

Into the storm

How will shipping cope with fuel bills from IMO 2020?

Shipping special report

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Foreword

A REALITY CHECK FOR SHIPPING

The effective date for the IMO 2020 regulation is approaching fast. The new sulfur cap of 0.5% on marine fuels promises to displace more than 3 million b/d of high sulfur fuel, shaking up the oil industry and giving all other commodity markets with exposure to seaborne freight a thing or two to think about. However, it is the shipping sector that has the eye of the upcoming storm fixed upon it. And none of the three major shipping markets covered by Platts – tankers, dry bulk and containers – look to be fully prepared for the rough weather heading their way.

Shipping is still an old-school business with limited capacity to easily digest big changes. It is also a club of optimists and bulls, who more often than not tend to expect the best outcome from the worst circumstances. These are dangerous blind spots to have when you are facing a game-changing scenario like IMO 2020.

The catch, of course, is in the money. Fuels compliant with the 0.5% limit are more expensive than the traditional high-sulfur bunkers. The extra costs for shipowners will depend on the adoption of various compliance options and spreads between fuel type prices and are certainly hard to predict. However, even moderate projections indicate hefty bills, running to tens of billions of dollars extra a year for the sector.

Can the shipping sector absorb these extra costs itself? The straightforward answer is – no. Like any business, it will have to try and slide the bill across the table to its customers. The trick here is simple in essence. Just charge your clients sufficient premiums in freight rates to cover your new expenses.

Even now, only months before the January 1, 2020 deadline, there are a surprising number of shipping players who believe that getting customers to pay up will be a smooth operation.

The optimists have a few staple arguments: customers will have no choice but to pay, bunker cost recovery tools will help, and the market is improving.

As usual, the reality may prove to be a bit more complicated. Customers may not have to pick up the full bill if they have the negotiating power to pay less. Bunker cost recovery mechanisms are imperfect and tend to fail in times of volatility. The market recovery is threatened by too many wild cards and may not come as quickly as some anticipate.

The tankers, dry bulk and container freight markets will each face unique challenges in recovering the extra bunker costs brought by IMO 2020. The critical question is: will they pass through the storm unscathed, or will there be wreckage on the shore when the morning comes?

— [Alex Younevitch](#)

INTERLUDE: THE SHAKE-UP

Jack Jordan

The IMO's lower sulfur limit for marine fuels in 2020 should not have come as a surprise to anyone. This change has been on the cards since at least October 2008, when the IMO set in place its revised Marpol Annex VI agreement on marine pollution.

Nonetheless, the final decision in October 2016 to proceed with the 2020 deadline has brought about great angst among shipowners, operators and in the wider commodity markets.

The effect on commodity markets will be profound: a large majority of the world's commercial fleet will shift from burning fuel oil to middle distillate-based bunkers, and refiners are expected to increase crude runs to maximize distillate output for the shipping industry's needs. S&P Global Platts Analytics forecasts a bunker demand shift of about 3 million b/d next year.

The main problem the shipping industry has to address is how it will cope with an unfamiliar set of new fuels in 2020. Little is yet known about the new 0.5% sulfur blends the refining industry is developing, but a wide range of products is expected to be on offer.

Refiners will blend new marine products primarily using the 0.5% sulfur limit as their target – rather than the 380 CST viscosity specification they currently aim for when blending high sulfur fuel oil – and they will have a broad array of options for how to meet it.

Products could range from a largely unaltered low sulfur straight run fuel oil to a primarily distillate-based product, or use other refinery streams including VGO and hydrocracker bottoms. The trouble will come when the products are mixed and some blends prove incompatible with one another: when a more aromatic 0.5% product comes into contact with a more paraffinic blend, the products are likely to separate and form sludge, blocking filters.

The risk of a spate of engine failures across the world in 2020 is currently keeping marine engineers awake at night. A contamination crisis in the bunker fuel industry in 2018 after harmful off-specification product seen first in the US Gulf was exported across the global supply chain has also concentrated minds on how similar problems may arise with the new fuels.

And 2020 will not be the end of the shipping industry's struggle with emissions regulation. The next ordeal for the shipping industry after 2020 will be in meeting the IMO's initial strategy for reducing greenhouse gas emissions, adopted in April 2018 and due to be revised by 2023. But in the shorter term, the challenge for shipping companies now is to make it through next year relatively unscathed, and pass what costs they can over to customers without losing ground to competitors. Success or failure in this endeavor will determine which shipping companies see the strongest growth over the next decade.

TANKERS

The tanker market – which consists of two main segments lovingly referred to in the industry as clean and dirty – is the most closely linked of all shipping to the oil and refining sectors, and thus is likely to experience significant impacts from IMO 2020 on several levels.

Crude oil carriers, or dirty tankers, are an integral part of global crude oil transportation, marketing and pricing. And in addition to burning fuel oil, they also carry it. So the ongoing changes in crude slates at refineries around the world, as well as displacement of high-sulfur fuel oil caused by IMO 2020, may have a profound influence on trade routes for dirty tankers, affecting ton-mile demand in unexpected ways.

Clean tankers, which handle petroleum products, will face a similar set of challenges, but with a much higher chance of a positive outcome, benefiting from the increased demand for gasoil resulting from IMO 2020.

However, shipowners in both categories will have to deal with escalating bunker fuel prices by passing the costs on to their customers in the oil sector through higher freight rates. This could prove to be much harder than some expect.

There are two main issues here – the fundamental lack of negotiating power in the shipowners' camp caused by persistent oversupply of tonnage, and the limitations of the Worldscale freight pricing system, which can be a problem during periods of bunker price volatility.

THE ISSUE OF SCALE

The prime weakness of the Worldscale system is the exposure of flat rates to bunker fuel prices. Flat rates are updated annually and are calculated based on bunker prices for the 12-month period to September of the previous year. For 2020 flat rates that would mean the period from October 2018 to September 2019.

Worldscale has already announced that it will be dropping high-sulfur fuel from its calculations for 2020, stating that only compliant fuels will be considered. This raises a number of problems.

First, there is no pricing data available for 0.5% fuel before January 2, 2019, when Platts launched its assessments for the grade at key bunkering ports, meaning Worldscale will have a shorter data period to consider for its 2020 rates. It will also have to work out what the right balance is between the 0.5% blends and marine gasoil for its bunker cost calculations in flat rates. Considering the high stakes for shipowners, any decision that Worldscale makes is likely to invite heavy scrutiny from the industry.

Worldscale explained

Worldscale is a unified system determining the freight rate for a given tanker's cargo.

It consists of two elements:

1. Flat rates

Nominal rates for a standard ship expressed in \$/mt for a wide array of routes. The flat rates are published by the Worldscale Association and are revised annually, based on changes in bunker prices, port costs etc.

Example: Hound Point-Rotterdam = \$5.86/mt (2019)

2. Worldscale multiplier

The tradeable rate, expressed in Worldscale points, represents the percentage of the underlying flat rates.

w100 = 100% of the flat rate; w75 = 75% of the flat rate; w175 = 175% of the flat rate.

Example: If the deal for a cross-UK Continent route is concluded at w120, basis Hound Point-Rotterdam flat rate (\$5.86/mt), the actual \$/mt freight would be the following: \$/mt = $5.86 \times 1.2 = \$7.03/\text{mt}$

For an 80,000 mt cargo, the total freight payment would amount to a lumpsum: $7.03 \times 80,000 = \$562,400$

The tanker freight market trades in Worldscale points. Most of Platts' tanker freight assessments are also expressed in Worldscale points.

Second, the most dramatic pre-IMO 2020 changes are expected to happen in the fourth quarter of 2019. That is when the specifications and availability of 0.5% fuel oil blends will become clearer and the spot market for these grades will start to become more active.

It is also the period during which many shipowners are likely to start switching to 0.5% bunkers. Most will avoid early switching in order to keep their costs down as long as possible, but leaving the transition too late is also a risky option, as vessels will need to have trial runs with the new fuels in order to minimize the risk of technical hiccups after the regulation comes into force. All of that could make the last quarter of 2019 a very volatile one for bunker prices.

Given that this quarter is likely not to be included in the flat rate calculation for 2020, and the expected volatility in bunker prices in 2020, a few revisions to the baseline bunker price calculations and therefore Worldscale flat rates can be expected next year, with some changes potentially being quite dramatic.

Any change in flat rates would shake up the spot freight for tankers on affected routes. Worldscale rates traded in the market have to adjust accordingly for shipowners to at least maintain the same level of earnings. If they fail to keep the Worldscale rates high enough, it could mean losing money for uncomfortably long periods of time as the market adjusts to each change in flat rates.

And even without revisions in flat rates in 2020, shipowners may struggle to get the premiums they need. Ultimately, the traded Worldscale rates in the spot market are determined by the negotiating power of the counterparties. And shipowners have been suffering from an acute deficit of clout for a while now.

Who's got the power?

The negotiating power in any freight market comes down to simple fundamentals of supply and demand. In shipping, the demand side is represented by the number of cargoes and the distance they need to be carried. This is called ton-mile demand. The fleet capacity, in either the number of vessels or their combined deadweight tonnage, reflects supply.

For shipowners to be successful in passing on their bunker costs to charterers, the growth of ton-mile demand would have to outpace the supply side, tilting the balance of power in their favor.

The problem is that the tanker market has been struggling with a heavy oversupply of vessels for more than a decade, and this is unlikely to disappear in the short time left before January 1, 2020.

According to data from Affinity Shipbrokers, the current new tanker orderbook stands at 447 vessels, or 61.4 million deadweight tons, which is 11.3% of the existing fleet. The bulk of this new capacity is to be delivered in 2019-2020, boosting supply and weakening the negotiating clout of shipowners at a critical time as the market adjusts to new bunker prices.

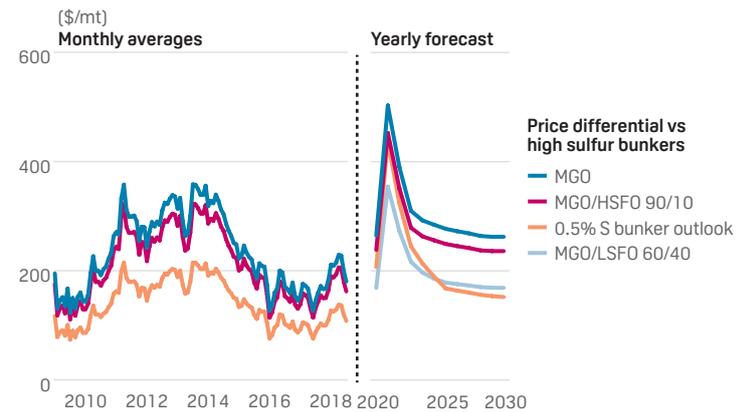
Charterers – oil majors, refineries, traders etc – will likely be able to use that to cap Worldscale rates for their cargoes, forcing shipowners to absorb a larger share of the growing bunker expenses themselves.

