



SIMPSON | SPENCE | YOUNG®

OUTLOOK 2022



EWPE	WEF	EFF
▲ 16.0680	▲ 0.7040	405.4
▲ 20.6500		054.0
	7.5030	
▲ 24.7050	▲ 86.560	0.650
47.0540	▲ 57.030	807.5
▲ 6760.70	▲ 5.7540	0.607
▲ 34 7080	▲ 0.7540	540.5
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47.0540	▲ 57.030	807.5
▲ 6760.70	▲ 5.7540	0.607
▲ 34 7080	▲ 0.7540	540.5

28.612	58.065	+56.965	+56.965
247	478	+478	+478
207	109	+109	+109
500	770	+0.770	+0.770
678	345	+0.346	+0.346

Global Stocks

Technology Stocks



Simpson Spence Young Outlook 2022

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About Simpson Spence Young

Established in 1880, Simpson Spence Young (SSY) is the world's largest independent shipbroker. Our 400 employees cover each major market including dry cargo chartering, tanker chartering, LNG chartering and projects, ship sale and purchase, chemical chartering, consultancy and research, futures and towage.

SSY has a global reach, with offices in Athens, London, Singapore, Houston, Shanghai, Stamford - USA, Dubai, Geneva, Sydney, Hong Kong, New York, Mumbai, Madrid, Oslo, Sao Paulo, Copenhagen, Tokyo, Vancouver, Varna and Zug.

Trusted and long-established, SSY has the privilege of working with clients across the globe, connecting people in the world of shipping.

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INTRODUCTION

Welcome to the latest edition of SSY's outlook for the year ahead. This publication aims to provide you with a summary of the key issues that affected shipping markets in 2021 and what we are expecting to see in 2022.

In looking at 2021 and drawing conclusions about the year ahead, Covid continues to be a constant presence. In sectors where pricing has been vulnerable to weakness it dampens growth prospects and where there is tightness of supply it adds uncertainty and stokes volatility.

Nevertheless, we are pleased that SSY has adapted successfully over the last two years and continues to connect with and support our customers around the world as they navigate any challenges they may face.

I hope that as 2022 unfolds we will find that the new variants are, as predicted by some, less aggressive and that we can find a way forward, where it becomes a manageable inconvenience rather than a limiting factor in our lives and businesses.

In the meantime, we continue to look forward with increasing focus on our Carbon Strategy. 2021 was a learning curve for us and no doubt many others in the freight business as we worked to build and integrate carbon trading and advisory businesses into the Simpson Spence Young Group.

Our ambition has been to understand this market and the implications for ourselves and our customers. As is often the case we have learned the most from discussions with our clients, who have generously allowed us to tap into their knowledge and have given essential feed-back.

We have begun to learn the audit process for our own corporate CO₂ emissions and have offset our 2020 emissions and made initial provision for 2021. This is just the start and it is our intention to be aligned with our customers.

As the IMO and regional compliance systems work towards bringing the freight market into CO₂ compliance and align with UN targets, SSY aims to support our customers in several ways. Firstly, via our partnership with Signal Ocean we aim to inform customers on their projected CO₂ production year on year. Secondly, with Marine Benchmark we are offering a precise CO₂ calculation system so that freight owners can reliably support their obligation to offset emissions under the new compliance regimes such as the EU's Emissions Trading System, which will encompass shipping operations to and from EU ports from January 2023.

At the hub of our Carbon service is our Carbon Desk, part of SSY Futures Ltd. This was established in the second half of 2021, and we can report that it has now on-boarded many of the leading participants in the Carbon derivatives markets and has begun transacting with them in significant volume. Hopefully this will provide a convenient and effective solution for all your Carbon requirements now and in the years ahead.

Finally, I'd like to wish you all a healthy and prosperous 2022.

