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*The **Global Maritime Weekly Digest**, based at **Southampton SOLENT University**, provides a regular flow of maritime news and analysis, of significance in a global context.*
Topics covered include shipping fleets and management, seaborne trade, ports, shipbuilding, ship recycling, maritime policy and regulations, and seafarers' labour.

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Editorial comments

- The ***world orderbook for new ships***, as a proportion of the existing fleet, has completed a full cycle by returning to the low point reached twenty years ago (item 1). From a high point almost a decade ago when orders were equivalent to over half of the fleet then existing, today's orders represent only about one-tenth of current capacity. Where the cycle goes from here is unclear.
- Preoccupying shipping professionals are the ***increasingly complex regulations*** affecting the industry. Item 2 examines several aspects – the EU's General Data Protection Regulation coming into effect this month, greenhouse gas emissions reduction, collection of data on emissions, ship recycling regulations and preparations for the sulphur emissions cap.
- How ships will comply with the new ***sulphur emissions controls*** scheduled for implementation globally at the start of 2020 remains a puzzle. Four aspects are considered in item 5: the huge uncertainties, quality of information circulating, the IMO regulation, and opportunities.
- When do ***economies of scale*** in ship size begin to become diseconomies? Item 4 looks at the problem for the container shipping sector in deciding how big may be too big, especially the handling of such gigantic vessels at loading and discharging ports. Ensuring adequate capacity utilisation is also a key imponderable for the service providers.
- An improving trend towards ***rebalancing in the bulk carrier market*** seems to be under way, but how far has this pattern progressed since the low point two years ago? A brief analysis in item 3 assesses the trend and emphasises differences among the main bulk carrier size groups.

Richard Scott MA MCIT FICS
editor (email: bulkshipan@aol.com)
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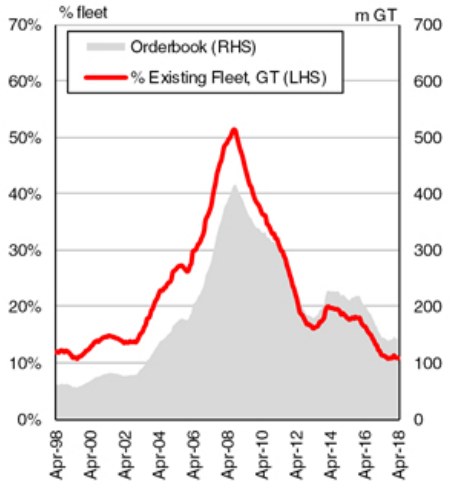
(1) Clarksons Research, 20 April 2018

Orderbook Offering An Echo Of The Distant Past

The shipping markets are renowned for their volatility but today there is one aspect of the industry where the last cycle has taken 20 years. The orderbook expressed as a percentage of the existing fleet, a widely used statistic, is basically back where it was twenty years ago, following a very long cycle indeed, and the trajectory in the meantime is well worth a closer examination.

Graph of the Week

Global Orderbook Now Back To Square One?



Source : Clarksons Research

The graph shows the development of the size of the global orderbook, both as a percentage of the existing fleet in GT terms and in absolute GT terms, over the last twenty years. Orderbook and fleet statistics basis the global merchant shipping fleet (100+ GT); for more details see *World Fleet Register* and *World Fleet Monitor*.

The author of this feature article is Trevor Crowe. Any views or opinions presented are solely those of the author and do not necessarily represent those of the Clarksons group.

Nothing Changes?

A lot can change in 20 years. Back in April 1998, the global fleet stood at 0.5bn GT compared to 1.3bn GT today, and global seaborne trade that year totalled 5.6bn tonnes compared to 11.6bn tonnes in 2017. However, one of shipping's key orderbook statistics has not changed too much, and give or take is back where it was 20 years ago. At the start of April 2018 the number of ships on order stood equivalent to 3.7% of the existing fleet, the lowest figure on record over the last 20 years, whilst in GT capacity terms, the orderbook stood at 10.8% of the existing fleet, almost back to the 10.7% seen last in mid-1999 (and briefly in September last year). Although the orderbook figures are much bigger in absolute terms (141.9m GT on order today compared to 61.0m GT in April 1998), today's orderbook in relative terms looks historically low.

The Best And Worst Of Times

In the intervening period, the orderbook has not been a case of major volatility, but rather more like a long cycle with a big upward trend followed by an equally large downward one (see graph). The 2000s saw the great ordering boom with an average of 106m GT per annum ordered 2003-08, before the onset of the global financial crisis. This saw the orderbook increase to its peak at 51.4% of the fleet in Sep-08. But ordering slowed following the crash, and continuing deliveries (despite some slippage and cancellation) started to erode the orderbook; 90m GT per annum was delivered in the period 2009-13. This was then of course compounded by generally more limited ordering in the post-downturn period. In the years 2009-17 an average of 60m GT per annum was ordered; that is almost 40% less than the average 2003-08.

Back To The Future

The obvious question is when might the next cycle begin, or could this orderbook statistic go even lower? Well, taking into account projected deliveries in 2018 of around 55m GT, if contracting continued at the run rate of the first quarter of the year (12.2m GT ordered, across 192 ships), without accounting for any cancellation, the orderbook would end the year at below 10.5% of the projected fleet in GT terms, for the first time since 1996. The headline orderbook statistics may not have changed much over 20 years, but

the financing and shipyard capacity environments (and the global fleet) certainly have, providing the backdrop to an orderbook still slimming in relative terms.

