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What Happens if U.S. Crude Exports Dry Up?

Resulting surplus could stunt recent price recovery.

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Data Sources for This Publication
CME Group
EIA

To discover more about the data sources used, click here.

Record Glut

U.S. crude output shrank by 2.8 million barrels/day since February this year as producers hurriedly shut wells in response to crashing prices and brimming storage tanks post-coronavirus. But there's still a record crude glut according to an Energy Information Administration, or EIA, weekly yardstick showing 41 days' supply in storage. Despite that stockpile we've seen a crude price recovery during May that continued last week, lifting benchmark West Texas Intermediate, or WTI, above $39/barrel. The United States price recovery has been assisted by robust crude exports that shifted an average 3.2 mmb/d out of the domestic market during May, helping prevent a recurrence of the oversupply that caused negative prices at the end of April. But now, as prices recover, traders are unwinding storage strategies by bringing floating cargoes to market, potentially crowding out U.S. exports. This note reviews U.S. market risks if exports dry up.

Flotilla

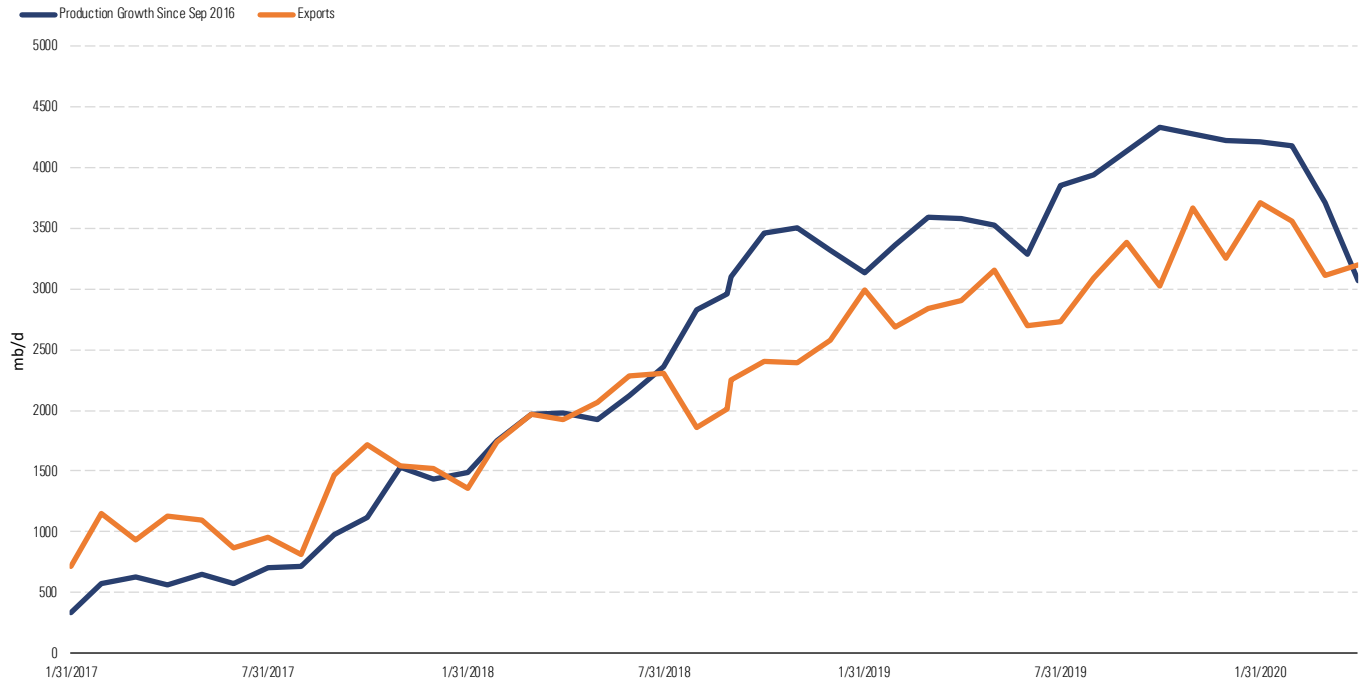
Last week we noted increased demand for medium heavy Alaska North Slope, or ANS, crude in Asia, caused by the OPEC+ group reducing supply to that market (see Export Prospects Increase as Alaska's Output Drops). In contrast, overseas demand for lighter crudes, typically produced from shale that makes up the vast majority of U.S. exports, is likely to weaken this summer in the face of competition from a flotilla of waterborne storage built up since March to take advantage of a "contango" market structure. Contango is where future prices are higher than those for immediate delivery, encouraging storage (see our March 2020 note: Corona Crude Contango). Floating crude in storage–estimated by Lloyds List International at 175 million barrels on May 28–is most likely light sweet crude either from the U.S. or the North Sea that will compete directly with today's shale exports as demand recovers and it comes to market. This waterborne glut, typically located closer to demand centers in Europe and Asia, can be delivered quickly at minimal freight costs compared with long-distance voyages required to get new shale supplies to market.