An opinion often expressed in the market is that increased bunker costs and low earnings will force shipowners to scrap some of their older vessels, limiting the growth in supply. This already happened in 2018, when a record number of tankers was recycled. However, demolition is a finite resource for managing supply growth, and it is running out quickly.

The VLCC segment serves as a good example as it is often used as a reference point to gauge the overall health of the tanker market. According to Affinity data, VLCCs are facing the heaviest orderbook, totaling 101 vessels or 31 million dwt – representing 13.5% of the current fleet. The average age of a VLCC sent for demolition in 2018 was 19.5 years. Currently there are only 76 vessels older than 18 years left in the global fleet, not nearly enough to compensate for the existing orderbook.

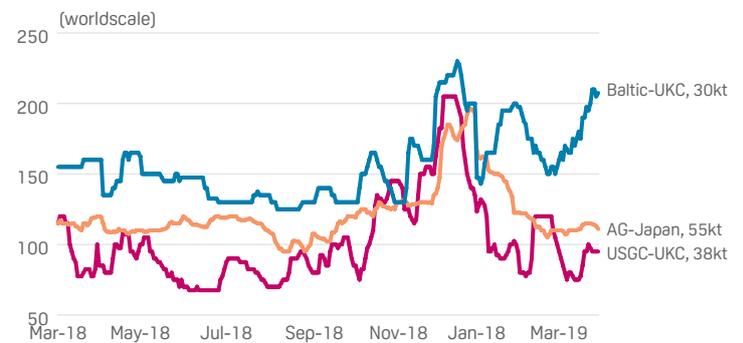
The average age of the VLCC fleet is only 9.8 years, clearly indicating that hopes put on scrappage are misplaced.

LOW SULFUR BUNKER PRICE OUTLOOK



Source: S&P Global Platts Analytics

CLEAN TANKER FREIGHT RATES



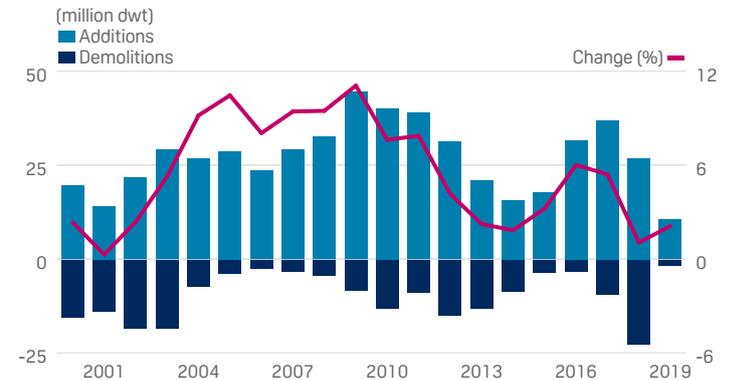
Source: S&P Global Platts

DIRTY TANKER FREIGHT RATES



Source: S&P Global Platts

TANKER FLEET: DELIVERIES, DEMOLITIONS, FLEET GROWTH



Source: Affinity Research

Younger vessels generally have capital costs still attached to them and the revenues from selling them for scrap are unlikely to be high enough to cover the loan repayments for assets that no longer exist.

With the outlook for ton-mile demand still uncertain, tanker owners need to consider a scenario in which they have to absorb a sizeable proportion of extra costs, at least during the 2020 transition period, and prepare accordingly.

“Owners are naive to think their earnings this year will be the same next year in light of higher fuel costs,” said a chartering manager with one of the world’s largest shipowners.

— [Alex Younevitch, Arthur Richier, Peter Farrell](#)

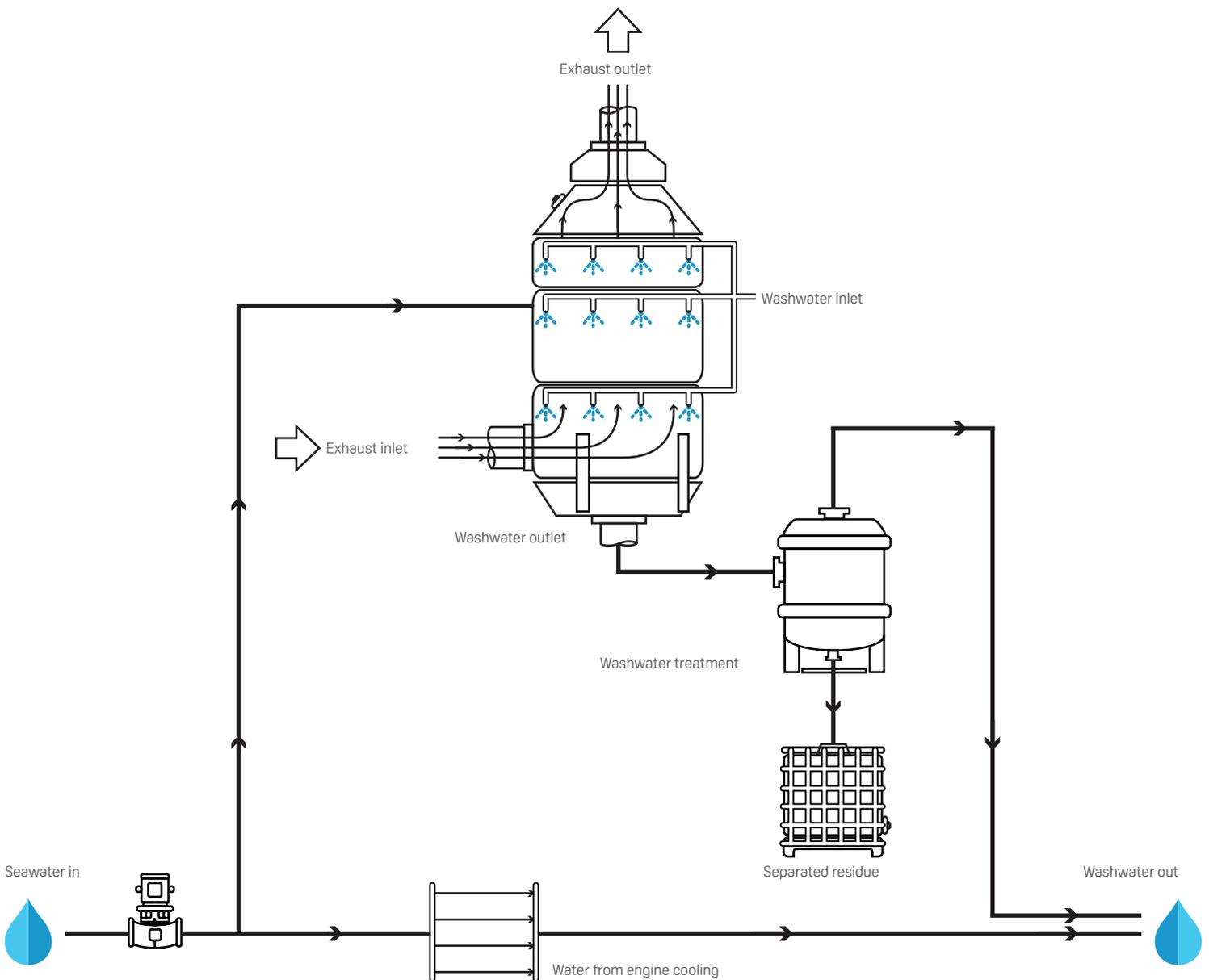
THE TALE OF TWO TIERS

Another popular tale in the tanker market is that of the two-tier market. The story stems from the growing adoption of scrubbers.

Scrubbers are exhaust gas cleaning systems which when installed on a vessel clean its emissions on-board, allowing it to continue burning high sulfur fuel oil while still complying with the new global sulfur cap.

Many believe that scrubbers will split the time-charter market into two tiers. Under time-charter terms, the charterer hires the vessel for a specified period of time, paying the shipowner a daily hire rate. The charterer also

A COMMON OPEN-LOOP SCRUBBER DESIGN



Source: S&P Global Platts, Exhaust Gas Cleaning Systems Association

becomes responsible for the commercial expenses of the hired vessel, including bunker and port costs.

So, considering the initially expected wide price spread between HSFO and 0.5% LSFO at the start of the new decade, charterers may be inclined to hire vessels with scrubbers that would allow them to burn cheaper fuel, cutting their operational costs. They may also pay a premium for such tankers, passing their savings on to shipowners.

This is a valid theory and could very well prove to be true, at least at the outset. However, the longevity of the two-tier division is questionable.

First of all, the premiums in the time-charter market, just as with anything else, will depend on the relative negotiating power between counterparties. Considering the large oversupply of tonnage, the size of the hiring premiums for ships with scrubbers could be limited. And they are likely to start shrinking fast as the price spread between the HSFO and LSFO narrows.

Secondly, scrubbers are not cheap. A unit costs anything between \$2 million up to \$6 million per vessel. The time-charter market would have to offer significant premiums to pay off the initial investment. For example, with a time-charter premium of \$2,000/day it would take four years pay off a \$3 million scrubber.

Of course, there are some innovative schemes to handle this. For example, the time-charter agreement may be concluded on the basis of charterers covering the initial scrubber installation costs. Some big shipowners may even buy stakes in scrubber manufacturing companies, to ensure better access to technology and a share of profits.

There are, however, serious concerns over the longevity of scrubbers as a compliance option. Open-loop scrubbers, which take in naturally alkaline water and then flush discharge into the sea, have already been banned in key bunkering hubs like Singapore and Fujairah as well as Belgium, California, Massachusetts and along the River Rhine in Germany.

Closed-loop scrubbers have their own challenges, like the lack of onshore facilities for discharging sludge, and the availability of caustic soda, which is used in closed-loop systems to raise the alkalinity of the water being used.

Also, there is a wide range of technical issues associated with the use of scrubbers, including stability of the vessel, potential breakdowns, corrosion of discharge pipes etc. Such things make the idea of paying a premium for a scrubber-equipped vessel increasingly less appealing as time goes by.

All things considered, the tale of the two-tier market may be an exciting, but ultimately quite short read.

— [Alex Younevitch, Surabhi Sahu, Sameer Mohindru.](#)

THE WAY OF THE TORTOISE: WILL SLOW STEAMING BE THE NEW NORM IN THE TANKER TRADE?

While the tanker trade is generally expected to try and recoup higher operating costs through freight rate increases, how to control rising bunker bills after the switch to 0.5% sulfur fuels globally has been on shipowners' minds since at least the beginning of 2018 and has become an ever more pressing issue as the 2020 deadline approaches.

