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

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Editorial comments

- Another rise in global ***shipping confidence*** has occurred, according to the latest quarterly survey undertaken by a leading consultancy firm (item 1). Both the overall industry rating and that of shipowners separately reached a four-year high level. However, among problems highlighted by respondents, persisting over-capacity is a prominent cause of anxiety.
- Brisk growth in the ***UK registered merchant ship fleet*** during 2017 has been reported (item 3). The tonnage grew by almost one-fifth over the past three years, although the UK registered fleet still comprises only around one percent of the world fleet's volume. But UK-owned and managed tonnage is a much larger fleet, comprising about 4% of the world total.
- Since the dispute between the USA and China erupted, ***fears of trade protectionism*** have mounted, and prospects for global economic growth have become less clear (item 6). While any escalation of the dispute is potentially highly unfavourable for economic activity, many analysts and commentators still appear to be anticipating that the outcome will not be too damaging.
- A new research report about the ***era of digital transformation in shipping***, prepared by an international bank and an academic institution, analyses opportunities for shipping in the closer connectivity of ships and ports (item 7). This process could greatly boost the industry's efficiency, argue the authors, who make some bold predictions about the longer term impact.
- Salient features of the ***global market for tankers*** are described in an article by a leading tanker owning company (item 8). This 'textbook' article may be useful for academic maritime studies.

Richard Scott MA MCIT FICS editor (email: bulkshipan@aol.com)

(1) Moore Stephens, 28 March 2018

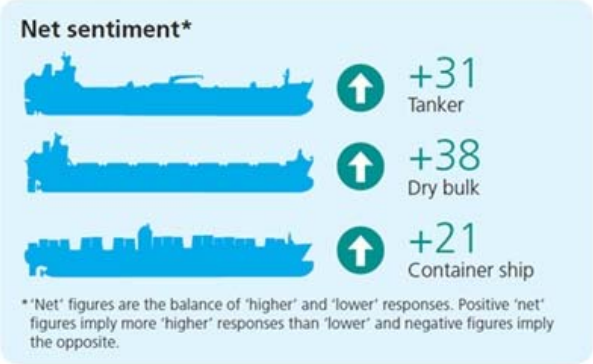
Four-year high in shipping confidence levels

Shipping confidence reached a four-year high in the three months to end-February 2018, according to our latest Shipping Confidence Survey.

The average confidence level expressed by respondents was up from 6.2 out of 10.0 in November 2017 to 6.4 this time. Confidence on the part of owners was also at a four-year high, up from 6.4 to 6.6, while managers' confidence was up too, from 6.1 to 6.4. The rating for charterers, however, continued its recent erratic performance – down to 5.0 from 7.7 in November 2017, but up on the 4.7 recorded in August 2017. Confidence on the part of brokers, meanwhile, was down from 6.3 to 6.1.
Confidence was up in Europe from 6.3 to 6.6, equalling the highest ever rating for this category of respondent in the life of the survey, which was launched in May 2008 with an average confidence rating across all respondents in all geographical areas of 6.8. Confidence was also up in Asia, from 5.7 to 6.3, and in North America, from 5.8 to 5.9.

The likelihood of respondents making a major investment or significant development over the next 12 months was down from 5.4 to 5.3 out of 10.0. Charterers' confidence, however, was up from 4.0 to 6.2. Expectations on the part of owners and brokers were up from 5.8 to 5.9 and from 4.4 to 5.3 respectively, but down from 5.4 to 5.3 for managers. Asian respondents (down from 5.9 to 5.0) were less confident in this regard, but in North America the rating was up from 4.9 to 5.4. In Europe, expectations held steady at 5.2.
The likelihood of respondents making a major investment or significant development over the next 12 months was up on the previous survey from 5.3 to 5.5 out of a maximum possible score of 10.0, its highest level since May 2014. Of note was the increased confidence of charterers (up from 6.2 to 6.8) and of managers (up from 5.3 to 5.6). Geographically, increased expectations of major investment were highest in Asia (up from 5.0 to 5.8).
The number of respondents who expected finance costs to increase over the coming year was up from 59% last time to 64%, the highest figure since May 2008 (66%). One respondent said, "Starting next year, the industry looks set to benefit from capacity reductions at shipyards, but the cost of funding will rise for most market participants."

Demand trends, meanwhile, were cited by 24% of respondents as the factor expected to influence performance most significantly over the coming 12 months, followed by competition (19%) and finance costs (15%). According to one respondent, “The supply and demand equation will balance out in line with industry growth rate over the coming years.”
The number of respondents expecting higher rates over the next 12 months in the tanker market was down by five percentage points on the previous survey to 39%, whilst those expecting lower rates were unchanged at 13%. Meanwhile, there was a four percentage-point increase, to 54%, in the numbers anticipating higher rates in the dry bulk sector, accompanied by a four percentage-point fall to 8% in the numbers anticipating lower rates. In the container ship sector, there was a two percentage-point increase to 38% in the numbers expecting higher rates, and a three percentage-point fall, to 12%, in those anticipating lower rates.



One respondent said, “The shipping market is still characterised by high volatility and excess tonnage in most sectors, particularly bulk carriers and tankers, but there is cause for slight optimism.”
When asked to predict where per-barrel crude oil prices would be in 12 months’ time, 36% of respondents opted for the $60-$69 range, as opposed to 29% when the same question was posed in February 2017. The 19% of respondents who opted for the $50-$59 range was just half the 38% who did so last year, while 28% of respondents favoured the $70-$79 price range, as opposed to just 10% 12 months ago.
The volatile nature of the shipping industry dictates that optimism should be tempered with caution. But a four-year high in confidence must be welcomed as extremely good news.
Shipping is more confident of making a major new investment over the next 12 months than at any time in almost four years, even though finance will probably be costlier to access in the year ahead. Net freight rate sentiment is positive in all main tonnage categories and, whilst slightly down in tankers, it increased both in the dry bulk and container ship trades.
Familiar problems persist. Excess tonnage in many trades and insufficient demolition levels continue to perpetuate uncertainty, and freight rates are not yet at the levels required to turn promise into reality. In the wider world, the impact on shipping of continuing political unrest in the Middle East, the US President’s proposal to impose tariffs on US steel imports, and the response of other countries to this, remains to be seen. All of this serves to underline how vulnerable shipping is to geopolitical influences. But the industry must take heart from its proven durability. Confidence breeds confidence, and confidence breeds success.
Source: Moore Stephens
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(2) Clarksons Research, 23 March 2018

