Southampton SOLENT University

Global Maritime Weekly Digest

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9 January 2018 **issue 103**

*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

- A ***cautious approach to global shipping markets*** in 2018 is strongly recommended by one of the leading industry associations (item 1). There are great uncertainties about how demand for shipping capacity will evolve in the main sectors, suggesting that restrained fleet growth on the supply side will prove advantageous in maintaining freight rate recoveries.
- Cogent reasons exist for doubting the value of ***long term world fleet forecasts***. One recent example of the genre concludes that the merchant ship fleet will grow by an average of just over four percent annually during the next five years (item 2). While it is perhaps not entirely fair to suggest that such precise estimates have no useful value, the main variables – newbuilding deliveries and recycling – cannot be predicted accurately over such an extended period.
- In recent years ***oil pollution from tankers*** has been very limited (item 4). Dramatic incidents seen in the past have been absent, although this week's tragic events resulting from a collision off the China coast are a reminder that marine hazards remain potentially potent.
- Challenges in ensuring compliance with and enforcement of ***sulphur emissions regulations*** are discussed in item 5. Only a short period remains before implementation two years ahead.
- The ***China-owned merchant ship fleet*** (world's third largest by nationality) expanded rapidly last year. Further robust growth seems likely during the next twelve months and beyond (item 7). Many new bulk carriers, tankers, container ships and other vessel types are on order for China-based investors. During 2018 a substantial total of newbuilding deliveries is expected.

Richard Scott MA MCIT FICS
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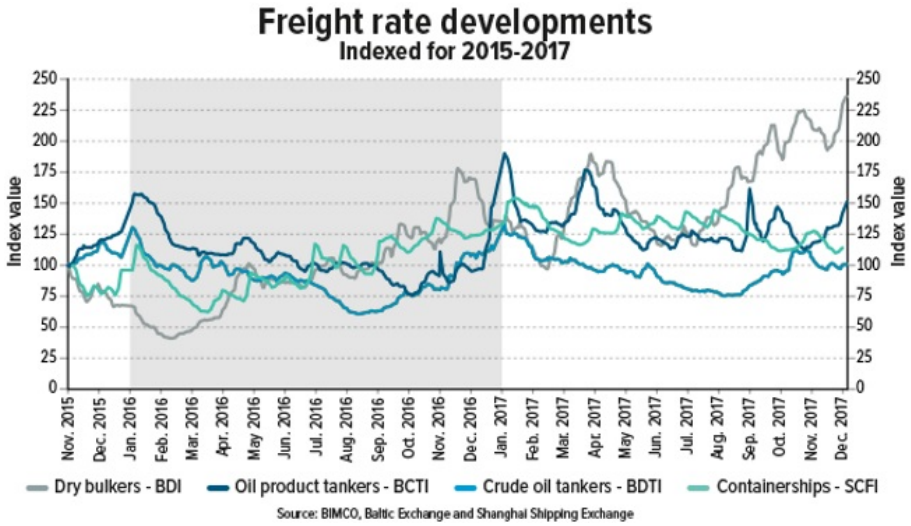
(1) BIMCO, 4 January 2018

2017 Was Year of Change in Shipping – Caution Required in 2018

2017 was a year of change. Much of it for the better, but a cautious approach is still needed for 2018 to maintain the progress already achieved.
Economic growth has accelerated in Europe, Asia and the Americas since mid-2016, and the IMF now expects the global GDP growth rate to raise slightly in 2018 to reach 3.7%, up from 3.6% in 2017.
In 2018, the dry bulk sector is likely to improve the fundamental market balance further, if operational speeds do not increase. For the container shipping sector, the improvement in 2017 will carry on into 2018, where fleet growth rate seems to match demand growth, and as a result no big freight rate changes are expected to lift earnings. For oil tankers, there is a potential upside in low fleet growth for both crude oil and oil product tankers. The growth in demand – coming from increased oil consumption and a return of more price arbitrage-driven trading activity – depends on a better-balanced oil market. BIMCO expects that the world's oil demand will only marginally outstrip the world's oil supply, and this will be a negative factor for the oil tanker market.
China is at the centre of shipping activity. Being the one driver of dry bulk shipping demand growth, China has also taken a giant leap in hiking crude oil import levels during 2017. By introducing robotics into its enormous manufacturing sector, China aims to remain the world's top exporter of containerised goods too. There is a lot of competition in that field, and maritime supply chains will change a lot over the coming years.



The Global economy: getting closer to its full potential
Increasing slightly on gains made in 2017 – global GDP growth rates are forecast to stay around 2018 levels, all the way into 2022 (source: IMF).
Nevertheless, the world trade volume growth rate (goods and services) is expected to drop from 4.2% in 2017 to 4.0% in 2018.
The shipping industry has adapted quite well to a lower level of demand growth over the past couple of years. The next challenge is to understand that this is as good as it gets, and to avoid wishful thinking that demand levels will increase significantly – as that will not happen. The biggest risks to the forecast remain on the downside, meaning that fleet could grow too much or demand too little.

