Southampton SOLENT University

# Global Maritime Weekly Digest

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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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- In recent years a prominent trend of ***more consolidation*** in the world shipping business has been under way. Yet this industry is still perceived as being characterised by relatively high fragmentation, although there is considerable variety, with bulk carriers and tankers being the least consolidated (item 1).
- Much attention is still focused on ***climate change policy*** in shipping and progress towards a unified strategy for reducing greenhouse gas emissions (item 5). Agreement on increasing the energy efficiency of ships has been reached but elsewhere progress is slower.
- Prospects for ***UK ports*** are attracting greater scrutiny in the context of uncertainties surrounding future trade, especially trade with the European Union. Both opportunities and challenges are visible according to port industry representatives (item 3).
- What are the prospects for the global ***container shipping sector*** in 2018? A further improvement in the fundamental market balance is likely, according to international association BIMCO, which expects demand for container ship capacity to grow at a similar rate to, or slightly more than, the supply of these vessels (item 2).
- In one sector of the world shipping market, the popularity of ***cargo-carrying giants*** is surging. Extremely large vessels designed specifically to control and reduce freight costs in the iron ore trades have been ordered in far greater numbers recently, and will have a progressively greater impact over the next few years (item 6).

**Richard Scott** MA MCIT FICS
editor (email: bulkshipan@aol.com)
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(1) Clarksons Research, 23 February 2018

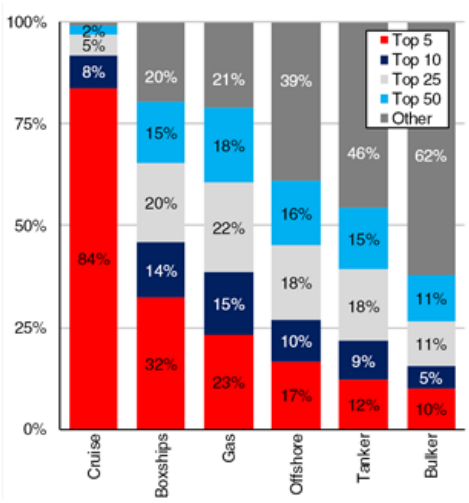
# Fleet Consolidation: Owners Fighting For A Share

Shipping is often regarded as a relatively fragmented business, with over 94,000 vessels split between almost 24,000 owners. However, the level of consolidation varies greatly between sectors, while the recent increases in M&A and restructuring activity have driven some change. This month's Fleet Analysis takes a look at consolidation amongst shipowners in a selection of shipping sectors.

Graph of The Month

**Consolidation: Where Do Owners Pack A Punch?**

The bars show the share of the fleet, in GT terms, owned by the largest owner groups within selected sectors (ranked by total fleet GT within that sector). 'Owner' refers to the primary reference company, defined as the company with the main commercial responsibility for the ship. A wide range of data on vessel ownership is available on the *World Fleet Register*.




Source : Clarksons Research

**A Tighter Chokehold**

Some of the more consolidated sectors, led by cruise ships, are shown on the left of the graph. As of 1st February 2018 the 'top five' owner groups (ranked by the size of their fleet within the sector, in GT terms) owned 84% of cruise tonnage. With each group controlling a number of companies, strong brand loyalty, as well as the huge cost of vessels, make it difficult for new owners to enter the market.

The containership sector has also typically been a more consolidated part of shipping, with 46% of fleet tonnage accounted for by the 'top ten' owner groups as of 1st February. This share has risen from 37% at the start of 2010, driven in part by significant M&A activity, such as the acquisition of Hamburg Sud, UASC and CSAV by larger liner companies. Consolidation is even more pronounced when focussing on operation, with the top ten boxship operators deploying 80% of tonnage. Elsewhere, in the gas carrier sector, the 'top ten' owner groups accounted for 38% of fleet tonnage at the start of February. However, this was a decline from 49% at the beginning of 2007. Fleet ownership is now divided more evenly between energy majors, who were previously dominant, and independent shipowners, who have increased their share.

**A Range Of Combinations**

In other sectors, consolidation is less pronounced. The 'top ten' offshore owner groups accounted for 27% of fleet tonnage as of 1st February 2018. The diversity of vessel types across the offshore fleet means that many owners specialise in a small number of sub-sectors, limiting the extent of consolidation across the fleet as a whole, although recent M&A activity has driven some change. Meanwhile, at the start of February the 'top ten' tanker owner groups accounted for 21% of fleet tonnage. Although this was a lower share than elsewhere, consolidation varies across the sector, for example due to high capital costs in the larger crude tanker sizes.

**All Chopped Up**

The bulkcarrier sector remains the least consolidated of the major vessel types, with the 'top ten' owner groups representing 15% of fleet tonnage at the start of February. Smaller owners have typically

accounted for a higher share of the bulker fleet than in other sectors, and as of 1st February, there were almost 1,500 owner groups with just 1-5 vessels.
Shipping as a whole remains a relatively fragmented industry, with smaller owners accounting for a large share of vessels. Equally, owner groups with fleets of more than 50 vessels account for 47% of total tonnage, and M&A activity could continue to drive consolidation. However, with some sectors dominated by a small number of groups and others remaining more fragmented, consolidation across the world fleet still varies hugely.
Source: Clarkson Research Services Limited
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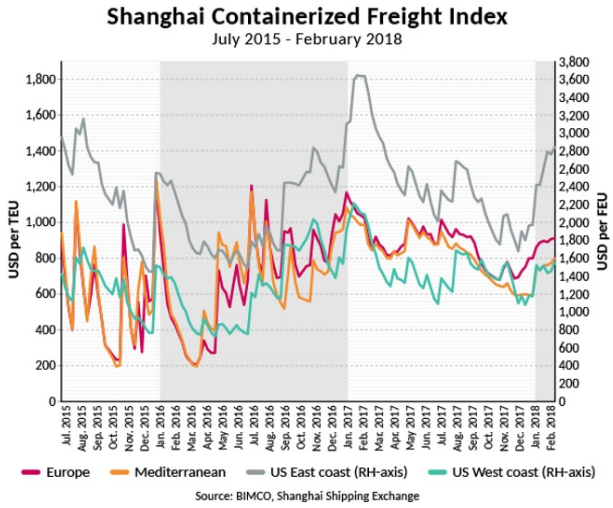
(2) BIMCO, 21 February 2018