Long Cycles

So, lots has changed in two decades, but in shipping there's at least one metric that looks very similar to 20 years ago. Shipping generally offers speculators plenty of volatility to manage, but for long-term trend spotters it isn't immune to some very long cycles too. Have a nice day.

Source: Clarksons

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(2) Lloyd's List, 19 April 2018

Five things to watch: Regulation

Anticipating regulatory changes to shipping was once a slow and relatively predictable affair. That is no longer the case. A series of decisions culminating with a landmark deal in mid-April to adopt a Paris Agreement for the shipping industry and cut ships' greenhouse gas emissions is just the latest example of a shift in environmental responsibilities for the industry to contend with, but the complexity of the legislative landscape is growing at a fearsome pace

by Anastassios Adamopoulos

Environmental regulation is the long-term trend, but shipping must first contend with a wide-reaching transparency regulation coming soon

THE decarbonisation pathway, backed by data reporting responsibilities, will be long and no doubt contentious, but the industry must also deal with recycling risk, deal with its digital deficiencies and come to terms with its obligation to its employees' data and by extension its shortcomings in safeguarding against ambitious hackers.

And that's just the headline items that have made it to this consolidated short list of pressing issues — there's plenty more where that came from.

Transparency for all

Perhaps the single most important and consequential regulation coming into effect this year is the European Union's General Data Protection Regulation, affecting all maritime sectors, employers and employees that have ties to the EU.

The GDPR, kicking in on May 25, applies to companies that are either based in the EU, operate in the EU or have EU staff and crew, as well as EU-flagged vessels, and ushers in a new era of accountability and transparency for shipping towards its staff and its jurisdictional overlords.

Companies that fail to comply with GDPR could face fines of up to 4% of annual global turnover or €20m ($24.8m), depending on which is greater.

Staff and crew will have direct control over what personal data companies hold and how they use them.

Consent by these subjects for the use of their personal data needs to be unambiguous, which means that the notoriously complex terms and conditions offered until today will not cut it.

Subjects also have the "right to be forgotten", denoting the deletion of personal data, under certain circumstances.

GDPR also has far-reaching effects for the disclosure of cyber attacks and data breaches. Amid recurring anecdotes of companies fending off continual infiltration attempts, the GDPR will force firms that suffer a data breach to report it to the relevant authorities and the people whose data was affected within 72 hours.

However, disclosure is only necessary if it "is likely to result in a high risk to the rights and freedoms of natural persons".

Companies can also reserve the right to not notify those subjects if they have measures in place that protect the data, such as encryption, or takes other measures after the attack that guarantee that the "high risk" is no longer likely.

Given the showcased susceptibility of the shipping industry to cyber attacks, epitomised in the attacks on Maersk and the public prominence of the problem only just recently, companies must be alert and aware of these new rules or risk incurring these costly penalties. The EU has proven time and again it does not take enforcement lightly and this is an issue that extends far beyond the maritime sector.
Discerning the case in which the risk does or does not warrant notification will be a business as much as a legal matter, and the expertise of the latter will be instrumental in ensuring companies are in their employees' and the EU's good graces.
Could the GDPR push the sector to invest more in cyber security to avoid exposure?

Preparing for a low-carbon reality
The IMO ratified a greenhouse gas emissions reduction strategy last week, committing to slash international shipping's GHG emissions by at least 50% by 2050 compared to 2008 and try to phase them out as soon as possible.
While the non-binding strategy and its targets will be revised in 2023, this initial agreement provides a compass for the shipping industry and its trajectory over the next 30 years.
The development of low-carbon fuels, and eventually zero-carbon, has clear regulatory support and a low-carbon reality should now be within shipowners', shipyards' and manufacturers' strategy.
But before that can happen, short-term measures will be developed and adopted in the next five years, including one in particular that has often divided opinion, affecting shipyards and owners alike.
As part of the strategy, shipping will need to reduce its carbon intensity compared to 2008 by 40% by 2030 and revise, "with the aim to strengthen", the Energy Efficiency Design Index, the sector's first mandatory decarbonisation measure.
EEDI phase two will come into effect in 2020 but the details around the implementation of the third phase are yet to be agreed.
The provisional schedule brings in phase 3 in 2025 and forces all vessels built after then to be 30% more efficient than the existing fleet.
"Aim to strengthen" could be interpreted in a number of different ways and the next MEPC, convening in October 2018, will be decisive in making headway for any amendments and in giving an early signal to yards and owners as to where the decision is headed.
A final report on the EEDI will be discussed during MEPC 74 in spring 2018.
Despite its progress, the EEDI remains a contentious measure and it is too early to tell whether regulators stick with the 2025 and 30% targets.

Data fuels the future
In this environment of increased regulatory scrutiny, the onus also will also fall on shipowners to collect and provide hard data that will eventually inform those longer-term decisions and shed light on the latest levels of emissions from international shipping.
Emissions data will be instrumental in creating long-term decarbonisation policy, and hence the measures that underpin it, as was evident during April's MEPC 72 when certain countries were vocal that there should not be an absolute emissions reduction target before the IMO's Data Collection System yields results.
Under the IMO DCS that launched on March 1 this year, vessels above 5,000 gt must provide information on fuel consumption and emissions levels to their flag states beginning on January 1, 2019. Flag states will subsequently submit these figures to the IMO, which will then publish annual reports on the data.
Data collection begins in just over eight months, which means that owners need to be developing plans accordingly to meet those deadlines.
For many, the remainder of 2018 and 2019 will offer a taste of the administrative onus of adhering to reporting requirements of two separate jurisdictions; the IMO and the EU.
Under the more stringent EU MRV regulation that is already in effect, vessels calling at EU ports have to inform the European Commission of a number of operational parameters including emissions levels, fuel consumptions and cargo carried per voyage. Having theoretically already gotten their monitoring plans assessed by independent verifiers, shipowners should currently be in the process of monitoring that relevant data.
Companies have to submit their first reports to the Commission and their flag states in 2019, by April 30.
Alignment of the two systems remains elusive but is not impossible. The cautious welcome of the IMO's GHG strategy by the commission keeps that potential alive. But with the revision of 2023 expected to

generate similar battlefields, the MRV remains an important pressure point for the EU and looking for alignment before then would be optimistic to say the least.

