Big shipping concerns as sulphur fuel cap deadline approaches

We're in the final stretch of the long-awaited International Maritime Organization shipping regulation, which will see the global shipping fleet having to move to a fuel with a maximum sulphur content of 0.5% from 2020 from the current limit of 3.5%

Refuelling at sea - A small oil products ship fuels a large bulk carrier

The options for the shipping industry

With less than six months to implementation, the shipping industry would have largely decided on the best way to tackle this new sulphur cap. As we have mentioned in previous notes, the options are: burn a compliant fuel, install scrubbers which will allow vessels to continue using high sulphur fuel oil (HSFO), retrofit with LNG engines or not comply with the new regulation.

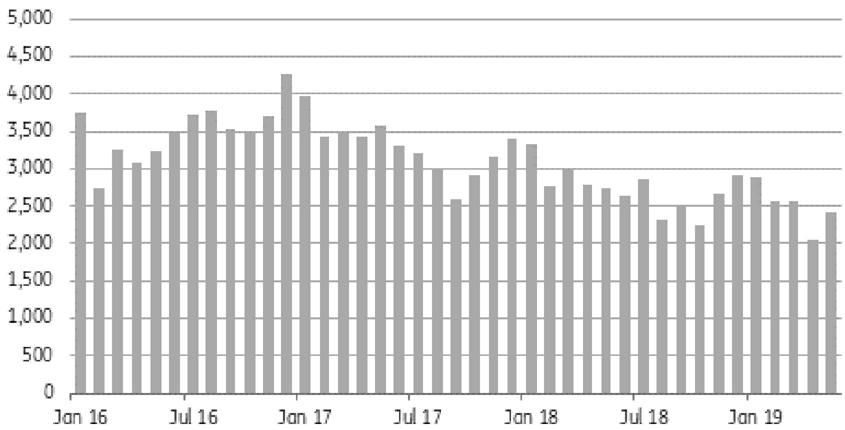
Compliant fuel

Suppliers have spent some time coming up with compliant 0.5% sulphur fuel oil or very low sulphur fuel oil (VLSFO), and we do think that a general industry move towards a compliant fuel remains the most likely outcome. However, this comes with its own challenges. Firstly moving to a compliant fuel is going to be costly, and the extent of this depends on whether shipowners go the route of a VLSFO or a marine gasoil (MGO), with the latter being more expensive. The key concern with VLSFO is the issue of commingling- while two fuels may be compliant and stable, they may be incompatible, leading to the potential for sediment formation. Secondly is the issue of fuel availability, with compliant fuel potentially not available at smaller bunkering ports.

A general industry move towards a compliant fuel remains the most likely outcome

Fuel availability may not be too much of an issue as we move into 2020, as stocks of compliant fuel would have been built up, ensuring enough supply at least initially. The concern may be further down the road, once stocks are reduced and the shipping industry is reliant on refinery output. But again this shouldn't be a long-running issue, as refineries around the world make the necessary investments. Look at Russia, where years of upgrades have seen refineries there yielding larger volumes of top and middle of the barrel products, whilst residual fuel oil yields have declined. Russian fuel oil exports over the last couple of years confirm this; fuel oil exports over the first five months of this year averaged 2.5mt a month, down from an average of 3.58mt in the same time period of 2017.

Russia fuel oil exports (k tonnes)



Source: CDU TEK, Bloomberg, ING Research

The scrubber route

If shippers are concerned about a more expensive fuel, the other option for them is to install a scrubber, which removes the sulphur, so allowing them to use HSFO. There are issues though going this route, and regulatory risks are also growing. The spread between gasoil-HSFO clearly does give the price incentive for shipowners to go the scrubber route; the spot spread is trading at around $226/t, and when you look at the forward curve, the March 2020 spread is as wide as $300/t.

There's clearly still an attractive incentive for ships to install scrubbers

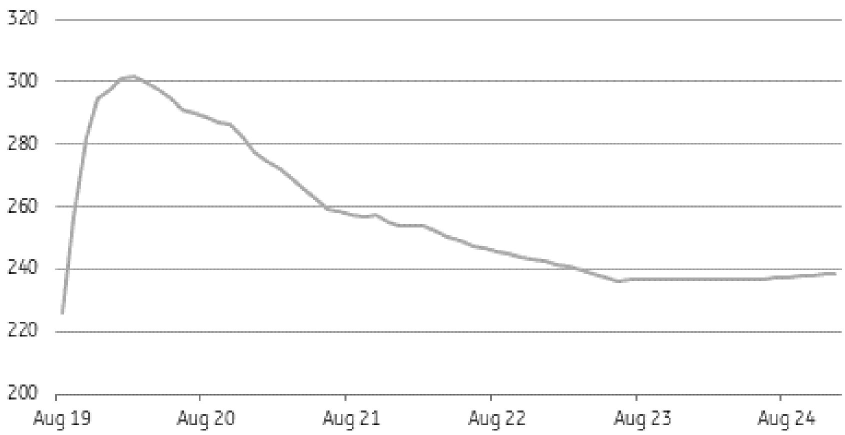
Admittedly over the last year, these spreads have been even wider, but there's clearly still an attractive incentive for ships to install scrubbers. Taking into consideration the cost of a scrubber and a spread of $300/t, the payback period for the scrubber is around one year. If the spread were to fall to around $100/t, this would see the payback period increase to around three years.

There are a number of issues with scrubbers though. Firstly with the regulation less than six months away, it is unlikely that a significant portion of the global vessel fleet will have scrubbers installed, there's just not enough time. The general consensus is that by 1 January 2020, we could see in the region of 3,000-4,000 ships with scrubbers, so only scratching the surface of the global fleet.