Dry bulk: keep slow steaming around to safeguard recovery
We did expect markets to improve in 2017, but the extent of it was a positive surprise. We didn't expect that 2017 would see a demand growth rate of 5%, nor a fleet growth 3.2%. A much weaker growth rate

was forecasted for both. However, Chinese demand has exceeded expectations on the upside and as that happened, fleet growth exceeded expectations on the downside, denting some of the upside potential.
As the rest of the world either imports a steady amount of dry bulk commodities or slows down its imports – China's importance to the market becomes even more evident. Once again it was the steel industry dominating the development. Iron ore imports were up by 7% on 2016, as steel production grew by 6.3% (2017-9M).
At the end of 2017, BIMCO continued its "Road to Recovery" market analysis, with the third update outlining the projected path towards a profitable industry. It highlighted that 2018 could become the first year since 2011, with the industry returning a profit, but we shouldn't be too hasty. It is mostly in the hands of the shipowners, as fleet growth may increase as little as 1% if handled with care. As BIMCO's expectations for demand growth in 2018 is slightly higher than that, fundamental improvements will follow if slow steaming is kept up.
For 2018, the challenge is for owners and operators to maintain slow steaming. BIMCO expects the supply-side to grow by around 1% in 2018 (3.2% in 2017E)

Tanker: Product tankers may breakeven in 2018
The prolonged draw down of global crude oil and oil product stocks proved to be a drag on tanker demand throughout 2017. While this came as no surprise, many PR departments from oil producers were busy telling us that the oil market fundamentals would balance "any day now".
In Q4, the oil producers gave in, playing the blame-game for a while before extending the OPEC supply deal into 2018. However, believing in the return of stronger tanker demand sooner rather than later, may have prompted tanker owners to postpone demolition.
Not until we see global oil stocks at a much lower level, can we expect a renewed interest in seaborne oil trading activities that will lift oil tanker demand from its current subdued level. However, the first half of 2018 may pass by before that happens.
The rise of United States (US) crude oil exports to long-haul destinations was markedly the positive story in 2017. That development increased tanker demand on top of the expected increase of oil imports into India. Chinese imports of crude oil also went beyond expectations, increasing tonne mile demand by as much as 13% in the first nine months of 2017. Such a high growth rate is not expected for 2018.
As forecast, increased demolition activity amongst crude oil tankers and oil product tankers wasn't enough to prevent freight rates from falling; still reaching a four-year high, but falling slightly short of BIMCO's scrapping forecast. Shipowners postponed the lion's share of demolition until the second half of the year, never really biting the bullet to reduce fleet growth significantly.
Tanker demand growth in 2018 is expected to prolong the trend seen in 2017; growing imports in the Far East and growing exports from the US. This is set to benefit VLCC and to some extent suezmax. The fate of aframax is closely linked to regional Asian and European demand where the growth rate is expected to be lower.
BIMCO expects the crude oil tanker segment to see a net fleet growth of around 2% in 2018 (5.1% in 2017E). We estimate that the supply side growth rate of the oil product tanker fleet to be around 1.8% (4.2% in 2017E). We expect demolition of oil tanker capacity to be on a par with 2017. Overall, we see oil product tankers operating in an improved market, whereas crude oil tankers will continue to struggle.

Container: industry needs to hold on to profitability
BIMCO expected 2017 to be a better year for container shipping compared to 2016. We got just that: freight rates went up and their volatility reduced. Demolitions went down, and the idle fleet was generally reactivated.
The 2017 demand growth rate is heading for +5%, which is the highest in six years. After a terrible 2015, port throughput has gone up and up, growing as much as 7.7% (quarter-on-quarter) in Q3-2017 (source: Alphaliner). As demand rebounded, combined with a multi-year low fleet growth rate in 2016, the fundamental market balance improved. In 2017 we have not seen such an improvement. The fundamental balance seems almost unchanged, as reactivation of idled ships lifted actual fleet growth beyond the nominal TEU growth rate of 3.3%.
In September, the ordering drought came to an end. Twenty new orders for 22,000 TEU ships broke a 21-month lull in newbuild activity. They will be delivered in 2019-2020.

