Foresight

Scrubbing Up(date)

Detail on vessels fitting scrubbers remains sketchy. MSI shines a light on this via analysing dry bulk movements data and in the process highlights the impact on the timecharter market through online market modelling platform 'MSI HORIZON'.

Data for vessels with scrubbers fitted, or due to fit scrubbers, is still very patchy. Many data providers have attempted to count the number of vessels fitting scrubbers with mixed success. Estimates across the industry vary widely – this is exemplified by a survey of owners and charterers published by Galbraith's shipbrokers in July which showed a wide range of predictions for vessels across all ship types to be fitted with scrubbers by the end of this year (the distribution is broadly uniform between under 1,000 and up to 4,000 ships).

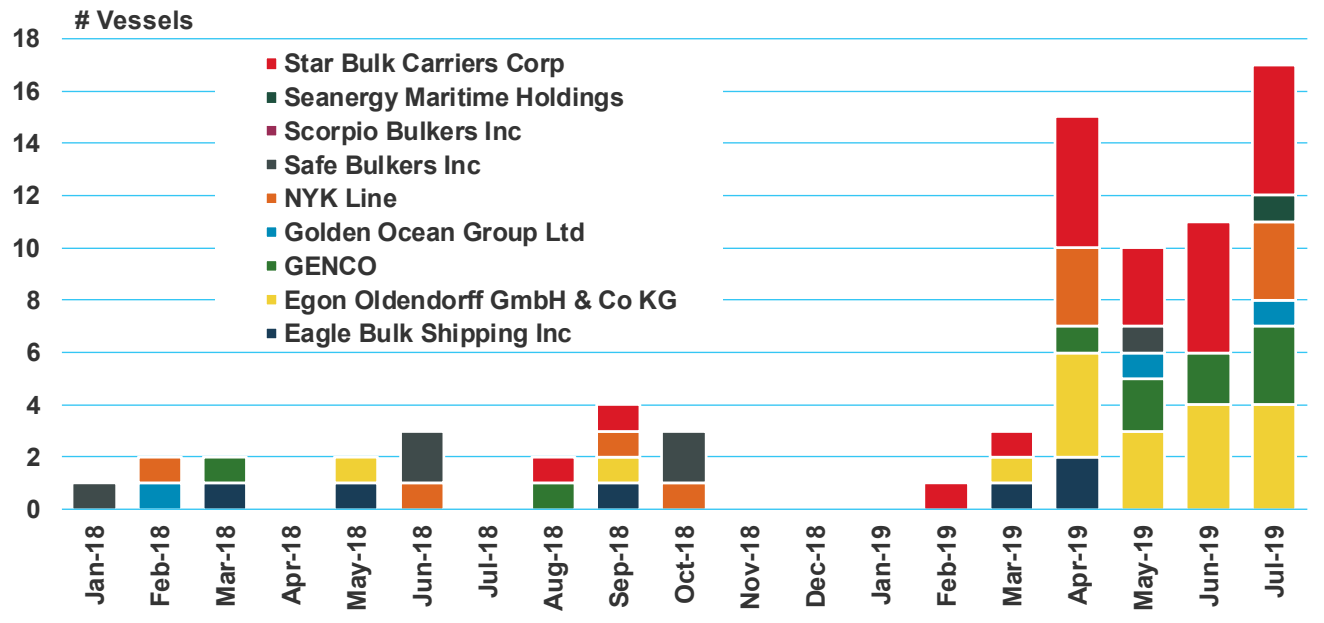
Tracking repair yard activity

To attempt to put some colour on this subject, MSI has analysed recent historical movements data for the entire dry bulk fleet, with the primary focus of identifying bulkers spending more than 15 days at a ship repair yard, which could indicate a vessel fitting a scrubber.