# Container Shipping: A Year Where Fleet Growth And Demand Growth Are The Same

**Demand**
Having experienced falling freight rates from August to year-end in 2017, most liner companies were successful in pushing rates higher in early January 2018. Remarkably, most of them managed to hold onto most of the gains they achieved, considering October and November were challenging in terms of very low demand growth. The weak demand came from the Far East to Europe trade, and on the Intra-Asian transport.
Liners were the most successful at maintaining higher freight rates on the US-bound trade lanes, both east and west coast. On the other high-volume trades into the Mediterranean and North Europe, the announced General Rate Increases (GRI) lifted freight rates too, but to a smaller extent.

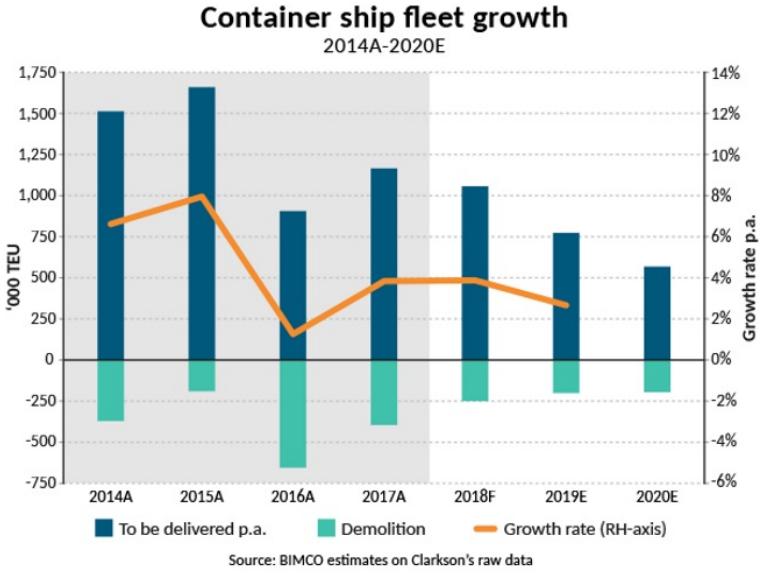



Liners always push for higher freight rates going into January. But, as fleet growth had overtaken demand by a large margin in the latter third of 2017, rates had been falling for six months going into January. Nevertheless, exports ahead of Chinese New Year in mid-February 2018, boosted demand to such an extent that rates into the US East Coast went up at the start of January 2018 and kept rising.
Most containers are moved on shorter hauls intra-Asia. For the full year of 2017, data provider CTS counted 40.9m TEU being transported between different Asian ports (+4.3% Y/Y). On the most important long-haul trades, CTS counted 18.5m TEU going from the Far East into North America (+7.3% Y/Y) and 15.8m TEU on the routes from the Far East into Europe (+3.7% Y/Y).
Demand also grew on the Far East to Sub-Saharan Africa trades, +5.9% for the full year of 2017 (2.8m TEU). Another ”lower volume trade” that grew strongly in 2017 was the Far East to South and Central America trade lanes – shipping 3.6m TEU during 2017, up by 10.7% on last year.
Either way you look at it 2017 was a strong year.

We always focus a lot on the front hauls – for good reason. Cargoes on the back hauls often only provide a bit of revenue to cover some of the costs of bringing the containership back to the Far East for another profitable pay load.
On 1 January 2018, a Chinese ban on specific imports came into effect. The ban covers the import of 24 types of waste – including waste paper and waste plastics. Commodity categories like “ores and scrap”, “pulp & waste paper” and “plastics in primary forms” often feature now amongst the top 5 commodities on many trades, with Asian-bound trades dominating.
At least for a while, the ban has turned the attention of industry and shippers back to the back-haul cargoes.
On the trade from North America to Asia, the number one commodity – by a margin – is “pulp & waste paper” accounting for 1.46m TEU in 2017 (source: MDST), with an estimated global total of 4-5m TEU that could be affected by the Chinese ban (source: Drewry). The volumes are not expected to be an outright loss. Much of the affected cargo seems to be heading for Indonesia, Taiwan and Vietnam. However, not all this type of cargo can expect to land there, as the now “unavailable” waste handling capacity in China is much bigger than the other waste handling facilities in the Far East combined.

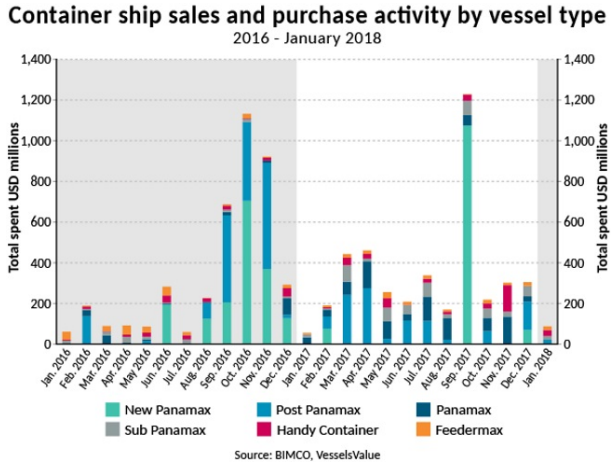
**Supply**

The containership fleet has already expanded by 1.2% in the first month of 2018 – equal to the entire fleet expansion of 2016.
A flurry of new ships has been delivered in January. Not since July 2010 has such a massive inflow of capacity taken place in one month – 254,173 TEU. This includes plenty of feeder ships but also five ultra-large 20,000+ TEU ships. On the demolition side, three ships have been removed (a 320 TEU ship built in 1981, a 976 TEU ship built in 1990 and a 3,802 TEU ship built in 1998).
2017 saw a total of 398,000 TEU demolished, a level which is bound to decrease in 2018. BIMCO expects that 250,000 TEU will leave the fleet as the year progresses. Bringing a fleet growth of 3.9% as the newbuilt delivery is forecast to reach 1.05m TEU.