This means that the nominal fleet growth level for the container shipping industry over the next few years is set for around 4%, which leaves little room for fundamental market balance improvements. As a result, increased earnings must come from: continued cost-cutting exercises and permanent slow-steaming to keep fuel costs on a tight leash. On top of that: operational efficiency gains and positive demand growth gain more boxes on the individual ships. The latter means harvesting some of the economies of scale the industry relies heavily upon – with the large volumes coming from front-haul trades.
Profitability is up for grabs across the container shipping industry, if demand growth remains in the region of 4-5% and actual fleet growth is handled with care.
BIMCO expects the container shipping segment to see a net fleet growth of around 4.1% in 2018 (3.3% in 2017E).
Source: Peter Sand, Chief Shipping Analyst; BIMCO
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(2) Lloyd's List, 3 January 2018

Global shipping fleet to grow 4.1% every year until 2021

Expected growth mainly attributable to tanker tonnage increase, according to Lloyd's List Intelligence report

THE global shipping fleet is expected to rise by an average of 4.1% per annum over the next five years to 1.65bn dwt by the end of 2021, according to a report from Lloyd's List Intelligence.
"This is a slightly higher fleet growth than in the previous five years, mostly due to the high fleet growth in different tanker segments," the report said.
The world fleet will reach 126,670 vessels by the end of 2021, compared with 122,935 as of December 2017, or 1.39bn gt, according to LLI.
In terms of gt capacity, the tankers segment is set to increase the most over the next five years, by 112m gt. The bulk and general cargo segment will add 100m gt and the containership fleet will grow by 69m gt.
From a fleet size perspective, bulk and general cargo vessels are the largest segment, comprising 37% of the total in gt terms, followed by tankers, with 30% and containers and ro-ro on 20%.
Measured by the number of vessels, offshore and service vessels had a 27% stake, bulk and general cargo vessels had 20% and the tanker fleet had 13%.
Over 2016, 69.2m gt was delivered to the global fleet, while an extra 72.3m gt is expected to have been added in 2017. In the coming three years, about 82m gt to 87m gt is likely to be delivered per year.
In the period covering 2017, LLI expects the bulk of tonnage delivered from tankers to be 36% or 26.3m gt, then from bulk and cargo vessels at 32% or 23m gt, followed by container and ro-ro at 22% or 15.6m gt.
In terms of physical vessel numbers, the offshore and service segment will take up a 27% share of 2017 deliveries, followed by bulk and general cargoes at 26%.
Capacity expected to exit the market is forecast at 25.4m gt or 1,512 vessels for the period covering 2017.
In the longer term, capacity exiting the industry is forecast to decrease 43% to 14.5m gt by the end of 2021.
"Removals of dry bulkers are expected to be only 5.7m gt in 2021 (only half of the 10.7m gt this year), due to the relatively new existing fleet," LLI said. "Container and ro-ro removals are expected to drop from 7.1m gt to 2.6m gt in 2021."
In December, the global orderbook stood at 5,614 vessels at 222m gt or 16% of the world fleet. Breaking it down by country, China had 88m gt or 39% of the orders, South Korea had 28% or 62m gt of the orders and Japan had 29% or 42m gt of orders.
South Korea had the lion's share of tanker orders, with 43% or 39m gt of the orderbook, while China dominated the bulk and general cargo orderbook, with 56% or 64m gt.

The world's second-largest economy also took the biggest slice of the orderbook for container and ro-ro vessels at 44% of the total at 21m gt. Meanwhile, South Korea took the largest share of the offshore and service orderbook at 38% or 8.9m gt.
In vessel numbers, 37% of the global orderbook will see vessels constructed in China, followed by 15% in Japan and 14% in South Korea.
"Of the orders placed in China (2,094 vessels), 36% are bulker and general cargo ships and 29% tankers, followed by container and ro-ro (19%). Tankers have a 70% share of the orders placed in Korea (762 vessels)," said LLI.
"Bulker and general cargo accounts for 44% of the Japanese orderbook (828 vessels), followed by 40% of tanker ships. European yards have 899 of the total 5,614 current orders and heavily dominate the cruise orderbook."
Source: Lloyd's List
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(3) International Maritime Organization, 1 January 2018

Seafarer shore leave gets extra protection from 1 January 2018

Seafarers' rights to shore leave have been strengthened through amendments which enter into force globally on 1 January 2018, under the revised treaty which aims to achieve the smooth transit in ports of ships, cargo and passengers.
The amendments to the Convention on Facilitation of International Maritime Traffic (FAL Convention) also bring in a new requirement for national governments to introduce electronic information exchange, including electronic data interchange (EDI), to transmit information related to maritime transport. This should be in place by 8 April 2019, with provision for a transitional period of at least 12 months during which paper and electronic documents would be allowed.
Use of a 'single window' for data is encouraged, to enable all the information required by public authorities in connection with the arrival, stay and departure of ships, persons and cargo, to be submitted via a single portal, without duplication.
In addition, a number of standard forms, standards and recommended practices relating to stowaways have been updated.
The FAL Convention has 118 contracting States.

Shore leave

The amendment to the international standard on shore leave adds a new provision, on top of the requirement to allow crew ashore while the ship on which they arrive is in port. This new provision says there should be no discrimination on grounds of nationality, race, colour, sex, religion, political opinion, or social origin. Shore leave should be granted, irrespective of the flag State of the ship.
If any request is turned down, the relevant public authorities must provide an explanation to the crew member and the master, which the seafarer or master can request to be provided in writing.