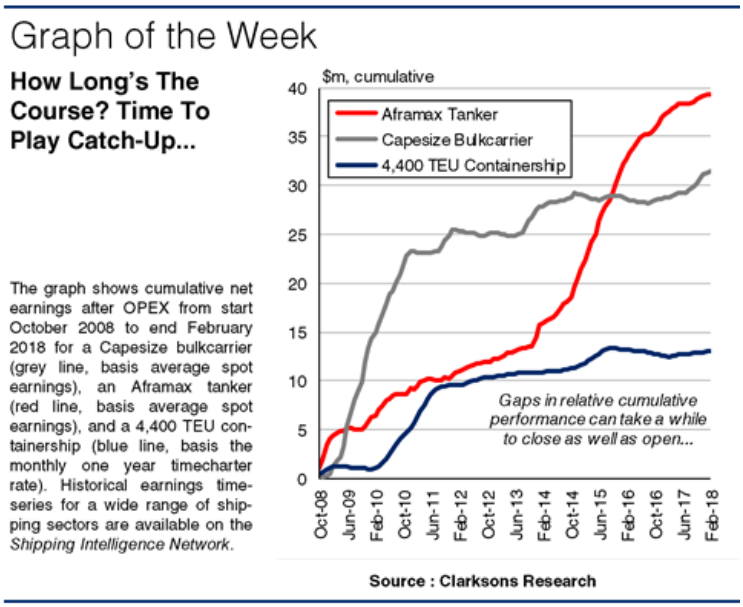
Ready To Play The Long Game?

The economist John Maynard Keynes famously commented that “In the long run we are all dead”, and for shipping market players waiting for cyclical markets to improve it might sometimes feel like that. But with

two of the previously long-suffering sectors enjoying better times recently, how do the improved market conditions impact on a long-term view of performance?

A Long Way Ahead?

The shipping markets in general have spent significant periods of time since the onset of the financial crisis back in 2008 around bottom of the cycle levels, acting as a drag on cumulative earnings. The graph compares the performance of a Capesize bulkcarrier, an Aframax tanker and a 4,400 TEU ('old Panamax') containership (vessels not priced dissimilarly for newbuildings prior to the crash) in terms of the monthly development of cumulative earnings after OPEX.



The Capesize generated around $29m in total by end 2016, benefitting from market spikes in 2009-10 and 2013. But with Cape earnings largely near OPEX between early 2015 and end 2016, the cumulative total did not increase much. In comparison, Aframax tanker earnings hovered close to OPEX for several years after the crisis. However, the 2014-15 rally in the tanker market allowed the Aframax to catch up, and its cumulative earnings reached around $37m by end 2016, having overtaken the Capesize total. The containership charter market, meanwhile, was largely rooted at depressed levels between 2008 and early 2017. With earnings close to OPEX for much of the period, a 4,400 TEU unit generated cumulative earnings after OPEX of less than $13m up to end 2016.

Longing To Catch Up?

But 2017 and this year so far have seen improved market conditions for bulkers and boxships. This has been welcome news for owners, but how much of a difference has it made in the longer-term context so far?

A Long Way Back…

Well the Cape has started to close the gap on the Aframax, with cumulative earnings moving to $31m, whilst Aframax cumulative earnings have remained below $40m, held back by the fall in the tanker market from 2016. Meanwhile, the gradient for the 4,400 TEU boxship is at least now upwards, with cumulative earnings tipping above $13m (other boxship classes may have performed a little more strongly, but the overall picture would be similar). But two factors mean that the picture hasn't changed more significantly yet. Firstly, the markets have not been good enough for long enough yet. Secondly, whilst earnings have started to move away from the bottom of the cycle for bulkers and boxships, they are still far from the 'spike' levels that do so much to help owners' cumulative earnings.

In The Long Run…

Still, bulker and boxship owners will be glad of improved market conditions after challenging times. However, waiting for the cumulative impact can be a long game, although turning markets can look attractive to new entrants. Shipping investors will no doubt monitor the earnings swing closely, with an eye on asset play opportunities too.

Source: Clarksons

(3) UK Department of Transport, 28 March 2018

UK: Shipping Fleet Grew 7% in 2017

Gross tonnage on the UK Ship Register (UKSR) grew 7% in the year to end 2017, and was 16.2 million GT at end December 2017.
Official data from the Maritime and Coastguard Agency (MCA) – for all merchant vessels over 100GT1 – shows that gross tonnage on the UKSR has grown by 18% compared with the end of 2014, following three consecutive years of growth.
Based on world fleet data (supplied by IHS Global) for trading vessels only, at the end of 2017, the UK registered trading fleet:
► accounted for 0.8% of the world fleet on a deadweight tonnage basis (a measure of cargo carrying capacity), and 1.2% when based on gross tonnage (a measure of vessel size).
► was the 18th largest trading fleet in the world, on a deadweight tonnage basis.
► accounted for 26% of deadweight tonnage of the Red Ensign Group, which as a whole would be the world's 10th largest trading fleet.
These statistics provide other measures of the UK shipping fleet, based on vessel ownership and management, which show that at the end of
2017:
► the 'UK fleet' of ships either owned, parent owned or managed in the UK is larger than the UK registered trading fleet – comprising in total around 4% of the world fleet, by deadweight tonnage.
► the deadweight tonnage of ships with a UK owner, parent owner or UK manager all increased in 2017, compared with end 2016

About these statistics

These statistics provide different measures of UK shipping interests, set in the global context, including the number of UK registered (UK flagged) vessels. Every merchant ship must be registered in a country (the 'flag state') and ship registration can, in part, be considered an indicator of the overall health of a country's maritime sector.

Data sources

This release presents figures from two different data sources:
► Section 1 presents figures for the UK Ship Register, provided by MCA, which show trends in the UK registered fleet using official data
► Sections 2 and 3 use data from a commercial source (IHS Global and predecessors) to provide context, giving the UK position in the global fleet (section 2) and other measures of UK shipping interests (section 3)
Users are advised to use MCA figures for a definitive picture of the state of the UK Register; the commercial data provides access to a wider range of contextual information (such as the world fleet or Red Ensign group, ownership or vessel details) or a longer historic series. An overview of the main differences between the two sources is outlined in the 'background notes' section.
Coverage and key definitions Time period. Both sources relate to the fleet as at 31 December of each year.
Vessel size. Both sources relate to vessels of 100 gross tonnes (GT) or over Vessel type. UKSR figures cover merchant vessels, including bareboat charters (parts I and IV of the register). Figures from the IHS data presented in this release relate to trading vessels – those which carry cargo or passengers for commercial purposes. However, the accompanying data tables also cover non-trading vessels (e.g. fishing vessels). Around half of UK registered vessels classified as non-trading vessels in the IHS data are included in the UKSR statistics given here.
Measures of ship size (tonnage). There are two alternative ways that the size of ships is measured within these statistics:
► Gross tonnage (GT) represents the size of the vessel, and is not a measure of weight – it is calculated using a formula based on the volume of enclosed spaces of the vessel. It is typically used to assess the cost of vessel registration, and the headline tonnage measure for the UKSR
► Deadweight tonnage (DWT) measures the cargo carrying capacity of a vessel, excluding the weight of the ship itself. In general, DWT has been used as the main measure where statistics are based on world

fleet data (as in previous years), as overall trends are broadly similar for both measures. The accompanying data tables contain figures for both DWT and GT.

