

Argus White Paper: Crude benchmarks



The emergence of WTI as a global marker, and the next steps for Brent

One of US president Barack Obama's final acts in office, as 2015 came to a close, was to lift 40-year-old restrictions on US crude exports.

This was a major boost to oil producers, connecting them to global markets just as shale-fuelled output swelled, although not so much for US refiners, whose margins took a direct hit as they were forced to compete with international buyers for US crude. The concession was reluctantly given by the outgoing Democrat president in return for Republican acceptance of renewables and other environmental legislation.

Soon US crude began to find outlets throughout the world. WTI had gone global.

This was expected, but a secondary unintended effect was that it placed US crude at the heart of global oil pricing.

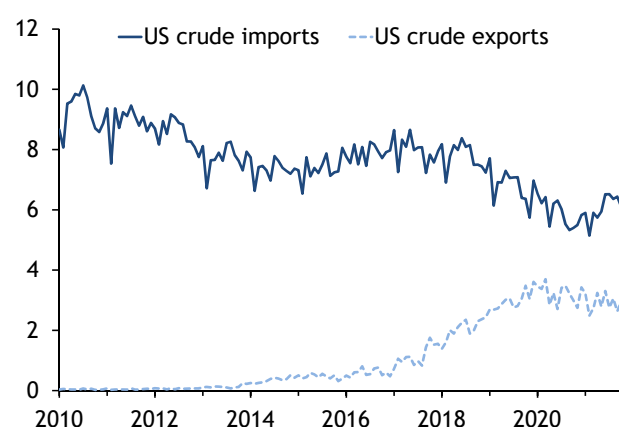
The US until that point had been by far the largest net importer of crude in the world, despite its considerable domestic production and significant refined products exports. However, being unable to export crude meant that the US was still something of an energy island, only tangentially linked to the global seagoing crude market.

Exports completed the benchmarking potential of the US Gulf coast. The region became a trading hub with production, refining, imports and now exports, and crucially, two advantages that the world's other crude benchmarks have long been criticised for lacking: liquidity and transparency.

Brent in transition

Across the Atlantic, in the North Sea market, some participants began to look at the flow of WTI to Europe as a

US crude imports and exports

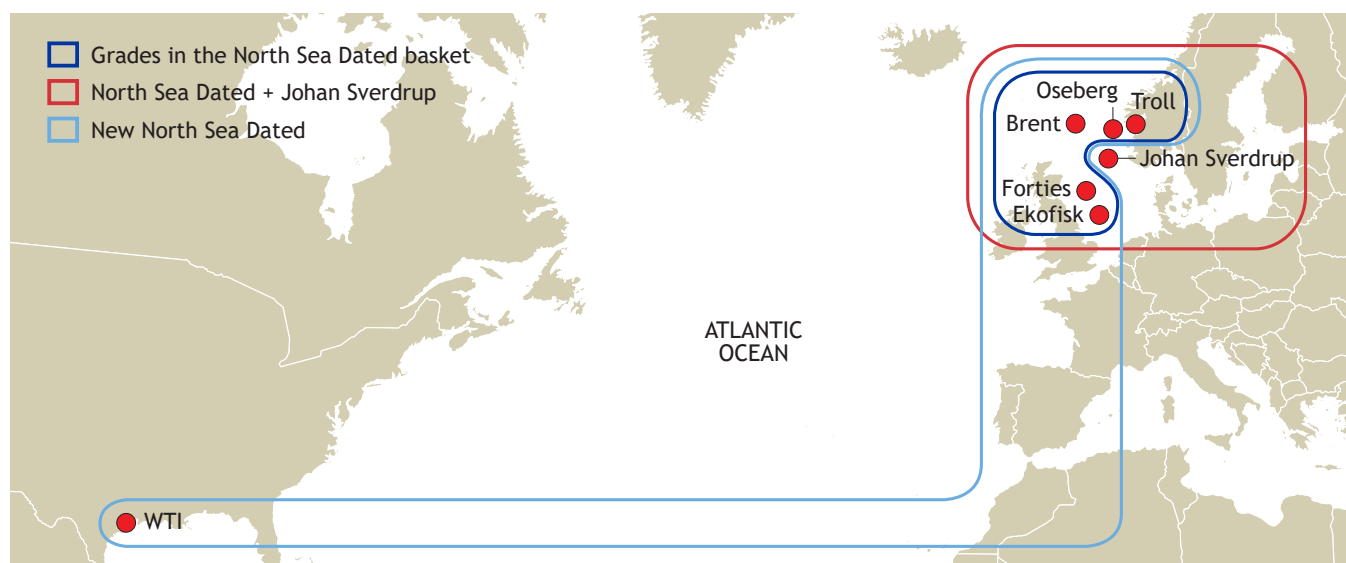
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potential saviour of Dated Brent, the world's premier physical oil benchmark, long beset by issues of falling production, participation and trade volumes.