Recycling the right way

An essentially disregarded — very possibly unintentionally — regional regulation on the end of a vessel's life is suddenly causing headaches for shipowners as a legal case proves a willingness to enforce and penalise.

The first successful prosecution against a shipowner (for violating the EU Waste Ship Regulation in March this year for recycling four vessels) was a wake-up call that at least certain jurisdictions in the EU, including those where some of the Continent's largest ports are found, will not tolerate any perceived violations.

Shipowners must seriously consider these rules, however unfavourable they may be, and resort to legal advice to guarantee compliance. That necessitates greater due diligence during a transaction to avoid a Seatrade situation and could affect relationships and business with cash buyers, who are the link between owners and recycling facilities.

The EU Ship Recycling Regulation replaces the WSR but only for EU-flagged vessels, and forces owners to recycle them in one of the list of approved facilities.

The list currently includes only EU shipyards but the commission is planning on updating the list with non-EU facilities. An EU official told Lloyd's List that as of April 19 there have been 24 applications from non EU-ship recycling yards, including 11 Indian, four Chinese, seven Turkish and two from the US. Site inspections started in March and will continue until after the summer. Once completed, these assessments will then be presented to EU member states.

At the same time the Hong Kong Convention, the IMO's tabled regulation for ship recycling, is a long way from ratification; just six countries of the minimum 15 needed have jumped on board, accounting for well below the gross tonnage and total recycling volume required for the convention to come into effect.

But with the shadow of the EU regulation looming large, significant gains are on the horizon, as Japan and India, a major shipowning and ship recycling country respectively, closely consider ratification with decisions for both potentially coming later this year.

If and when the HKC is ratified, alignment of the EU regulation would be the next desirable step. Neither is likely to happen anytime soon given the current pace of developments and owners must understand that EU regulation is the law of the land for the foreseeable future.

Planning for the storm

The incoming 2020 fuel 0.5% sulphur cap will probably have the greatest operational expenditure effects of any of the new rules on account of both its immediacy and the monumental fuel switch that it requires — and will empower.

MEPC 72 signed off on a widely supported carriage ban on the use of non-compliant fuel, excpet where vessels are equipped with scrubbers, giving the industry the first measure in the uphill battle of compliance.

With less than two years to go, the use of expensive low-sulphur fuels is comfortably the preferred option compared to scrubbers and LNG propulsion, which require heavy singular investments and come with further complications given the aforementioned clampdown on fossil fuels and subsequent concerns over long-term availability of heavy fuel oil.

Regulators now take on the difficult task of guiding the sector through what is expected to be a tumultuous transition into a low-sulphur future.````

The IMO Sub-Committee on Pollution Prevention and Response convening in the summer is expected to develop a set of guidelines meant to address the potential geographical discrepancies in low-sulphur fuel, identify where non-compliance may be justified and how that non-compliance shall be reported.

The guidelines should be officially adopted at MEPC 73.

These guidelines will not solve fundamental market concerns but will reveal how much officially sanctioned leeway owners can expect, particularly in the early days of the cap, amid an underdeveloped supply infrastructure.

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(3) Clarksons Research, 20 April 2018

Bulkcarrier Earnings: How Far Have We Come?

Following the historically challenged market seen in 2016, earnings in the bulkcarrier sector improved substantially in 2017, with more positive demand side trends across a number of dry bulk commodities seeing the erosion of some excess capacity. Trends in 2018 so far have been mixed, so just how far along the road to rebalancing has the bulkcarrier sector come?

Climbing Through The Gears

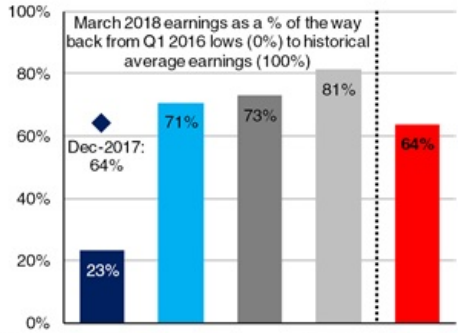
Having fallen to a 17-year low of just $6,218/day in 2016, average bulker earnings increased 77% y-o-y to $10,986/day in 2017, driven largely by an acceleration in dry bulk trade growth. In 2018 so far, the bulkcarrier sector has seen further gains from last year, with average earnings in Q1 up 24% y-o-y at $11,393/day. While the percentage increases sound impressive, how does recent market performance compare historically?

Graph of the Month

Tracking The Progress Of The Bulker Sectors

The bars show the relative position of earnings in each bulkcarrier sector in March 2018, between the lowest monthly average seen in Q1 2016 (0%) and average earnings in January 2000-March 2018 (100%). The dark blue diamond shows the position of Capesize earnings in December 2017. Capesize and Panamax data basis average spot earnings. Supramax and Handysize data based on average trip earnings from 2002 and 2010 respectively, and 6 month timecharter rates previously.