Measures of shipping interests. A country's shipping interests may be measured in different ways. UKSR statistics relate to vessels which are registered in the UK. These vessels may be owned or managed by non-UK companies; the commercial data provides other measures of UK shipping including ownership and management. These are summarised in section 3.

Section 1: The UK Ship Register

Official figures show that the UK registered merchant fleet grew by 7% in gross tonnage (GT) in the year to end December 2017, a third consecutive year of growth.

Overall, gross tonnage of the UK registered merchant fleet has grown by 18% in the last three years, from the recent low at the end of 2014.

The number of vessels registered was 1,317 at end 2017, and broadly unchanged over this period (1,327 at end 2014).

Consistent official figures exist back to 2003, though commercial data shows (see section 3) that over the longer term, the UK registered fleet was at historically low levels during the 1990s, before increasing in the decade to 2009. This may reflect the impact of the UK tonnage tax scheme introduced in 2000 in promoting the UK Ship Register.

Tonnage Tax companies are required to elect into the regime for a 10- year period and may extend that election on a rolling annual basis.

Between 2009 and 2014, the UK registered fleet declined, with a couple of larger companies moving their fleets away from the UK flag for commercial reasons during this period. The Maritime Growth Study (MGS) published in 2015, was launched in response to these trends, with the aim of growing the sector; the UK Ship Register Advisory Panel report also covered possible actions to increase the size of the UK flag.

A recent MGS progress review (published 2018) noted that through continuous improvements to the register, the MCA aim to increase the size of the register to 30 million GT. UKSR plan to focus marketing on quality owners and quality vessels so that the average age of 90% (previous target 85%) of the internationally trading UK flag ships greater than 500 GT is 10 years or less.

16.2 million GT on the UKSR at end 2017 is the highest end year figure since 2012 Gross Tonnage on the UK Ship Register (parts I and IV) at end year: 2003-2017 [table FLE0100]

Section 2: Trading fleets: World and Red Ensign Group

Based on data from IHS Global, the UK share of the world trading fleet was 0.8% at the end of 2017, with the UK registered trading fleet the 18th largest in the world by deadweight tonnage.

At the end of 2017, there were around 58,500 vessels in the world trading fleet, with a total deadweight tonnage of 1,834 million – by deadweight tonnage, the world fleet has nearly doubled in size since 2005 though the rate of growth has slowed in recent years, with a 3% increase in 2017.

Trends in the UK registered share of the world trading fleet have been stable over the last two years – the growth in the UK registered trading fleet has broadly matched the overall world trading fleet growth so that the UK share has remained similar – at 0.8% on a deadweight tonnage basis, and 1.2% when measured using gross tonnage (see table FLE0501).

The UK registered trading fleet was the 18th largest in the world by DWT, at end 2017. The largest trading fleets, such as Panama, are open registers (referred to by some as 'flags of convenience'), available to all shipping regardless of the place of business of the owner. The UK register is a traditional, or national registry, which requires ships to be owned, at least in part, by national interests (registration information for the UK is published by MCA). The large open registers also account for a large proportion of the overall growth of the world fleet in recent years, most notably the Marshall Islands.

If taken as a group, the Red Ensign Group would have the 10th largest registered trading fleet in the world at the end of 2017, totalling 58.9 million DWT.

The Red Ensign Group is the collective title for the shipping registers of the UK, the Crown Dependencies and the Overseas Territories. Registration with the Red Ensign Group provides vessels with the support of British consular services worldwide, and British Royal Navy protection.

The UK accounts for 26% of the Red Ensign Group deadweight tonnage; the Crown Dependencies (effectively Isle of Man) account for 45%. In 2009 the UK and Isle of Man registered trading fleets were at a broadly similar level; since then the Isle of Man trading fleet has grown more than 50%, compared with overall decline during this period for the UK trading fleet, despite growth in the last three years. The Crown Dependencies (effectively Isle of Man) rank as the 12th largest registered trading fleet in the world

measured by deadweight tonnage at end 2017, and in combination, the Red Ensign Group would be in 10th place (58.9m DWT). Outside the UK, Red Ensign Group members, like many non-European open registries, are able to offer very attractive fiscal regimes to potential customers.

Section 3: Other measures of UK Shipping Interests

The 'UK fleet' of ships owned, parent owned or managed in the UK is considerably larger than the UK registered trading fleet – in total accounting for around 4% of the world fleet deadweight tonnage. Shipping is a complex international business, and many different parties, often based in different countries, may have a commercial interest in a single vessel. Both ownership and management of shipping can have economic value to the country in which they are located. In comparison to the UK, many of the large open flags typically have relatively small fleets of parent owned vessels.

In these statistics, the following, non-mutually exclusive, definitions of the UK fleet are used:

► UK registered: the vessel is UK registered
► UK direct owned: the registered owner of the vessel is a company registered in the UK
► UK parent owned: the nationality of the company having the controlling interest in the direct owner is a UK company
► UK managed: The company managing the ship is a UK company

The above categories are not mutually exclusive – for example, a vessel could be both UK owned and UK managed. In total, 1,556 trading vessels totalling 75.4 million deadweight tonnes (4.1% of the world total) are either directly owned, parent owned or managed from the UK (see FLE0102).

The four measures of the UK trading fleet – relating to ownership and management as well as registration – have shown broadly similar trends in recent years.

► In general there was growth throughout the decade to 2009. UK tonnage tax, introduced in 2000, may have contributed to this growth through promoting the UK Ship Register.
► Decline from 2009 to 2014 followed, possibly related to the economic downturn.
► From 2014 to 2016, the registered trading fleet and UK parent ownership have grew, while UK direct ownership and management continued to decline.
► However on all four measures there was an increase in DWT in the year to end 2017.

UK shipping interests – measured by ownership, management or registration – grew in 2017 UK interests in trading vessels, million deadweight tonnes (vessels over 100GT), end year: 1997- 2017 [FLE0101]
Source: UK Department of Transport
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(4) Drewry, 3 April 2018

Slow and steady recovery for container shipping

The outlook for the container shipping market in 2018 and 2019 is a combination of healthy demand growth that will outpace the fleet; resulting in a better supply-demand balance and slightly higher freight rates and profits for carriers, according to the latest edition of the Container Forecaster published by global shipping consultancy Drewry.