Export Surge

Significant U.S. crude exports are a recent phenomenon. Previously restricted by a 1970s-era federal ban that was lifted in December 2015, exports took off in 2017 in the wake of a November 2016 OPEC+ agreement to curtail production. Since then export volumes have kept pace with shale production (Exhibit 1), surging by 3.0 mmb/d between January 2017 and February 2020, according to the EIA at the same time as U.S. crude output grew by 3.9 mmb/d. That export growth reflects two fundamental factors: First, most new production is predominantly light sweet shale; second, U.S. refiners have had their fill of this type of crude because they are largely configured to process heavier sour grades that are

imported. As a result, incremental shale production has had to find a home in export markets to prevent inventory builds from weighing on prices.

Exhibit 1 Monthly U.S. Crude Production and Exports Since January 2017



Source: CME Group, EIA, Morningstar Commodities.

Propelled Higher

Production and exports were propelled higher when crude prices recovered from lows below $30/barrel in 2016. A return to prices in the mid-$50/barrel range encouraged shale producers to restart drilling as break-even costs declined. The resulting second shale boom was underpinned by the OPEC+ producer agreement to curtail production and sanctions against Iran and Venezuela that created an opportunity for U.S. producers to gain market share at the expense of the cartel.

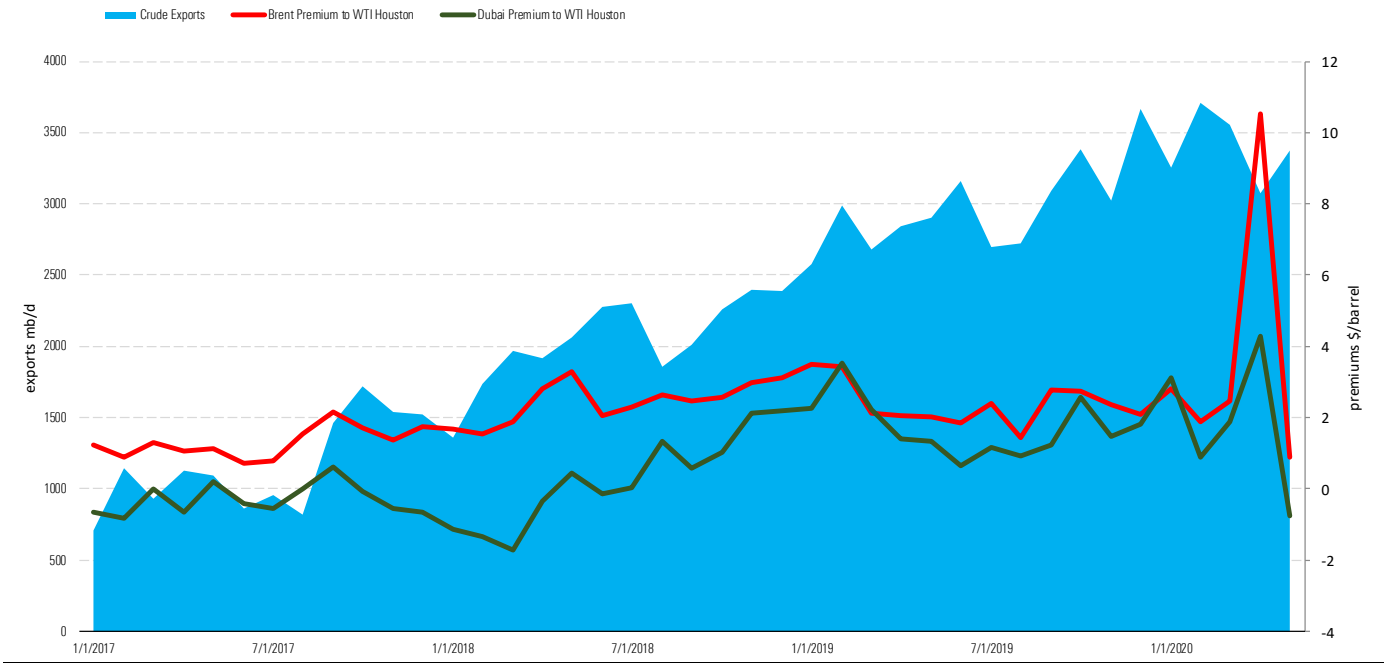
This market grab wasn't seamless, particularly in Asia, because the U.S. was mostly replacing the heavier crude grades produced by OPEC+, Iran and Venezuela, with lighter-quality shale. That strategy required discounts for WTI, versus Asian benchmark Dubai–making it attractive for refiners to blend with traditional purchases of heavier crudes. WTI also traded at a wide discount to the international light crude benchmark Brent, allowing U.S. exports to compete in Europe as well. Exhibit 2 shows monthly average Brent and Dubai premiums over Gulf Coast WTI prices at Houston as well as export volumes since January 2017.