Security and stowaways

The section on preventing stowaways is updated and expanded. National authorities are recommended to apply operational procedures equivalent to those in the IMO International Ship and Port Facility Security (ISPS) Code, to prevent stowaways accessing a ship.
A new standard requires governments, where appropriate, to incorporate legal grounds to allow prosecution of stowaways, attempted stowaways and any individual or company aiding a stowaway or an attempted stowaway with the intention to facilitate access to the port area, any ship, cargo or freight containers into their national legislation.

New FAL Forms

Updated FAL forms are in effect from 1 January 2018, covering IMO General Declaration; Cargo Declaration; Ship's Stores Declaration; Crew's Effects Declaration; Crew List· Passenger List and Dangerous Goods.

Three additional documents have been introduced for ships' clearance that may be required by the shore authorities – security-related information required under SOLAS, advance electronic cargo information for customs risk assessment, and advanced notification form for waste delivery to port reception facilities.

FAL Convention

The FAL Convention, first adopted in 1965, aims to harmonize procedures for ship's arrival, stay and departure from port. It includes mandatory 'Standards' and 'Recommended Practices' on formalities, documentary requirements and procedures which should be applied on arrival, stay and departure to the ship itself, and to its crew, passengers, baggage and cargo.

The revised annex, which was developed following a comprehensive review of the treaty, will ensure the convention adequately addresses the shipping industry's present and emerging needs and serves to facilitate and expedite international maritime traffic. The objective is to prevent unnecessary delays to ships, and to persons and property on board.

Source: IMO

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(4) Lloyd's List, 5 January 2018

Life after Braer: 25 years of action to cut oil spills

Over the 11 years to end-2016, tankers spilt 86,000 tonnes of oil, almost the same amount the Braer leaked in 1993

WHEN the storm-stricken crude tanker *Braer* broke in half in January 1993 off Scotland, almost 85,000 tonnes of crude oil leaked into the ocean. By the end of 2016 there had been 86,000 tonnes of oil spilt from tankers around the world over a span of 11 years.

On the 25th anniversary of the *Braer* casualty, the dramatic decline in volumes of spilt oil since the 1970s is a rare example of the industry and governments being able to claim undeniable progress — but not complete success.

Levels of oil spilt from tankers have dropped from 3.19m tonnes of during the 1970s to 196,000 tonnes throughout the 2000s and 36,000 tonnes from 2010 until 2016, according to data from the International Tanker Owners Pollution Federation.

Braer was among the last major tanker oil spills.

The 89,730 dwt Liberia-flagged tanker was headed from Norway to Quebec when its main engine stopped off Scotland's Shetland Isles in the early hours of January 5, 1993. Battered by heavy storms and winds that deterred any potential rescue operation, it ultimately broke in half.

As a result of the break-up almost 85,000 tonnes of Norwegian Gullfaks crude oil were spilt, elevating the total global volume for 1993 to 140,000 tonnes of oil.

To put the scale of the incident into perspective, *Braer* is the 14th biggest oil spill from a single tanker since 1970, when the ITOPF's available data began.

The emphatic drop in volumes of oil is largely a result of the absence of major isolated incidents since the *Braer* casualty. While there have been other major incidents, like the *Prestige* sinking off the Spanish coast in 2002 and the *Sea Empress* in 1996 off the UK, *Braer* remains the single biggest incident in terms of volume of oil spilt since 1993 and no single year has recorded higher oil pollution levels since.

In light of the 25th anniversary of the accident, North P&I Club deputy claims director Catherine Doyle said that the flurry of regulatory frameworks, as well government-industry collaboration, have been the drivers behind the overall decline.

For Ms Doyle, perhaps the most significant development was the introduction of the International Safety Management Code, which was adopted by the International Maritime Organization in 1995 and requires vessels to be equipped with a safety management plan for vessel operations and pollution prevention.

Compensation of oil spill victims was also institutionalised through the International Convention on Civil Liability for Oil Pollution Damage (CLC) which delineates the obligation of vessel owners and insurers for financial payments to pollution victims.

Certain governments also decided to contribute directly to payment schemes, setting up the International Oil Pollution Compensation Funds, comprising of the two separate 992 Fund and the Supplementary Fund, providing compensation to oil spill victims.

In late 2016 the International Group of P&I Groups agreed with the IOPC Funds to provide faster compensation to those affected by spills.
While Ms Doyle hailed the effect of these industry-government initiatives, she warned that the successful prevention and management of oil spills depended on the appropriate application of all these by the parties involved, something that P&I clubs monitor carefully.
For all the successful improvements in prevention and containment, pollution remains a sensitive problem and the need for timely reaction is much more imperative than these declining numbers might suggest.
The latest high-profile case was the grounding of the 3,205 dwt *Agia Zoni II* product tanker on September 9, 2017, off Greece. The delayed response to the resultant oil spill became a highly scrutinised subject within the country and crossed over into Europe, with the European Maritime Safety Agency reporting that it had received a request to assist the Greek authorities to recover the leaking oil four days after the vessel had been grounded.
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(5) Hellenic Shipping News, 6 January 2018/ Ince & Co