"The bad news for carriers is that they are unlikely to see the very strong demand growth rates of early 2017 for the foreseeable future. The good news is that while port handling growth may have peaked, they can still expect more than adequate volumes for at least the next two years," said Simon Heaney, senior manager, container research at Drewry and editor of the Container Forecaster.

The latest edition of Container Forecaster includes Drewry's forecasts for world and regional container port handling, the containership fleet and how those will combine to affect freight rates and carrier profitability through 2019.

Subtle changes to the orderbook, mainly in the form of delivery deferrals, have softened this year's new capacity burden and had a positive effect on Drewry's supply-demand equations for both 2018 and 2019. "The top-heavy delivery schedule for 2018 with the majority of ULCVs being delivered in the first quarter has depressed our supply-demand index, but the balance will improve as the year progresses," said

Heaney. “Unfortunately for carriers this won’t come soon enough to erase the negative sentiment for annual contracts, hence why we only anticipate a small uplift in average freight rates for the year.” Heaney added that renewed newbuild contracting activity is not yet at the level that risks worsening the supply-demand balance. “For now, we are optimistic that new investment in containerships will be appropriate to the demand needs,” he said.

Drewry’s forecasts were finalised before the escalation in trade hostility between the US and China. “We did build in some element of trade deflation based on past rhetoric and actions,” said Heaney. “A trade war is not yet inevitable, but given the lack of details, quantifying the risk to container shipping is very difficult. For example, much of the hi-tech goods considered liable to tariffs will be airfreighted rather than move on the water. In a worse-case scenario we believe as much as 1% of the world’s loaded container traffic could be exposed, and were the situation to become real we would clearly have to revise our demand forecasts downwards.”
Source: Drewry
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(5) Hellenic Shipping News, 4 April 2018/ Transparency International

Transparency International Claims Weak governance at UN shipping agency delaying action on climate change

The International Maritime Organisation (IMO) is at risk of unresolved conflicts of interest due to shortcomings in its governance, according to preliminary key findings of a new study by Transparency International.
Private shipping-industry concerns could have undue influence over the policymaking process at the IMO, concluded the anti-corruption organisation. This could undermine the UN agency’s ability to effectively regulate greenhouse gas (GHG) emissions from maritime trade. According to a report by the European Parliament, the shipping industry could contribute up to 17% of global CO2 emissions by 2050 if left unregulated.
Transparency International’s study, which will be published in full in May 2018, assesses three dimensions of the IMO’s governance structure: transparency, accountability and integrity. A summary report released today raises serious concerns:

- Journalists indicate that they are unable to report freely on IMO meetings. Non-profit organisations with consultative membership of the IMO can face expulsion if they criticise the agency or report on country views, for example.
- The majority of the world’s commercial fleet (52 per cent) is registered in only five states – Panama, Liberia, the Marshall Islands, Malta and the Bahamas – many of which are known as tax havens for ships. Together, these five states contribute 43.5 per cent of the total funding from the IMO’s 170 member states. These countries potentially have exaggerated weight in the IMO policymaking processes, particularly when no mechanism exists to protect against undue influence.
- Governments are able to appoint employees of corporations, including shipping companies, to their delegations, and they have dominated some delegations. These private-sector delegates can determine their government’s position on IMO policy and are not subject to conflict of interest rules nor to a code of conduct.

The report however notes that even in the absence of a comprehensive access to information policy, transparency about the IMO’s administration is high, and that information about the remit, powers and rules of procedure of its assembly, council and committees is easily accessible. The IMO itself is not responsible for who member states appoint to their delegations.
“The IMO was assigned the task of limiting and reducing emissions from shipping under the Kyoto Protocol back in 1997,” said Brice Böhmer, coordinator of the Climate Governance Integrity Program at Transparency International. “However, it took until 2016 for the IMO to even agree on a roadmap towards an initial strategy, due in 2018, and a revised strategy, due only in 2023. A well-functioning organisation’s governance structure should enable decisive action, but the governance flaws identified by our research

suggests that this is not happening at the IMO because policy-making could be overly controlled by private companies."
Transparency International urges the IMO to establish a stronger governance framework. The agency should engage in a transparent process of open dialogue with its external stakeholders (including civil society and industry), to improve transparency, ensure decision-making processes reflect the public interest, and apply robust integrity rules and measures.
There should be no delay on action to combat climate change. The Intersessional Working Group on GHG Emissions from Ships meeting in London today should set ambitious targets for reducing emissions in line with the Paris Agreement, and begin taking measurable action now.
"A guiding principle of UN system is that member states must represent citizens' interests. At the IMO, this could end up being undermined by corporate participation in the place of nation states," said Rueben Lifuka, vice chair of Transparency International and an environmental consultant. "The IMO has an integral role in helping the shipping industry meet UN Sustainable Development Goal 13 on climate change, and Goal 14 on oceans. Ultimately, it must reform its governance structure to promote transparency and ensure the voices of citizens – alongside industry – are heard."
Source: Transparency International
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(6) Hellenic Shipping News, 4 April 2018/ Morgan Stanley

Trade and Protectionism: What Happens Next?

As trade frictions dominate the headlines, markets have had to react to near-daily developments, assessing the impact that tariff measures by the U.S.—and the response by trade partners—could have on global growth.
Amid this cloud of uncertainty, investors must suddenly confront the possibility of increased protectionism, the severity of the measures and its effect on regions, companies and impacted sectors.
"Our base case economic narrative for 2018 called for continued global growth, with a recovery in the capex cycle supporting global trade. We think that this strong starting point of underlying global demand will help to offset the rising U.S. trade policy uncertainty," says Chetan Ahya, global co-head of economics at Morgan Stanley Research.
In a report from Morgan Stanley Research, Ahya and his colleagues outline three possible outcomes to help investors navigate the implications from a rise in trade frictions.

1. Bilateral Agreement

In this scenario, the U.S. and China would agree to cut the U.S.-China trade deficit by $100 billion (4% of China's exports and 4% of U.S. total imports), resulting in a de-escalation of the situation. Recent reports indicate that China and the U.S. have begun negotiating, with the U.S. seeking improved access to Chinese markets and lower tariffs on U.S. cars among other discussions.

2. Targeted Use of Section 301

On March 22, the Trump Administration announced plans to pursue Section 301 of the 1974 Trade Act which outlines measures to respond to "unfair trade practices"—in this case, what the Trump Administration believes are intellectual property infringements on the part of Chinese companies.
Under this plan, the U.S. is expected to impose a 25% tariff on $50 billion to $60 billion in annual imports from China. The proposed list of products subject to higher tariffs is expected to be delivered by early April and is likely to affect such sectors as aerospace, communication, machinery, robotics and technology. The U.S. is also expected to roll out new restrictions on Chinese investments related to those sectors.
If these plans were to be implemented, Morgan Stanley estimates that this level of protectionism would dampen China's export growth by 0.7 to 0.9 percentage points and would reduce China's GDP growth by 0.12 percent points to 0.14 percentage points after factoring for spillover effects.
Following the U.S. announcement to extend tariffs, China indicated that it would put up additional barriers of its own, with tariffs on 128 products representing about $3 billion in U.S. imports, including fresh fruit, steel pipes and pork. While this could have real consequences for some U.S. exporters, it would not directly impact the broader U.S. economy.