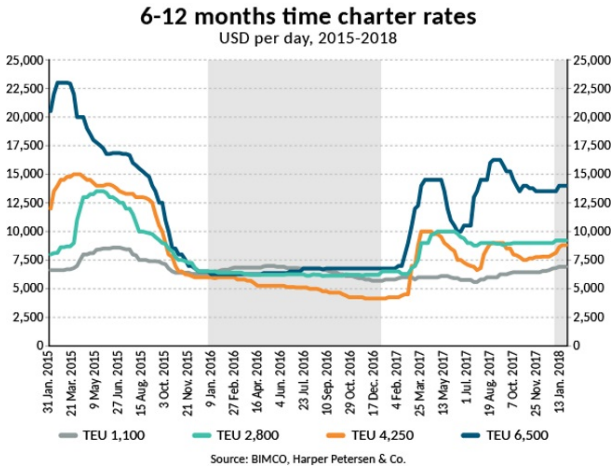



In 2018, the focus will be on the deployment of ultra-large containerships. 53 ships larger than 13,500 TEU are scheduled for delivery – we expect around 40 of them to be launched. In 2017, 55 ships of the same size were scheduled for delivery but only 43 were delivered.
New orders are also being placed at an increasing pace. The break in ordering from December 2015 through August 2017 was one to cherish.
The idle containership fleet has almost disappeared. Alphaliner counts only 65 ships on their list with a combined capacity of 191,441 TEU as of 5 February 2018. In real terms, this means that nominal fleet

growth will have a bigger effect on the market balance, as the temporary idling and re-activation of ships becomes negligible.
Owners and investors were busy in the second-hand market in 2017. In fact, it was the busiest year on record. 297 ships changed hands, valued at USD 4,178m (source: VesselsValue). Panamax ships were in demand, more due to price than anything else – with 93 ships changing hands in total. Purchasing prices were equal to the demolition values of many of the ships, meaning there was little downside risk from the purchase. Since mid-2017 both demolition prices and second-hand values have gone up.
It all depends on timing – a 2009-built panamax ship (4,275 TEU) was valued at USD 13.7m in July 2016, USD 5.6m in January 2017 and USD 10.9m in January 2018. At the same time, the demolition value of the same ship was USD 4.6m, USD 5.6m and USD 8.1m. Meaning that deals done at January 2017 prices were equal to demolition values.




**Outlook**
The fact that demand growth slowed down towards the end of 2017 is also clear from the development in time charter rates, which peaked twice last year, around April/May and around mid-September 2017. Nevertheless, the upward trend was an encouraging one, as the dip following the second peak was not as low as the previous dip. For a 6,500 TEU ship, that development took time charter rates from USD 14,500 per day in April 2017, down to USD 10,000 per day in June and back up to USD 16,250 per day in September 2017. By early-February the rate was at USD 14,000 per day again. In all aspects time charter rates were mostly lossmaking – but 2017 did deliver considerably higher rates in comparison to the absolute lows of 2016.




What will the future bring? Overall demand growth is expected to be lower than in 2017, but still high enough to potentially improve the fundamental market balance. BIMCO forecasts demand to grow by 4.0-

4.5% against a fleet growth of 3.9% in 2018. The IMF January update of its World Economic Outlook, significantly lifted expected GDP growth in advanced economies for 2018 and 2019, and growth in advanced economies is generally good for container shipping demand.
Watch out for the North American inbound loaded containers where we expect a change in 2018. We saw very strong growth in 2016 and 2017 for the US West Coast imports and in 2015 and 2017 for the US East Coast imports. We have yet to see the full effect of the elevated Bayonne Bridge allowing ultra-large containerships to pass and enter the New York/New Jersey (NYNJ) port. Loaded containerised imports into NYNJ were up by 6.0% for the full year of 2017 compared with the year before.
For the whole of the US East Coast in 2017, the amount of inbound loaded containers grew by 10.1%. It took the industry a while to embrace the expanded Panama Canal locks – but they are making use of them now. 2018 is likely to be the year where many container line networks calling the US East Coast will become fully up-scaled by deploying ultra large container ships.
Source: Peter Sand, Chief Shipping Analyst, BIMCO
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(3) Maritime UK, 7 February 2018

# UK Ports: A future of prospects

With UK ports contributing billions of pounds to the UK economy, Brexit could offer Europe's second-biggest ports industry a golden opportunity
As an island nation, the UK depends on its ports and harbours to facilitate the country's diverse export industry and support the handling of critical imports, necessary for the UK to prosper. At a time when the UK is going through unprecedented political change due to its impending departure from the Europe Union, the UK's shipside cargo handling facilities are also being recognised as key tools in safeguarding the country's long-term economic prosperity. In a speech delivered in January at Teesport – one of western Europe's ten largest ports – in the north of England, Brexit Secretary of State David Davis said that the UK's EU-exit would create "new opportunities" for ports.
It should come as no surprise that the UK government is viewing ports with a Brexit eye: given the crucial role those ports play in the country's trade they have become an important part of exit discussions.
**Contribution to the UK**
Maritime UK member, the British Ports Association (BPA) calculates that 95% of the UK's international trade, comprising both imports and exports, passes through UK ports. The sector is the Europe's second-largest, providing £19 billion to UK GDP and supporting 344,300 employees. That same industry contributes £7.6 billion to the annual UK GVA and pays £1.5 billion in taxes each year. The job-creation value of UK ports is also high with around 101,000 people employed directly by the UK ports industry. Labour productivity is 46% higher than the country's national average. In addition to this, many docks are centres for local economic activity.
The UK has around 120 commercial ports in a variety of different forms. They include major, all-purpose facilities like those of London and Liverpool, ferry ports like Dover, specialised container ports like Felixstowe and ports for specialised bulk traffic. Most of the UK's freight traffic is concentrated among a comparatively-small proportion of these commercial ports, with the UK's top 20 accounting for 88% of that total.
In addition to the 120 cargo handling ports, there are more than 400 non-cargo handling ports and harbours nationwide, which often serve as the focal points for smaller communities. These smaller ports offer pivotal facilities for fishing and the marine leisure sector and serve as important gateways to remoter parts of the UK. Moreover, UK ports are increasingly diversifying into logistics and other value-added services.
**Opportunities and challenges**
The current political climate offers both opportunities and challenges for UK ports. Tim Morris, chief executive of Maritime UK member the United Kingdom Major Ports Group (UKMPG), the trade association representing most of the UK's bigger commercial harbours, says that, although there is a risk of growing protectionism from Brexit, increases in global trade levels present opportunities for major ports. "In the UK, Brexit has brought trade up the political agenda, which can only be a good thing for both ports and the whole maritime sector, as well as UK plc," he explains. "Brexit of course brings challenges, but