The author of this feature article is David Whittaker. Any views or opinions presented are solely those of the author and do not necessarily represent those of the Clarksons group.



Earnings, $/day:	Capesize	Panamax	Supramax	Handysize	Weighted Average
Hist. Avg.	34,123	17,414	17,463	12,593	**16,388**
March 2018	8,719	13,851	13,988	10,802	**11,928**
Q1 2016 Low	1,071 (Mar-16)	4,709 (Feb-16)	3,113 (Feb-16)	3,089 (Feb-16)	**3,636 (Feb-16)**

Source : Clarksons Research

One way of putting this into context is to look at how far earnings have come from their lows in Q1 2016 compared to long-term averages. Using this approach, average bulker earnings in March 2018 of $11,928/day were 64% of the way back to the historical average (based on Jan-2000 to Mar-2018 data) from the bottom of the cycle in February 2016 (when average bulkcarrier earnings fell below $4,000/day). While market conditions are still below the long-term trend, the more positive fundamentals over the last 18 months or so have driven a significant overall improvement.

Capesizes Making A Pit Stop

However, this improvement has not been uniform across all size sectors recently. Average Capesize spot earnings stood at just $8,719/day in March 2018, down 38% y-o-y, reflecting weak Chinese iron ore demand in Q1 as well as a number of seasonal factors. This represents an upwards movement of just 23% from the March 2016 low of $1,071/day towards the historical average of $34,123/day. However, just three months previously in December, Capesize earnings stood at $23,737/day, the highest monthly average in four years, and representing a level around 64% of the way back towards today's historical average.

Smaller Sectors Accelerating

In contrast to the Capesize sector, the smaller bulker sectors have seen further gains so far this year. Panamax and Supramax earnings both reached multi-year highs of almost $14,000/day in March 2018, equivalent to over 70% of the way back to historical average levels from the lows seen in early 2016. The Handysize sector has also seen a clear improvement, with average earnings of $10,082/day in March representing an upwards movement of more than 80% of the way back to the historical average. In

general, the smaller sectors have benefitted from improved growth in coal, grain and minor bulk trade over the last year.
So, even while the Capesize market is currently taking a partially seasonal pit stop, average earnings in the bulker sector are now statistically more than half of the way back towards the historical average. While there have already been twists and turns along the road towards rebalancing, it is clear that the bulker sector as a whole has come quite a way from the historical lows seen back in 2016.
Source: Clarksons
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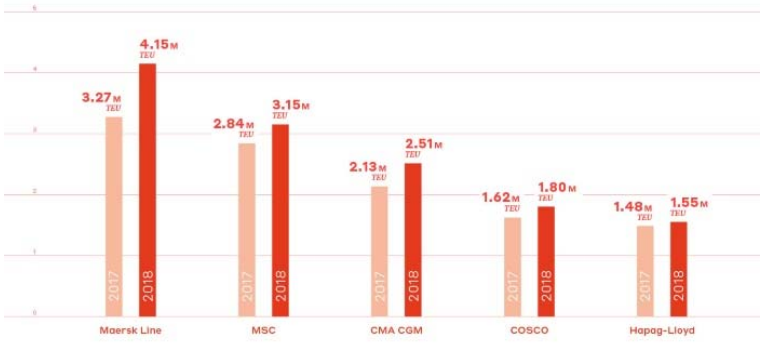
(4) Hellenic Shipping News, 21 April 2018/ WSP Maritime

The Ceiling On Economies Of Scale In Container Vessels

January 2018 was a record month for new vessel deliveries, with shipping lines seemingly intent on continuing to order new, bigger ships. As a result, the active total fleet deployed has increased by some 10.8% in the last year, and to date it is now just under 21 million TEU. New, larger tonnage is expected to be introduced on the main arterial trade lanes of Asia-Europe and Asia-North America, with existing tonnage cascading onto secondary trade lanes. This will increase the average size of vessels deployed across all the main trade routes.

Increase of Existing Vessel Sizes

"Jumboisation" is back on the agenda. Some lines looking to increase the capacity of their 13,800-14,000TEU vessels by lengthening them to achieve a capacity of 17,000TEU, making them more suitable for the main trade lanes. There are twenty-one ships currently in the process of being converted. This additional capacity and slot cost savings will come at the expense of a slightly slower (-2 knots) speed. Hyundai Merchant Marine (HMM), a member of the 2M Alliance, has also decided to launch its own stand-alone Asia-Europe service as of April 2018. The existing 2M Alliance expires in April 2020 and HMM has also suggested that they would consider ordering 20,000 to 23,000TEU vessels in the future. This suggests that they are on the lookout for a new alliance position, deploying these Ultra Large Container Ships (ULCS) that would be bigger than any other vessels yet sailing.



COMPARISON OF FLEET CAPACITY FOR TOP FIVE LINES (2017 AND 2018)

Shipping Lines are Investing in Size

The appetite of shipping lines for more and larger tonnage has continued unabated, despite their struggles to maintain consistent operating profits over the course of 2017. Additional tonnage means more space to fill as well as further, future pressure on sea freights and operating profits. Nevertheless, all of the main shipping lines have increased their fleet capacity.
Although some of these increases were the result of acquisitions – Hapag-Lloyd acquired UASC and COSCO acquired OOCL – there is nevertheless a general trend towards new, additional, and much larger vessels. CMA-CGM's new flagship, the CMA-CGM Antoine de Saint Exupery, is now CMA's largest container vessel in active service, with a capacity of 20,776 TEU, an LOA of 400m, and a width of 23 rows (59m). This vessel can carry up to twelve tiers of containers in its holds, one tier greater than other recent ULCS, giving it the extra capacity compared with other recent newbuilds.