However, the possibility of U.S. and China negotiating a deal that moves in the direction of resolving the dispute remains in the works as indicated by recent reports, which would therefore mitigate the impact on both economies.

3. Widespread Use of Section 301

Under this "protectionist push" scenario, the U.S. would implement a tariff hike across all Chinese manufactured goods, and China would lob a commensurate response. This would have the strongest impact. Morgan Stanley U.S. chief economist Ellen Zentner estimates that a 20% broad-based tariff increase could, after four quarters, result in a 1 percentage point drag on real U.S. GDP growth. Morgan Stanley China economist Robin Xing estimates a similar impact on real GDP growth for China.

Just as critical as the direct impact of widespread tariffs are the reverberations across other markets. "The impact of this widespread use of Section 301 would extend and be amplified by global value chains, which account for two-thirds of global trade, and tighter financial conditions," says Ahya. Companies adjusting their own strategies as a hedge against rising protectionism could further stifle growth.

Where Do We Go From Here?

As it stands, the current level of tariffs on the table should not have a material effect on the current trajectory of global economic growth. "Our base case of stronger for longer growth remains intact, unless we move into an aggressive protectionist push scenario," says Ahya.

That said, trade policy is a wildcard and the situation remains fluid. The risk that trade friction could escalate, persist and spill over to other countries has injected a dose of worry into global markets. Accordingly, market movements have reflected the ebb and flow of these concerns.

"Trade tensions don't dominate our forecasts. But the core of our 2018 outlook is a 'tricky handoff' where slowing growth in the U.S. and China occur alongside rising inflation. Trade tensions could make both sides of this handoff worse," says Andrew Sheets, Morgan Stanley's Chief Cross Asset Strategist.

If trade frictions were to persist, it could dampen risk appetites and raise volatility for U.S equities, particularly where a late-cycle environment has already led to questions about earnings growth and economic fundamentals.

For European equities, the negative headlines on trade are also a potential drag. Although Morgan Stanley strategists still like the European market overall, they recommend avoiding sectors which have the largest exposure to exports and currency, including autos, chemicals and industrials.

For Asia/Emerging Markets equities, meanwhile, uncertainty over trade protectionism could drive valuation adjustment to the downside. North Asia and Mexico are most exposed to the U.S. in terms of listed equities' revenue sensitivity while ASEAN, Turkey, Russia, South Africa and Brazil are potentially less affected.

Source: Morgan Stanley

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(7) Berenberg, March 2018, followed by comments by Richard Scott, GMWD editor

Shipping in an era of digital transformation: Structural shift in shipping – opportunities through digital networking

The digitalization process taking place in every area will also determine the future of shipping. The changes will affect the structures and business models of the industry as well as production. "Shipping will be marked by much greater integration of individual business models, becoming part of overall logistics platforms," said Berenberg economist Dr Jörn Quitzau in the new "Shipping in an era of digital transformation" study put out by the Berenberg private bank and the Hamburg Institute of International Economics (HWWI).

The new technological means to process masses of data and link them intelligently with algorithms make possible an entirely new level of communication and networking. "The ability to centralize decentralized digital information on a digital platform creates great potential for organizing markets efficiently. Large platforms are inserting themselves between suppliers and purchasers, and coordinating their plans. We can expect that there will ultimately only be a few providers of logistics platforms worldwide, and that they will integrate shipping in 360° solutions much more than has been the case until now. Smaller providers,

go-betweens and intermediary suppliers will come under increasing pressure," said HWWI Director Professor Dr Henning Vöpel.
The networking of vessels and ports is an enormous opportunity for shipping. On both sides this will require retrofitting with high-performance digital infrastructure, glass-fibre data cables and the G5 mobile radio standard, as well as full-coverage use of sensor and satellite data. "Shipping is networking into a complex technological system through the exchange of data and digital platforms. This makes it possible to control and organize logistics chains in real time, reduce waiting times, and predict ship arrivals more accurately," said Quitzau. This increased connectivity opens up the possibility of unmanned shipping at some point in future. But the resulting economic benefits will probably be slight in comparison to those resulting from improved logistics chains, faster routes and more transparent information.
In manufacturing, great structural changes will result from 3D printing technology and the evolution of the smart factory, process automation by algorithms and robots. This will bring with it a major decentralization of production. "Bulker capacity will grow disproportionately. But the container will remain a central element of worldwide freight traffic," said Vöpel.
"We expect world trade to remain on a stable growth course long-term, but the long-valid rule of thumb that 'international trade grows twice as fast as the gross world product' is a thing of the past," said Philipp Wünschmann, Head of Shipping at Berenberg. "Shipping is in the midst of a consolidation process. Shipping companies are joining up to form large providers, strategic alliances are being formed."
Source: Berenberg
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Digital opportunities in shipping

by Richard Scott, *Solent Global Maritime Weekly Digest* editor, 3 April 2018

Progressively greater emphasis on, and interest in, digital technology is a prominent feature of today's shipping industry. It is argued by some observers that digitalisation will determine the future of shipping. Even if that argument appears somewhat controversial, there is little doubt that the digitalisation process is certain to play a much bigger part in shipping's evolution over the years ahead.

A valuable contribution to the ongoing debate appeared in March this year in a research study entitled *Shipping in an era of digital transformation*. The report is published by Germany's Berenberg private bank, and jointly authored by Berenberg and the Hamburg Institute of International Economics, affiliated with the University of Hamburg.

(Report available for downloading free of charge at:
https://www.berenberg.de/files/MacroNews2018/180327_Berenberg_HWWI_Study-Shipping.pdf)

An aim of the research was to analyse and evaluate what was identified as huge opportunities for shipping in the closer connectivity of ships and ports. The beneficial future economic outcome probably will be "optimised logistics chains, shorter waiting times, faster routes and more transparent information or even energy-efficient fuels". There is great potential for organising markets more efficiently. By contrast, according to the report, the economic benefits of unmanned shipping are likely to be limited.

The research provides a thought-provoking discussion of how various elements could result in transformed shipping activities. It is suggested that "the new technological possibilities to process Big Data and connect them intelligently using algorithms is resulting in various digital innovations". Such innovations, from an economic perspective, are listed as digital platforms, virtual and augmented reality, artificial intelligence, internet of things, blockchain, and 3D (additive layer) printing methods. Both direct and indirect effects of these innovations are expected to have a large impact on shipping.

