THE OXFORD INSTITUTE FOR ENERGY STUDIES

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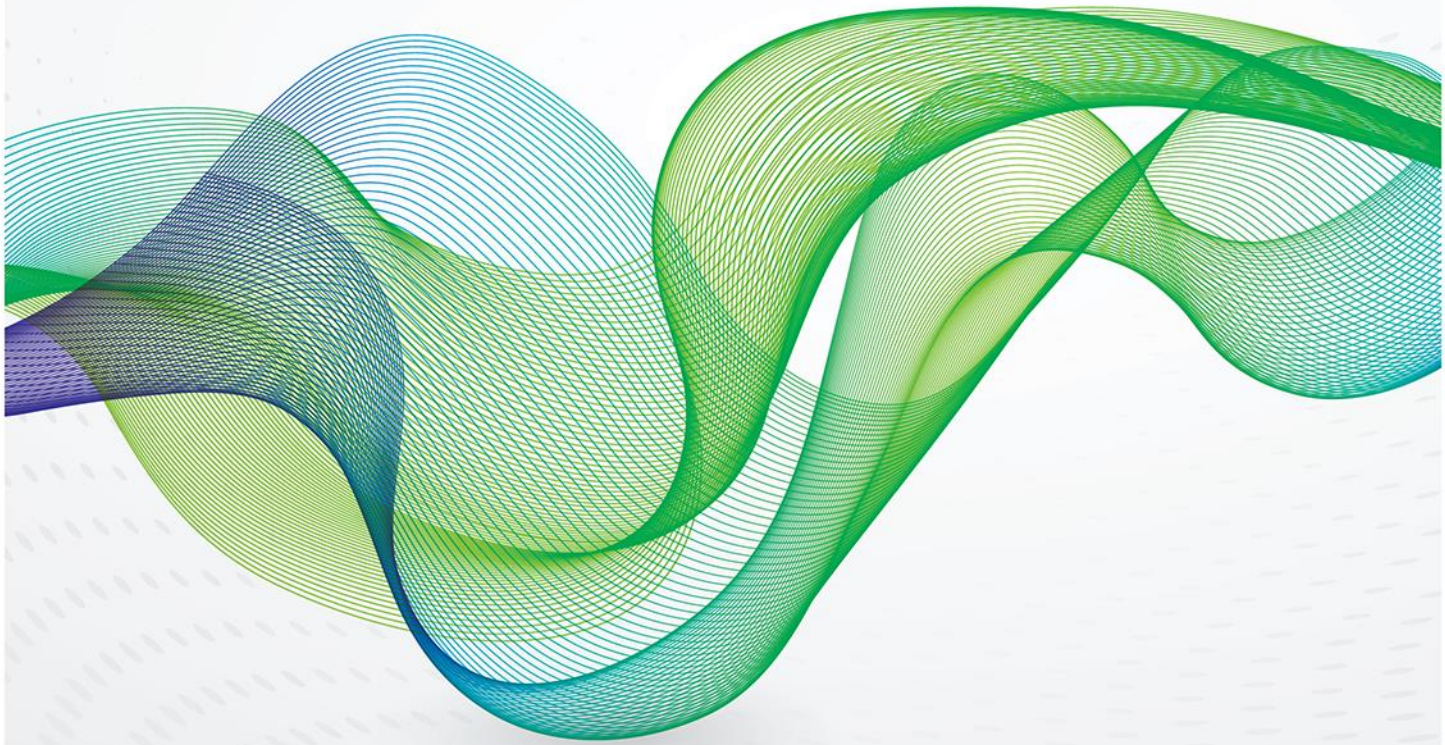
The Oil Market's Mixed Price Signals