COVID-19 Pandemic Response

The right side of Exhibit 2 shows how the coronavirus pandemic affected prices and exports this year. Exports peaked in February 2020 at an average 3.7 mmb/d, according to monthly EIA data and have

declined since to an average 3.2 mmb/d in May according to weekly EIA data. Brent and Dubai premiums over Houston WTI jumped in April as a result of the WTI Cushing price collapse into negative territory (see our April note: "Crushing Cushing: Wider Impact of Negative Crude"). Both premiums retreated again in May with Dubai prices averaging a $0.76/barrel discount to WTI Houston over the month and Brent averaging a narrow $0.89/barrel premium. At these prices U.S. exports aren't competitive against international rivals. The result should have been either a wholesale retreat in overseas shipments or heavy price discounting to clear shale barrels onto the water.

Exhibit 2 Brent and Dubai Premiums to WTI Houston and Crude exports



Source: CME Group, EIA, Morningstar Commodities.

Export Hangover

Instead, crude exports continued to top 3 mmb/d through May although they dipped from around 3.5 mmb/d in the first half of the month to 2.8 mmb/d during the week ending May 29. There are two reasons why the pace of exports remained relatively high despite narrowing differentials that should have priced them out of the market. The first is that many cargoes leaving the Gulf Coast in May were contracted before the COVID-19 pandemic lockdown affected demand. Some of these exports were the subject of tenders and term contracts that went ahead despite changing market conditions. The second reason is that crude cargoes loaded after prices first crashed in early March were destined for floating storage rather than delivery to a specific customer. In the latter case shippers likely purchased distressed crude at discount prices in April when the market was in deep contango, moved it into floating storage during May and shipped it to long-haul destinations for delivery at a profit as prices recover this summer.

Continue to Shrink

Neither of these explanations for continued high exports still holds good in June. Tenders and contracts arranged before the market collapse are now probably complete and the wide market contango seen in April has shrunk back to levels that don't justify new floating storage plays. And as we pointed out earlier, existing high floating storage levels represent a competitive threat to new U.S. exports, helping to squeeze them out of the market until the surplus is absorbed. As a result, we believe U.S. exports will continue to shrink in coming months.

Uncertainty

Provided this export retreat is matched by continued declines in domestic production and a recovery in refinery demand, there should be a minimal impact on the U.S. crude supply-demand balance. However, the pace of this evolution is uncertain because no-one knows how quickly demand will recover or how rapidly domestic production will decline during the rest of 2020. If the export market is saturated with floating storage barrels and U.S. shale output still exceeds domestic demand then any excess barrels will have to be discounted to clear into international markets, reversing the recent crude price recovery.

OPEC+

Another critical crude balancing factor is adherence by the OPEC+ group to their April 2020 agreement to cut 9.7 mmb/d of production in May and June. That agreement was extended this weekend by another month to July. So far, the group has delivered promised cuts, helping balance supply with shrinking world demand and supporting a price recovery. The OPEC+ cuts provide an opportunity for continued U.S. exports but if the deal falls through or isn't adhered to, the resulting surplus will weigh heavily on prices.

Normality

Crude markets have been transformed beyond recognition during the past three months. It will take many months for a sense of normality to return and for analysts to understand how the crude supply-demand balance will operate in a post-pandemic world. When refinery demand returns close to normal levels, we'll get an idea of how much shale production can be sustained in the future. At that point crude prices will determine a producer's appetite for drilling and whether U.S. barrels can compete in international markets. If shale output returns to levels seen between 2017 and 2020 then exports will continue to play a critical role in balancing the domestic market. If production only returns to lower levels at 8mmb/d or 9 mmb/d then the U.S. will lose the international market share it gained since 2017 and may even return to a heavier reliance on imports.

The fate of a great deal of investment in U.S. crude infrastructure depends on answers to these questions.

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