Secondly, there is the issue of increased yard time to install a scrubber, which means lost revenues for a shipowner, along with the fact the a scrubber will also reduce the load that a ship can carry.

Finally, and probably most importantly, is the growing concern that scrubbers create their own environmental issues, with wastewater from the scrubber pumped back into the oceans. A number of ports have already banned the open-loop scrubber system, and more will likely follow. Singapore, Fujairah and China are some which have already introduced a ban on the open-loop system, which will be a concern for those who have made this particular investment. However, there are other scrubber options: ships could use the closed-loop system or a hybrid system, but admittedly this would be more expensive, and so increasing the payback period.

Gasoil - HSFO spread forward curve (US$/t)



Source: Bloomberg, ING Research

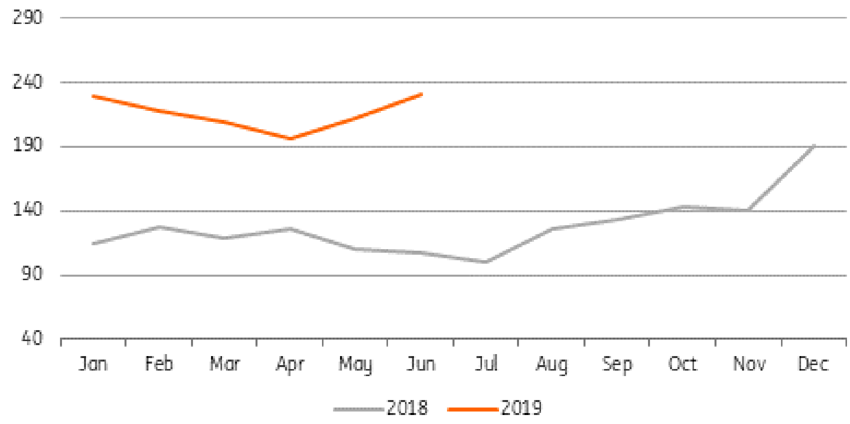
LNG switch limited

The other option is to turn to Liquified Natural Gas. However, for now, we do not believe it is a viable option; the additional expense of retrofitting a vessel with an LNG engine is too burdensome, while the lack of LNG bunkering infrastructure is another obstacle. Longer term, the case for LNG had been largely bullish. However, with the focus shifting to carbon emissions after the low sulphur cap, the industry will probably have to look at even lower carbon alternatives.

Strong compliance expected

The final choice for the shipping industry is not to comply with the regulation. This non-compliance may be intentional, while there may be a segment which has tried to unsuccessfully procure a compliant fuel, in which case they receive a waiver. We do think that compliance will be strong, with ship owners not wanting to risk fines from flag states. Furthermore, breaching the regulation would class the vessel as unseaworthy and therefore, uninsurable.

Singapore light sulphur marine gasoil bunker sales (k tonnes)



Source: MPA, ING Research

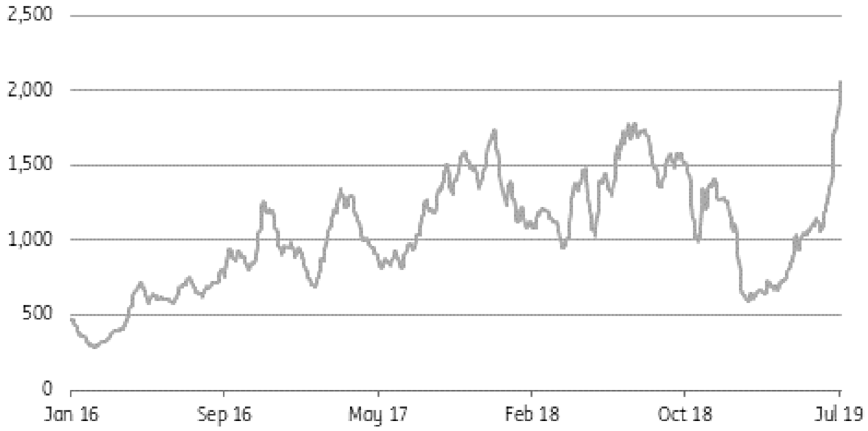
When will the impact of IMO be felt?

We already see signs that the fast-approaching IMO regulation is having an effect. If we look at bunker sales in Singapore (the largest bunkering port in the world), while total bunker sales over the first six months of the year are down 6.5% YoY, sales of low sulphur marine gasoil have increased by almost 84% YoY over the same time period. Although these sales are still a fraction of the higher sulphur fuel sales, it still suggests that the industry has started to prepare to ensure compliant fuel. We believe that vessels will start to transition towards a compliant fuel over the course of the 4Q19. From a cost point of view, shipowners would want to burn HSFO through until the 31st December. However, from a practical point of view, this is very unlikely.

Strangely the regulatory change is not reflected in current forward curves as strongly as it was over the last year. We saw the spot gasoil-HSFO price spread in north-western Europe trade out to over $293/t in 2018, however it is currently trading at around $226/t. Furthermore, if we look at middle distillate cracks, they have come off from the highs of 2018, when the NW Europe spot gasoil crack broke above $20/bbl. If one expects there is going to be a significant shift from HSFO to gasoil as a result of IMO, one would expect these cracks to only strengthen further from the $14/bbl they are currently trading at. We expect these cracks will pick up over Q4, as demand picks up, sending a signal to refiners that they should maximise middle distillate yields. While HSFO cracks should start to weaken as demand falls away, for now spot HSFO cracks are well supported.

In terms of freight, we are already starting to see rates picking up; the Baltic Dry Index has rallied by a staggering 237% since February- the highest levels seen since early 2014. While a large part of this strength is attributed to a pickup in iron ore shipping activity, the other element is reportedly lower vessel availability due to ongoing scrubber installations.

Baltic Dry Index rallies



Source: Bloomberg, ING Research

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