LNG Fuel is Better for the Environment, but Requires More Space

CMA-CGM is also the first of the large container shipping lines to order liquefied natural gas (LNG) ready vessels. Nine of the 22,000TEU newbuilds that are due for delivery in 2020 will be designed with engines that can use LNG. This fuel provides significant environmental benefits when compared to heavy fuel oil (HFO), including 25% less CO2 emissions, 99% less fine particles and sulphur emissions, and 85% less nitrogen oxides emissions. The design of the newbuilds has required additional space for the LNG fuel storage, however, which requires more space for conventional bunkering.

If CMA-CGM wants to increase future capacity beyond 22,000TEU while maintain LNG capabilities, there will be a challenge in finding the room for both the additional capacity and the additional fuel storage.

How Big Can Container Vessels Become?

Is there a limit on how big container vessels can be? A great deal of sabre rattling by the three largest shipping lines would suggest that there are only limited physical restrictions on the maximum container vessel size, but is this really true?

While lines could physically build longer, wider, and deeper vessels, doing so would exacerbate the challenges they already face of getting their ULCSs operated efficiently at container facilities at either end of their main trade lanes. There also remains size restrictions on vessel at the Kiel, Suez, and Panama Canals. These could be regarded as short-term challenges that can be resolved with time, but it would certainly create some serious mid-term challenges if vessels are to increase their capacity substantially.

Port-Side Problems

At present, ports are already struggling to handle 18,000 to 20,000TEU vessels and some are not even trying, further reducing the number of alternative terminals open to the shipping lines that have deep enough water, long enough quays, and cranes with wide enough outreach to offer the basic requirements for serving ULCSs. It is also important to consider that these physical requirements are in addition to the extra power/electricity needed to handle larger vessels. This is causing further restrictions for some terminals.

By far the main restriction, however, is increasingly the speed at which containers can be handled from the vessel and what happens to these containers once they have been discharged from the vessel into the terminal as well as the transition to/from the gate or intermodal yard.

The increase in the number of units handled per call puts increasing pressure on the required terminal area. Whether for direct onward local delivery, gateway cargo located relatively close to the terminal, or for transhipment units that need to be moved across the quay either to a stack or waiting feeder vessels, it stresses the port's infrastructure.

Overloading the Hinterland

This is especially felt on the road, barge, and rail networks designed to move cargo to its ultimate destination. Too many containers dropped in one location will see hinterland infrastructure placed under immense pressure, resulting in serious delays in the inland haulage and final delivery times.

As there are only a finite number of container terminals that can handle the ULCSs at present, the container exchange per call is increasing each time the size of vessels increases. Unless more terminals become capable of handling the big ships, the container exchange per call will continue to increase and put more pressure on the hinterland connectivity of a port. In this eventuality, terminals will have to be faster in order to keep up with the larger vessels and larger consignment size.

There is a body of opinion that maintains that the container exchange required at each port of call for a 20,000TEU vessel on a European rotation with four direct calls is already at the limit of a port's capabilities as far as successful hinterland connectivity is concerned. In other words, with an exchange of 9,000 to 10,000TEU per call, there are operational difficulties involved in getting some of the cargo to its final destination. Even one customer complaint is one too many.

Is Bigger Better?

Any increase in capacity of the vessels will only increase the number of problem shipments, suggesting that a capacity greater than 20,000TEU exceeds the perceived financial benefits scale that comes from using a larger vessel.

There are new generation designs for vessels of 22,000TEU and 24,000TEU, proving that larger vessels can physically be built, with additional LOA and breadth and only a marginal increase in draught requirements, but will vessels of this size require an increase in exchange that results in too many problem shipments?

	TEUs	LOA (m)	Beam (m)	Max Draught (m)
Maersk "EEE"	18,270	400	59.0	15.5
CSCL/UASC Vessels	18,400	400	58.6	15.5
MOL TRIUMPH	21,700	400	58.8	16.0
New Generation I	22,000	430	59.0	15.5
New Generation IIA	24,000	450	59.0	15.8
New Generation IIB	24,000	450	61.5	16.5

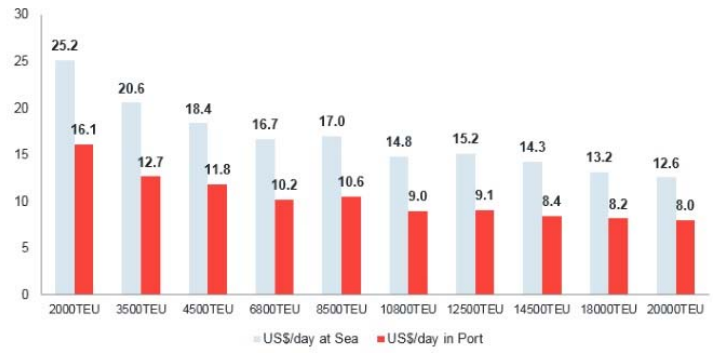
CURRENT AND POTENTIAL CONTAINER VESSEL SIZES

The Limits of Economies of Scale

It is also worth assessing how far the benefits of the economies of scale go. The financial benefit of increasing a vessel from 8,500TEU capacity to 10,800TEU vessels and again from 14,500TEU to 18,000TEU is clear (when vessels are fully utilised), but diminishing returns for vessels from 18,000TEU to 20,000TEU and >20,000TEU suggests that increasing the capacity of vessels beyond 24,000TEU is unlikely to provide the necessary, significant economic benefit required for lines to want to order still bigger tonnage.