these are concentrated in particular areas, and it's important that the UK also grasps the opportunities of setting fit-for-purpose regulation."

Mr Morris cites as examples of these regulatory opportunities the repealing of the EU's Port Services Regulation and making effective use of more liberty to create enhanced coastal enterprise zones or free ports. Free ports are ports which, though inside a country's geographical boundary, are viewed as outside the country for Customs purposes and remove Customs duties.

"In policy terms, there are a number of key regulatory developments in the transport infrastructure area that must be grasped, as well as in the UK Government's Department for Transport's Port Connectivity Study itself, to increase the value to UK plc of its major ports," he adds.

"UK major ports will also continue to positively engage with environmental issues such as air quality to work towards robust but proportionate and well-evidenced rules."

**Shared objectives**

Richard Ballantyne, chief executive and director of the BPA, says that the challenges and opportunities that the sector faces currently include: Cross border Customs and port health checks post-Brexit; increasing planning restrictions and conditions on development and activities; ensuring public investment in port road and rail connectivity schemes; and the performance of the economy, which impacts trade and port activity.

"The BPA has recently written to the UK Chancellor keen to discuss the development of a new vision of port development and enterprise zones, and possibly also consideration of the suitability of free ports," he says.

Maritime UK has worked with both bodies to develop policy positions on issues like port connectivity – "which have clear benefits for both ports and the wider maritime community", Mr Morris says. There has also been a joint focus on engagement with the ports sector to include a ports sector-perspective in Maritime UK's bid for a maritime sector deal as part of the UK's government's new industrial strategy. "We feel the sector has a better chance of success of inclusion collectively than individually – as just ports alone," the Mr Ballantyne says.

Another example of extended UKMPG/BPA and Maritime UK collaboration is representation of ports on Maritime UK trade missions – "and vice versa, with UKMPG acting as an ambassador for the wider maritime sector", Mr Morris says.

Looking ahead, it's important to bring the largely unheralded success story of UK ports to a wider audience: "UKMPG members alone invest around £550 million a year to enable key UK supply chains," Mr Morris points out.

**Supporting infrastructure**

There's also a drive to promote the case for increased road and rail infrastructure investment to better connect UK ports. "This will keep the sector competitive, reducing costs for the freight and logistics industry," Mr Ballantyne says. The Association has already called for a new UK freight strategy and will press the Government this year to examine the options.

Further, training will continue to be a focus area in 2018, with the BPA continuing its roll-out of governance and duty holder training on issues such as safety and strategy for all types of ports as well as supporting internal industry benchmarking initiatives and developing a network for port security professionals.

In summary, Mr Ballantyne sees 2018 as a "critical" year for UK ports as "by the end of the year we should know what Brexit will look like".

With the UK's departure date from the EU set for March 29, 2019, focus will increasingly fall on the country's ports as facilitators of UK trade – something that will be vital to the UK maintaining a healthy and robust economy after Brexit. With UK maritime facilities already accounting for such a high proportion of the nation's commerce, ports are being singled out as areas that will be offered "opportunities" by the UK's vote to leave, with the potential for significant infrastructure investment. Given how vital the country's docks and harbours are for UK prosperity, there is little doubt that they will be increasingly seen as lynchpins to a smooth national transition out of the EU – which could see significant benefits unlocked for the country's ports sector as a whole.

**Models of ownership**

The UK has three main models of port ownership. The first is the private ownership model, where the UK government has no ownership interest and all investment in these facilities is privately-funded on a commercial basis. This model encompasses ports owned by international groups as well as ports owned by private companies.

The second model in the UK is the trust port model. These ports are independent bodies that other companies or shareholders cannot own, and they serve as strategically and financially-independent statutory corporations. Trust ports are accountable to their users and stakeholders, and although they tend to be smaller, some major ports, including the Port of London, Belfast Harbour and the Port of Dover, are trust ports.
Finally, there are local authority-owned ports, which also run on a commercial and competitive basis. Examples of these types of ports are Portsmouth International Port and the oil terminals in Orkney and Shetland.
Source: Maritime UK
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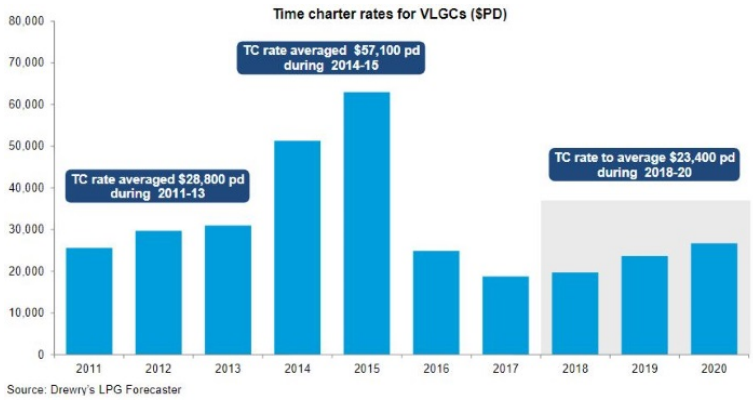
(4) Drewry, 27 February 2018

# Better days ahead for VLGC shipowners

A slowdown in fleet growth should begin the recovery cycle from the second half of 2018, although freight rates will not reach the levels seen during the bull run of 2014-15, according to the latest edition of the LPG Forecaster published by global shipping consultancy Drewry.
2017 was one of the toughest years in the history for VLGC shipping as ample vessel supply squeezed the freight market. VLGC earnings in the spot market (on the benchmark AG-Japan route) averaged $12,500pd; way below the break-even rate of $21,000pd.