Some conclusions of the research may be viewed as contentious. Nevertheless, signs of the direction in which technological developments affecting the global shipping industry are heading are abundantly clear to many people. There is perhaps less consensus about how far these trends will go, at what speed and how transformative as well as beneficial progress will prove.

This new report specifically says that it is not offering a forecast of the shipping market. Yet it does make bold assertions of a highly speculative nature about how the future will unfold. It serves to robustly support the idea that digital technologies will fulfil a vastly expanded role in the longer term. One striking observation is that "the many different innovations will interact and trigger a complex change process, the depth, breadth and speed of which is scarcely imaginable today". Assuming this is intended to be interpreted in a positive way, it may be seen as potentially an exaggeration.

Many people would agree about the direction in which the trend is moving, and acknowledge that it is likely to be strong and have huge consequences. But great uncertainty surrounds how some aspects will evolve and interact over a period stretching out over the next one or two decades. Therefore it seems realistic to consider a possibility of such progress being less than, or taking longer than, some of the more audacious predictions contained in the report are implying.
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(8) Hellenic Shipping News, 6 April 2018/ Euronav

Euronav: The Basics of the Tanker Shipping Market

This year's special report focuses on the key drivers and influences on the crude tanker market. The aim is to provide some basic market background and explain key market drivers to investors, commentators and observers alike.

Where do Crude tankers sit within the Value chain?

Crude oil tankers have a vital role to play within the energy value chain. Their main role is to transport crude oil from production point to refinery, although they are also sometimes used for storing crude oil post production. Crude tankers can also be used for carrying oil products such as fuel oil. Any clean products that come out of the refinery are carried on 'clean' or 'product' tankers, which are smaller in size due to the smaller parcel sizes in which these products are traded. Euronav only operates in the VLCC and Suezmax segment, this report will therefore focus on crude oil tankers.

The Asset

Crude oil tankers come in various sizes, the biggest standard size being a Very Large Crude Carrier – or 'VLCC'. These tankers take up to 2 million barrels of crude oil per shipment, while the second largest size is the 'Suezmax' which takes around half of that amount and is the largest size ship that can sail through the Suez Canal fully laden. The smallest size of dedicated crude oil tankers is an 'Aframax' which can carry around 600,000 barrels of oil. There are smaller tankers in the market, but these tend to carry refined oil products and fuel oil, not crude oil.

	DWT	Barrel capacity	Length (m)	Breadth (m)	Draught (m)	Fleet size*	% owned by top 10
VLCC	300,000	2,000,000	320	60	20	735	43%
Suezmax	160,000	1,000,000	265	50	17	523	39%
Aframax	115,000	600,000	240	45	15	959	36%

* January 1, 2018
(Source: Clarksons SIN Excludes shuttle tankers)

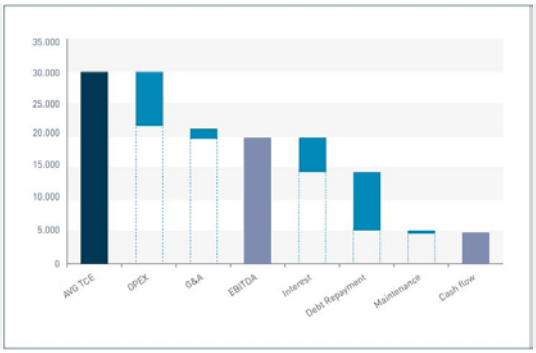
Construction of crude oil tankers takes 9 to 15 months from the time the keel is first laid. This means that it will take at least two years from the time of newbuilding contract signature (ordering) until the vessel is delivered because many critical parts are long-lead items that needs to be ordered and produced before the construction of the ship can commence. Their sheer size dictates that there is a limited number of sites capable of building them and these are concentrated in Asia, more specifically in South Korea, China, and Japan. The price for contracting a tanker newbuilding is influenced by a number of factors such as the underlying price of energy, steel, labor costs and available construction finance. The relative demand for contracting new tonnage also plays a role and may lengthen or shorten waiting time to delivery and affect price. Over the last ten years the cost of a new VLCC has ranged from around USD 80

million to USD 160 million. The payment profile on the ships tends to be very back loaded, typically with a 10% deposit on signing the contract, 20% to 40% in milestone payments and finally 50% to 70% on delivery.

The economic lifespan of an oil tanker has historically been 25 years, although more recently this has dropped closer to 20 years. Different tanker companies operate with their own asset depreciation policies, ranging from 18 to 25 years. At Euronav, we depreciate the original cost of a vessel to zero value over 20 years.

The Cost Structure

A ship owner chartering his vessel to a customer is paid 'freight'; this is the gross revenue agreed with the charterer to cover the entire voyage from port of loading to port of discharge. This revenue is used to cover the cost for the owner to undertake the voyage, the cost of operating the vessel, any interest payments to loan providers and other costs associated with owning a ship. Certain fixed costs vary between shipping companies, most important the purchase price, and each will therefore have their individual breakeven cost at which it becomes profitable to run the vessels. However once these fixed costs are covered, all additional revenue results in profit. Earnings are reported by companies and market watchers in terms of 'dollars per day' also known as the Time Charter Equivalent (TCE). The cash breakeven TCE for a VLCC is between USD 20,000 per day to USD 35,000 per day depending for example on the level of loan interest, fixed operating costs depreciation (or amortization) and G&A expenses.



(Source: Euronav)

For the purpose of this report, the tax issues will not be covered in-depth, but for more details please refer to the annual report. As a consequence of this cost structure, most tanker companies are highly operationally levered. Therefore, every additional dollar earned in revenue over and above the "fixed" cost base will fall through to profit. Euronav's illustrative operational leverage for its cost structure is depicted below.

(Source: Investor Presentation High Yield Conference 2017)

Tanker Customers

Tanker shipping is a business to business environment with a number of key customers who regard the shipping element as an integral part of their logistical chain. These key customers are the oil majors – both National Oil Companies (e.g. Unipec, Saudi Aramco, Petrobras) and International Oil Companies (e.g. Total, Shell and Chevron) – and there are trading houses such as Trafigura and Glencore, and large refiners. The oil majors generally require ships to take oil or to deliver to or from third party refineries oil to their customers. This type of business depends on physical oil flows, which refineries require what type of crude oil at any given time. The trading houses are often more opportunistic in their trading of oil and therefore also more unpredictable in terms of when and where they may need a ship. Most counterparties in the large crude tanker space are large multinational companies with strong credit ratings. The customer is often referred to as the 'charterer' of the vessel. When a charterer requires a tanker to move oil from A to B they will typically get in touch with a ship broker, who will in turn contact a number of vessel owners and act as a middle man in negotiating price, terms and conditions for carrying the cargo. The charterer can go directly to the ship owner himself, although this happens less often.

