Hurricane Harvey may nudge crude oil upwards

As the impact of the storm becomes clearer, the unintentional consequences may see crude oil inventories grow

Disruptions but rising US shale production

Harvey has reportedly shut down 300-500Mbbls/d of Eagle Ford shale production, but this is an aberration to the long term upward trend. The EIA's Monthly Drilling Productivity report shows US shale oil production increased by 128Mbbls/d MoM to 5.9MMbbls/d in July 2017, levels last seen in May 2015; and on track to reach new highs of above 6MMbbls/d and 6.15MMbbls/d in August and September 2017 respectively.

This would mean that despite the impact of Harvey, year-to-date production gains should reach nearly 1MMbbls/d this quarter and more than 1.3MMbbls/d by the end of the year – neatly offsetting OPEC production cuts of 1.2MMbbls/d.

As a result of stronger domestic production, the US either needs to curtail imports or increase exports. For refineries, limiting imports of heavier oil changes the oil blend, which would have an impact on refinery yields. In fact, US crude oil imports have increased from an average of 7.9MMbbls/d in 2016 to 8.1MMbbls/d in 2017 YTD, with major growth coming from Canada and Mexico – both suppliers of heavier oil.

The other option is to seek external markets for this lighter oil; and with the driving season coming to an end, the need to find an outlet is growing. In fact, US oil exports have increased from an average of 0.5MMbbls/d in 2016 to 0.8MMbbls/d YTD; but the weakening spread suggests that this is not enough. Additionally, with growing Libyan and Nigerian output, there is increased competition for market share in Asia.

Big discount, but how much bigger?

On quality parameters, both ICE Brent and NYMEX WTI are reasonably comparable (with API gravity of 38.1 and 39.6 respectively), so the main pricing difference is a geographic issue. While ICE Brent is an offshore benchmark, NYMEX WTI's delivery point is inland, so transportation costs to Gulf Coast export terminals need to be discounted. Based on shipping costs, WTI should theoretically be trading at around US$2-3/bbl discount to Brent.

Additionally, with Middle East light crude cargoes currently offered at a discount to Brent for Asian buyers (Saudis offering Asian buyers a discount of US$1.50/bbl), there is potentially the need for WTI to trade at an even larger discount to compete with this crude oil.

The current discount we are seeing WTI trade to Brent is still some distance away from the c.$25/bbl levels seen in 2011 and 2012. This was a time when we saw a boom in US shale output and inadequate pipeline takeaway infrastructure at Cushing, combined with a longstanding ban on US crude oil exports weighing on WTI. With new infrastructure in place, $25/bbl seems far-fetched in 2017, but double digit discounts for WTI are a real possibility.

Hurricane Harvey impact

On the surface, one may assume the impact from Hurricane Harvey would be bullish for oil prices as offshore production terminals are shut-in. However, given that almost 2.3MMbbls/d of refining capacity has been shut in the Gulf (vs total operable US refining capacity of 18.6MMbbls/d) and scaling up can take months, refinery run rates will slow, which should see crude oil inventories grow in the short term.

> *As the impact on oil and gas infrastructure passes and refinery run rates pick up, we expect to see a slight recovery in the spread*

After previous Hurricanes in the region, US refinery run rates fell from a little over 90% to just under 70%, and it took a little more than two months for refinery utilisation rates to return to levels that they were at before the storm.

A relatively new factor for US energy is oil exports, with the repeal of 1975's Energy Policy and Conservation Act in 2015, terminals in the Gulf were sending out almost 1 MMbbls/d before Harvey hit. Exports, combined with increased pipeline infrastructure, were key to parity between Brent and WTI. All told, we see a push and pull between lower production boosting WTI and lower run rates/exports pressuring WTI.

Where to next?

As Hurricane Harvey's impact on oil and gas infrastructure passes and refinery run rates pick up, we expect to see a slight recovery in the spread.

However, with growing US supply, we believe that until the end of 2017, the spread will need to remain at levels which make the US crude oil competitive in the world market. Therefore we forecast the Brent-WTI spread to average a discount of US$3/bbl over 4Q17, with the possibility of short term blow-outs in case of further refinery outages or transportation issues.

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