Shipowners are hoping for a better future as annual fleet growth is set to slow down from 16% in 2016-17 to a more manageable 5% over 2018-19. However, new ordering is also picking up, with seven VLGCs ordered in the first month of 2018 as owners look to position themselves for the next upswing in the freight cycle.

The above figure depicts Drewry's freight rate forecast for VLGCs over the next three years, with rates improving from this year and strengthening further in 2019-20. However, rates are unlikely to touch the highs seen in 2014-15 when the bull run was led by a sudden pick-up in propane demand from new PDH plants in China. China already has its eight PDH plants up and running, and only two more plants are due to come on line in 2019. That will prevent any sudden spike in the country's imports.




"Our outlook for 2018-20 suggests an average freight rate of $23,400pd, below the $28,800pd that was recorded between 2011 and 2013," commented Shresth Sharma, senior analyst for gas shipping at Drewry. "The reason for the difference between average historical and future rates is that VLGC fleet ownership has become more fragmented since 2013 as many new players entered the market during the boom period of 2014-15. For instance, at the end of 2017, there were 62 companies in the VLGC sector, 17% more than at the end of 2013. It goes without saying that fragmentation tends to reduce the bargaining power of shipowners with charterers."
Source: Drewry

(5) Hellenic Shipping News, 23 February 2018/ OECD Observer

# Climate change: Is shipping finally on board?

Trade is on the rise again globally, and ships are back trawling our seas, connecting places and people. But ships don't just drive trade, they unfortunately contribute to climate change too. In fact, global shipping is responsible for about 2.5% of global greenhouse gas (GHG) emissions, and these are projected to rise by between 50% and 250% by 2050 if nothing improves. And yet, maritime transport was excluded from the Paris Climate Agreement struck two years ago.

**Why?**

One problem lies in deciding which country to assign carbon emissions to when ships are almost always outside national borders. The issue is further complicated by the fact that the actual nationality of ships is often different from that of their owners, operators or crew.

Because of this, regulation of the international maritime sector's greenhouse gas emissions falls to the International Maritime Organization (IMO), a specialised agency of the United Nations whose 172 member countries set global shipping standards.

Has the IMO made any progress on reducing emissions in the past two years? Well, it depends on whether you are the kind of person who sees the glass half full or half empty.

Half-empty types feel the organisation has lost time embarking on a process to define a greenhouse gas emissions reduction strategy rather than just adhering to the targets of the Paris agreement right away. This process is intended to yield an "initial strategy" in April 2018 and a "revised strategy" in 2023, eight years after the Paris Agreement. The one publicly available outcome two years after COP21 is a seven-line draft outline and a decision to start collecting data on the fuel consumption of ships.

Half-full types, however, see this as a thorough approach. By establishing the "how" first, the IMO sets and adheres to targets they are sure can be met. Whether these are sufficient to reduce shipping's footprint remains a matter of discussion.

**Different greenhouse gas emissions strategies**

What is clear is that the highly divergent positions of the IMO's member countries will make it harder to achieve a unified strategy on reducing those greenhouse gases. At one end of the spectrum, we have a group of Pacific Island states, most notably the Marshall Islands, home of the world's third largest shipping registry but also threatened by rising sea levels. They want the shipping sector to reach zero emissions as early as 2035.

The other end of the spectrum is mostly dominated by emerging economies such as Brazil who want to postpone decarbonisation efforts of the sector to the second half of this century. They have not specified preferred targets for shipping emissions.

In between lie most of the OECD countries. A group of EU countries has proposed reducing maritime carbon emissions by an absolute target of 70% by 2050. They also want to reduce carbon intensity, that is, the number of tonnes of carbon emission emitted per kilometre, by 90%, using the 2008 rate as baseline.

The shipping sector itself, represented by the International Chamber of Shipping (ICS), has officially proposed reducing carbon intensity by 50% to 2050, but not suggested an absolute reduction target.

Whatever carbon reduction strategy the IMO settles on, to keep the planet's temperature "well below" a 2°C rise, as spelt out in the Paris Agreement, requires that shipping's greenhouse gas emissions peak as early as possible and descend to zero by the third quarter of this century. The aforementioned IMO projection of an increase in emissions of 50-250% by 2050 makes that target difficult to attain, to say the least.

**Efficiency by design**

One of the ways IMO member states have agreed on to reduce greenhouse gas emissions is to increase the energy efficiency of ships. The IMO's Energy Efficiency Design Index, known in shipping circles simply as EEDI, entered into force in 2013. But its effects are limited and very gradual: the new energy efficiency standards get stricter in stages. They also apply only to new ships, with the average lifetime of a ship being approximately 26 years. And two thirds of new container and general cargo ships already comply with the stricter standards that will enter into force after 2025, which has raised questions about their effectiveness.