With bunker fuel adjustment clauses, common in the container market, so far unheard of in the tanker trade, one way to save on bunker costs is to reduce vessel speeds and thereby fuel consumption. Slow steaming tankers at below the 12-13 knots average speed on the high seas offers shipowners an operational means to save on bunker costs and hence improve operating margins. Savings can range between 20-40% depending on speed and vessel type.

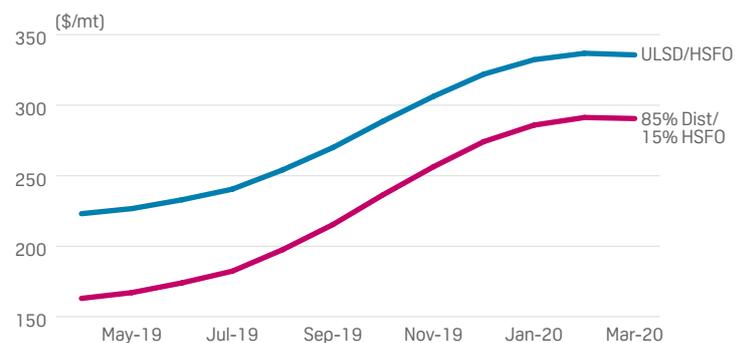
It is not a new practice and is generally employed when shipowners are faced with rising bunker costs amid periods of low freight revenue, as was most recently the case in the summer of 2018, when time-charter equivalent earnings turned negative on some routes loading in the Americas.

Recouping the cost increase obviously depends on the general supply-and-demand balance between tonnage and cargoes, but freight and the cost of bunkers do correlate over time, albeit not necessarily in the short term and might need a longer lead time when faced with a sky-high low-sulfur bunker bill.

Clean and dirty tanker owners have successfully reduced steaming speeds from an average 12-13 knots to 10-11 knots during industry downcycles or to improve earnings on certain routes when viable. When traveling at these lower speeds daily bunker cost savings amount to 20-25% for a VLCC up to 10 years of age. At 10 knots on the ballast leg, these tankers burn 48 mt/day rather than the average 61-62 mt/d at 13 knots, according to shipping sources.

For a Medium Range tanker, bunker cost savings range between 39% and 41%, with eco design tonnage consuming 8 mt/d less at a speed of 10 knots than the 20-21 mt/d when laden and 19-20 mt/d during ballast at 13 knots, clean ship

SULFUR SPREAD FORWARD CURVE PEAKS FEB 2020



Source: S&P Global Platts

owners indicate. Non-eco design tanker bunker consumption drops 11 mt/d at 10 knots from the standard speed consumption of 26-27 mt/d laden and 23-24 mt/d ballast.

The balancing act

Slow steaming is also a way to rebalance market fundamentals in shipowners' favor, as a one knot reduction in average ballast speed results in the "removal" of 20 VLCCs from the market on the long-haul voyages that these very large crude carriers take, according to the International Seaways December 2018 Investor and Analyst Day presentation.

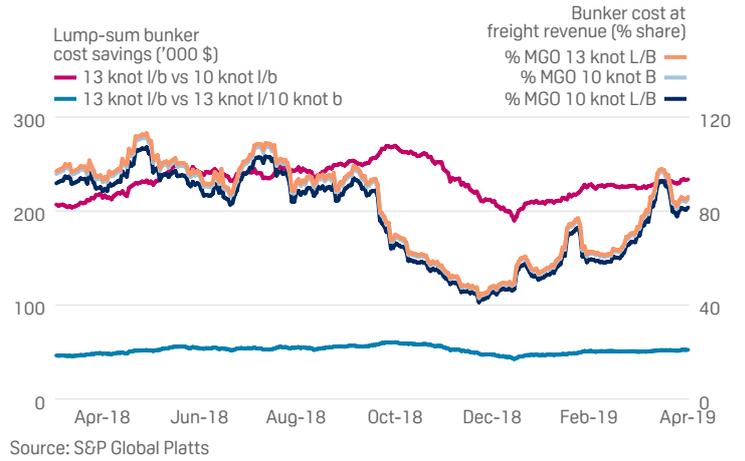
Since it will be hard for tanker owners to pass on the low-sulfur bunker bill to customers, when left to negotiating power only, slow steaming is a viable operational option for tanker owners when the market is in the charterers' favor.

To put things into a different perspective, on the VLCC US Gulf Coast-China route the bunker cost between March 2018 and April 2019 could have been reduced by an average \$50,000 per voyage if the vessel had reduced speed to 10 knots on the ballast leg rather than running at the regular 13 knots, according to S&P Global Platts data.

The average lump-sum \$50,000 in savings reduces the bunker cost share of the overall freight from an average 82% to 81%.

With speeds reduced to 10 knots on both the laden and ballast legs of the voyage, bunker cost savings could have topped lump-sum \$270,000, reducing the bunker cost share of freight revenue to an average 78%. In terms of travel time on this particular run, the 3 knots reduction increases voyage time by 13 days, if routing via the Cape of Good Hope. If past experience is any guide to the future, extended delivery times will be an

SLOW STEAMING ON THE VLCC US GULF COAST-CHINA RUN



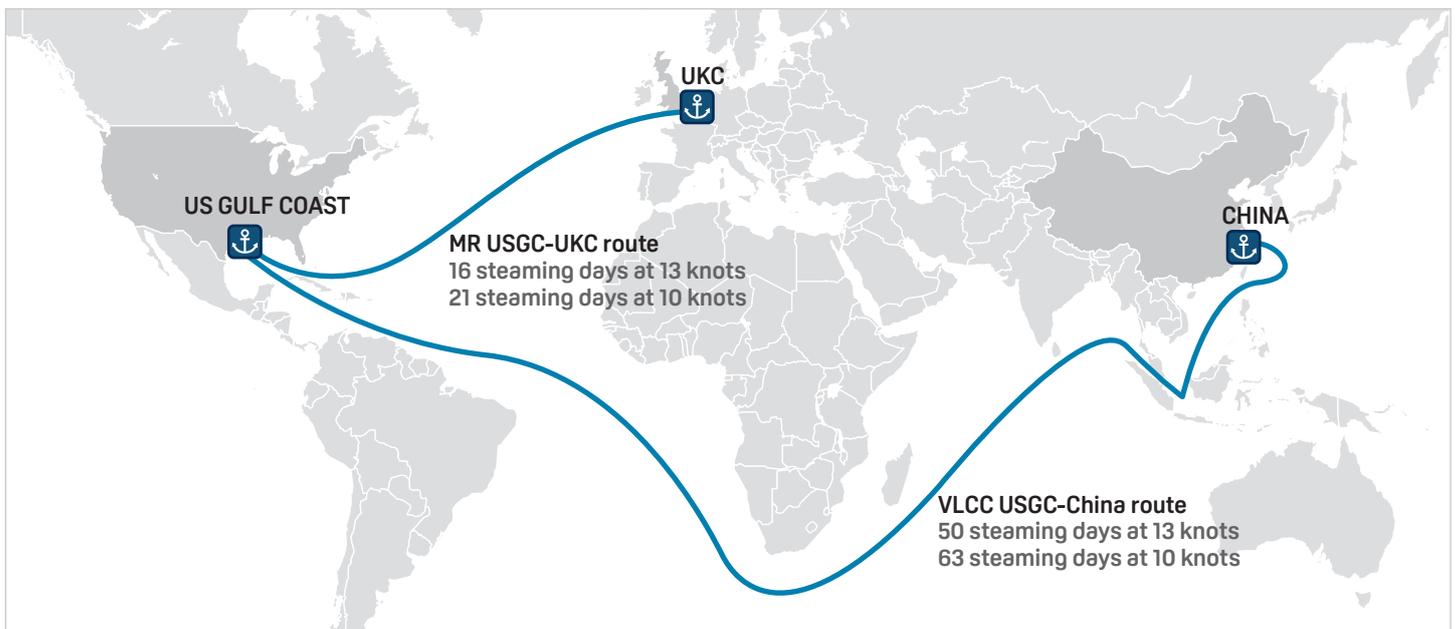
almost impossible clause to push for in charterparties, but then IMO 2020 may well shake up business as usual.

On the clean tanker side, however, negotiating reduced speeds in the charterparties is more common. While some owners are wary of operational and mechanical engine issues that can occur at 10 knots, there are owners who say they have reduced speeds to 11 knots on the laden legs and to 9-10 knots during ballast, depending on the economics of the destination market.

Tanker owners do expect there to be scope for slow steaming due to the inefficiencies the market will have to absorb in the IMO 2020 context and in preparation for it during the second half of this year. The general consensus seems to be that, at some point, at least some of these additional costs will have to be passed on.

— [Barbara Troner](#)

BALANCING ACT: TIME vs SPEED



INTERLUDE: TANKER EARNINGS POST IMO 2020

Richard Matthews, Head of Research at Gibson Shipbrokers

Whilst the precise degree is debatable, IMO 2020 is going to have a direct impact on freight costs across the industry.

In part this depends on how successful vessel operators are in passing on the cost of compliance to the charterers.

The term “cost of compliance” is used because some companies would have invested in scrubbers, on which they will seek to generate a return on their investment.

Given that scrubbers will only be installed on a small portion of the fleet, freight prices are expected to be based off a 0.5% compliant fuel, whether it be gasoil or a low sulfur fuel oil, with the most dominant fuel option determining freight pricing.

When deciding what freight level to bid during the negotiating process, vessel operators will run their \$/day time-charter equivalent calculations, and set their bid accordingly to prevailing bunker prices at the time, relative to the \$/day TCE earnings they are seeking to achieve.

The supply-demand balance at the time (i.e. how many competing offers the charterer receives for the cargo) will then determine the final fixed price, irrespective of the bunker element.

Therefore, whether or not vessel operators are able to maintain \$/day TCE earnings at pre-fuel switching levels largely depends on the supply-demand balance.

If the supply-demand balance falls in the operators' favor come 2020, then most, if not all, of the costs may be passed on.

To illustrate the impact of IMO 2020 on tanker earnings, Gibson Consultancy & Research has analyzed anticipated development on the following routes in the table below.

Gibson's base-case forecast projects a modern (non-eco, non-scrubber) VLCC will earn an average TCE of \$39,500/day during 2020.

To achieve this TCE at an assumed bunker cost (0.5% gasoil) of \$700/mt, the implied freight rate for the Persian Gulf-Japan, 260kt dirty route would be \$17.15/mt (+65% vs 2019 forecast).

For a modern (non-eco, non-scrubber) LR2, Gibson anticipates a 2020 TCE of \$22,000/day, which on the same basis equates to a freight cost of \$32.82/mt (+66% vs 2019 forecast).

Likewise, a modern LR2 tanker (non-eco, non-scrubber) trading on the Singapore-Sydney, 35kt clean route is anticipated to generate \$19,750/day, which would equate to \$40.78/mt (+67% vs 2019 forecast).