Liquefaction leads to yet more loss of life and total losses

The recent loss of Emerald Star in September this year, with the loss of another 10 seafarers lives, and the sinking of the Bulk Jupiter in 2015, with the loss of 18 lives, should remind us all of the inherent risks in transporting potentially hazardous goods such as nickel ore. Since 2009, there have been at least nine total loss cases attributable to liquefaction, resulting in the loss of over 100 lives.
The majority of liquefaction related incidents involve cargoes loaded in the Philippines, Malaysia, India or Indonesia. Liquefaction is the phenomenon that occurs when a solid material, such as iron ore fines, bauxite or nickel ore, loses strength at high moisture content, resulting in the solid material moving or behaving like a liquid, particularly when exposed to engine vibration and/or ship's motion. This in turn causes free surface effect and creates a sudden and major stability problem for the vessel, often resulting in capsize.

Can these tragedies be prevented?
Absolutely. One of the root causes behind the losses is poor compliance by some shippers with the testing and certification requirements set out in the IMSBC Code; the Certificates of Quality given to the Master are often unreliable or simply provide false information. Commercial pressures should not be allowed to eclipse safety and efforts should continue to find quicker, simpler (but reliable) means of testing cargoes to minimise delays in port. Innovation also needs to be seriously considered – should these cargoes be shipped on different types of ships (e.g. purpose-built OBO's) or shipped in a different way (e.g. bagged in watertight bags or loaded in tank containers).

Recovery of Losses
In the event of a casualty, obtaining legal advice on these issues from the outset from those with experience is vital. We have been involved in multiple cases of liquefaction, including both the Emerald Star and Bulk Jupiter, for insurers. We have made significant recoveries for insurers in many cases. Early opportunities to collect evidence and obtain security should not be lost. With the absence of any crew, this may be largely documentary but can be complemented by commencing proceedings in appropriate jurisdictions. Seeking third party evidence can also be invaluable.
A firm recourse is needed – we owe it to our seafarers to eradicate this totally avoidable loss of life.
Source: IUMI (By Faz Peermohamed, Global Head of Shipping, Ince & Co London, IUMI Professional Partner)
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(6) Hellenic Shipping News, 27 December 2017/ UK P&I Club

Sulphur emissions: The outstanding challenges

The International Maritime Organization (IMO) has been working to reduce the harmful impacts of shipping on the environment.
It adopted Annex VI (Regulations for the Prevention of Air Pollution from Ships) to the International Convention for the Prevention of Pollution from Ships (MARPOL Convention) in 1997. Regulation 14 therein covers emissions of sulphur oxides (SOx) and particulate matter from ships.
The IMO has been setting progressively stricter limits on the sulphur content of fuel oils used by ships. Last year, it adopted a 2008 resolution that introduces a reduced global sulphur cap on marine fuels. The current global limit of 3.5% mass/mass (m/m) shall decrease to 0.5% m/m from 1 January 2020. The 0.1% m/m limit in Emission Control Areas (ECAS) such as the Baltic Sea area, the North Sea area, the North American area, introduced on 1 January 2015, remains unaffected.
While the new regulation has been welcomed by all, there are challenges in ensuring its compliance and enforcement. These challenges will be discussed below.

The challenges

Will there be sufficient affordable low-sulphur fuel oil (LSFO)?

With 1 January 2020 less than two and a half years away, there is a real concern over whether sufficient LSFO will be available to enable compliance.
Improving hydrocracking technology in refineries is leading to higher productions of LSFO. Sulphur from residual fuels can also be processed away using hydroconversion or hydrosulfurization technology, and low sulphur distillates can be blended with high sulphur residuals to create heavy fuel oil with sulphur contents of 0.5% or less. So, it seems likely that sufficient compliant fuel will be available.
Blended LSFOs will, however, bring challenges of their own in the form of catalytic fines and other impurities.
Increasing demands for 0.5% m/m fuel is anticipated to drive its price up to 50% higher than the cost of residual fuel, bringing with it challenges for closing loopholes for non-compliance.

