European Transport Fuel Benchmark: Methodology

Abstract

As of 2019, 68% of end user oil consumption was for transportation purposes. This illustrates the importance of transport fuels in global oil markets. Currently no one product exists that enables market participants to hedge their exposure to European transport fuel products. This document considers the available contracts, their liquidity, their proportion of global demand and their appropriateness to act as a representation of fair prices. The Onyx Global Transport European Fuel Benchmark uses a basket of contracts which provides a more comprehensive method for market participants to appropriately hedge exposure to and express their view on European transport fuel prices.

Introduction

Currently, in order to hedge exposure to or express a view on the on the price of transport fuel, market participants face choices that are significantly less representative, liquid and carry vulnerabilities to product-specific risks. They must either hedge with individual product contracts or crude.

In 2018, Europe accounted for 14% of global transport fuel demand, in total consuming 709.1 million tonnes across the year. The ports of Rotterdam and Hamburg have an annual throughput, 14.5m 20-foot equivalent container units in 2018 and this is where our fuel oil benchmarks in Europe are based.

A basket of products is far more robust to changes in regulation. The IMO 2020 regulations are a perfect example of this. IMO 2020 had an enormous effect on the shipping fuels market, where forward demand for high sulphur fuel oil fell significantly and the very low sulphur fuel oils had to take its place. Our benchmark is far less vulnerable to regulatory change than holding positions in outright products.

We have constructed the benchmark with motivations for products' inclusions and proportions with regard to the liquidities, demand and ability to represent a range of other products. These are outlined in the justification.

Proposal

Onyx European Transport Fuel Benchmark = 45% Low Sulphur Gasoil 1st Line Futures +

30% Eurobob Oxy FOB Rotterdam Barges Future +

10% Jet CIF NWE Cargoes Future +

7.5% Marine Fuel 0.5% FOB Rotterdam Barges +

7.5% Fuel Oil 3.5% FOB Rotterdam Barges Future

Justification

In order to best represent European transport fuel prices, we consider three factors:

1. **The Demand Split of Transport Fuels in Europe.** For the benchmark to be useful for transport fuel consumers hedging their exposure it is vital the benchmark accurately represents the proportional demand of each fuel.
2. **European Refinery Outputs.** Refinery Economics play a crucial role in global oil markets and particularly transport fuel supply. For a transport fuel benchmark to adequately represent the supply side impact of refinery outputs it must consider the proportion of each transport fuel in refinery output.
3. **Reliability and Liquidity of Underlying Contracts.** In order to ensure the benchmark is representative of European transport fuel it is important that the underlying contracts hold good liquidity and are recognisable hedging tools for European physical traders.

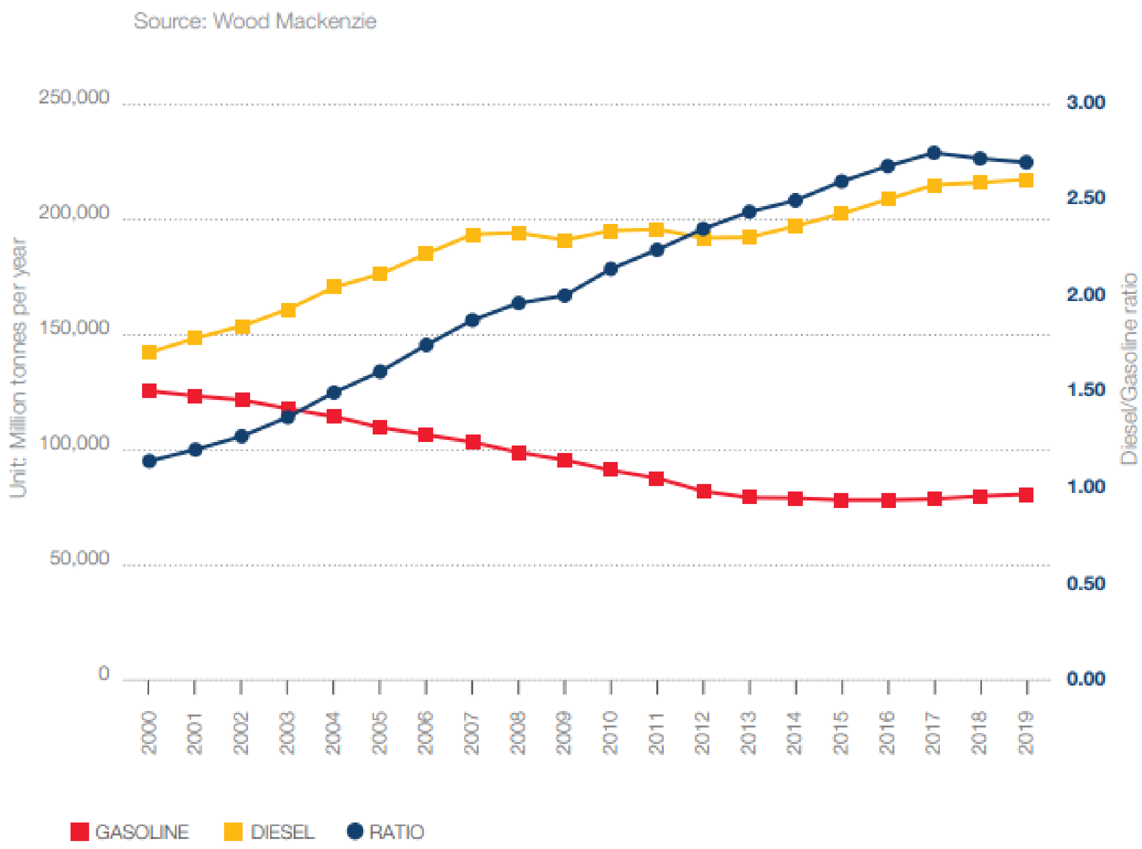
Globally the demand breakdown of transport fuels is as below:

Motor Gasoline	Jet Kerosene	Diesel	Fuel Oil
36%	11%	44%	9%

Then in Europe the demand breakdown is as below:

Motor Gasoline	Jet Kerosene	Diesel	Fuel Oil
20%	12%	55%	13%

Whilst Fuel Oil and Jet Kerosene are consumed in similar proportions in Europe as they are across the World however it is clear that Europe has a much greater propensity to consume diesel over gasoline. This stems from historic EU policy designed at reducing CO2 emissions. Since diesel emits less CO2 than gasoline the EU implemented tax incentives to promote the use of diesel cars. This leads to a surge in the use of diesel cars and greatly increased the diesel/gasoline ratio as seen in the graph below.



However, following the Volkswagen emissions scandal, the popularity of diesel cars has plummeted, and consumers are switching back to gasoline cars. In 2019, for the first time since 2009, more new gasoline cars were registered than diesel. Assuming this trend of consumers moving from diesel to gasoline continues we would expect the demand breakdown in Europe to shift more towards that of the world, that is consuming more gasoline and less diesel. Therefore, in order to ensure a contemporary and forward-looking European transport fuel benchmark it makes sense to weight gasoline and diesel somewhere between Europe and the World's current demand proportions.

In the benchmark we have represented fuel oil as an even split between 0.5% Marine Fuel and 3.5% Fuel Oil. Following IMO 2020 regulations specifying a maximum 0.5% sulphur content in marine fuels globally it was expected that 0.5% Marine Fuel would become the go to fuel oil of choice for shippers. However, we have seen many ships being fitted with scrubbers allowing them to run 3.5% fuel oil whilst still being IMO compliant. By including both 0.5% and 3.5% the benchmark reflects shippers' choice between fuel oils.

The European transport fuel refinery output breakdown is as follows:

Motor Gasoline	Jet Kerosene	Diesel	Fuel Oil
23%	11%	50%	16%

The refinery output breakdown is roughly inline the demand breakdown in Europe with a slight bias for gasoline compared to diesel. Given that gasoline is more in demand globally than it is. The benchmark maintains the ratios seen in the demand breakdown and refinery outputs between road fuels (gasoline and diesel), jet kerosene and marine fuel oils with a 75:10:15 split.

Finally, all the chosen underlying contracts are regularly traded, recognisable physical hedging tools. Their assessments are thorough and inclusive of physical and paper trades thus ensuring a transparent price.

Conclusion

This document discusses the importance of transport fuels in global oil markets and the current lack of products on offer to market participants that allow them to hedge their exposure to and express views on European transport fuels. The Onyx European Transport Fuel Benchmark considers demand and supply side factors as well as underlying contract liquidity and reliability to provide an accurate representation of European transport fuels that market participants can use to hedge exposure and express views.

References

https://www.eia.gov/energyexplained/oil-and-petroleum-products/use-of-oil.php

https://www.fuelseurope.eu/wp-content/uploads/SR_FuelsEurope-_2020-1.pdf

https://e360.yale.edu/digest/diesel-vehicles-face-a-grim-future-in-europes-cities

https://www.politico.eu/article/co2-emissions-up-as-car-buyers-switch-from-diesel-to-gasoline-air-pollution-emissions-diesel-transport-fossil-fuels/

https://www.pwc.com/ng/en/publications/imo-2020-regulation.html#:~:text=The%20new%20regulations%2C%20known%20as,the%20fuels%20that%20ship%20use.

Disclaimer