In all cases, these freight rates are the highest on a \$/mt basis since 2008.

Some market participants might be surprised to see \$/day income rising relative to 2019, when the biggest voyage expense for owners – bunkers – has increased substantially.

However, we expect supply-demand fundamentals to tighten as we move into 2020, primarily driven by a slowdown in fleet growth, growing long-haul crude trade from West to East, and increased product trading driven by new refinery startups and higher products trading volumes induced by IMO 2020.

The situation will however remain dynamic. Vessel earnings will fluctuate up and down with market fundamentals, making it impossible on a long-term basis to determine what element of the bunker cost is being absorbed by counterparties.

The key indicator will be whether or not there is a noticeable drop in TCE earnings as the 2020 switch takes place.

ANTICIPATED DEVELOPMENTS IN TANKER FREIGHT

| | AG-Japan, 260kt | | AG-Japan, 75kt | | Singapore-Sydney, 35kt* | |
|------|-----------------|--------|----------------|--------|-------------------------|--------|
| | (\$/mt) | (\$/d) | (\$/mt) | (\$/d) | (\$/mt) | (\$/d) |
| 2008 | 23.73 | 94,000 | 39.77 | 41,250 | 43.59 | 23,000 |
| 2009 | 10.54 | 27,000 | 21.09 | 16,500 | 23.95 | 9,000 |
| 2010 | 13.32 | 35,000 | 22.61 | 15,250 | 28.42 | 10,000 |
| 2011 | 12.03 | 17,250 | 25.42 | 12,500 | 33.34 | 9,250 |
| 2012 | 12.78 | 19,750 | 26.41 | 13,500 | 34.33 | 9,500 |
| 2013 | 12.03 | 19,500 | 24.85 | 13,250 | 37.11 | 13,500 |
| 2014 | 13.07 | 28,000 | 26.57 | 18,000 | 35.87 | 13,750 |
| 2015 | 16.68 | 71,000 | 27.52 | 31,000 | 37.23 | 23,750 |
| 2016 | 11.35 | 43,750 | 17.05 | 16,250 | 26.15 | 14,750 |
| 2017 | 8.25 | 18,250 | 14.73 | 9,250 | 27.77 | 12,500 |
| 2018 | 9.65 | 18,500 | 17.68 | 9,500 | 25.60 | 11,750 |
| 2019 | 11.22 | 27,500 | 21.82 | 16,500 | 27.22 | 14,500 |
| 2020 | 17.15 | 39,500 | 32.82 | 22,000 | 40.78 | 19,750 |

*Basis 30kt prior to 2018

Source: Gibson Consultancy & Research

THE CASE OF LR II TANKERS: AN INVESTOR'S DELIGHT

The upcoming new sulfur emission norms for marine fuels have wide ramifications ranging from changing refinery configurations to retrofitting of ships, juggling fuel grades and cleaning out bunker storage tanks.

However, away from the hustle and bustle of day-to-day fuel markets and trade flows, there is also a quiet asset play emerging. The IMO 2020 conundrum has caught the eye of maritime investors. Multi-million dollar financiers, bankers and sales and purchase brokers are making the rounds of owners – both existing and prospective – using all their skills to convince them to start buying vessels again before they move up in asset value, following the shift to low sulfur fuels.

There's something about MGO

Demand for marine gasoil, or MGO, is expected to at least double next year, according to projections from Banchemo Costa, a Genoa-based global shipping brokerage and consultancy. Asia currently has a hefty surplus of gasoil, and with the introduction of IMO 2020 large volumes are expected to head to European markets. MGO is moved in clean tankers and consequently freight rates for such vessels are expected to get a significant boost, making them increasingly attractive to investors.

Building ships is a time-consuming exercise running into years and implementation of new bunker standards is only months away. The clock is ticking. This is making ships that are already in the market which fit the bill increasingly attractive. The message of bankers and financial institutions to investors is unambiguous. Invest now in those ships that are expected to increase in value.

The approaching deadline for IMO 2020 has already been pushing up demand for secondhand tankers, particularly the Long Range 2 class – the preferred mode of transport for MGO as its larger size offers economies of scale, giving an edge over the smaller LR1 and MR tankers.

Sales prices for five-year-old LR2s having risen by nearly a third between the start of Q4 2018 and the end of Q1 2019, according to brokers. A five-year-old LR2 was being quoted around \$31-\$32 million in the sale and purchase market in March 2019.

I like your ship

Most big oil trading and refining companies are looking to have LR2s, but existing owners will not easily part with their younger ships. Finance executives acknowledge that it is not easy to get a young LR2 ship for purchase. Most owners S&P Global Platts has spoken to are just not ready to part with them, preferring to hold on in anticipation of further value enhancement.

Consequently, most sales and purchases are taking place in the 10- and 15-year-old segments. The going rate for a 10-year-old was around \$22-\$23 million as of March 2019,

close to the value of a five-year-old just six months earlier, according to brokers. Such a vessel would have fetched around \$19.5-\$20 million in August last year.

Such is the interest in LR2s that in January even a 14-year-old fetched around \$13.5-\$14 million for the seller, according to sources tracking deals. Such ships would hardly fetch around \$10 million in August last year.

Financiers now forecast that the number of second-hand deals on LR2s may continue to grow. If their predictions come true, sunny days should be on the way again for maritime investors.

— [Sameer Mohindru](#)

DRY BULK

As in other sectors of the shipping industry, for the dry bulk freight market the IMO 2020 0.5% sulfur cap could be a game-changer, with shipowners and charterers weighing up several strategies to manage the possible disruption from the fuel shift.

Unlike the tanker market, dry bulk vessels carry an assorted range cargoes which include iron ore, thermal coal, metallurgical coal, petcoke, bauxite, alumina, clinker (the basis for cement), slag and grains. Consequently, dry bulk vessels have a greater tendency to sail on less regular routes, making it somewhat more challenging for market participants to adapt to the changes required, and surprises that could be sprung, by the sulfur cap.

The general feeling among market participants is that the supply of low sulfur fuel oil could be strained, with just 10% of the global shipping fleet expected to be adopting scrubber systems to allow them to continue to burn high sulfur bunker fuel.

With the majority of merchant ships set to embrace LSF0, supply tightness is expected – and thus an increase in fuel costs.

In the event of the supply side for vessels looking long, the passing of the additional fuel costs to the charterer could be challenging. Sharing the extra costs may well become a point of contention between vessel owners/operators and charterers.

SCRUBBING IT RIGHT

Just like in other shipping sectors, scrubbers have become the talk of the town in the dry bulk space. Dry bulk market sources surveyed indicated that 15-20% of the Capesize fleet may be fitted with scrubbers when the low sulfur cap regulation kicks in from January 2020. The benefits to shipowners going for this compliance option will depend on the price spread between high and low sulfur marine fuels.

INTERLUDE: THE UPTAKE OF SCRUBBERS

Kenneth Bogden, S&P Global Platts Analytics

The slowdown in new vessel orders in all shipping sectors in 2019 can be explained in part by the allocation of capital toward the installation of scrubbers ahead of the January 1, 2020 implementation date for the IMO’s new global bunker specification.

As of mid-April approximately 2,530 scrubber installations had been announced in all shipping sectors.

Assuming an installation cost of \$2.5-\$3.5 million per vessel, this would amount to \$6.3-\$8.9 billion of capital committed to scrubber installations.

Approximately 75% of current orders are for retrofits on vessels already in operation and 25% for newbuilds under construction. But the lead time needed for installation is now pushing many new orders – for both retrofits and new vessels – to beyond January 1, 2020.

At this point, our current forecast is that 2,200 vessels, consuming 550,000 b/d of high sulfur bunkers, will be fitted with scrubbers by January 1, 2020.

Scrubber installations make the most economic sense for larger

vessels that consume the highest amount of bunker fuel, which tend to be dedicated to longer-haul trades. Prime candidates for scrubber installation tend to be concentrated in the oil, dry bulk and container sectors, with these three groups accounting for 75% of current scrubber orders.

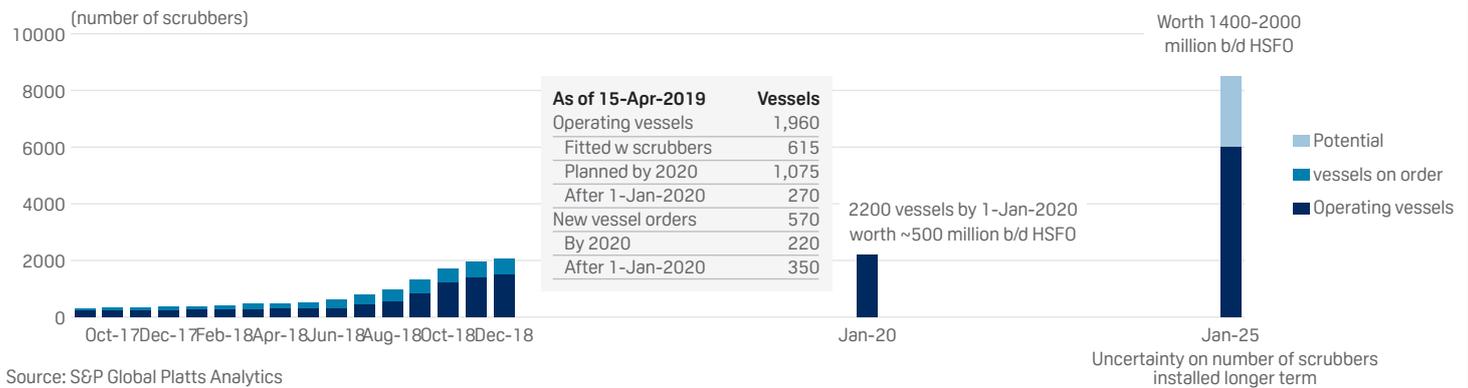
Among the vessel groups, the largest number of scrubber installations are planned in the oil sector, with approximately 750 systems on order. Orders have also been strong among bulk and ore carrier operators, with 660 systems planned. The container sector is also well represented with 510 systems on order.

That said, recently the pace of new scrubber orders has slowed. A number of reasons for the slowdown have been cited. The current backlog of orders means new orders are unlikely to be installed before January 1, 2020, so many operators considering scrubbers are opting to wait and see how the bunker markets evolves (i.e. HSFO/0.5% sulfur spreads) in 2020 before committing capital.

In addition, some ports have banned the use of open-loop scrubbers, which discharge waste water into the sea. This reduces the incentives (only marginally) for installing scrubbers.

UPTAKE OF SCRUBBERS

The pace of scrubber installations increased in 2018 but is now slowing and only a limited number of additional retrofits will be ready by 2020 and the longer term growth rate is far less certain.