For illustration, Chart 1 summarises the results from this analysis when applied to the fleets of nine well-known companies that have publicly declared an intention to fit scrubbers on board their ships. The chart plots the number of vessels calling at a repair yard for more than 15 days each month since January 2018 for each of the nine owners – clearly activity has dramatically increased since April. Even if we allow for an increase in dry docking in response to poor freight market early in the year, a fair assumption would be that a large number of these calls included fitting a scrubber.

Of course, this approach has to be treated with a degree of caution. First, it is impossible to disentangle scrubber fittings from normal repair/survey activity via movements data alone. In this context it is important to recognise that other market drivers may have had an impact in driving activity higher. Second, this potentially misses vessels fitting scrubbers mostly at

Chart 1: Dry Bulk Scrubber Retrofitting for Key Shipowners



sea (for instance, Star Bulk have announced plans for 50 at-sea installations this year in addition to 52 dry-dockings specifically to fit scrubbers).

Analysis becomes more problematic when looking at movements for the whole dry bulk fleet; nonetheless, there has been a clear increase in activity at ship repair yards beyond 'usual' levels and this is particularly true for the 120+ k Dwt Capesize segment. The average number of calls to repair yards lasting longer than 15 days between the start of 2016 and end 2018 was 11.4 vessels per month for 120+ k Dwt vessels. In March this stepped up to 37 vessels and the March-July average was 36.2 vessels per month.

A number of observations help to support the argument that these calls are mainly vessels fitting scrubbers. For instance, the average age of Capesize vessels calling repair yards for more than 15 days dropped from 12.5 years old prior to March 2019 to around 8 years old after. This is aligned with the understanding that younger ships are more likely to fit scrubbers. Additionally, the time spent at repair yards jumped from 22 days on average to just over 32 days from March.

Albeit via a 'heavy-handed' approach, this suggests that, since March, at least 25 Capesize vessels per month have fitted scrubbers. The trend has been broadly flat over this period – assuming 25 more vessels will be fitted per month for the remainder of this year means that by the start of 2020, around 250 Capesize ships will have fitted scrubbers (around 15% of the Capesize fleet). This tallies reasonably closely with estimates published by Howe Robinson shipbrokers, who have identified 227 Capesize vessels which have, or will have, fitted a scrubber by the start of next year.

By a similar approach for the sub-Capesize sectors, we have identified around 5 Handysize vessels fitting scrubbers per month since March this year, 9 Handymax and 11 Panamax; implying 2%, 2.5% and 3.5% of these fleets will have fitted scrubbers at ship repair yards by the start of 2020, respectively.

Whilst MSI's approach will undoubtedly identify some vessels as fitting scrubbers erroneously, it will also miss other vessels which may have fitted a scrubber at sea, or at a yard not typically associated with repair activity (or indeed fitted a scrubber prior to 2019). It clearly is also aimed at identifying retro-fits to existing vessels, and does not include newbuild ships being delivered in 2019 with scrubbers fitted. In our online market forecasting model 'MSI Horizon', we assume that just over 20% of Capesize vessels will have fitted scrubbers by the start of next year (which includes newbuild vessels and retro-fits), 6.5% Panamax, and 5% for Handysize/max (Chart 2).