While we don't have actual newbuild prices for vessels of 22,000 or 24,000TEU capacity, some assumptions can be made based on the existing price of 18,000 and 20,000TEU vessels. It is extremely likely that the benefit of increasing a vessel from 20,000 to 22,000TEU capacity will only result in a combined "at sea" and "in port" benefit of US$0.6/TEU and a further combined "at sea and in port" diminishing returns of US$0.4/TEU for vessels of 24,000TEU capacity.

The increasing difficulty of ensuring that the vessels are full in order for lines to enjoy the benefits of scale, coupled with the physical and hinterland challenges identified above, suggests that vessels are unlikely to grow beyond 24-26,000TEU capacity in the future.



THE SCALE OF ECONOMIES OF CONTAINER SHIPS (US$/FEU)

Moving Forward

Major shipping lines have already had to acquire other shipping lines and form new alliances to ensure that big vessels can be well utilised by loading combined alliance volumes, but there remains only limited further scope here. It remains likely that the "marriages of convenience" that form the structure of the current alliance groups will remain in place until such time as world container trade demand catches up with the world container capacity (supply) and the market recovers.

Once this has happened and container vessels reached their maximum theoretical capacity of 24,000 to 26,000TEU, then it seems extremely likely that major shipping lines will once again want to go their own way and enter divorce proceedings with their alliance partners once they are confident that they can fill large vessels entirely with their own cargo. This isn't likely to happen in the next five years by which time, who knows what further advances will have been made in the container industry?

Source: WSP Maritime

(5) Hellenic Shipping News, 27 April 2018/ Exhaust Gas Cleaning Systems Association

Scrubber Technology and Preparing for the 2020 Sulphur Cap

The only commercial technology solution currently available to meet compliance with MARPOL Annex VI Regulation 14 is an exhaust gas cleaning system, namely scrubbing. Remember Regulation 14 requires ships to use 0.10%S fuel in ECAs and 0.50%S fuel globally from 2020. There are also regional ECAs with slight variations. Examples include the 0.50%S in some rivers and coastal areas in China.

The EGCSA was formed in 2008 by the founding members to protect the industry in its fledgling state at the time. Today, I believe and attempt to ensure, it represents high standards, quality, ethical behaviour and honesty. EGCSA offers impartial technical information, advice and opinions on many current and future issues and challenges related to emissions reduction and in my capacity as its director that I am speaking at this conference.

There are, in reality, about 17 months left to prepare strategies and implement actions to be ready for the global Sulphur Cap around September 2019. Leave it any later than that and there is a considerable risk that a fleet will not be in compliance on 1st January 2020.

In a presentation at the 2020 Sulphur Cap Conference on 17th April, David Cox of Nord Rederei advised that his company had no idea what their compliance will look like. David's remark is a common theme I have heard over and over again.

There are four areas that seem to be part of the reason for the continuing hiatus of activity to meet compliance. In my view, these are uncertainty, quality of information, IMO regulations and, lastly, opportunity or possibly lost opportunity.

Uncertainty

Starting with uncertainty there are many questions we continue to hear. Only on Monday, an EGCSA member emailed asking me if it was true the MEPC 72 had agreed to postpone 2020. That was a rumour in his market. Let us be clear: there is no postponement planned.

Other uncertainties include

- Will 2020 be enforced?
- Will High Sulphur Fuel Oil (HSFO) be available? There is no question it will be in surplus and available at rock bottom prices. However, the supply chain may have to be re-started if demand drops in 2020 and does not resume for a year or two.
- Should we choose alternative fuels?
- Do scrubbers work and can they really be installed in a retro-fit situation?
- How long does a retro-fit take?
- Aren't scrubbers banned in open loop mode in ports in Europe and don't they simply transfer pollution from air to sea?

Quality of information

Uncertainty can also be considered as affecting the quality of information in ship owner's hands. It could also be labelled lack of real research on the part of ship-owners or opinion sourced data. Too often, a throw away comment such as, "open loop scrubbers are banned in Europe" becomes the factual position. The facts are that open loops scrubbers are used in all of Europe except Belgium where government legislation imposed a ban on all water discharges long before scrubbers came to the market. Germany also has a partial ban in some of its rivers but not everywhere. The facts are that there is no evidence whatsoever that scrubber discharges have or do cause harm to the aquatic environment. There is a large body of research on this from land-based scrubbers such as those at the Mongstad refinery in Norway or the scrubbers installed at Longannet Power Station in the Firth of Forth near Edinburgh.

Ship operators need to improve their information base and ensure it is reliable and factually accurate in order to make informed choices and the best decisions possible.