And these perks may seem far from irresistible if bunker prices do not move in the desired direction.

Let us take as an example the Capesize market, which consists of vessels in the 160,000 dwt to 183,000 dwt category and primarily moves iron ore.

An average Capesize vessel would spend approximately 80% of its time sailing at sea, which equates to about 292 days a year. Assuming an average consumption of 43 mt of fuel per day, and a spread of \$200/mt between HSFO and LSFO, this would result in an estimated saving of \$2.5 million for a Capesize vessel equipped with a scrubber.

Considering that putting a scrubber on a Capesize vessel costs around \$4 million to \$6 million, it would take about

two years for the owner to recover the installation costs. This means that actual profits from the investment would only start to accrue in the third year.

There are also some market participants who expect the spread to only be about \$90/mt going in to 2020, which would bring savings to just \$1.1 million a year. So, depending on their installation costs, some owners would need about 4-6 years before they begin to see any return on the investment.

That is why, in many instances, scrubbers are perceived by shipowners as a good way to hedge their bets against adverse spreads between high-sulfur and low-sulfur fuels rather than a long-term compliance solution.

— [Andrew Khaw, Shriram Sivaramakrishnan, Han Lu](#)

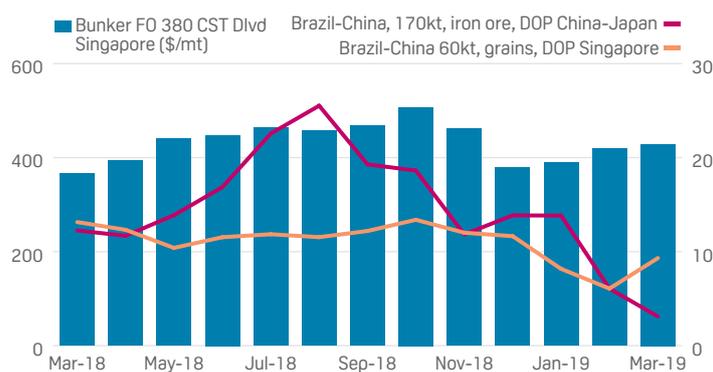
IT'S ALL ABOUT THE CASH

One of the best ways to gauge the financial impact of IMO 2020 on shipowners is to look at time-charter equivalent (TCE) earnings, which are calculated by subtracting a vessel's voyage expenses from the revenues it earns.

Platts publishes a range of TCE assessments for key dry freight routes. They are produced by putting the daily \$/mt freight on the respective routes through calculations that include fuel prices at relevant bunkering ports, fuel consumption and vessel speed, and port costs, to determine the \$/day earnings.

For shipowners to come out unscathed from the switch to compliant fuels, assuming all other variables being equal except bunker prices, TCE numbers should remain unchanged. This means that freight rates would have to move higher to compensate for rising bunker costs.

PLATTS DRY BULK TCE ASSESSMENTS vs SINGAPORE 3.5% FUEL OIL PRICE



Source: S&P Global Platts

Let us consider two scenarios, the first based on April 2019 prices for 0.5% fuel oil and the second using an assumed price for 0.5% fuel in 2020.

The TCE index for the Santos to Qingdao 60,000 mt grains route, basis DOP Singapore on April 12, 2019 was assessed at \$9,814/day, using that day's assessments of \$31.5/mt for voyage freight and Singapore delivered bunker prices of \$428.50/mt for IFO 380 3.5%.

If we use the 0.5% FOB Singapore cargo marine fuel price, which on April 12 was assessed at \$481.17/mt, then the premium in freight would be much lower. An increase of \$1.8/mt, or 5.7%, in the freight rate would be enough to secure similar TCE levels of \$9,818/day.

However, the spread between the LSFO and HSFO is expected to be considerably wider in 2020.

There is of course no way to know how wide the spread will be in 2020, but trades concluded on the Intercontinental Exchange's 0.5% marine fuels contract in March can be used as a good indication. Four one-lot trades, each equivalent to 1,000 mt/month and total annual volume of 12,000 mt, of ICE's Calendar 2020 Rotterdam FOB Marine Fuel 0.5%/3.5% FOB Rotterdam barges (Platts) traded on March 6 on the exchange at \$182/mt, \$190/mt, \$189.99/mt and \$190/mt, respectively.

An average of those trades gives us a spread of \$188/mt between 0.5% and 3.5% fuels for 2020. Combined with the reference point of \$428.5/mt for 3.5% on April 12, the price of 0.5% marine fuel in this scenario can be assumed at \$616.5/mt.

With bunker prices at those levels, the freight rates on the Santos-Qingdao 60kt grains route would have to rise

DRY BULK FREIGHT RATES AFTER IMO 2020 TO MAINTAIN CURRENT TCE EARNINGS

| Vessel type | Load port | Discharge port | Cargo size ('000 mt) | Commodity | Current freight (Singapore HSFO at \$428.50/mt) | Post IMO 2020 (Singapore 0.5% fuel assumed at \$616.5/mt) | % increase |
|-----------------|-----------------------------------|---------------------------|----------------------|-----------|---|---|------------|
| Capesize | | | | | | | |
| | Port Hedland, Northwest Australia | Qingdao, North China | 170 | Iron ore | 5.05 | 6.30 | 24.75 |
| | Tubarao, South Brazil | Qingdao, North China | 170 | Iron ore | 12.75 | 16.65 | 30.59 |
| | Saldanha Bay, South Africa | Qingdao, North China | 170 | Iron ore | 9.15 | 11.90 | 30.05 |
| Panamax | | | | | | | |
| | Hay Point, Northeast Australia | Paradip, East coast India | 75 | Coal | 11.90 | 14.45 | 14.45 |
| | Hay Point, Northeast Australia | Qingdao, North China | 75 | Coal | 10.55 | 12.75 | 12.75 |
| | South Kalimantan, Indonesia | Paradip, East coast India | 75 | Coal | 6.15 | 7.35 | 7.35 |
| | Richards Bay, South Africa | Paradip, East coast India | 75 | Coal | 11.90 | 14.25 | 14.25 |
| | Santos, Brazil | Qingdao, North China | 60 | Grains | 31.5 | 37.95 | 20.48 |
| | Hampton Roads, Virginia | Rotterdam, Netherlands | 70 | Coal | 11.50 | 12.70 | 10.43 |
| Supramax | | | | | | | |
| | East Kalimantan, Indonesia | Guangzhou, China | 50 | Coal | 6.65 | 8.00 | 20.30 |
| | Yuzhny, Ukraine | Cigading, Indonesia | 50 | Grains | 27.75 | 30.65 | 10.45 |
| | South Kalimantan, Indonesia | Paradip, East coast India | 50 | Coal | 7.85 | 9.20 | 17.20 |
| | Richards Bay, South Africa | Port Qasim, Pakistan | 50 | Coal | 11.40 | 14.45 | 26.75 |
| | Mina Saqr, UAE | Paradip, East coast India | 50 | Limestone | 7.90 | 9.20 | 16.46 |

Source: S&P Global Platts

by about 20.5% or \$6.45/mt for shipowners to maintain similar TCEs of \$9,846/day.

The big picture

Certainly, an additional charge of \$6.45/mt may be perceived as fairly small when compared to the price of the actual commodity, for instance soybeans, which currently price at around \$370-\$380/mt. However, to put that number into perspective, just on the grains trade route from South America to the Far East, which shifts more than 70 million mt/year, this would mean an extra bill of around \$450 million. And if the spread between HSFO and LSFO proves to be more dramatic, the numbers would quickly escalate.

The same factors apply to all dry bulk routes, but it is the longest voyages on the biggest vessels that are likely to suffer the most, due to the higher proportion of bunker costs in the overall figure. Looking at the whole plethora of arbitrages that the dry bulk market serves, additional costs could easily reach into billions of dollars a year.

And in order to secure the required premiums on freight and maintain their earnings, shipowners would have to be in a very strong negotiating position, which they might not necessarily have in the new decade. In this case, they could face the unpleasant reality of absorbing some of the costs themselves.

— [By Alex Younevitich, Andrew Khaw, Shriram Sivaramkrishnan](#)

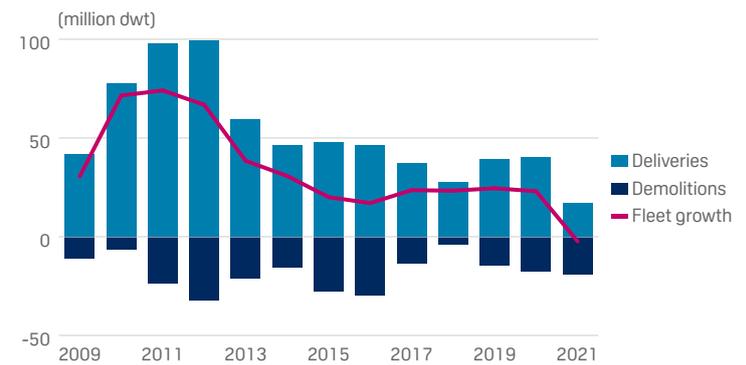
OVERSUPPLY WOES

If there's one problem the dry bulk market has in common with its peers, it's vessel oversupply. The dry bulk fleet has been plagued by strong growth for more than a decade, averaging additions of around 39.6 million dwt a year over the 2009-2018 period, according to data from shipping agent Banchemo Costa.

While owners have somewhat curbed their collective appetite for new tonnage in recent years as weak freight rates chewed into their earnings, 2018 still saw a fleet expansion of 3% as the pace of demolitions also decreased, the Banchemo Costa data shows.

And fleet growth has so far shown little sign of slowing down for the critical 2019-2020 period, when the market will be switching to the new sulfur cap and shipowners will have to fight to push freight rates to levels sufficient to at least match the extra costs. That could be hard to achieve with 46.8 million dwt of new capacity hitting the water in the period. Meanwhile recent events, like Vale's Brumadinho tailings dam collapse in Brazil and the US-China trade war, have demonstrated how unreliable demand in this market can be.

DRY BULK FLEET: DELIVERIES, DEMOLITIONS, FLEET GROWTH



Source: Banchemo Costa

Some relief could come from increased demolition going forward. There are still a good number of vessels in the fleet that could be prime candidates for recycling, especially as bunker costs go up and more modern ships gain a sharper competitive edge. According to Banchemo Costa, around 16% of dry bulk vessels are currently 15+ years old, and unless there is a new wave of orders the global fleet could see negative growth as early as 2021.

By that time the seismic shifts brought about by IMO 2020 are likely to be settling down as the industry acclimatizes to the new realities. But with the current balance in supply-and-demand fundamentals, the dry bulk market may arrive to this brave new world with a few ugly bruises.

— [Samuel Eckett, George Griffiths, Alex Younevitich](#)

CHANGING LANES?