OXFORD ENERGY COMMENT

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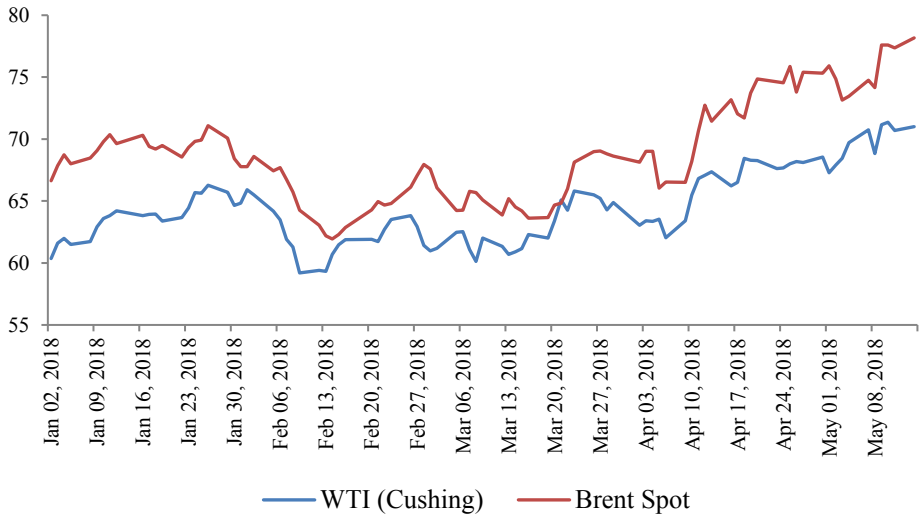
Recent movements in oil prices, time spreads, and physical differentials have been sending some mixed signals both about current and long-term market fundamentals. This may reflect heightened uncertainty as well as a wide divergence of expectations about key factors shaping the oil market, both in the short-term and the medium-term, including the size of potential output losses from Iran following the US withdrawal from the nuclear deal, how low Venezuelan oil production may go, whether OPEC+ will exit the deal anytime soon, the potential impact of the recent oil price increases on oil demand growth, and whether the market will face a supply crunch in the next couple of years due to lack of investment. Over time, some of these key uncertainties will be resolved and the price signals may converge towards a more 'coherent' story with movements in price levels, the back end of the futures curve, time spreads and physical differentials all pointing in the same direction. This, however, may take time and the adjustment mechanism remains unclear and so for now the various market players have little choice but to navigate through mixed price signals, some sharp disconnections between price levels, time spreads and physical differentials and between short-term and long-term expectations.

The last few weeks have seen the price of all benchmarks increase sharply. For instance, the Brent price increased from $66/b to above $78/b between April 5 2018 and May 14 2018 representing more than an 18 per cent increase. Similarly, the WTI price witnessed a smaller increase of 12 per cent during the same period. Given that the supply-demand fundamentals didn't change much during this short period of time, these sharp price increases not only reflect the tightening of current market fundamentals, but more importantly a shift in expectations about the future evolution of these fundamentals. In an environment of declining stocks and increased risk of geopolitically induced disruptions, speculative demand shocks are expected to play a more important role, pushing up oil prices beyond shifts in supply and demand. Also expectations of a tightened market and a potential spike in oil prices has been attracting financial flows to a commodity for which a couple of years ago, there was a wide belief that its price would remain 'lower for much longer' or even 'lower forever' due to the entry of a very elastic source of supply and high stock levels. So recent price movements are pointing towards a market that is tightening or expected to tighten at a very rapid pace, hence the call by some observers for OPEC+ to put more barrels in the market to control the price on the upside.

Fig 1: Spot WTI and Brent Prices, $/B



Source: EIA

While oil price levels have been increasing sharply, time spreads have been pointing in the opposite direction. Brent time spreads (first month price minus second month price) have fallen from high levels in April, flirting with contango, while the WTI time spread has flipped recently from backwardation into contango. An important reason why Brent time spreads have been weakening is the rise in US crude exports, which reached record levels of 2.3 mb/d in the last week of April. This has intensified competition in the Atlantic Basin with some cargoes struggling to find homes in Europe

or even in Asia. At the same time and despite the sharp increase in US exports, WTI time spreads continued to weaken. Thus, unlike the movements in the price levels, the recent weakening of the time spreads is not pointing towards a 'very tight' market!

Fig 2: Brent time structure 1-2 month, $/b

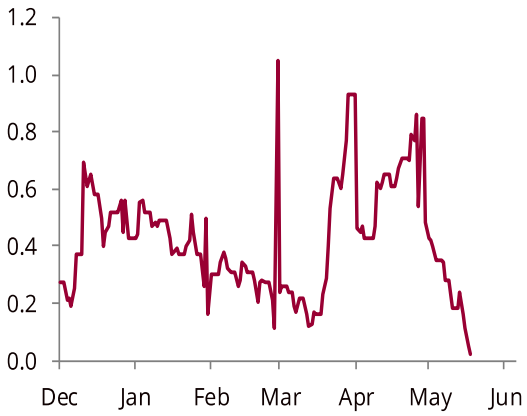
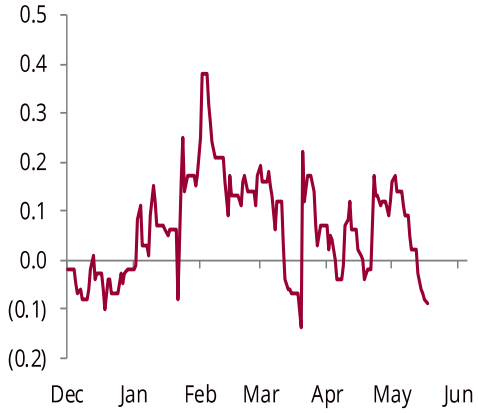