Some of the information they should be clear on would include;

- How are scrubbers installed in a retro-fit situation? Ship operators could talk to some of the specialist installer companies and ask to see case studies. They could also talk to some of the RORO companies in Europe. What were their main problems? Are they still a risk?
- When do scrubbers become cost effective? Is there an engine size or fuel consumption minimum to make the payback period for an installation cost effective? If the payback is short and there are no other downsides, then there is a real incentive to fit scrubbers.
- Ethically, are scrubbers likely to be better than a fuel switch? Professor Ralf Zimmermann, Full Professor of analytical chemistry at the University of Rostock has suggested that, at worst, both solutions have similar health effects in highly populated ports. At best, scrubbers may result in slightly less harmful emissions than using 0.10%S distillate.
- What are the real implications of the fuel compliance route? Is it simply using gas oil at 0.10%S for a few bunkerings. Ship owners should talk to Danny Evans of AW Shipmanagement, whose company has done the changeover for its ECA fleet. It has secured its long-term fuel supply, but it has also experienced non-compliance detentions. It is for ship owners important to examine real case studies and the facts. The fuel switch option may not be as simple as we think.

The paucity of real facts and the extent of opinion driven data is worrying. Those who don't research the facts but rather provide their top management with information based on hearsay or assumptions may find they have made the wrong choices come 2020.
The EGCSA website can be used to source some of the information the industry may need. Access and use of the material is free to all. If data from the website is used in public, we would appreciate source acknowledgement.

IMO regulation

There has been a lot of press coverage of the ban on the carriage of High Sulphur Fuel Oil on ships not fitted with scrubbers. MARPOL Regulation 14 was poorly written in terms of compliance enforcement. The carriage ban is trying to fix that with more poor and not very well thought through regulations. The only benefit of the carriage ban is that is will give Port State Control (PSC) the legal power to tackle non-compliance rather than simply report it to the FSC. That is assuming that PSC has the resources needed to undertake the carriage ban inspection – a difficult and very demanding inspection.
As always with IMO regulations, there is an attempt to be fair and allow for circumstances outside the control of the ship operator to comply with the regulations.
This brings me on to the FONAR, the "Fuel Oil Non Availability Report". On the face of it, it seems a simple idea to implement. All that ship owners need to do is, just state in the report why they could not obtain the compliant fuel and hand it to the PSC and FSC. Well, life it not that simple. How many ship operators accept a charter to anywhere without working out things like: is this a war zone?, can victualling be done?, are fuel and lubes available?, what are the berths like?, do we have a ship's agent etc.? The FONAR is not a get out of jail free card and certainly needs to be used sparingly or perhaps not at all.
Just like the uncertainty surrounding ship operator decisions, the IMO has not yet prepared the ground for effectively managing the implementation of the global sulphur cap. Hence, there is a week long intersessional in July to propose, discuss and resolve the what-ifs. Ship operators and others in the industry are encouraged to contribute to the intersessional. I would therefore urge you to talk with your representing organisations and governments as soon as possible.

Opportunity

Let us finally look at the topic of opportunity.
The shipping industry lost an opportunity to make the transition to lower sulphur emissions much less painful and much more gradual. That would have been the effect if the industry had embraced an emissions trading scheme. This would have worked a little like banking and trading; a scheme that makes it possible for emissions allowances and reductions in emissions beyond the set limit to be monetised. Such a scheme would have allowed a much more cost effective and practical transition to take place.
But that is history. The opportunity we have now is a choice between ensuring that compliance choice results in, at worst, a neutral outcome, or to strive for a better outcome that results in a competitive advantage.

Conclusion

The street market trader lives on his or her knowledge of the competition and the customers.

The ship operator needs to invest in building that same awareness based upon facts and not opinion. All ship operators should:

- Understand the most cost effective and secure method of achieving compliance for their fleet.
- Be able to be in compliance well before the 1st January 2020.
- Work out how they can demonstrate compliance so their ships do not need to be inspected. Emissions monitoring and the availability of that data seems a sensible and rational option.

Once the strategy and plans have been crafted and are ready for implementation, ship owners need to be sure to let their key stakeholders know. If they need HSFO in certain ports or 0.10%S fuel in others, it would be wise to advise the bunker suppliers of their estimated demand. Likewise, they may need to make changes to their lubricant stems. Ship suppliers can only make preparations if they know what is going to be required.
There is a lot more to reflect on concerning the situation we are facing as 1st January 2020 looms, but I hope the topics of uncertainty, information, IMO regulations and the real opportunities to be had provide some food for thought.
Source: Don Gregory, Director of the The Exhaust Gas Cleaning Systems Association (EGCSA) & Technical Director Gulf Oil Marine
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(6) Lloyd's List, 19 April 2018

Five things to watch: Marine insurance

The sector is quietly implementing technological innovations while at the same time dealing with consolidation and the fall-out from cyber attacks and natural disasters

by David Osler

Technology and industry consolidation are making the marine insurance sector stir up historically high levels of interest

MARINE insurance is facing a period of disruption, whether it finds that development congenial or not. There will be good and bad effects from new technology, while the decision of the British electorate to quit the European Union, market forces making for consolidation, and climate change will come together to shake things up in the months and years ahead, we predict.

InsurTech
Long seen as basically a poor cousin of FinTech, InsurTech has emerged as very much a watchword over the past year. What is more, marine insurance — not really big business for today's corporate insurance giants — has somehow found itself at the centre of the revolution.
Nicholas Berry, a partner at Norton Rose Fulbright, specialises in this field and has been watching developments closely.
"I have watched as it has affected the commercial sector, the retail sector and now the marine sector. 2018 feels to me as if it is going to be the year of MarineTech," he says.
The state of play is symbolised by the recent launch of what has been hailed as the world's first blockchain platform specifically geared to the niche of InsurTech.
The effort — led by professional service major EY and Guardtime — has plenty of big name backing from the likes of Maersk, Microsoft, Willis Towers Watson and XL Catlin.
It is said to be able to do just about everything short of making your morning cuppa. It does this by creating asset data and linking it to policy contracts.
Other projects include an artificial intelligence-powered marine insurance analytics platform from UK company Concirrus. The firm's software provides behavioural analysis that considers a ship's location, speed and other factors to enable it to offer more accurate underwriting models.
As our sister publication Insurance Day has reported this month [April], Concirrus has very recently signed a partnership deal with EY, which should enable it to scale up the offering in the near future.