S&P Global Platts' Dated Brent, or North Sea Dated in *Argus* terminology, is a daily benchmark price based on a complex triangulation of forward prices, physical cargo trade and other derivatives and quality adjustments.

Argus launched a further daily price series in early 2019 — New North Sea Dated — incorporating an assessment of delivered Rotterdam WTI cargoes into the North Sea Dated basket. The concept has grown in popularity since, but several market players remain opposed on principle to the idea that Europe's benchmark should be set by a grade from outside of the region, given all the uncertainty about loading programmes, freight costs and timing mismatches, and the fact that — as it is currently configured — it is not possible to deliver a cargo of WTI into the North Sea forward contract. This would break the link between Brent forward markets and the Dated assessment.

Argus North Sea Dated assessments



In February 2021 Platts announced that it would add WTI to its Dated Brent basket, as well as switching from a fob North Sea terminal basis for pricing to a cif Rotterdam basis. At a stroke this changed the value of many Dated Brent-linked derivative contracts with open interest long into the future, and the expected income stream from upstream projects, as well as tax receipts and refinery economics. This uncertainty and volatility was too much for many market participants, who rejected the changes, and the proposal was shelved, although intensive discussions have continued over the past year. A fob to cif switch for the European marker in particular was deemed too radical by the market, although in fact much North Sea cargo trade is now concluded on a cif Rotterdam basis, becoming a vital source of liquidity for the benchmark.

BP stepped into the breach in late 2021, floating a plan for reform of the North Sea forward contract to allow for the delivery of a limited number of WTI cargoes, with a retroactively calculated freight adjustment.

While this addresses several of the concerns around adding WTI into the North Sea basket, it remains the case that in such a scenario, US exporters may find themselves in a tricky situation where they must decide whether they want to commit to deliver cargoes into the Brent complex, or retain their commercial flexibility around export timings and destinations. These options are not compatible.

Of course, the reason that Dated Brent is important is not because Europe is the key balancing point for the world's oil market — the most influential pricing points are now the US Gulf coast and the delivered China market — but habit. It is used far beyond the boundaries of the North Sea region and the oil industry can prove slow to change until a crisis forces its hand.

Exports from Russia, Africa and Latin America, and even southeast Asia and Australia, are linked to Dated Brent, but there is a move afoot away from the traditional physical price benchmark and to use instead prices set in the futures market. Brent futures are a more generic instrument, less subject to the volatility caused by the regional peculiarities of the North Sea. Early adopter Saudi Aramco has been using Brent futures prices as the benchmark for sales to Europe since the turn of the century, pointing to its much larger volume of trade and breadth of participation. Several other national oil companies are evaluating a similar move, particularly in regions where a US crude-based benchmark is politically inconvenient.

This trend is set to increase as Brent futures prices are judged to have more liquidity, ease of access and reduced risk of distortion by the activities of a small number of counterparties, when compared with the Dated Brent benchmark.

If WTI is to set Brent, then why not simply use WTI at the US Gulf coast as a benchmark?

If Dated Brent is to become a derivative of the WTI market, with the same crude setting the price benchmarks both ends of the journey, then what does this mean for the Brent/WTI spread, one of the most closely watched relationships in the oil world? Will it simply reflect the transatlantic freight cost?

And if WTI is to set Brent, then why not simply use WTI at the US Gulf coast as a benchmark, unencumbered with all

the freight adjustments and other complications required to shoehorn it into the creaking Brent complex?

That would meet the world's need for a reliable light sweet crude benchmark, and the price reporting agencies and commodity exchanges have recognised this by launching a welter of options for WTI pricing at the US Gulf coast, both on an outright basis and as traded differentials to CME's WTI futures contract, whose volumes remain in excess of Ice Brent as the global market has picked up on its utility.

But switching from Brent to WTI at a global level does not solve European refiners' need for a regional price reference that reflects supply and demand in Europe, still a major consumption area even though its growth has probably peaked.

Late in 2019, the mature North Sea basin came to the rescue, with the start-up of the massive Johan Sverdrup field that quickly became the region's largest single stream, overtaking Brent and Forties. Johan Sverdrup is a different kind of crude to Brent; heavier and more sulphurous. At first glance it might seem that the inclusion of this crude in the light sweet Brent basket would drag prices lower and force a rethink of other grades' relationships to the benchmark. But the same adjustment factors that have increased the relevance of Oseberg, Ekofisk and Troll by bringing their prices for benchmarking purposes closer to those of Brent and Forties can be brought to bear on Johan Sverdrup.