How the price of freight is set

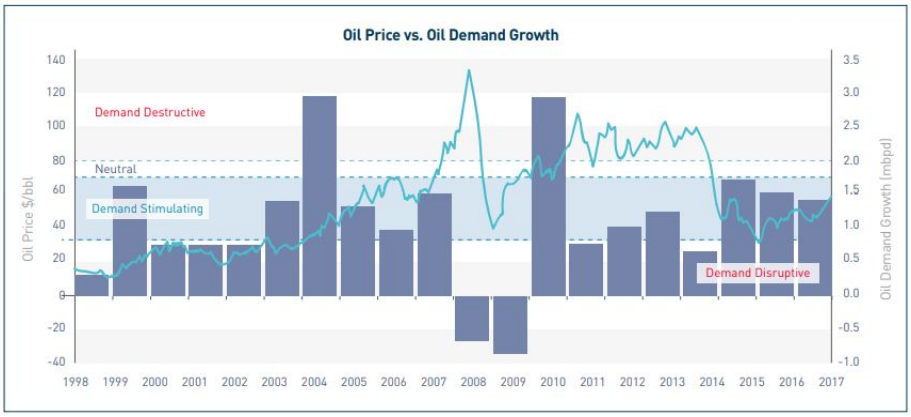
The following chart gives a broad worked example on how the price of freight is set. A number of vessels will be eligible to take a cargo and the broker (who has been mandated by the cargo owner to find a vessel to carry the cargo) will over the course of several rounds bring down the number of potential ships. This process will also be driven by the ship owners themselves as some will voluntarily drop out of any potential bidding for a range of reasons (logistics, price, other cargo to bid on etc.).

(Source: Euronav)

Quite simply the higher the number of potential ships, the lower the eventual freight rate will likely be as more qualifying bidders logically should mean more pressure on the price. However, it is important to understand only one ship will be selected to go through a final vetting process whereby the cargo owner will assess the vessel's seaworthiness and suitability for the trade via previous survey results and inspections. Ship owners competing with each other drive pricing down sometimes below fixed costs.

Price of Oil – impact on tankers

Like any commodity, the greater the demand for it, the more demand for its transportation. Crude is no different and the sharp reduction in the price of oil the market experienced from the fourth quarter of 2014 prompted a boost in demand in both the U.S. and Europe where oil demand is highly price sensitive. With improved demand for oil products, more crude oil was needed by refineries worldwide. These refineries are rarely located close to the sources of crude oil, so more oil tankers were needed to transport the crude from oil field to refinery. Generally speaking the lower the oil price the stronger demand for it. However the relationship is not linear. In our view there is a band between USD 35 and USD 70 where the oil price will be demand stimulating. Between around USD 70 and USD 80 this is neutral and above this level the price is demand destructive. However, as the market saw in the first quarter of 2016, a very low oil price can be demand disruptive – primarily for oil producing and exporting nations; hence the relationship is not linear. Ships also burn oil as fuel so high prices increase costs of transport.



Key Market Drivers – Demand for Oil

The demand for oil is an obvious driver of crude tanker demand; the more oil that is needed around the world, the bigger the demand for moving this oil from production to refinery. Global demand for oil has generally been rising year-on-year with the average growth rate from 1990 being 1.1 million barrels per annum. Since 2015 this growth rate has been above trend and is forecast to remain so until 2022. Translating oil demand growth into actual vessel demand is an inexact science as many factors impact how this oil is being traded and what means of transportation is used to move it. A rough calculation looks something like this: demand growth of say 1 million barrels per day equates to 365 million barrels per year. If all this incremental demand was shipped and carried on VLCCs in 2 million barrel parcels this would be an additional 182 cargoes per year. With a VLCC performing on average six voyages a year we can conclude that these additional cargoes would require around 30 extra ships provided all the additional demand is carried by sea.

Key Market Drivers – Supply of Oil

Clearly for any oil transportation business the supply of oil is critical to the status of its markets. Oil supply dynamics have undergone a transformation in the past decade, away from being very Middle East focused to having a more diverse supply base, in particular with the development of U.S. shale oil. This quick-to-production process of shale oil (less than six months) has made global oil production far more responsive to short-term changes in demand. The fact that the U.S. government started to allow the export of crude oil in December 2015 has developed a new trade flow currently exporting 1.4 mbpd compared to zero exports two years ago (since end September 2017 average weekly export 1.424 mbpd (source: DOE)). Oil supply is dynamic with for instance OPEC (the national oil producers cartel) and Russia voluntarily cutting their crude production and removing cargoes from the traditional trade routes emanating in the Middle East as from the first quarter of 2017.

Key Market Drivers – Vessel Supply

Perhaps the key driver of tanker markets is vessel supply. This is the ultimate driver of market fluctuation; when the market is in short supply of ships, the cost of chartering a ship – the freight – goes up but of course down if there are too many ships available. This over- or undersupply of vessels can be viewed on a macro level with the total global supply of ships, which will drive more long-term trends in freight levels, but it can also be viewed on a more regional level where the number of ships available in a specific load area can drive short-term freight fluctuations, which may vary in different load areas.

On a global scale the supply of ships is a function of how many newbuild ships are delivered versus how many ships are removed from the fleet. The vessel supply picture can be compared to a bathtub – new vessel order flow reflect when the taps are on filling up the fleet with more ships. Vessel scrapping is when the plug is out and vessels are removed from the fleet rebalancing what is in the tub. The water contained in the bathtub represents the size of the fleet – see in this respect also the special report included in the 2016 annual report ‘What is the effective size of the operational tanker fleet’.