Scrubbers

One method to meet the legal requirements of MARPOL without the use of low sulphur fuel is installing exhaust gas cleaning systems known as “scrubbers”. There are two general types of scrubbers: wet scrubbers and dry scrubbers.Wet scrubbers spray alkaline water into a vessel’s exhaust to remove sulphur before it is released into the atmosphere, whereas dry scrubbers expose dry reagents to the exhaust stream to create a chemical reaction that removes the sulphur from the gas.
The benefit of installing scrubbers is that ships may continue to use cheaper high sulphur fuels. The up-front cost of the scrubber (US$1.5m to US$2m), retrofitting costs, potential loss of cargo space on board, shipyard capacity to meet installation demands and training of crew to maintain the scrubbers are, however, challenges for the shipowner. The estimated payback time for a scrubber is 2 to 4 years but this is assuming the fuel prices prognoses are correct.
Only scrubbers fitted with continuous emission monitoring equipment are acceptable. In the United States, scrubbers are permitted but the ship must at all times still continue to comply with requirements and prohibitions in regards to water pollution. Germany and Belgium have also mandated for closed loop scrubbers in some of their ports and parts of their territorial waters. In closed loop scrubbers, the washwater is treated to restore its alkalinity after it leaves the scrubber, and then recirculated in the system. Little or no water from the scrubbing process is discharged overboard. The German green lobby group Nabu has claimed that discharge from scrubbers can have a significant impact on the marine environment.
Accordingly, whilst scrubbers are generally effective for removing SOx from the gas exhaust, there are a number of considerations shipowners need to bear in mind when deciding whether or not to have scrubbers fitted.

Alternative fuels – LNG and Methanol

LNG, when used as a fuel, significantly reduces the emission of SOx. It was traditionally used as a fuel onboard LNG ships only but is now also used in other trades such as short sea shipping. LNG’s use as a fuel has been recognised by the IMO in the development of the International Code for Ships Using Gases and other Low Flashpoint Fuels (the IGF Code), adopted in 2015.

Other recent regulations include ISO 20519 (2017) which standardises LNG bunkering operations internationally.

Methanol is a clean burning alcohol, and emissions of SOx and particulate matter from its combustion are low. Methanol is transported in chemical product tankers at atmospheric temperature and pressure, and stored in tanks similar to those used for gasoline. It can be produced from a wide range of feedstocks including natural gas, coal and renewables.

There are, however, several challenges facing the success of these fuels as genuine alternatives to high-sulphur content fuel.

LNG's use as a fuel is constrained by the cost of retrofitting propulsion units capable of burning gas and by the lack of port infrastructure to handle bunkering. An LNG bunker barge costs between 5 and 10 times a liquid fuel barge. The biggest challenge for using LNG as a fuel, however, is methane slippage due to the incomplete combustion of the methane in the engine. The global warming potential of methane is 25 times higher than CO2; consequently, the release of even small volumes of methane can easily negate the CO2 reduction benefits of using LNG as a marine fuel.

The energy density of LNG and methanol is also far lower than for petroleum, which means higher volumetric quantities are needed to propel a ship a given distance than with traditional petroleum fuel. Ships will therefore need to have larger fuel tanks (2.5 times larger in the case of LNG) which in practice means reducing its cargo carrying capacity.

Commercial disputes and criminal penalties

Potential disputes under charter party contracts in regards to compliance with fuel emission regulations are foreseeable. Issues that may arise include whether the ship had been "fitted for the service" if she is not able to burn compliant low sulphur fuel, which party is liable to pay for deviations to take on compliant fuel, off-spec bunkers, difficulties in managing and segregating different fuels onboard to avoid contamination, delays, detention of the ship and even criminal penalties.

Owners and charterers are strongly advised to bear in mind the potential issues above and to pay attention to costs and risks allocation clauses when negotiating their charter parties.

Sanctions

Member States to MARPOL (Flag States and Port States) are to implement the new regulation through the introduction of "effective, proportionate and dissuasive" penalties. Most violations are likely to be met by fines, which in the absence of any harmonisation of sanctions framework, can vary in severity from jurisdiction to jurisdiction.

Due to the economic benefits of non- compliance, it is likely that fines will be set at up to ten times the economic benefit for a year's operation. Therefore, fines in the region of US$10m to US$50m per ship can reasonably be expected.

Penalties in the US are even more severe. In addition to the imposition of fines, the US Coast Guard (USCG) has the power to seize ships in breach of sulphur regulations, and the Environmental Pollution Agency (EPA) may impose fines of US$25,000 per day for the duration of the violation.The PSC, in contrast, has no power to detain ships for non-compliance.

Methods of enforcement

The IMO has made efforts to upgrade global enforcement of the regulations. In January, the IMO's sub-committee on Pollution Prevention and Response (PPR) prepared a list of enforcement considerations in order to achieve the environmental benefits sought through Regulation 14. Amongst its recommendations, the committee suggested that the industry considers a draft standard format for reporting fuel oil, and develop guidance that may assist Member States and stakeholders in assessing the sulphur content of fuel oil delivered for use on board ships.

Some countries have developed the use of sniffers as a method for enforcing the sulphur cap. Sniffers are sensory systems that detect the levels of sulphur that are emitted from a given ship's exhaust gas. In Denmark, for example, a sniffer has been installed underneath the Great Belt Bridge, and sniffers have also been attached to light aircrafts and drones.

Localised sulphur regimes are also in force in various jurisdictions including China, Hong Kong, Australia, Turkey and California, and ships trading to these jurisdictions should be aware of the specific rules and regulations applicable in these regimes.