Besides energy efficiency, other measures that have been suggested include speed optimisation for ships, retrofitting existing ships to make them more energy-efficient and use of alternative energy sources (see below).
But there is no agreement on targets or measures, and, in a larger context, there are two stumbling blocks to consensus on how to lower shipping emissions: one which concerns principles and the other, economic effects.
Developing and emerging economies argue that developed countries should carry a greater financial burden in lowering greenhouse gas emissions from shipping. They base their argument on the United Nations Framework Convention of Climate Change (UNFCCC) principle of "common but differentiated responsibilities and respective capabilities". But how does this sit with the IMO's principle that all ships should be treated equally, otherwise known as the "no more favourable treatment" principle?
The second stumbling block is also financial in nature. Several countries that are located far from the world's main consumer markets are worried that decarbonisation of shipping will raise transport costs and affect the competitiveness of their exporting sectors. While the concern is legitimate, it is far from clear how trade flows will change in the future and what the impact will be. Dynamic modelling of global trade flows could help project the possible effects of decarbonising shipping, which, in turn, might provide a basis for some sort of compensation mechanism.

**Looking ahead**

More effort is needed as the basis for consensus on an effective Initial Greenhouse Gas Strategy for shipping by April 2018.
An unambitious target and postponement of any policy measure until 2023 could stifle innovation and increase the likelihood of a patchwork of uncoordinated, potentially ineffective, regional and national measures. It might even lead to the unravelling of the global framework as public patience is tried. The European Union has already indicated that shipping will be integrated into its emissions trading scheme by 2023 if no significant progress is made at the IMO. China has embarked on an ambitious national programme to decarbonise its shipping sector, including via carbon pricing.
Front-runners in the maritime sector are beginning to embrace emissions-reducing technologies. There are already ships roaming the oceans that are propelled by electricity, methanol, hydrogen, biofuels and– as the OECD Observer reported as long ago as in 2010–wind (see references). The innovations to help keep greenhouse gases down are available, and an ambitious, agreed-upon emissions strategy in April will put extra wind in the sails of a cleaner, more efficient maritime industry. The glass is still half full; shipping nations should take care not to accidentally knock it over.
Source: OECD Observer
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(6) A version of this article by Richard Scott, Solent GMWD editor, was published by Hellenic Shipping News, 22 February 2018

# Large ore carriers enjoying the limelight

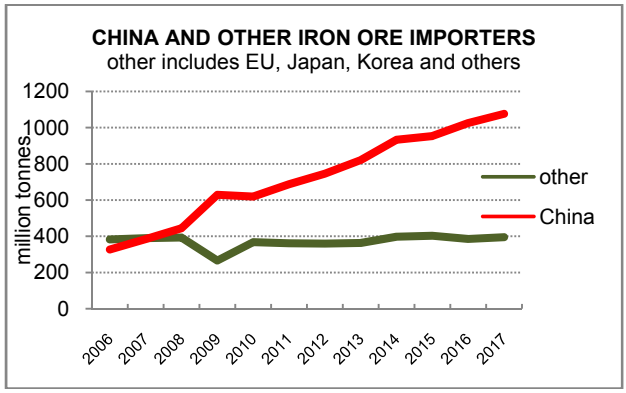
Ore carriers, especially very large ore carriers or vlocs exceeding 300,000 deadweight tonnes capacity, are becoming a more prominent part of the global bulk carrier market. Many additional new vessels of this type have been ordered from shipbuilders recently, joining an already sizeable orderbook. Consequently the ore carrier fleet is likely to expand. But many of the new ships will be replacing old ships (including numerous conversions) becoming uneconomic to continue operating and destined for scrapping.

Amid further growth in global iron ore trade, and expectations of a sustained strong demand for shipping capacity in the sector over the years ahead, shipowners are responding. The perceived need to replace existing elderly ore carriers, together with low newbuilding prices, acts as a powerful incentive to invest in new tonnage. Another stimulus is the availability of long-term charters, providing secure employment at remunerative rates ensuring profitability.

**Sturdy demand for shipping capacity**

The dominant influence boosting demand for this type and size of vessel is China's imports, comprising over two-thirds of world iron ore movements. Annual world seaborne iron ore trade grew by about 700

million tonnes or ninety percent over the past decade, reaching an estimated 1470mt in 2017. China's annual seaborne imports almost tripled in this period, to reach 1060mt,[1] and the growth in volumes into China comprised almost all the net growth in the world total.




Of particular relevance to the expanding world vloc fleet are the increasingly significant long-haul (distance) shipments. A major proportion of iron ore purchases by Chinese as well as other Asian buyers is sourced in Brazil, a long-haul route.[2] On that route economies of scale achieved by using large ore carriers are very valuable, reducing transport costs. This feature enhances Brazil's competitiveness with number one supplier Australia, which benefits from much closer proximity, and therefore a shorter voyage and cheaper cost route to the Asian market.[3]

**The voluminous large bulk carrier fleet**

Within the existing fleet of the largest bulk carriers, many of which are specifically ore carriers, two features are immediately apparent. Three-quarters of the total deadweight capacity, in the vessel size range 250,000 dwt and over, was built within the past 10 years, including more than two-fifths built in the past 5 years. Second, among the remainder almost all ships are older ore carriers aged 20 years or more, including many converted from tankers.

**LARGE BULK CARRIER EXISTING WORLD FLEET AND NEWBUILDINGS ON ORDER**

**vessels of 250,000 dwt and over, year of build or scheduled delivery, as at January 2018**

number of vessels and '000 dwt

| vessel size group | | 1997 & earlier | 1998-2007 | 2008-2017 | total existing | 2018 | 2019 | 2020 & later | total newbld |
|---|---|---|---|---|---|---|---|---|---|
| 250,000-259,999 dwt | number | 2 | 0 | 31 | **33** | 2 | 2 | 0 | **4** |
| (wozmax) | 000 dwt | 500 | 0 | 7800 | **8300** | 500 | 500 | 0 | **1000** |
| 260,000-319,999 dwt | number | 40 | 0 | 67 | **107** | 6 | 0 | 0 | **6** |
| | 000 dwt | 11200 | 0 | 19400 | **30600** | 1600 | 0 | 0 | **1600** |
| 320,000 dwt & over | number | 3 | 1 | 37 | **41** | 16 | 21 | 21 | **58** |
| | 000 dwt | 1000 | 300 | 14700 | **16000** | 6400 | 7800 | 7100 | **21300** |
| **total** | **number** | **45** | **1** | **135** | **181** | **24** | **23** | **21** | **68** |
| | **000 dwt** | **12700** | **300** | **41900** | **54900** | **8500** | **8300** | **7100** | **23900** |

source: Clarksons Research

[1] Clarksons Research (2018), various publications, and calculations by Richard Scott, Bulk Shipping Analysis

[2] ssyonline.com (2018), 'Chinese Iron Ore and Coal Imports Breakdown', *News & Events,* 25 January. In 2017, China's iron ore imports from all origins totalled 1075.4 million tonnes, up by 4.5 percent from the previous year, of which 229.4mt or 21 percent of the total was received from Brazil, a new record high level.

