

Argus White Paper: North Sea benchmarking and the role of WTI in Europe



The North Sea crude oil benchmark pricing system has been a hot topic of conversation in the first half of 2021, and it doesn't look like this highly complex issue will go away anytime soon.

The North Sea benchmark is known as Dated Brent, or in Argus parlance, **North Sea Dated**. It's a combination of crude oil price inputs based in the North Sea and FOB (free on board) basis that essentially represents the price of cargoes at the loading terminals. The Brent basket includes Brent, Forties, Oseberg, Ekofisk, and Troll – all North Sea crude oils bought and sold on a cargo basis that provide the underlying market liquidity for Dated Brent, or North Sea Dated.

Over the years, physical production and market transparency, reflected in the amount of trade going into that assessment process by price reporting agencies like Argus, Platts, and others, have diminished. How should the basket be boosted to bolster the Brent price for the future? One of the two main contenders is WTI (West Texas Intermediate). This light sweet crude is shipped across the Atlantic and competes with North Sea crudes in Europe's refining centers.

It has played an increasingly important role in the European market.

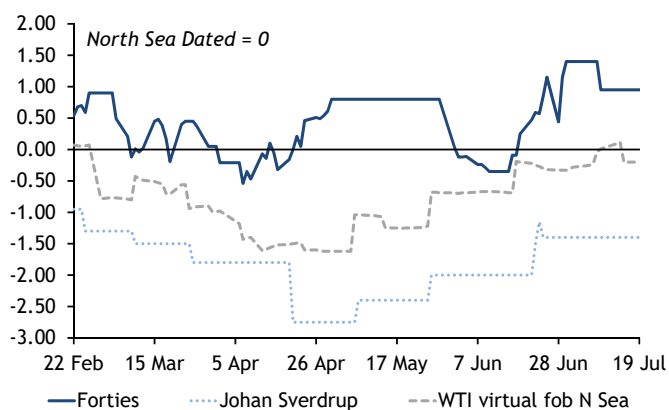
The other main contender is Johan Sverdrup, a Norwegian crude oil that started production in late 2019 and has now become the largest stream of crude oil in the North Sea.

There are benefits and disadvantages to both solutions. WTI, of course, is light and sweet, but is coming from a long way away. Volumes of WTI imports alone into Northwest Europe are significantly more than any single stream of North Sea crude, with the possible exception of Johan Sverdrup. On the other hand, Johan Sverdrup is a heavier crude, at about 28° API compared with the 35° to 40° gravity more typical in the North Sea light, sweet complex. Johan Sverdrup also has a little bit more sulphur, at 0.8pc. However, the crude is produced within the North Sea and is traded in the same way as the Brent basket crudes.

Another factor that often comes up with adding Johan Sverdrup to the Brent basket is the fact that so much of it is shipped out of the region. A majority of Johan Sverdrup car-

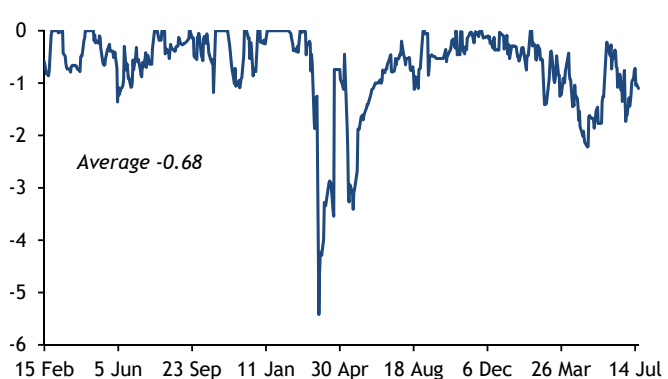
Key crudes vs North Sea Dated

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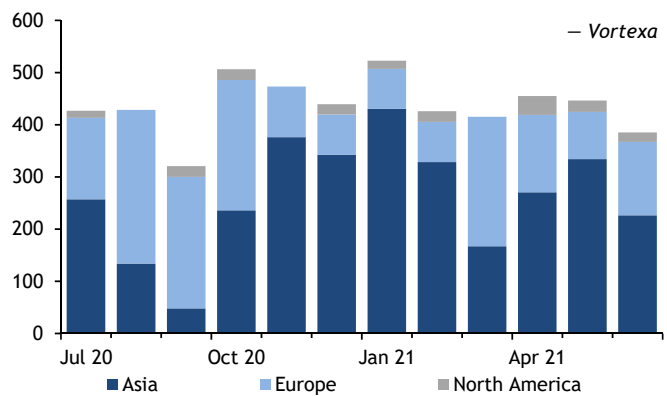