Enforcement methods are becoming more sophisticated but if the ultimate goal is to make ships switch to LSFO completely, the question of whether it is the Flag or Port States that will be responsible for enforcing the sulphur cap in international waters must be settled.

Conclusion
Air pollution from maritime transport is a global environmental concern.The need to control the emission of SOx in shipping through regulations is acknowledged but as highlighted above, challenges for compliance and enforcement remain. It is hoped that some of these challenges can be addressed before the new global cap comes into force in 2020.
Source: UK P&I Club
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(7) Article by Richard Scott, editor, ***SOLENT Global Maritime Weekly Digest***, 9 January 2018

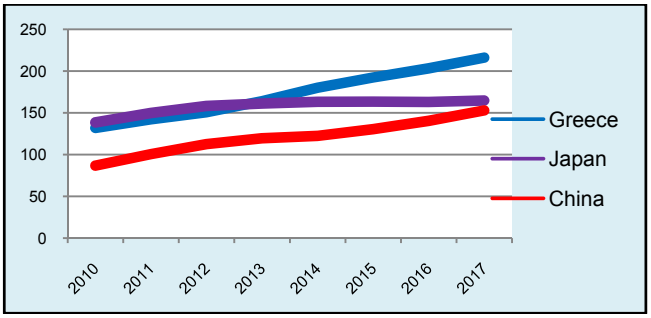
Strong growth in the China-owned fleet: an update

Over the past few years, strong and accelerating growth in the China-owned merchant ship fleet has been unfolding. Provisional figures for 2017 show an increase of almost 9 percent. Vigorous expansion seems quite likely in 2018 also: there is a large schedule of new ships due for delivery and other additions to the fleet probably will be seen.

Accompanying and reinforcing this trend is China's advancing economy and rising trade volumes. Robustly expanding commodity imports - dry bulk cargoes, oil and gas - influence transportation requirements, often in long-haul trades which further boost demand for shipping capacity. Export trades are also a prominent influence.[1] Although not all additions to the China-owned fleet are destined for this employment, much of the extra capacity is likely to be involved in these trades.

Fleet growth last year
At the end of 2017, the China-owned fleet contained 7,404 individual ships totalling 152.9 million gross tonnes,[2] according to figures compiled by Clarksons Research. The growth rate over twelve months since the end of the previous year was 8.8 percent. This figure may be revised upwards when more complete information is available. In the preceding year, 2016, a 7.7 percent increase was recorded, after 6.6 percent growth in 2015.[3]

World's 3 largest fleets, by owner nationality
million gross tonnes, at year end, Clarksons Research data



Cumulative growth in China's fleet, the world's third largest by nationality of owning company, was almost 35 percent during the past five years. Enlargement has raised the total closer to the second largest fleet owned by Japan, amounting to 165m gt at the end of last year. Greece, remains in top position with a much larger 216m gt.[4]

[1] Reuters (2017), 'China to remain the main game for global commodity demand', *Hellenic Shipping News*, 21 December; Scott, Richard (2017), 'Dry bulk imports growth continues in China', *Dry Cargo International*, September, 4; Clarksons Research (2017), 'Tracking the trends in Chinese exports', *Hellenic Shipping News*, 2 December
[2] vessels of 100 gt and above; gross tonnes are used as a common measurement for all ship types
[3] Clarksons Research (2018), *Shipping Intelligence Weekly* (London: Clarksons), 5 January, 15
[4] Clarksons Research (2018), *Shipping Intelligence Weekly* (London: Clarksons), 5 January, 15

New ship deliveries in 2018
Newbuilding vessels on order for companies based in China total 25.5m gt (as at end December 2017), equivalent to almost 17 percent of the existing China fleet, based on Clarksons data. Within this volume 15.7m gt or three-fifths is scheduled for delivery from shipbuilders in 2018.

Among this year's scheduled newbuilding deliveries, a prominent feature is the start of the second ***valemax*** ore carrier programme. These giant 400,000 deadweight tonnes ships are the largest of their type. Currently, China-based companies have 30 valemaxes on order, including 16 totalling 6.4m dwt due for completion over the next twelve months. Valemaxes to be delivered in 2018 are 6 ships for China Merchants, 5 ships for China Ore Shipping and 5 ships for VLOC Holding Company. China Ore Shipping is a subsidiary of Cosco, while VLOC Holding is a subsidiary of ICBC Financial Leasing (Industrial & Commercial Bank of China).[5]

Recent newbuilding orders
The orderbook has swelled in recent weeks, when some notable bulk carrier and tanker orders were added. A characteristic of current ordering patterns is that contracts are often arranged for batches of identical or similar ships, rather than individual units.

Within the past two weeks it has been reported that 6 ***guaibamax*** 325,000 dwt ore carriers have been ordered from shipbuilders Beihai Shipyard by ICBC Leasing, for delivery in 2019 (2 ships) and 2020 (4). An option of a further 3 for 2021 delivery has been agreed.[6] The Guaiba Island iron ore loading terminal in Sepetiba Bay, southern Brazil, is unable to accommodate valemaxes, which are loaded at other Brazilian ports, Ponta da Madeira and Tubarao. The guaibamax, a new label for a ship class, is designed as the maximum size vessel which can be loaded at Guaiba.