Fig 3: WTI time structure 1-2 month, $/b



Source: Energy Aspects

This, in fact, has also been reflected in the weakening of the physical differentials. As US barrels compete with some of the other crudes destined for Europe, the physical differentials of some of these crudes have been falling, reflecting a market in which producers and traders are trying to clear spot barrels. Perhaps this is most evident in the West African (WAF) crudes differentials to Dated Brent, which have continued to fall despite the sharp rise in Brent prices. If European and Asian refineries were desperate for extra barrels, this should have been reflected in stronger bids for WAF barrels, but, this is not happening yet.

Fig 4: Nigerian diffs to Dated Brent, $/b

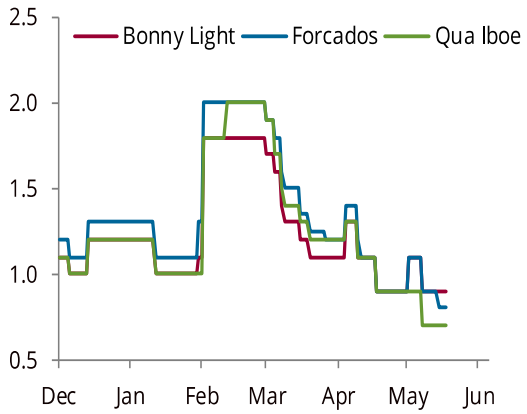
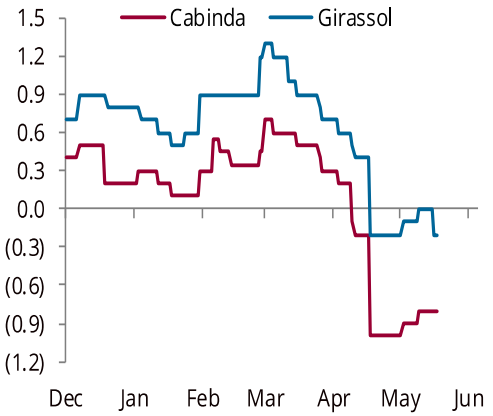


Fig 5: Angolan diffs to Dated Brent, $/b

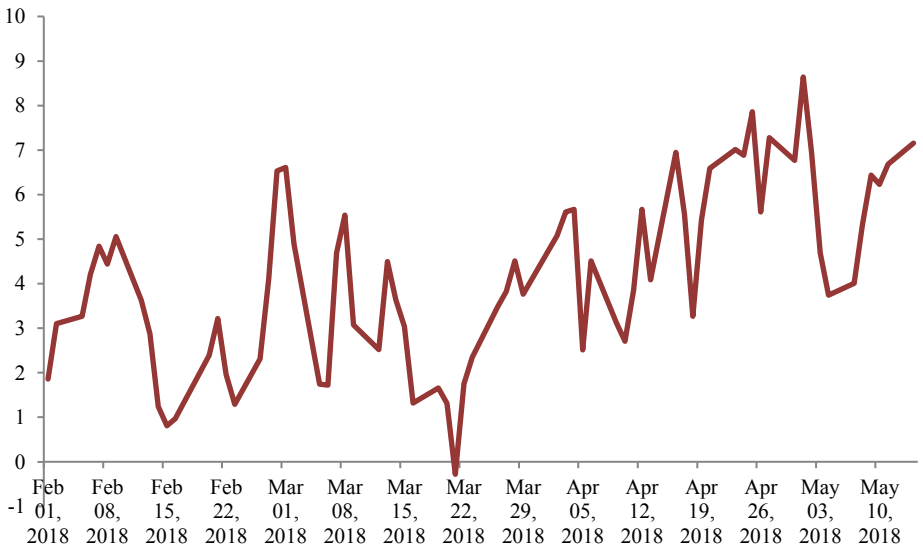


Source: Energy Aspects

The rapid rise in US exports is linked to other sets of differentials, particularly the Brent-WTI and the Dubai-WTI differential. The Brent-WTI differential has widened recently to above $7/b, and on a few occasions exceeding the $8/b mark. This price wedge has opened the arbitrage window, allowing the movement of the crude surplus from the US to Europe and Asia. Until refineries in the US start increasing their runs, the differential is expected to stay wide in order to clear the US market. These differentials are even wider if one considers the pricing point where US production has been growing the fastest i.e. the Permian basin. For instance, WTI Midland (the pricing point in the Permian) is trading at a large differential to Cushing reaching almost $12/b a week ago before declining to $7/b