The impact of the IMO 2020 on specific trade lanes in commodity markets served by the dry bulk fleet will differ on a case-by-case basis, with long-haul swing suppliers potentially worst affected. However, if the jump in freight stays below 20%, the effect might be relatively limited.

To take one example, the Black Sea wheat exporters Russia and Ukraine serve as swing suppliers for Southeast Asian countries like Indonesia, competing with Australia, the prime supplier for the region. Considering the wheat quality differences, the arb from the Black Sea to Indonesia is workable when the delivered price of Black Sea milling wheat is around \$10/mt or more cheaper than Australian wheat. When the spread narrows past that threshold, Indonesian buyers would generally give preference to Australian product.

If the assumed increase in freight of 20% is added to the FOB prices for Australian and Black Sea wheat, the spread

for almost the entire January 2018-April 2019 (1-16) period comfortably stays above \$10/mt.

But the fog of uncertainty remains thick when it comes to developments in bunker prices after the implementation of the new sulfur cap and freight rates have the potential to swing in dramatic ways.

The price balance between the Black Sea and Australian exporters is not set in stone either. A narrower gap between FOB prices combined with spikes in freight could render a theoretically wide-open arbitrage barely workable.

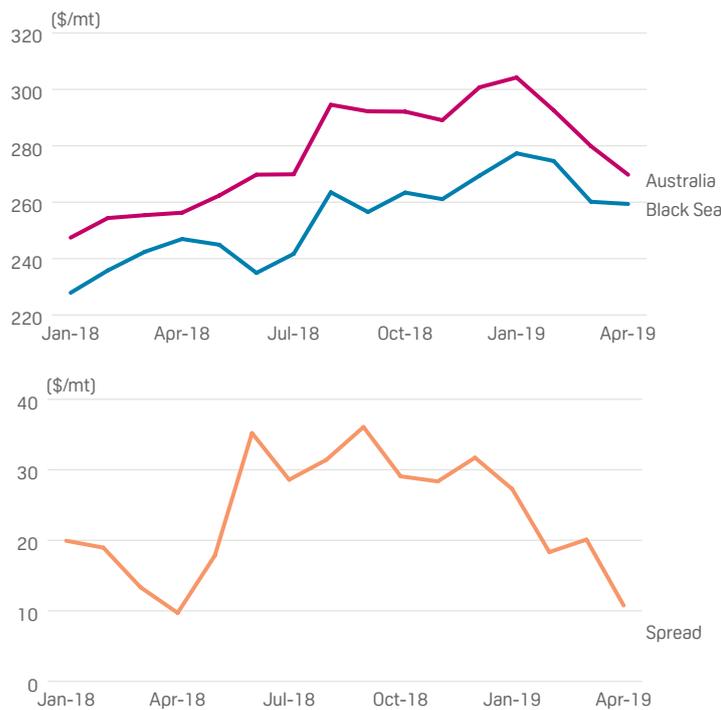
For the dominant Capesize trades though, like the iron ore routes from Brazil and Australia to China, the risks seem to be very limited.

Iron ore market participants say that the IMO 2020 regulation is not a big concern given the current low freight rates in the aftermath of a dam burst in Brazil and subsequent drop in Vale's iron ore exports, which have taken a substantial chunk out of the Capesize ton-mile demand.

According to mining company sources, the long-term impact due to IMO 2020 should be limited on iron ore prices since freight is a very small component of the delivered price.

According to Platts data, the average price of the IODEX 62% Fe CFR China benchmark in March 2019 was

WHEAT ARBS TO SE ASIA: BLACK SEA vs AUSTRALIA, FOB PRICES PLUS FREIGHT, IMO 2020 SCENARIO



Source: S&P Global Platts

\$85.70/dmt, while the average freight for the Australia-China and Brazil-China routes was only \$5.10/mt and \$11.82/mt respectively.

One iron ore trader said the impact from IMO 2020 is likely to be larger on Brazilian miners than Australian miners due to the longer voyage time from the Atlantic.

— [By Alex Younevitch, Samuel Eckett, Alexander Bobylov, Andrew Khaw](#)

FUEL AND CARGO

There are broad guidelines on what 0.5% fuel oil should be in the IMO 2020 regulations, but well defined specifications are still largely lacking. The refining industry is developing a wide range of very low sulfur fuel oils which may be compliant but also vary in some significant ways.

Shipowners are concerned about the compatibility of fuel oil procured from different suppliers that would likely be comingled in their fuel tanks if ships continue to trade and bunker as they do today.

There is no guarantee that fuels from different refiners will be compatible with each other and this might see shipowners look to procure bunker fuel exclusively from one supplier, at least initially, for the safe operation of their ships.

As a result, vessels might be restricted in the trades they take on by bunker fuel availability. This could see vessels staying more within a specific region, resulting in more intra-regional rather than global shipping markets.

Once the market matures, with more clearly defined specifications for low sulfur bunker fuel and wider availability, the shipping industry may move back to how it functions today.

At the outset, owners will also likely want to play it safe, which may mean taking on more bunkers than is required for a voyage. This could lower the quantity of cargo being loaded on the ship, which would also push up the freight rates paid by charterers.

For example, assuming that time-charter rates are similar to today with compliant fuel being \$200/mt higher than 3.5% 380 CST HSF0, if the quantity of coal loaded on a Supramax from Indonesia to India drops by 1,000 mt, the freight would increase by 15 cents/mt.

Within a reasonable boundary of estimates of time-charter rates and bunker prices, the above relationship between the actual quantity loaded and the freight rate is fairly linear in percentage terms.

— [Andrew Khaw, Shriram Sivaramakrishnan, Han Lu](#)

INTERLUDE: SAME PROBLEM, NEW FACE

Ralph Leszczynski, Head of Research at Banchero Costa Group

2020 is fast approaching, and with it the implementation of new regulations regarding sulfur content in bunker fuel which are going to have significant commercial repercussions for the dry bulk shipping sector.

There is no doubt that in 2020 compliant fuels will be more expensive than what is burned today. IMO 2020 will push overall bunker costs upwards.

However, what's really new? Bunker prices change on a daily basis, as they are directly correlated with crude oil prices. The IMO 2020 rule is an exogenous factor in many ways not that different from, say, an OPEC oil production cut or US sanctions on Iran.

Such events result in higher oil prices, and therefore in higher bunker costs.

IFO 380 3.5% fuel prices reached over \$750/mt in 2012, at a time when Brent crude prices were over \$110/barrel. Today, HSFO sells for almost half that, and MGO sells for less than \$600/mt.

Shipping didn't stop in 2012, and time-charter rates were higher back then than they are now. It will not stop next year either, even if charterers are forced to cough up \$900/mt for compliant MGO.

Nevertheless, a return to an expensive bunker environment

will have commercial implications. We are likely to see further reductions to sailing speeds, down to 11 knots or even below.

This will restrict available tonnage, and help support charter rates. It will also reinforce a two-tier market between modern eco tonnage and less fuel-efficient vessels, helping boost demolition activity.

This will be balanced, however, by a potentially negative impact on sailing distances. Higher bunker costs, and therefore increased freight per ton, could make long-haul shipments less competitive.

This could impact the relative advantage of, say, Brazilian iron ore when compared to Australian exports, or the attractiveness of Australian coal exports to China versus China's domestic coal production.

The net effect is difficult to quantify, as no one knows yet what bunker prices will really be like when 2020 comes.

Some effect, though, we are likely to see already in 2019.

The installation of scrubbers will take vessels almost a month between drydocking and repositioning, restricting supply this year.

And some non-perishable cargoes are likely to be pushed forward to the final quarter of this year, if the saving on bunkers exceeds any eventual stockpiling costs.

CONTAINERS

The container shipping industry is huge, handling over 60% of the world's seaborne trade by value. Around 150 million intermodal containers – the often colorful standardized steel boxes that can be stacked on container ships but also moved by rail or hauled by truck – are shipped annually around the world by sea, carrying anything from champagne to cars, and bananas to bookcases.

Unlike the tankers and dry bulk shipping segments, it is a consolidated space with the lion's share of the market split between three major alliances: 2M, Ocean Alliance and THE Alliance, with each containing only a handful of big carriers.

Considering the small number of big players that handle such enormous volume of trade, one might assume that liners should be in a good position to recoup any extra bunker costs resulting from IMO 2020.

However, unique challenges in the container market, including the limitations of the Bunker Adjustment Factor fuel cost recovery system, the importance of annual freight and bunker charge contracts, and persistent overcapacity, suggest a very different story may unfold.

THE BROKEN WHEEL

For the container market, bunker costs in most freight deals are handled using a mechanism commonly referred to as the BAF, or Bunker Adjustment Factor. In theory, it allows carriers to recoup the fuel expenses they incur when transporting containers.

In simple terms, here is how BAF works. For each trade lane, such as North Asia to West Coast North America, carriers take bunker prices for key ports over the chosen period of time and run them through their own calculations. These formulas take into account numerous factors, including, but not limited to: size and fuel consumption of a typical vessel on that route, the capacity utilization, trade factor between head-haul and back-haul legs, distance and perhaps most importantly, type of fuel used along the voyage.

Their customers – shippers, commonly referred to as Beneficial Cargo Owners (BCOs), or logistics and freight-forwarding companies, also known as Non-Vessel Operating Common Carriers (NVOCCs) – are then presented with a table that breaks down how much will they be charged per container on the selected routes, depending on the moves in bunker prices during the contract period.

The system appears quite straightforward and it has been employed by the industry for a number of years.

However, recent volatility in fuel oil prices, brought about by shifts in the crude oil market, has unveiled some glaring flaws in the current BAF approach, flaws that could make it a dangerous tool to use for the turbulent times ahead.

MY BAF IS BETTER THAN YOURS

The biggest problem with BAFs, especially with the upcoming global sulfur cap, is an almost a complete lack of standardization and transparency in the underlying formulas. For example, even for the two big partners of the 2M alliance, Maersk and Mediterranean Shipping Company (MSC), bunker surcharges on the same trade lanes are different.

Shippers therefore face a confusing plethora of indications and formulas, with quotes for the same routes sometimes being vastly different.

The fuels used as a reference, the ports chosen, the length of review period for bunker prices, capacity utilization and other elements may vary significantly. For 2019-2020 carriers have also come up with various new names for their BAFs, creating a series of new abbreviations for shippers to get to grips with. Maersk renamed its Standard Bunker Factor (SBF) back to BAF, Hapag Lloyd rebranded its BFF (Bunker Fuel factor) and BUC (Bunker Charge) to Marine Fuel Recovery (MFR), while MSC got rid of its multiple fuel charges FAD, EFS and BUC, replacing them with a single Bunker Recovery Charge (BRC).