"Data as a tool for underwriting is becoming discussed much more," suggests Marcus Baker, chairman of the global marine practice at megabroker Marsh. "There will probably be some potential impact on decision-making."
Andrew Taylor, who will shortly take over as chief executive of the UK Club, is even more enthusiastic.
"This new technology is likely to have a big impact on the risk profile of a ship, and enable premium rating to use enhanced-data tools," he maintains.

Cyber risk
InsurTech may be the future, but as we now know, there is a dark side to technology, too. Cyber risk, as it is known, has been highlighted through hacking incidents at Maersk and Clarksons.
The world's biggest shipping and ports group found itself anything up to $300m out of pocket after the collateral damage it sustained from rel="noopener noreferrer" what was basically a malware attack on Ukraine last year.
The world's biggest shipbroker is known to have been blackmailed, although it has chosen not to reveal the nature of the data breach.
Joe O'Keeffe, global head of insurance at Ince & Co, points out that most marine policies — other than those designed specifically to cover cyber risk — contain a cyber exclusion clause, often in the shape of the Institute Clause CL380
"As far as we know, however, CL380 has never been tested in the courts and there is some concern as to whether it is adequate in the modern environment," he noted.
"This is because it may be construed as being limited to circumstances in which cyber is used as a means of inflicting harm, and accordingly, inapplicable to accidental failure."
Norton Rose Fulbright partner Chris Zavos added that the clause is being revisited, and that a revised wording is likely at some point.
"It is a combination of pressure from the market, and potential issues around coverage if there is a cyber attack, and how that impacts on a loss that might also have been caused by a traditional marine peril."

Climate risk
The International Maritime Organization has only just reached a landmark deal to halve greenhouse gas emissions from shipping by 2050.
But that deadline remains many years away, and climate change is happening here and now. Natural catastrophes — or 'nat cats' in insurance jargon — have been on a steady upward trend since 1980.
The year 2017 was one of the worst years in living memory for nat cat claims, with the insured damage caused by hurricanes Harvey and Irma alone running to $50-70bn, according to Bronek Masojada, chief executive of Hiscox.
Swiss Re modelling tools have simulated hurricane event scenarios in which insured losses have topped $250bn.
Marine insurers inevitably find themselves in the firing line, too. For instance, a hailstorm in Germany in July 2013 saw hailstones the size of tennis balls, up to 11 cm in diameter.
This led to $3.6bn of damage, $2.6bn of it insured, at Bremerhaven, making it the most expensive hail event in history. Much of the bill was for cars stored in the port.
Meanwhile, the European heatwave of 2003 was a 500-year event and devastating for inland shipping.
All of this will inevitably affect marine underwriting. At the very least, the risk will have to find a realistic reflection in pricing.

Axa takeover of XL points to more consolidation in hull
Insurance consolidation has been with us for several years, but Axa's rel="noopener noreferrer" takeover of XL Catlin — itself the product of merger in 2015 — underlines just how fast rationalisation is transforming the sector.
Both companies are significant players in hull and machinery. However, industry sources have told Lloyd's List that the latest deal will not in itself be sufficient to harden the perennially soft marine hull market.
Even so, the combined entity will likely prove a formidable force in mainland Europe, in which Axa traditionally has a strong position that is not always apparent when seen from London.
XL is a major presence in hull insurance through its XL Catlin affiliate. Axa is better known in the marine insurance world for cargo insurance and is strong in this sector in Germany and southern Europe.

Brexit may spur shift away from London

With less than a year to go before Britain leaves the European Union, not even the outlines of the terms of departure are yet available to British businesses.

Let's not mince words. That's an utterly astonishing state of affairs, and certainly not good news for those charged with planning what their companies' work in EU markets in the years ahead.

Marine insurers are working out their fallback positions anyway, and making sure they retain single market access, even if Britain does not.

While Shipowners and the London are already honorary Europeans, being regulated from Luxembourg for reasons not related to Brexit, the remaining British International Group affiliates are also setting up shop inside the EU.

The North and Standard, for instance, have opted for Dublin, while the UK Club has chosen Rotterdam and Britannia for Luxembourg, making the landlocked Grand Duchy quite a little P&I hub on the quiet.

Lloyd's List has spoken to several of the clubs involved, and all are insistent that this will not be a brass plate exercise. These will be small but substantial offices, with real underwriters writing real business, they stress.

Some even see a silver lining in all this, in that serving continental European members closer to home represents a boost for levels of customer services.

In the long run, this development may even prove to be a spur towards the establishment of more offices outside the UK, according to the UK Club's Andrew Taylor.

"With Brexit pushing many insurers to establish a subsidiary within the EU, there may be greater regionalisation in future," he notes.

"Most of the clubs have offices in the key markets, the UK Club has offices in Greece, Japan, Hong Kong, Singapore, the US and China.

"One key aspect of this is whether regionalisation will impact the distribution channels, or indeed how digital technology affects the broker market in future."

The situation is less urgent for the major hull underwriters, which are part of bigger groups with existing operations inside the European Economic Area anyway, insiders added.

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