average 10.7 mmb/d in May 2018, much of it coming from shale basins, particularly the West Texas Permian. This burst of new production has been matched virtually barrel for barrel by increases in crude exports (Exhibit 1). Even though the U.S. continues to import 7-8 mmb/d of medium and heavy crude to feed domestic refineries, new shale output is of very light quality that domestic refiners can't easily absorb, making it more economic to export.

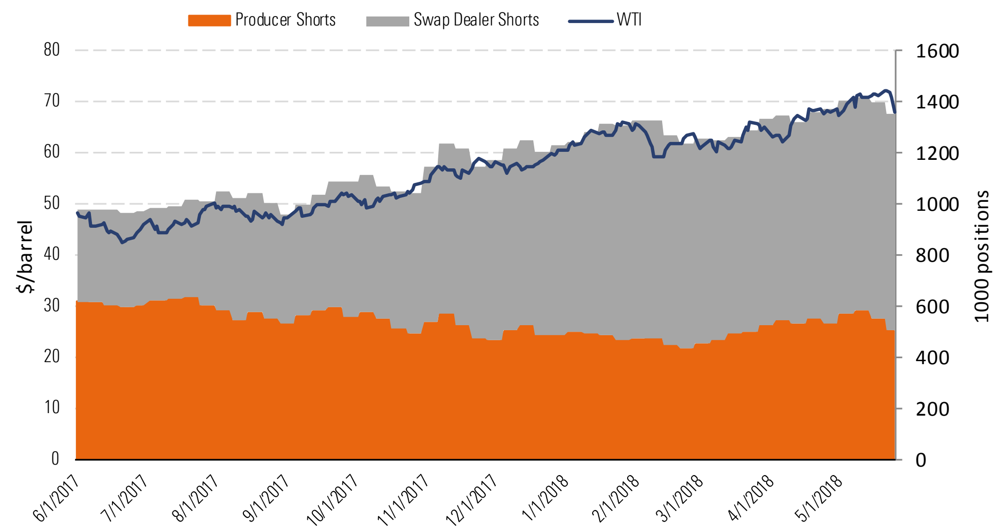
Exhibit 1 U.S. Crude Production Increase Since September 2016 and Exports



Source: EIA, Morningstar

Since the start of 2018, world crude supplies tightened further as OPEC production fell below target levels due to Venezuelan financial chaos and reduced output from West Africa. Geopolitical concerns in North and South Korea and the Middle East, and lately, over Iran added to market concerns, and crude prices increased 20% between Jan. 2 and May 21, 2018. Rising prices have only served to encourage U.S. production. Oil rigs deployed in the four most prolific shale basins increased by 10% to 636 between January and April 2018. Producers continue to hedge future production in financial markets as prices increase. Exhibit 2 shows futures contracts (short positions) held by producers and swap dealers (financial intermediaries for producers) since the start of June 2017 (right axis) compared with U.S. benchmark West Texas Intermediate crude prices for Cushing, Oklahoma, delivery (left axis). These growing hedge volumes reflect producers locking in prices for planned output this year and next. So while producers are currently experiencing infrastructure constraints getting new crude out of West Texas from the Permian, as we discuss below, the planned addition of at least 2.2 mmb/d of crude pipeline takeaway capacity in the basin during 2019 will ensure the production boom continues.

Exhibit 2 Hedging and Crude Prices



Source: CFTC, CME Group, Morningstar

So far this year, the world market has readily absorbed increased U.S. exports competitively priced against international benchmark Brent crude in Europe and Asian benchmark Dubai in the Far East. Although commentators warned about the dangers of $100/barrel oil destroying demand, prices continued to increase, with Brent crude futures touching $80/barrel in intraday trading on May 23.