Since October 2021 *Argus* has been publishing an illustrative index — North Sea Dated + Johan Sverdrup — that shows what the impact of the inclusion of the new grade might be. So far, it has mostly been minimal.

The Asian prize

For all the debate over the future of WTI and Brent — these *grandes dames* of western oil benchmarking and their courtiers should pay heed to the revolutionaries at the gate.

The Asian market is the last great prize in crude benchmarking. The Dubai price has long been criticised for low liquidity in the underlying partials market, and consequent volatility. Essentially, the Dubai price is another derivative of the Brent futures price, with levels set by trade of the exchange of (Brent) futures for (Dubai) swaps (EFS) contract. Indeed this is how *Argus* sets its own Dubai price, following the principle of assessing the most liquid contract for a given commodity.

The market's drift away from physical market-based agency-assessed outright benchmarks like Dated Brent and Dubai towards futures settlement prices has emboldened the champions of the Dubai Mercantile Exchange's Oman contract, and more recently Shanghai exchange INE's futures

contract for medium sour crude delivered to China, and the IFAD Murban futures contract for crude from Abu Dhabi.

Argus has led the way in establishing physical differential prices for a range of Mideast Gulf crudes to new futures benchmarks as they emerge and where there is market demand.

Futures prices cannot survive on their own momentum forever. There must be some link to the underlying commodity if they are to remain relevant. Ice Brent is currently settled at expiry against the value of equivalent physically deliverable North Sea forward contracts, which can in turn be delivered as cargoes of Brent, Forties, Oseberg, Ekofisk or Troll into the "Dated" market — ie cargoes with specific lifting dates attached. If one part of this chain is disrupted, for example by allowing US WTI cargoes to set Dated Brent even as the forward and futures contracts have been long traded on the understanding that they represent the value of free on board North Sea oil, there is a risk that confidence in the entire edifice will be eroded.

If traders seeking to hedge crude positions long into the future cannot be certain of what those contracts will represent, then they are likely to look elsewhere. So while Ice Brent is in the ascendant, particularly in the key Asian market, there is a risk that the confusion over the future of Dated Brent could drive liquidity elsewhere.

The Argus position

We expect that this year clarity will emerge on the future of Brent. We also expect that any attempt to include WTI in the Dated Brent basket will drive some users to the ready alternatives of Ice Brent futures or WTI physical benchmarks at the US Gulf coast underpinned by the CME WTI futures contract at Cushing.

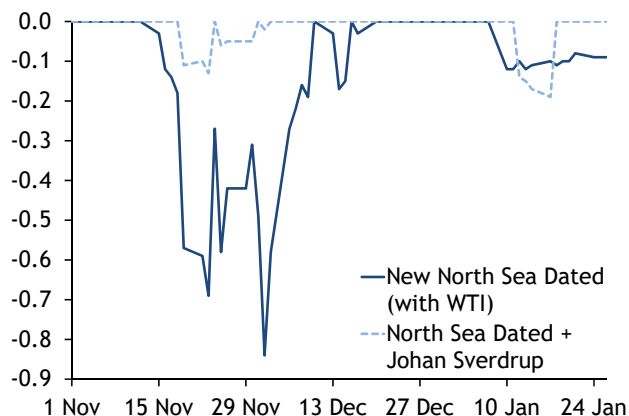
Argus believes that liquidity, transparency and broad participation are the key elements of a successful global benchmark, and that among the candidates currently available, only WTI at the US Gulf coast meets those requirements.

Rather than turning Brent into a freight-based derivative of WTI, and the potential circularity that could entail, we are focused on maintaining robust, trade-based physical pipeline assessments at the US Gulf coast and boosting the trade data flow into our export cargo assessments in the region.

The solution for North Sea Dated could be closer to home. *Argus*' North Sea Dated + Johan Sverdrup index shows that the benchmark can be sustained with additional regional production rather than relying on a stream of imported cargoes that may ebb and flow and cause unplanned distortions. Participants looking for a regional solution based

on regional economics will be able to use this price, and for the wider market it will be a clear signal of whether WTI and other competing crudes should flow to Europe or not.

Alternative Dated benchmarks vs current method \$/bl



In Asia, the twin poles of Brent and WTI can continue to be useful, but further futures-based trade is likely to grow, and *Argus* will be quick to assess markets against emerging benchmarks, to facilitate this development.

We look forward to continuing to work closely with the crude oil market to ensure that robust and sustainable pricing tools are available, to help move this vital commodity around the world in the most efficient manner possible.

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