[3] Typical voyage distances: Tubarao (Brazil) to Qingdao 11,100 nautical miles, a 34 day voyage at average 13.5 knots speed, compared with Port Hedland (Australia) to Qingdao 3,500 miles, 11 days at same speed.

During the period up to 2007, investment interest in new bulk carriers exceeding the standard capesize capacity of up to 200,000 dwt was limited. Newbuildings in the size range 250,000 dwt and over were rare. As shown by the table below, based on Clarksons Research data, in the current fleet there is only one ship of this size which was built in the ten years ending 2007. A perception prevailed that growth in the capesize fleet was adequate for handling iron ore and other commodity trade expansion.

**Additional tonnage in recent years**

What changed attitudes, encouraging more interest in larger tonnage? One incentive was the extremely high and volatile freight rates, on all trade routes, in the bulk carrier market boom over several years ending in 2008.[4] Expensive transport costs were especially disadvantageous for long-haul shipments competing with short-haul cargoes of the same commodity.

Brazil's major iron ore exporter Vale took a couple of dramatic steps to mitigate the much greater cost of transporting its ore to China and other Asian destinations, compared with the cost incurred by principal competitor Australia.[5] One step, taken by Vale and independent shipowners employing ships carrying cargoes from Brazil, was converting a number of large tankers to carry iron ore. Another step was having new mammoth ships built for the trade.

Vale and partner shipowners ordered a series of 35 of the biggest bulk carriers ever constructed. These gigantic 400,000 dwt ore carriers, labelled 'valemax', were delivered mainly in the four years from 2011 to 2014. Originally 19 valemaxes were built for Vale ownership. The remaining 16 were built for several independent owners, arranging long-term employment with Vale on contract of affreightment (coa) basis. In many cases the coa covered up to 25 years trading, the envisaged vessel lifetime. Subsequently, over a period ending in 2017, Vale reduced direct ownership by selling its nineteen valemaxes to shipping company investors in China.[6]

Reinforcing the strategy was the enormously strong growth trend in China's iron ore import demand, and expectations of further expansion. Brazil's high-grade ore production was well-placed to benefit and gain market share. It was envisaged that the aim of selling greater volumes to Chinese buyers could be assisted by reducing transport costs with more efficient ships, coupled with long-term charter arrangements designed to stabilise freight rates.

**Conspicuous conversions**

Vessels converted to vlocs were mostly single-hull vlccs (very large crude carriers) phased out of the tanker market by new regulations prohibiting their use. Conversion work requiring extensive reconstruction was completed between 2008 and 2011. This process provided a fairly quick partial solution to the need for additional ore carrier capacity in the trade from Brazil to Asia, to compete more effectively with ships employed on shorter distance routes with lower costs.

Several aspects of shipping markets facilitated conversions. A major influence was a ready supply of vlccs facing obsolescence amid the International Maritime Organization's mandated phase-out of single-hull tankers. These ships were suitable for conversion and obtainable at economical prices. Substantial conversion costs, and time away from the employment market for the work to be done, usually many months, could be justified by current and expected trading revenues. Such incentives subsequently ceased or were greatly reduced.

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[4] Scott, Richard (2016), 'Giant ore carriers set to play a bigger role in the global shipping fleet; China embraces valemaxes', *Hellenic Shipping News*, 26 May

[5] Lloyd's List (2010), *Global iron ore giants adopt different strategies to supply chain investment*, 17 June. See also Sterling, Arlie (2011), 'Vale's shipping strategy: creating a competitive advantage?', *Marine Money Offshore*, 1-9

[6] Mining Weekly (2017), 'Vale sells last two valemax vessels', *Hellenic Shipping News*, 9 December; Lloyd's List (2017), *Vale offloads two valemaxes to Bocomm for $178m*, 10 August

Looking ahead over the next five years, into the 2020s, potential for replacement tonnage is highlighted by the age of numerous vloc conversions.[7] Many were built in the first half 1990s, and so are now at or approaching 25 years old, often considered around the maximum lifespan. More expenditure is associated with maintaining older vessels, and new international regulations are due to take effect from 2019 onwards, entailing substantial spending to comply. These factors point to a limited remaining life for many older ore carriers.[8]

However, analysis suggests that deliveries of new valemaxes from this year onwards may not be exactly matched by withdrawal from service and immediate scrapping of converted vlocs. Some conversions may continue trading for a period, since they are firmly employed under long period contracts. According to research by BIMCO published in the middle of last year "most of the converted vlocs are operating profitably on fixed routes and schedules".[9]

Among owners and operators of vloc conversions, South Korean company Polaris Shipping is a prominent investor. Currently this operator lists 19 vlocs converted seven to ten years ago, almost half the world fleet of these vessels, with sizes ranging from 261,000 dwt to 305,000 dwt. Of these, 11 are 23-24 years old, and 8 are 25 or more years old. This company also owns modern purpose-built ore carriers delivered in the past few years: 3 of 250,000 dwt built in 2014, and 3 of 301,000 dwt built between 2015 and 2017, as well as other bulk carriers.[10]

Intensified scrutiny of old converted vlocs, and more pressure to replace these vessels unfolded last year. In April 2017 the 1993-built 266,000 dwt *Stellar Daisy* owned by Polaris sank in the South Atlantic en route from Brazil to China with a cargo of iron ore. The ship apparently split in two, a tragedy which resulted in only two survivors from a crew of twenty four seafarers.[11]

Future additional capacity joining the world fleet of large ore carriers is likely to be wholly derived from newbuilding vessels. Converting tankers to ore carriers no longer seems a viable option.