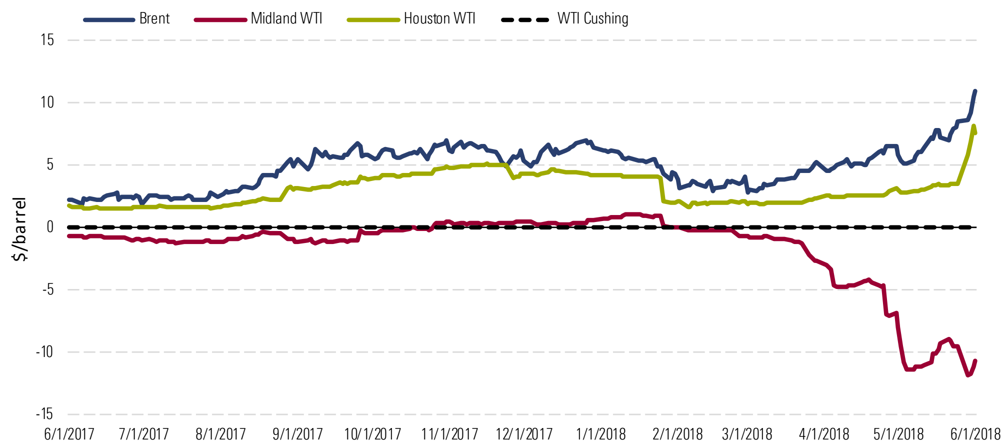
Burst Bubble

Then during the week before Memorial Day, the bubble appeared to burst on the cycle of growing prices, production, and exports. Public statements from Saudi Arabia and Russia regarding a potential early end to the OPEC-led production accord triggered that change. The two leaders of the cartel discussed increasing output to make up for lost supplies from Venezuela and the impact of sanctions on Iran—implying an unexpected boost to world supply. The result was an immediate drop in benchmark crude futures, with WTI Cushing down 6% to $67.88/barrel and Brent down 4% to $76.44/barrel during the week ending May 25. During the following week WTI was down another $2/barrel to close at $65.81 on June 1 while Brent gained back 35 cents/barrel. The drop in U.S. crude prices gave us pause for consideration of OPEC's ability to derail the U.S. production/export juggernaut. Our analysis below indicates that won't happen for a while, based on closer examination of price response to the OPEC threat.

In the first place, the fall in overall crude prices triggered a parallel widening of international price differentials that appears to favor exports. Second, a consequent widening of domestic price spreads serves to emphasize the pressure for new U.S. crude production to reach the coast.

More nuanced than the fall in benchmark Brent and WTI prices was the $4.00/barrel widening of the international Brent premium over WTI to $10.98/barrel between May 21 and June1. Over the same period, domestic spreads between WTI delivered at Cushing in the Midwest and the Permian production region at Midland, Texas—widened by $1.72 to negative $10.66 barrel and between WTI Cushing and WTI delivered to Houston—widened by $4.17 to $7.55/barrel (Exhibit 3).

Exhibit 3 Premiums to WTI Cushing



Source: CME Group, Morningstar

Wider Spreads

The widening Brent premium to WTI Cushing continues a trend set in place since Hurricane Harvey hit the Gulf Coast at the end of August 2017. Harvey closed down refineries, adding to a surplus of U.S. crude looking for a home at a time when crude balances in the rest of the world were tightening and pushing up Brent prices. As a result, prices for WTI in the oversupplied U.S. market traded at a wider discount to Brent, averaging $6.04/barrel during the last four months of 2017, then narrowing to an average $4.87/barrel between Jan. 2 and May 21 of 2018 as U.S. refiners consumed more crude at home. The dramatic widening of the Brent premium to WTI Cushing to nearly $11/barrel after the Saudis and Russians discussed ending production restraints, in part reflects the implication that U.S. supplies may have a tougher time competing in international markets without the artificial advantage provided by the OPEC agreement. Exporters will have to increase discounts for U.S. crude to find buyers in a better-supplied outside world. The wider spread since the end of May indicates the discount will adjust to accommodate growing U.S. exports.

Domestic Drama

A more dramatic disruption is ongoing in the domestic market, where congestion getting Permian crude to market is jeopardizing the delivery of incremental production to export terminals on the Gulf Coast. We should emphasize that congestion at the Permian Midland hub has been building since mid-March, as can be seen from plunging differentials in Exhibit 3 (red line), but during the last week of May these differentials widened out close to $12/barrel below WTI Cushing as producers scramble to find space on crowded pipelines or swallowed higher transport costs by truck (as much as $19/barrel to Houston) or rail. These wide differentials are likely to continue well into 2019 until new pipeline capacity opens up to relieve the congestion.

Meanwhile at the Gulf Coast, the export boom continues apace, with Asian buyers reported by Reuters to be lining up tankers to ship at least 20 million barrels of U.S. crude during June, in response to higher Brent premiums. The near-term demand for export crude has widened the WTI Houston price to a $8/barrel premium over Cushing and a $18/barrel premium over Midland. That spread encourages shippers to use every transport option but wheelbarrows to get WTI to the docks.

The Cycle Continues

Our interpretation of price action over the past two weeks is that the threat to end OPEC production restraint widened Brent premiums over WTI and made U.S. exports even more attractive. The pressure to get incremental crude to export docks has further strained U.S. supply lines, putting a premium on coastal barrels. However, as long as WTI discounts to Brent at the Gulf Coast or in Midland continue to deliver higher-than-breakeven prices to producers, either directly in the spot market or indirectly through hedges, the production export cycle will continue. Signs of hesitation by the Saudis and Russians immediately following the price correction at the end of May suggest they have little appetite for a price war. That means U.S. producers will continue to gain market share at the expense of OPEC and allies.

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