

From Macro to Micro: the evolution of the Brent benchmark

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Over the past two decades, global crude markets have relied on a small set of key benchmarks as the main pricing tools, and in the western hemisphere, the key index crudes have been WTI and Brent. Indeed, global benchmarks are thought to reflect world supply and demand fundamentals. But since the US tight oils boom, WTI prices have been increasingly governed by the infrastructural logistics of the US Midwest and the position of WTI as an international benchmark has changed.

The market, as a result, has become increasingly reliant on Brent as the primary global benchmark, with open interest in Brent growing strongly since the WTI dislocation began. With two-thirds of seaborne traded barrels priced off Brent and Brent reflecting global supply–demand balances and geopolitical events more aptly, consumers, producers, funds, and even commodity indices started to move away from WTI towards Brent. However, over the course of this year, a few key changes have started to impact the Brent contract specifically, and may somewhat redefine the influences underpinning movements in the Brent term structure going forward.

The strength in Brent prices early in the year was down to global factors – a combination of improvements in the macroeconomic picture, together with OPEC and non-OPEC supply shortfalls. But even as global fundamentals improved, Brent-specific fundamentals

started to weaken by mid-year. Starting with North Sea production, the 0.12 mb/d Elgin and Franklin fields, which had been offline for a year, returned to operation in March. At the same time, refinery maintenance was in full swing in the Atlantic basin, reducing spot demand for crude. But the three factors that have perhaps had the biggest impact on the Brent market are the South Korean government closing a tax loophole which reduced South Korean buying of Forties crude, weak European refinery margins putting pressure on light crudes in particular, and the introduction of the Platts escalator, which increases the number of crude grades that can be used to establish the underlying price of Dated Brent. It took substantial outages in light sweet crude from Libya to shore up Brent prices in Q3-13 but as the worst of the outages impacting light sweet crudes eased, the Brent structure came under pressure once again.

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South Korean Buying

After the Free Trade Agreement (FTA) between South Korea and Europe was

implemented in 2011, South Korea started to pick up Forties cargoes as they became cost effective adjusted for the lack of import duties under the FTA. Prompt Brent spreads moved into backwardation and, after a few occasions when South Korea took Forties cargoes even when the arb seemed closed on paper, the extent of the backwardation became more entrenched (Q3-12 onwards), with the market fearful of shorting the structure, given the nature of Korean buying. Separate from the FTA tax rebates, South Korean refineries are also eligible for a 3 per cent tax rebate on oil products they export; however, that rebate only applies to products refined from crudes they have purchased and on which they have paid taxes, and thus does not apply to FTA crudes like the North Sea (as these crudes are exempt from the import tax). The South Korean refineries were claiming taxes back on products even when produced from FTA crudes and the government closed this loophole earlier this year. Following this move by the government, the Koreans significantly reduced their purchases of Forties and only returned to the North Sea market for large volumes in September when Middle Eastern crudes reached near-record strength. As a result, the nature of Asian buying of Forties has changed significantly when compared to the last few years. It has become more price-sensitive and will increasingly be a swing factor impacting Brent structure

and Brent–Dubai spreads, rather than the constant it was for most of 2011 and 2012.

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Weak European Refining Margins

In the absence of Asian buying, Brent is more exposed to European refining margins, which have been some of the weakest in the world. European refineries are well known for producing too much gasoline relative to diesel, which is where domestic demand is biased, while gasoline demand is declining in the USA, their primary export market. But Europe’s predicament is made worse by changes taking place in the products market and the abundance of light ends, brought about by the booming US refining industry, thanks to the access to cheap domestic crude. This has resulted in gasoline exports from the Gulf Coast to Latin America and even Africa – regions that used to be European strongholds. Worse, Europe is a large exporter of naphtha to Asia and naphtha is probably the weakest part of the barrel currently. Seasonality of cracker maintenance aside, a significant change in the markets has come about with the surge in US propane exports, which are increasingly heading to Europe, displacing the more expensive naphtha feedstock wherever substitution is possible. By the end of 2013, the USA could have as much as 15 per cent of the global LPG export business. In any case, growing tight oils, NGLs, and natural gas output is helping to resurrect the US chemicals and petrochemicals industries, and growing ethylene production was already going to weigh on Asian and European crackers that rely on naphtha for feedstock, potentially leading to their closure. The falling away of gasoline and naphtha demand – the key drivers for the sustainability of European refineries – is putting significant pressure on light

end prices, the mainstay of European refining margins, and hence demand for Brent.