**New ships for the future**

The vloc newbuilding order trend abruptly regained momentum in first half 2016 when three Chinese investors ordered 30 valemaxes of 400,000 dwt. The first ship, named *Yuan He Hai*, was delivered In January this year. Each investor - China Merchants; China Ore Shipping, a subsidiary of Cosco; and ICBC Leasing - ordered ten ships for delivery from Chinese shipbuilders mainly in 2018 and 2019. Later, Japanese shipowner N S United ordered two ships of the same size at a Japanese shipbuilding yard, for delivery in 2019 and 2020.

Another ordering phase began during last year's second half when Polaris placed contracts with South Korean shipbuilders for 18 ore carriers of 325,000 dwt capacity. These vessels are labelled 'guaibamax', the maximum size which can be received at the Guaiba Island ore loading terminal in Sepetiba Bay, southern Brazil. Delivery is scheduled from 2019 to 2022, and long-term contract of affreightment employment has been arranged with mining company Vale.

Other shipowners have ordered 325,000 dwt guaibamax ore carriers in recent months. These include three South Korean companies, Korea Line (2 ships), Pan Ocean (6 ships) and SK Shipping (2 ships). Chinese owner China Ore Shipping has 4 vessels of this type and size on order, while ICBC Leasing

[7] Lloyd's List (2017), *Converted vlocs to face slow phase out*, 21 June; see also Argus (2017), 'Vale's vloc headache is contagious', *Hellenic Shipping News*, 18 May – according to this article Vale was using 50 chartered vlocs mostly converted in the late 2000s, operating under 10-year contracts, some of which were extended.

[8] Lorentzen & Stemco (2015), *Assessing the impact of new valemaxes*, 14 December, 6

[9] BIMCO (2017), *The vintage converted VLOCs still make economic sense*, 9 June

[10] Polaris Shipping (2018), *Fleet List & History*, company website accessed 13 February, providing ship's names, dwt tonnages and some conversion or delivery date details; supplemented by further details of ships' ages and conversion dates based on research by Richard Scott

[11] Lloyd's List (2017), *Stellar Daisy: what went wrong?*, 5 April; Lloyd's List (2017), *Stellar Daisy casualty sparks Karatzas warning on conversions*, 11 April; Lloyd's List (2017), *Spotlight on Polaris and its converted vlocs*, 18 April

ordered 6 vessels with an option of an additional 3 units.[12] Long-term charter employment contracts with Vale are a feature.[13]

In the above table, a summary of worldwide orders is shown for newbuilding bulk carriers in the large ore carrier categories, alongside details of the existing fleet, based on data compiled by Clarksons Research.[14] This January 2018 summary shows 68 newbuildings totalling 23.9m dwt in the size groups starting at 250,000 dwt, scheduled for delivery over a period stretching up to five years ahead. Most are due in the next three years. The orderbook is equivalent to 44 percent of the current world fleet in these size groups.

Since the table analysis date, Singapore-based U-Ming Marine Transport has placed a further order with Chinese shipbuilders, for two 325,000 dwt ore carriers scheduled for delivery in 2020. Employment has been arranged under a 25-year coa with charterers Vale.[15]

During the current year, 2018, vloc deliveries scheduled total 24 ships of 8.5m dwt. Next year a further 23 ships amounting to 8.3m dwt are due for delivery. Among the remainder many are scheduled for 2020. Almost ninety percent of the deadweight total consists of vlocs exceeding 320,000 dwt size, showing preference for vessels able to load a cargo of around twice or more the volume carried by a standard capesize bulk carrier widely involved in iron ore trades.

**A changing market balance ahead?**

An orderbook of this magnitude, in relation to the existing fleet operating, could be seen as a sign of potential for overcapacity unfolding in the future. But a perceived need to replace numerous older vessels within the next few years has been highlighted.[16] The table shows 45 ships totalling 12.7m dwt which are currently 20 or more years old. Many will reach age 25 years in the near future, and could incur major expenditure to maintain class and comply with impending new environmental regulations.

Nevertheless it can be envisaged that there will be a net addition to tonnage supply available in the iron ore segment, resulting from the new large ore carriers scheduled for delivery in the next few years. Incremental capacity seems likely to be restrained, however by disposal for recycling of many existing vloc conversions. But any further large order batches for guaibamax or valemax ships could alter perceptions of the impact.

The market balance will be affected also by how the fleet of standard capesize units evolves. Currently the newbuilding order book for those vessels is limited, although there are numerous orders for slightly larger newcastlemax bulk carriers.

Another relevant aspect is the evolution of global iron ore trade. Some forecasts remain bullish, predicting fairly brisk growth, at least in the current year. If this occurs, benefiting ore carrier employment, it seems likely to mainly reflect extra imports into China, for which there is considerable uncertainty about an upwards trend continuing into the longer term future. Such imponderables illustrate the difficulty of attempting to foresee influences shaping the freight market, over an extended period ahead.

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[12] Lloyd's List (2017), *ICBC to build six vlocs at Beihei Shipbuiding*, 28 December
[13] Lin, Max Tingyao (2017), 'Vale looks to the next generation of VLOCs', *Lloyd's List*, 18 December
[14] Clarksons Research (2018), *Dry Bulk Trade Outlook*, January, 18-20
[15] U-Ming (2018), 'U-Ming orders two very large ore carriers from China yard', *Hellenic Shipping News*, 1 February
[16] Lloyd's List (2017), *Polaris to replace converted vlocs with newbuilds*, 18 September