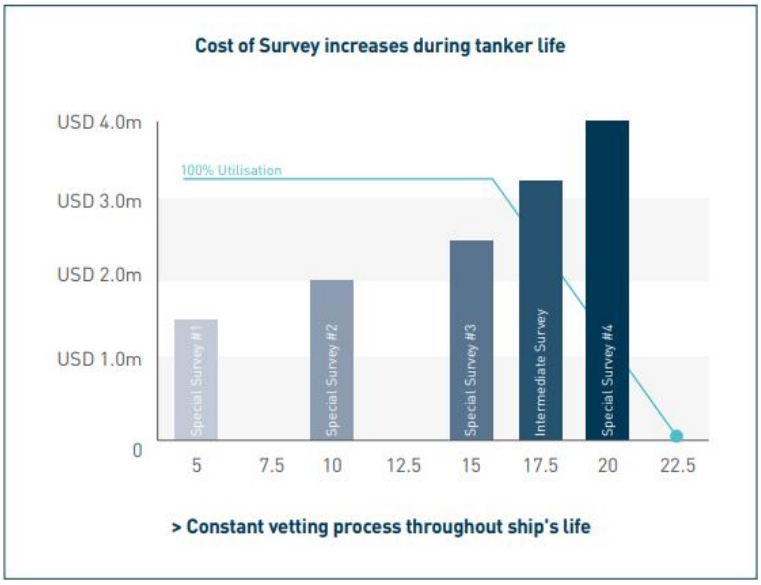
Trade Routes & Dynamic Market

The different sizes of ships cater for different trade routes. We have already discussed how smaller ships carry oil products, but within the crude tanker segment we also see a divergence. Economies of scale dictate that. The size of a VLCC makes them more cost efficient for longer international trade routes between large ports that can physically accommodate their larger size. The smaller the vessel size, the

more regional the trade routes become. However, there is cross elasticity between vessel sizes when the price of utilizing a VLCC becomes too expensive it may become more price efficient for a customer to use two Suezmax vessels to transport the same amount of oil instead. So we do sometimes see Suezmaxes compete for the long haul international routes that are dominated by VLCCs and vice versa. The same applies for smaller vessel segments.
It is important to keep in mind that trade routes are not static; these routes are highly dependent on oil flows. For example when we began to see crude oil exports from the U.S. destined for the Far East, the market developed a need for large crude tankers to load in the U.S. Gulf, something not seen before. Please find more details below.

Regulation of assets and operating businesses

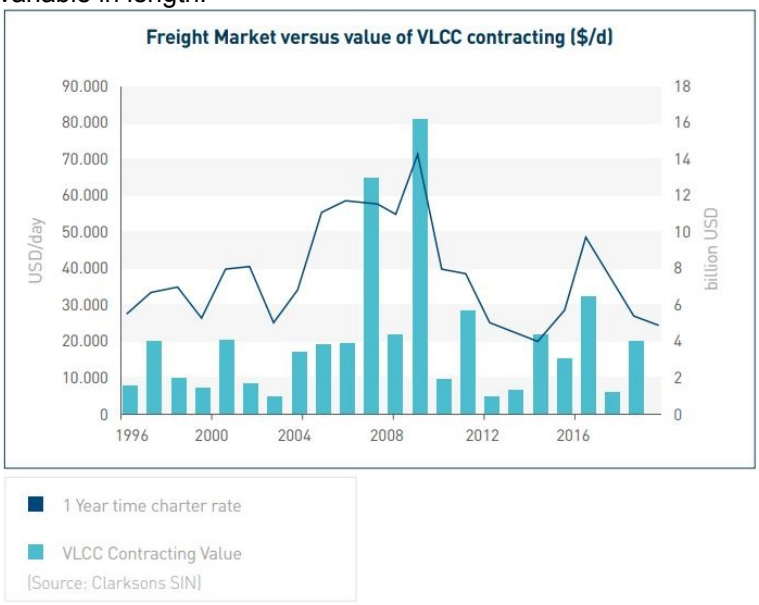
The tanker industry is highly regulated, to ensure that all vessels are safe to use for the crew, the cargo and the environment. Until the age of 15 years, the ship must undergo a survey in dry dock only every five years. The vessels have to have certification of classification society, which is an independent organization that establishes and maintains technical standards for the operation of all ships. Vessels have a five year survey cycle with an annual survey (12 months), intermediate survey (30 months) and special survey (60 months). Performing this survey can take a couple of weeks and will test for steel thickness and other indicators of seaworthiness. After 15 years, the intermediate survey cycle also needs to be done in dry dock every 30 months so at 17.5 years and 22.5 years. This is to account for the associated wearand- tear due to the vessel's age. The cost of these surveys increase as the vessel gets older – see diagram.
Some important charterers consider the overall risks associated with carrying oil on an older ship as being too large when the vessel reaches 15 years of age, and only charter ships until this age limit. However, most oil tankers find employment up until around their 20th anniversary, which is currently the expected life of a vessel, although some trade for longer. Looking at tankers that have been scrapped since 2009, the average scrapping age for both VLCCs and Suezmaxes has been around 20 years.

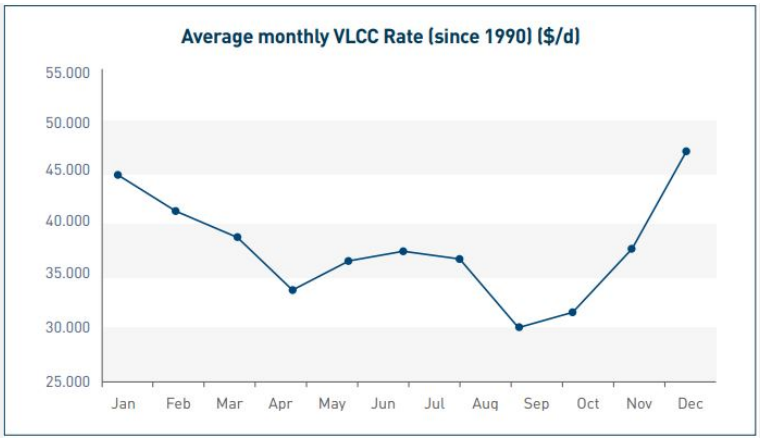


Seasonality and Cyclicality

Historically, there has been a visible degree of seasonality in the tanker market as freight rates have tended to perform better during the first quarter and the fourth quarter of a calendar year. With 90% of the global population living in the northern hemisphere, more oil is required during the northern hemisphere winter hence more oil is consumed during these quarters. Below chart shows the seasonality differential in average VLCC rates since 1990. However this marked contrast in seasonality has been less evident in recent years. This can be explained by most demand growth now originating from Asia, where oil demand is less affected by seasonal consumption patterns.
Tanker shipping is a highly cyclical business with freight rates driven by numerous factors, but in the medium to long-term vessel supply and demand are the main drivers. Vessel supply is the one factor

controlled by the shipping industry and the supply of vessels is impacted largely by capital flows into and out of the sector, but also availability of financing from banks and other investors. A tanker market cycle generally begins with an oversupplied market where too many ships depress any earnings and therefore the capital flows out of the sector. This will cause some owners to get rid of their older ships as these become uneconomical to run. As vessels are removed from the fleet, the market will become rebalanced, owners will start earning more profits and more capital flows into the sector. This encourages owners to start ordering new tonnage, although the lead time on delivery is at least two years. Once these newly contracted vessels start delivering to the market it will slowly, once again, become oversupplied and earnings will hit another trough – we are back where the cycle started. These cycles are of varying duration but generally take five to ten years to complete but like seasonality do appear to be more variable in length.





(Source: Clarksons SIN)

Source: Euronav
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