To make things even more interesting, carriers often have additional emergency and low-sulfur surcharges (EFS) in addition to the BAFs. All of that is on top of the general freight element.

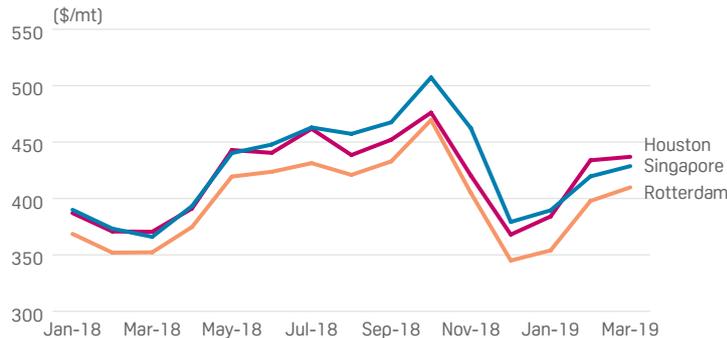
There is also the question of splitting bunker charges from the freight or including all charges together to produce all-inclusive FAK (Freight All Kinds) rates to be included in the contracts. Carriers and shippers often have opposing views on how this should be handled.

To top it all off, the freight contracts for 2019-2020 also tend to include hardship clauses, which allow further review of bunker charge mechanisms in Q3 and Q4 of 2019, when adoption of new 0.5% fuels is expected to pick up.

Naturally, the big shippers and NVOCCs responded with BAFs of their own, pushing for their adoption in contracts.

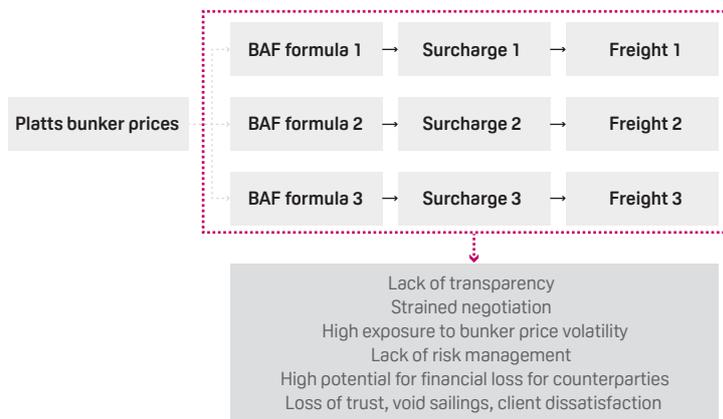
As a result of all these factors, negotiations have been frustrating, often leading to strained relationships and some counterparties ending up with a contract which includes bunker charges they do not quite understand or agree with.

IFO 380 BUNKER FUEL PRICES, MONTHLY AVERAGE



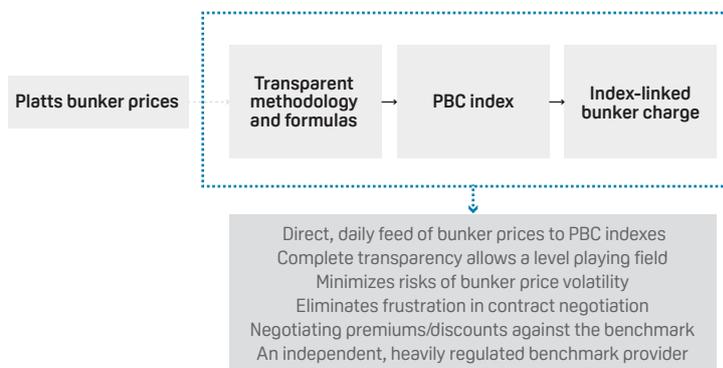
Source: S&P Global Platts

BAF SYSTEM



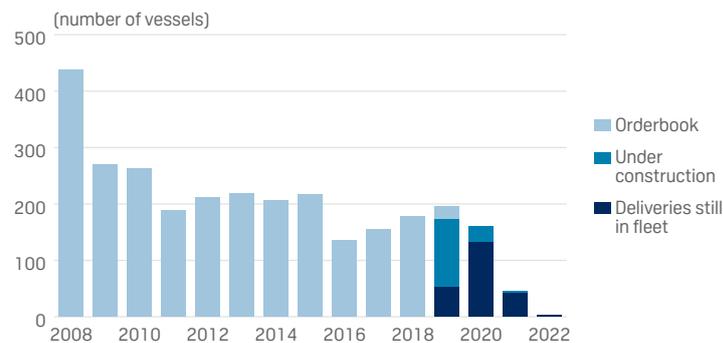
Source: S&P Global Platts

PLATTS BUNKER CHARGES



Source: S&P Global Platts

CONTAINER FLEET ORDERBOOK



Source: Affinity Research

BETWEEN THE DEVIL AND THE DEEP BLUE SEA

Volatility in oil prices during 2018 served as a warning to the container industry that BAF may be the wrong vessel for navigating through stormy market conditions. As bunker prices followed crude oil on a roller-coaster, both carriers and shippers were exposed to the adverse changes in bunker costs.

The problem is that FAK rates that include bunker charges do not follow changes in bunker expenses closely enough. First of all, the quarterly review periods of BAFs do not allow for much agility. Secondly, just like in other shipping markets, the overall freight levels will depend on the negotiating power of the counterparties.

And despite their consolidated position, carriers still have the issue of severe overcapacity on their hands, which restricts their clout when negotiating both spot and annual rates. According to data from Affinity Research, the orderbook for the container fleet stands at 380 vessels with the lion's share of deliveries expected in 2019 and 2020. Despite fairly high demolition numbers in the last few years, the fleet's capacity keeps growing as the orderbook is dominated by large vessels, especially in the 14,000-18,000 TEU+ (twenty-foot equivalent unit) range.

As a result, there have regularly been misalignments between the overall freight and bunker charges. And every time that has happened, counterparties have been losing money.

Putting the numbers into perspective, Platts' PCR1 index for overall freight on North Asia to North Continent was assessed at \$1,500/FEU (forty-foot equivalent unit) on both March 1 and July 1 of 2018.

Meanwhile the Platts Bunker Charge 1 index on the same route was \$238.38/FEU on March 1 and \$301.87/FEU on July 1.

This difference in bunker costs of \$63.49 per container at some points may have been coming out of carriers' pockets. For a full 18,000 TEU vessel on this route it would mean more than half a million dollars' loss, just for one head-haul trip.

It could quickly go the other way too, of course. Within just one week between November 19 and November 23, when freight on the PCR 1 was again unchanged at \$1,225/FEU, the Bunker Charge dropped by \$18.7/FEU. That gave carriers potential savings of almost \$170,000 per voyage.

The rigidity of BAFs and the lack of standardization led to some frustrating moments in freight negotiations and P&L management in 2018 – for everyone involved. This has been the case to an even greater extent this year as players have had to start coming to terms with the wild cards thrown up by IMO 2020, like the inclusion of compliant fuels into BAF formulas and the greater uncertainty in bunker prices over the next few years.

INTERLUDE: HOW TO RECOVER HIGHER FUEL COSTS IN THE CONTAINER MARKET

Peter Sand, Chief Shipping Analyst at BIMCO

The headline does sound like clickbait, I know, because everyone would like to know just how it can be done! But we are all scratching our heads to find out how to do it. Passing of costs down the global supply chain, crucial as it is, is much easier said than done.

Even a simple discussion with your business partners on how it could be done conceptually appears to be quite an obstacle. The 2019 Trans-Pacific Maritime Conference held in Long Beach in March showed just how far from a mutual understanding the involved parties are.

At face value, all liner companies want to do is to update the notorious surcharge known as the Bunker Adjustment Factor, or BAF. Why is this a problem? Why is it extraordinarily special this time around? Because it's always been treated like an unwanted stepchild by both parties. Did it ever work properly? Perhaps, but probably not really. As time passed it became just another element up for negotiation between the parties when deals were done.

But when bunker cost rose sharply in Q2-Q3 2018, liners pushed for a new and controversial "emergency bunker surcharge," which was loudly opposed by shippers. Now they are at it again, haggling about who should rightfully pay the extra money when fuel prices goes up.

The charter markets

This is the easy one, and it applies for all shipping sectors. Shipowners will only invest in a scrubber if the charterer requests it – and want to pay a premium for it on top of the charter hire for a ship without a scrubber installed.

Why is it this simple? Because the charterers pay for all the voyage related cost items including the fuel, not the non-operating shipowners.

For large ships on long-term charters (6-10 years), some liner companies have fixed with non-operating owners conditionally on scrubber installations. The math is simple, and the operator harvests the fuel cost spread as you go. The spread may be smaller at some times and larger at others – but it will always be there.

Will high sulfur fuel continue to be widely available?

For the liner industry, HSFO availability should not be a problem, as the scrubber-fitted ships will pass by major bunkering hubs regularly.

Bans on wash water discharges from open-loop scrubbers in selected ports and regions wouldn't change the math dramatically – it adds only few new gray hairs for those who have already invested in an open-loop scrubber. Hybrids and closed-loop go free – at least for now.

The freight markets

This is where it gets complicated, and critical. Moreover, it is crucial to note that the ability of the container shipping industry to pass on the extra fuel cost depends greatly on its negotiating power (requiring a fundamentally strong freight market).

PLATTS CONTAINER RATES vs PLATTS BUNKER CHARGES NORTH ASIA-NORTH CONTINENT



Source: S&P Global Platts

LINE IN THE SAND

The mounting displeasure towards the current BAF system has encouraged market participants to look for new ways of handling bunker charges in freight contracts. There has been an increasing shift towards “floating bunker charge pricing,” which would keep bunker charges separate from the freight element in contracts.

The natural evolution here would be an adoption of independent bunker charge indexes that would standardize BAFs to a single number on a respective trade route. Such an approach would allow a much leaner and more transparent freight trading environment, leveling the

Platts container indexes overview

- Daily indexes, offering unparalleled flexibility to choose the desired data sets
- Reflect all-inclusive freight and bunker surcharge prices on major routes
- PBC (Platts Bunker Charge) indexes directly fed by Platts bunker prices on IFO 380, MGO and later in 2019 0.5% fuel blends
- Expressed in \$/FEU, standardizing bunker surcharge calculations and allowing easier contract negotiation against an index
- Fully transparent formulas and assumptions
- Currently available for free during the market adoption stage via a Web App: <https://containers.plattslabs.com>

INTERLUDE: HOW TO RECOVER HIGHER FUEL COSTS IN THE CONTAINER MARKET (continued)

Extra costs also occur should owners decide to invest in scrubbers on owned ships. Higher freight rates, not BAFs, will then make the return on that investment.

Unless these costs can be passed on to the end-consumer through the whole supply chain, profit margins in the container shipping industry will be reduced; a failure to recover the extra fuel costs in full may even result in outright bankruptcies in the container shipping industry.