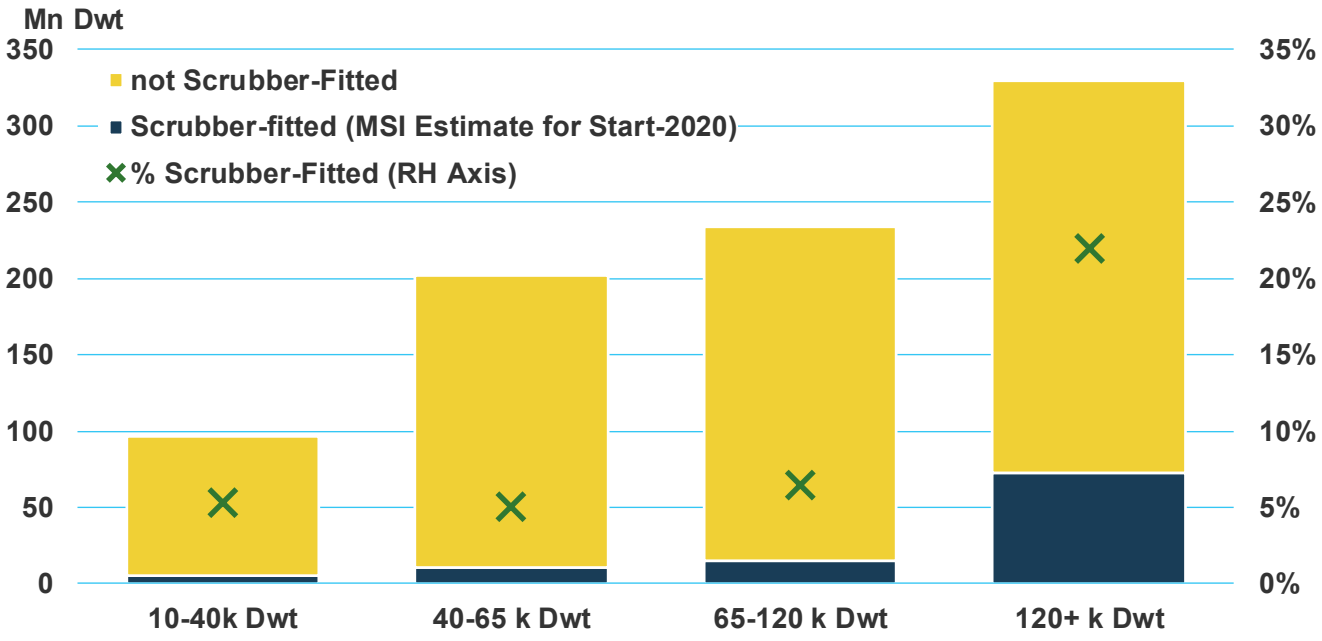
Looking to the HORIZON

It is not surprising that the number of 'probable' scrubber-fittings identified through this approach exceed data provided by fleet data suppliers, who need to confirm definitively whether a vessel has fitted a scrubber before it is recorded. According to a sample of around 500 ships, one leading database provider records a quarter of the vessels identified by MSI to have fitted scrubbers using the ship-repair approach.

What does this mean for the dry bulk markets? For one, we can estimate how much supply we will lose to vessels fitting scrubbers for the rest of this year. In this Foresight we update an analysis published in our latest quarterly dry bulk report. In summary, an average 25 Capesize vessels taken out of the fleet for a month at a time, with an average capacity of 180,000 Dwt, would remove 4.5 Mn Dwt from effective supply. This corresponds to just under 1.5% of the total Capesize fleet. Extending the analysis to sub-Capesize segments, in total we estimate scrubber-fitting activity will effectively remove 0.8% of total dry bulk supply in the second half of this year on average.

The impact on supply appears inconsequential, but it is not. MSI's online data and modelling platform 'MSI HORIZON' is ideally suited to testing the impact of this on the market – a scenario calculated through Horizon entailing a loss of 0.8% of supply equates to an increase in Capesize 1 Yr T/C rates of 12%. In addition, the impact of scrubber-fitting is highly sensitive to a number of factors. For instance, the time spent in ballast to and from the repair yard (route deviation) will have an impact. Increasing the average number of weeks to fit a scrubber in our forecast to six weeks translates into a 20% increase in Capesize 1 Yr T/C rates in our Horizon market model.

Chart 2: MSI Estimate for Scrubber-fitted Dry Bulk Fleet at the Start of 2020



MSI Foresight is a periodic series of articles on topical areas of interest across the commercial shipping spectrum. To find out more about MSI's analytical, consulting and vessel valuation services, please contact Simon Mason at MSI on Tel: +44 (0)20 7940 0070 or email: simon.mason@msiltd.com

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