Guaiba Island iron ore loading terminal, Brazil

About a month earlier another large order was placed at shipbuilders Jiangsu New by CDB Leasing (China Development Bank). A total of 5 ***newcastlemax*** 208,000 dwt bulk carriers is scheduled for delivery in 2019 (3 ships) and 2020 (2). An optional further 5 for delivery in 2020 and 2021 was also included.[7] Newcastlemaxes in the 200-210,000 dwt group are the maximum size acceptable at the coal loading port of Newcastle, western Australia. Reportedly the five ships definitely ordered will begin, on delivery, charters to commodity trading house Cargill.

Tanker orders have also featured. Last week reports indicated that Cosco Shipping Energy Transportation had placed orders at shipbuilders Dalian Cosco for two ***vlcc*** (very large crude carrier) tankers to be delivered in 2020 and 2021.[8] In December it was reported that CSET had contracted from GSI Nansha shipbuilders two 114,000 dwt tankers, two 109,900 dwt products tankers, as well as two smaller 64,900 dwt tankers.[9]

[5] Clarksons Research (2017), *Ship Type Orderbook Monitor* (London: Clarksons), December, 21
[6] Lloyd's List (2017), *ICBC to build six VLOCs at Beihai Shipbuilding*, 28 December; Clarksons Research (2018), *Shipping Intelligence Weekly* (Clarksons: London), 5 January, 10
[7] Clarksons Research (2017), *Shipping Intelligence Weekly* (London: Clarksons), 1 December, 10
[8] Lloyd's List (2018), *Cosco Shipping Energy orders two tankers worth $160m*, 2 January
[9] Clarksons Research (2017), *Shipping Intelligence Weekly* (London: Clarksons), 21 December, 10

Earlier, in November, the same owners CSET were active. Orders were placed at Dalian Shipbuilding for 4 x 319,000 dwt vlccs scheduled for completion in 2020 (3 ships) and one in 2021, plus 3 ***suezmax*** 158,000 dwt tankers scheduled for 2020 (2 ships) and 2021 delivery.[10]

Leasing increasing

One trend emphasised by a number of these orders is the enlarged significance of Chinese leasing houses. Amid the progressive withdrawal of the dominant European banks from shipping finance, a gap in the ship loans market has opened up, and Chinese lenders have seen opportunities to participate. This involvement has provided valuable support for domestic shipbuilders in China.[11]

According to a compilation of lending volumes by a consultancy firm, reported in Lloyd's List, leasing houses in China invested about $11.9 billion in ships and offshore projects during 2017. This total was similar to, but slightly lower than, the $12.3bn advanced in the previous year. Bank of Communications subsidiary Bocomm Financial Leasing was the top lender last year with $3bn, followed by ICBC Leasing with $2.2bn. CMB Leasing (China Merchants Bank) was at number three position with 1.7bn.[12]

Lending by Chinese lessors is often arranged for foreign clients as well as Chinese companies. Although in a large proportion of deals China is where the ship or ships will be built, sometimes other shipbuilding countries are involved. An example occurred in the past few weeks. Reportedly Chinese and other Asian lenders are providing funds for Mediterranean Shipping Company's huge 11-ship series of 23,000 teu ultra-large container ships – the biggest yet ordered – which will be built in two South Korean shipyards.[13]

Ongoing enlargement

Several other factors will determine how quickly the China-owned fleet grows in 2018 and in subsequent years. Ship acquisitions from foreign owners in the secondhand market could be a substantial boost for the fleet. On the other hand, sales of older vessels for recycling, or as secondhand tonnage to foreign owners will be partly offsetting. These volumes are not easy to predict. But the available evidence suggests that substantial fleet expansion will occur.

On one aspect there has been an absence of information. Last year Cosco, in a massive $6.3bn deal, acquired the Hong-Kong based major container liner operator Orient Overseas Container Line (OOCL). The merger has been mostly approved by regulators and is progressing. When completed this year, ships owned by OOCL could be moved from 'Hong Kong-owned' (assuming that is their current categorisation), to the China-owned fleet.

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Source: Richard Scott

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[10] Lloyd's List (2017), *Cosco Shipping orders four VLCCs and three suezmaxes for $554m*, 21 November

[11] Gibson Shipbrokers (2017), 'Bank on China', *Weekly Tanker Report*, 27 October, 1; Dow Jones (2017), 'China, flush with cash, sets sights on shipping', *Hellenic Shipping News*, 27 December

[12] Lloyd's List (2018), *Chinese leasing houses' investment in shipping stays flat at $12bn*, 5 January

[13] Lloyd's List (2017), *MSC wins financial backing from Chinese lessors for mega boxships to be built in South Korea*, 28 December