This reveals a central issue for shippers and operators. How to pin down the cost when some ships have scrubbers and others don't. A standard for BAF to recover the low-sulfur fuel oil cost increase would be nice, as would a standard to recover the cost on investing in and running a scrubber. Don't expect the competition authorities to approve it though.

Increasing work capital is an issue too. It is not widely discussed, but cash flow management will be even more important going forward as money is tied up in fuel onboard the ships.

Hoping for a full box

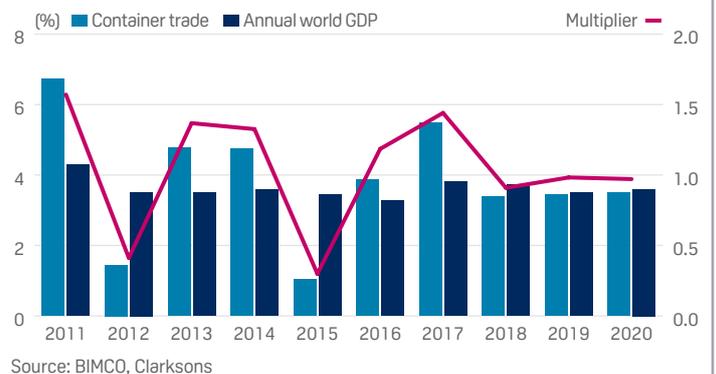
Recovering higher fuel costs from shippers gets easier if the demand for transportation is strong and overcapacity is not (so much of) a problem. The more balanced the market fundamentals are, the stronger the negotiation power of the liners will be.

For 2019, demand growth is not looking overly bright. But as fleet growth could slow too, an improved fundamental market balance is possible – but not the most likely scenario. Unchanged conditions are the most probable outcome this year.

Demand will face headwinds mainly on the high-volume long haul from the Far East into Europe. The trans-Pacific trade lane will struggle too while US retail inventories are brought down following the stocking up seen in H2 2018 in the face of tariff hike threats. Keep an eye on how the intra-Asian volumes grow this year too.

Looking further into 2020 and beyond, the lower GDP-to-trade multiplier is your guide. Coming down quite solidly in recent years, the multiplier installs a glass ceiling on demand growth.

TRADE MULTIPLIER TRENDING DOWN



Source: BIMCO, Clarksons

playing field for all players and removing strains in the process for all sides. There is a need for some sort of clear guideline the market can rely on.

That is why Platts launched its Platts Bunker Charge (PBC) and Platts Container Rate (PCR) dollar per container (FEU) indexes, which give industry participants tools for managing freight contracts on the key container trade lanes.

The PBC indexes are intended to give complete visibility into how the bunker charge calculations are produced, allowing fair deals attached to real movements in bunker prices, without the need to have to deal with numerous and diverse BAF formulas.

The issue of volatility in bunker prices is not new. It was not born with the IMO 2020 regulation and it will not go away once the switchover happens. However, the current troubles should serve as a wakeup call for the industry that the BAF wheel is broken and needs to be replaced.

— [Alex Younevitich, George Griffiths](#)

The last word

'All at sea', 'set adrift', 'rudderless' – the maritime world has never been short of evocative words and phrases to describe a chaotic situation. And as the IMO 2020 regulations approach, many still see the landscape in those terms. Even now, with just a few months left ahead of the rules coming into force, there are some who hope that the International Maritime Organization might somehow offer an extension to allow companies more time to adapt.

This point was raised during the 12th International Fujairah Bunkering & Fuel Oil Forum, which was held at the end of March. The IMO Marine Environment Division's Head of Air Pollution & Energy Efficiency, Dr Edmund Hughes, stated in no uncertain terms that there would be no delay. The industry has to be ready for the new rules – no ifs, no buts. This is, after all, the culmination of a process which began over 10 years ago, when the IMO published its revised Marpol Annex VI agreement on marine pollution in October 2008.

At that point in time, of course, shipping markets, along with the rest of the global economy, were in temporary freefall. Capesize dry bulk carriers, for example, went from record-high daily spot market time-charter earnings of over \$200,000/day in the summer of 2008 to close to zero by the end of the year. And while today's freight environment is more stable, it remains prone to extreme volatility. Short-term squeezes in tonnage availability or cargo supply can be exacerbated by a myriad of factors including, but not limited to, unforeseen weather conditions, shifting arbitrages and port congestion. Add to that trade embargoes and tariffs, along with the overarching influence

INTERLUDE: THE LIFE OF A CREDIT ANALYST

Jason Silber, Global Head of Ocean Intelligence

Though the IMO 2020 low sulfur bunker fuel regime officially starts on January 1, 2020, its major side-effect – a predicted spike in fuel prices – is expected to begin sometime before.

Bunkers are the largest component of ship operating expenses by far, so pricier fuel obviously means tighter cash and narrower margins, which would certainly concern your average marine credit due diligence analyst. However, IMO 2020 presents new challenges which will require even more scrutiny.

The Indian diesel diet

Starting in 2020, some 3 million b/d of 3.5% sulfur bunkers will have to be replaced by low-sulfur 0.5% fuel. Around half of the total will be diesel, with much of the rest comprised of new ultra-low sulfur blends.

Coming up with an extra 1.5 million barrels of diesel every day – equal to the daily diesel diet of India – is challenging and expensive, and is a big driver of the higher prices to come. The other 1.5 million b/d of new blends will present buyers with potential compatibility, performance and contamination hazards since these blends can't be mixed and could cause engine damage.

Historical perspective

The expected spike is not unprecedented – bunker prices have always fluctuated considerably.

In summer 2008, the Platts Bunkerworld 380 Index (BW380) peaked at just over \$750/mt – a record high – but by January 2009, with much of the world mired in economic crisis, it had dropped to \$225/mt.

The BW380 closed in on \$750/mt again in March 2013 but tumbled all the way to \$150/mt by January 2016. It recovered to \$506/mt by October 2018, then slipped to \$355/mt by the start of 2019, but was back up to \$436/mt in late March 2019. And through it all, shipping companies and bunker suppliers have largely coped – some better than others.

The question now is whether the spike to come will keep fuel prices at historically elevated levels on a permanent basis, representing a "new normal."

Costs and credit

Consider an operator of 10 medium-sized bulk carriers and buying around 6,000 mt of fuel a month – that would cost about \$2.6 million at the late March price of around \$430/mt. However, a \$200/mt spike could add \$1.2 million to that monthly bill, or more than \$14 million annualized. The operator would clearly try to push at least part of this cost onto the shipper, but what if the shipper doesn't cooperate? Either way, ship operators will have to seriously cut costs, with a return to slow-steaming mentioned most prominently as one way to do so.

The extra cost of fuel also has a knock-on effect: credit availability. Fuel buyers in the \$300 billion bunker market rely on extensive credit lines from suppliers and banks, as well

of fleet growth and cargo demand, and the result is a market that can be difficult to navigate.

It's in that context that the apparent indecision that some shipowners and operators have shown so far in regard to the upcoming regulations should be seen. The past decade has not been a particularly profitable one for the shipping industry so it's no wonder vessel owners are reluctant to make expensive investment decisions, such as investment in scrubbers, before the full impact of the new rules is clear.

This is why the issue of bunker cost recovery is of such concern to market participants. The cost of doing business looks certain to rise under the new regulations, further eroding already tight profit margins. As demonstrated across this report, there are various pricing tools available to help mitigate the impact of increased costs, along with operational tools such as slow steaming.

But there's no simple solution. Ultimately the ability of shipowners and operators to recover the additional costs in the form of higher freight rates comes down to their negotiating power, which in turn depends on the balance between cargo demand and vessel supply.

Of course, the shipping industry is complex, with each sector having its own peculiarities. Although IMO 2020 represents a daunting challenge for some, it also brings great opportunity. It's notable how the upcoming regulations have encouraged some investors, who had backed away from the industry in recent years, to take a fresh look at investing in shipping. Potential areas of interest include product tankers, in particular the Long Range 2 class, as demand for moving MGO increases. Dry bulk trading patterns could be altered by increased fuel costs, while container markets continue to face supply-side challenges with limited demand upside.

It's clear that the complexities and variance within the shipping world have given rise to different strategies to cope with IMO 2020 and it remains to be seen how exactly this will play out.

In the longer term, however, new challenges loom. The IMO intends to reduce greenhouse gas emissions from shipping by 50% compared to 2008 levels by the year 2050 and major shipowners are already planning towards that. In comparison, while the current furor around IMO 2020 might seem like a sea change right now, in retrospect it could just feel like a drop in the ocean.

— [Peter Norfolk, Editorial Director, Global Shipping & Freight, S&P Global Platts](#)

INTERLUDE: THE LIFE OF A CREDIT ANALYST (continued)

as coverage from credit insurers, none of whom are likely to expand credit to cover the entire increase in bunker prices. In addition, creditors are likely to view their customers as higher credit risks, which could push them to tighten payment terms.

Many observers expect small bunker traders to vanish in an IMO 2020 world, with an inability to raise additional capital or secure higher credit lines from suppliers leaving them powerless to compete with better-financed, larger rivals. On the other hand, a savvy and experienced bunker trading outfit could actually leverage its smallness: unlike the big traders, such a trader doesn't need \$5/mt to turn on its lights in the morning, providing it with a competitive edge.

Payment reputation and beyond

In the pre-2020 era, Ocean Intelligence's counterparty assessments of ship operators and bunker resellers have revolved mostly around credit – how a company pays its bills. These assessments are a composite of a company's history, operations, management, overall market, likely financial condition, and payment references from creditors.

While sustained high fuel prices in a post IMO 2020 environment obviously present an elevated credit risk, the appearance of the new low sulfur blends will require closer scrutiny of performance risk as well.

Ship operators and bunker sellers will have to be carefully watched for their compliance with the strict new sulfur rules.

Bottom line

We've looked at the challenges of a "new normal" environment of long-term higher fuel costs. We'll conclude with a very brief look at the near-term prospects for the major shipping sectors in the shadow of IMO 2020.

The bulk market appears to be in trouble due to lower demand from China and its trade dispute with the US, compounded by the aftermath of the Brazilian dam collapse which has severely disrupted iron ore exports to the Far East.

The tankers market is widely expected to recover in 2019, as crude oil tanker demand will benefit from more refinery import runs to meet demand for low sulfur fuels. Product tankers could do brisk business carrying compliant fuel from refineries: after all, 3 million b/d is a lot of tankers' worth.

Finally, container carriers are barely breaking even – and that's before the fuel price spike. Expect additional mergers and pray for no Hanjins.

In the emerging new environment of tighter cash and shorter payment terms coupled with new compliance, performance, and contamination challenges, the life of your average marine analyst is about to become a little bit more complicated.

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