Moreover, global refining capacity has increased far too quickly, with refinery capacity additions outstripping demand growth for 2013 and 2014, by 0.8 mb/d and 1.5 mb/d respectively. New refineries in non-OECD countries (more often than not supported by government subsidies) tend to run even when margins are weak and are therefore likely to add to the glut in products. Despite some apparent commissioning hiccups, the new Satorp refinery at Jubail in Saudi Arabia will soon make its presence felt on the global market. The emergence of yet another major ultra-low sulphur diesel (ULSD) producer on top of growing Chinese ULSD production and increasing volumes of higher quality product from Russia will not only weigh on outright diesel prices but is also likely to compress the spreads between ULSD and higher sulphur gasoil, and between gasoil and Brent. Barring significant refinery problems, European refiners will not be able to count on strong diesel prices to the extent that they have in recent years to offset weak or negative returns from other products such as gasoline, naphtha, and fuel oil. The bottom line is that the burden will fall on the comparatively more efficient refineries. The problem for Europe is that the least profitable refineries are unlikely to close down, due to government pressure to maintain employment, so refining margins must decline further to levels where larger and more competitive refineries in countries like the UK and USA are forced to shut down. Refining margins will be a constant factor impacting sentiment about the structure of the Brent curve, given the start-up of a tranche of new refining capacity and its negative impact on European margins.

Changes to the Platts Escalator

The third important factor impacting the Brent structure is the introduction of the Platts escalator for assessing Dated Brent prices in June this year. This new quality premium effectively broadens the production base that is used to set the benchmark physical crude price for the Atlantic Basin, thereby reducing the

reliance on Forties – the grade that has been the marker for Dated Brent for the last few years and has tended to distort price assessments due to tight supplies. For instance, when the Korean arb was one of the largest determinants of Brent spreads, the escalator would have reduced that impact, making expiries and prices movements less sharp.

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Under Platts’ methodology, quality premiums for Oseberg and Ekofisk are set at 50 per cent of the net price difference between these grades and the most competitive grade of crude among Brent, Forties, Oseberg, and Ekofisk during the previous two trading months. Two-thirds of the quality premium is determined by the spread in the month immediately preceding the current trading month. The remainder of the premium is determined by the spread two months before the current trading month. This methodology generated large premiums for Oseberg and Ekofisk in October for instance, since both grades were very strong relative to Forties in the summer, weighing on Brent prices since Oseberg set the price for Dated Brent for most of the month. When the market for North Sea crude is strong, these quality premiums often play a limited role in setting Dated Brent given the wide difference in price between Oseberg and Ekofisk and the lower quality Forties grade, which usually sets the Dated Brent price. But when demand for North Sea crude oil weakens, and the relative value of Oseberg or Ekofisk to Forties declines, the mechanism widens the slate of cargoes that set the Dated Brent price, compounding the weakness in the benchmark. In a sense, a weakness of the quality premium mechanism is that it amplifies downward trends during

periods of soft demand that follow periods of strong demand, yet it does little to curb upward price trends during peak demand periods.

Conclusion

As a benchmark, Brent is still responsive to global supply and demand fundamentals. However, the three factors outlined here, and in particular European refining margins, set the stage for a considerable increase in the volatility in Brent time spreads. We have seen already that, in the absence of Asian and

European refiner buying, Brent is vulnerable to rapid shifts in term structure as unwanted cargoes pile up. This looks to be the pattern that will continue to play out as the market struggles to adapt to the problem of global refinery overcapacity. With European crude oil processing rates low, the scope for a quick increase in runs is considerable, but margins are vulnerable to an uptick in refinery production while demand growth remains slow, so increased crude buying is likely to stop as quickly as it starts. There are considerable ramifications to the Brent

structure being dictated by increasingly variable European crude demand, particularly if European crude prices have to push lower to sustain arbitrage trade to Asia. At times of the year when there are limited prospects for gasoline demand (Q1 and Q4, for example) Brent spreads will probably face a tough slog, punctuated by periodic bouts of strength as refinery outages or sliding crude prices spur opportunistic buying. Overall, in the absence of unplanned production outages of light sweet crude, Brent spreads could be stuck in the doldrums given these recent changes. ■