this week. Those wide differentials reflect the infrastructure constraints facing the Permian shale producers with many predicting that the lower prices realised at the Permian will eventually push producers to slow their production.

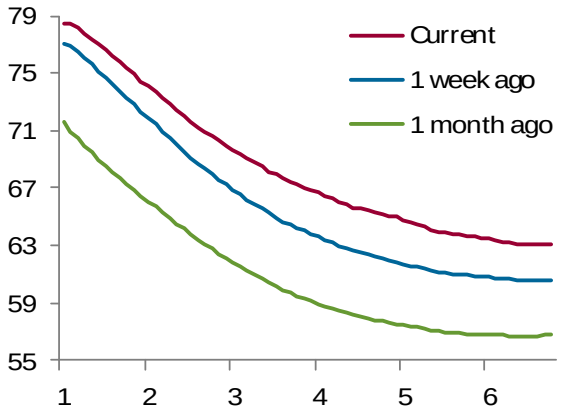
Fig 6: Brent-WTI Price Differential, $/B



Source: EIA

The last few weeks also saw some sharp movements in the back end of the futures curve, which almost paralleled the movement in the front end of the curve. Some consider this as an important development reflecting a structural shift in expectations and signifying that the market is finally sending a signal that more investment is needed, beyond what is currently being directed to US shale, towards the more expensive long-term cycle capital-intensive projects. However, this could also reflect an environment of heightened uncertainty in which the informational content of the current price becomes more relevant relative to investors' beliefs about long-run fundamental values. As a result, investors start relying more heavily on the information contained in the current price and therefore the expected future oil price will move closer to the current spot price resulting in parallel movements in the futures curve.

Fig 7: Brent forward curve, $ per barrel



Source: Energy Aspects

Taken individually, these recent price movements show that prices have been effective in reflecting fundamentals and expectations about these fundamentals and the changes in trade flows. However, at the same time, not all the signals are pointing in the same direction and there is a disconnection between differentials and price levels and between short-term and long-term expectations. Time spreads and physical differentials are pointing towards a not very 'tight market' but rather to a market that still has some clearing to do in a market where seasonal factors still matter. On the one hand, price levels are showing a market that is running ahead of current physical fundamentals and pricing in potential future output disruptions and continued strong demand growth amidst an environment of low spare capacity and declining inventories. On the other hand, at the back-end of the curve movement is signalling that tightening may not only occur because of temporary geopolitical factors but also due to a lack of investment in long cycle projects. In other words, for many observers, the latest movement is an indication that the market no longer believes that US shale alone can carry the burden of market adjustment.

These disconnections will feed into the behaviour of the various different players. For physical traders, they indicate that there is some clearing to do and perhaps some opportunities for storage may arise. For shale producers in the Permian, they are pointing to the importance of clearing the surplus through exports and resolving infrastructure constraints. For financial investors, the prospects for higher oil prices and a market in backwardation is an exciting opportunity, which was not available to them a few years ago. For OPEC+, they indicate that the timing of when to release more barrels is key. Acting pre-emptively and putting more barrels in the current market could weaken differentials without necessarily putting a cap on the oil price.

The second half of this year may see the resolution of some of these disconnections which will impact price levels, physical differentials and time spreads, and it is possible that at some stage all price movements may start pointing in the same direction. For the bulls, further tightening of oil markets in the second half of 2018 will generate a perfect storm in which the time spreads and physical differentials will strengthen, the Brent-WTI spread will narrow, the front prices will rise and the back end of the futures curve will stabilise at a price higher than $60/barrel ensuring a steep backwardation. For the few remaining bears, this bullish world will unfold quickly as a strong US shale response, slower demand growth due to higher oil prices, and the unwinding of the OPEC deal will shift the market back into surplus in 2019 and the back end of the futures curve will stabilise at the production cost of US shale. In reality, the oil market does not follow a clean and tidy script. The current mixed price signals clearly emphasize this point.