New North Sea Dated vs North Sea Dated

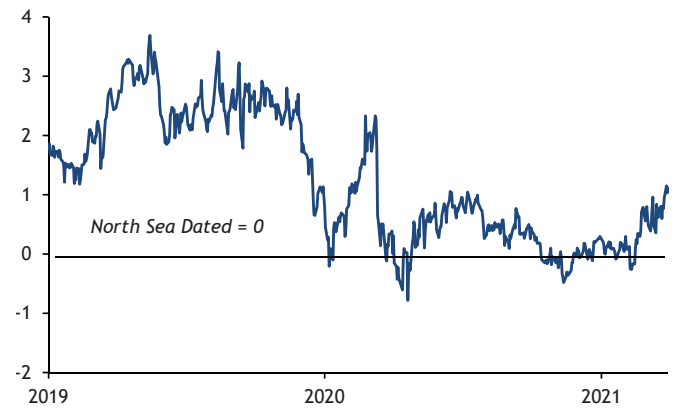
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John Sverdrup exports



Discount of Dated with J Sverdrup to NSD (BOET only) \$/bl



goes do flow to Asia – particularly China – where Argus also assesses the price of it on a delivered basis. However, a good proportion does stay in Europe, and this split market is really nothing new for the price benchmarking complex. Of course, Forties has been the lower-priced crude in recent years, and therefore the benchmark-setting grade. As Forties also often flows into to Asia, the Brent price already reflects something of a global market, including crude oil that is in demand not only in Europe but across the globe.

The pricing of these grades, of course, is key. The Brent benchmark is set by the cheapest or most competitive crude in that basket. As you can see in this chart comparing the price of Forties, Johan Sverdrup and WTI with North Sea Dated, the latter two crudes are lower than the price of Forties and, therefore, generally lower than the price of Dated. WTI’s price pattern reflects the fact that this is a market with some good transparency in Europe, so much so that Argus assesses WTI delivered into Rotterdam because there is a lot of trade and price signals in that market. Interestingly, despite the differences in quality, the price of WTI and Johan Sverdrup follows a similar price trajectory, quite different to Forties itself, so these candidate grades work together in setting the clearing price in Europe.

Looking back over the past few years, the Brent price would have mostly been lower had it included WTI, because WTI tends to be discounted compared to similar crudes in order to find a market in Europe. Particularly during the first wave of Covid-19, there were times when the North Sea market froze up and WTI was being offered into Europe at very steeply discounted prices where a benchmark inclusive of WTI would have been significantly lower. And, of course, this would have had an impact on all grades priced against Brent, not to mention the value of the futures and all the other derivatives that

are the constellation around the Brent complex.

In looking back similarly with Johan Sverdrup (bearing in mind Johan Sverdrup was not producing back in February 2019 so we have used a product yield-based price analysis), the impact of adding this grade to the Brent basket would have been lesser, when a quality adjustment factor is used.

Argus is committed to keeping our North Sea Dated price as an FOB assessment. Although there have been suggestions that it should move to a delivered basis, part of the problem is that, in a delivered market, it’s difficult to know how much crude will be available. An FOB market includes published loading programs, where the number of available cargoes in a given month that the market is going to have at its disposal is known.

Argus also recognizes the importance of consulting not only with the small club of North Sea market participants, but also with a wider group of companies around the world that use the Brent price – whether Dated, futures, or some combination of the two – to ensure all views are taken into account, because this would be a systemic change in what Brent represents and it is important that everybody is aware of those impacts.

Argus has developed a price indication that includes WTI, called New North Sea Dated, and we are working on something similar with Johan Sverdrup. These assessments will provide the market with some transparency into what these options would look like to understand each solution’s implications. Both of these assessments will be available in our Argus Crude report.

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