Mark Richardson
Chairman, Simpson Spence Young

DRY CARGO

Derek Langston

Head of SSY Consultancy & Research

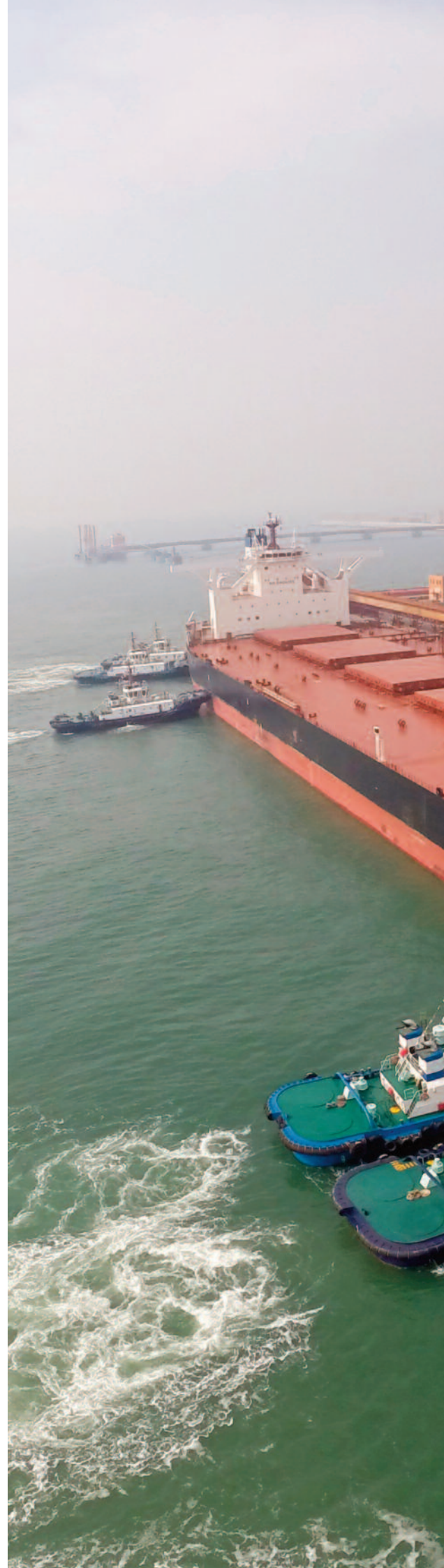
Seldom has a year been as eventful as 2021 for the dry bulk freight market. Vessel earnings across all main bulker sizes jumped to 13-year highs buoyed by recovering demand outside China, coal and iron ore prices spiralled to record levels, and smaller bulkers were suddenly in demand for both container and de-containerised cargoes due to supply chain dislocations creating chronic capacity shortages in the boxship market.

It was also a year when Covid-related fleet inefficiencies in the form of quarantining and stricter crew change requirements played a highly significant role in tightening vessel supply, which, when combined with weather-related disruption at China's terminals, served to push the bulker markets higher.

Capesize average timecharter rate assessments from the Baltic Exchange leapt close to \$87,000/day in October, at a time when Panamax, Supramax and Handysize equivalents were all above \$34,000/day.

Despite that extraordinary headline figure from October, across the whole 12 months, the Capesize TCs did not perform as strongly relative to their smaller counterparts as in previous years. Seaborne iron ore trade growth proved slender in 2021, with Australian iron ore exports among others running below year-ago volumes, offsetting the influence of emerging Capesize coal trades from the Black Sea coal terminal at Taman.

Juxtaposed against the vibrant dry bulk freight market were several significant trade negatives, many of which emerged through the second half of the year so posing intriguing questions for the market outlook in 2022.





Several key Pacific trades lost momentum, either due to seasonality (nickel ore) or pressures from surging commodity prices (such as Indian coal-fired plants reducing import demand or the withholding of Chinese fertilisers from the export market to ensure domestic supply). Against a background of softening geared vessel demand, a downward jolt to Pacific rates in November was prompted by a sudden drop in coal chartering activity into China, as downward correction in coal prices caused buyers to pause international purchases.

In addition, Chinese steel production slowed down sharply from the middle of 2021 onwards. When originally reported in the 3q21, the goal of holding 2021 full-year crude steel output below the 2020 level for environmental reasons may not have appeared realistic, given the rapid 60 Mt annual expansion in January-June. However, for July-November a yearly drop of around 75 Mt was recorded, suggesting an overshoot of the annual target, with weakening end-user demand increasingly in evidence. Steel exports sank to a 13-month low of 4.4 Mt in November, which compares with a four-year high of 8.0 Mt in April.

The 2h China slowdown extended beyond steel, with minor bulk imports experiencing year-on-year declines. According to customs data, combined imports of ten cargoes ranging from forest products, fertilisers to various ores and concentrates in July-November dropped by close to 9 Mt from the year-ago total to 133 Mt. In contrast, 1h21 volumes rose by more than 13 Mt to 153 Mt.

These apparent negatives for vessel demand highlight the importance of fleet inefficiencies in tightening vessel supply and supporting freight markets.

Turning to next year, much will be dependent on the evolution of the pandemic as well as any policy response to support China's economy.

Further complicating the outlook has been the timing of the Beijing Winter Olympics in February 2022 with several events to be held in Hebei province, still the single-largest

“ Although facing structural decline in many parts of the world, coal trade dynamics still exert a significant influence on the dry bulk freight markets.



province for steelmaking. True to form, extended restrictions on steel production and iron ore sintering during the 1q22 have already been announced.

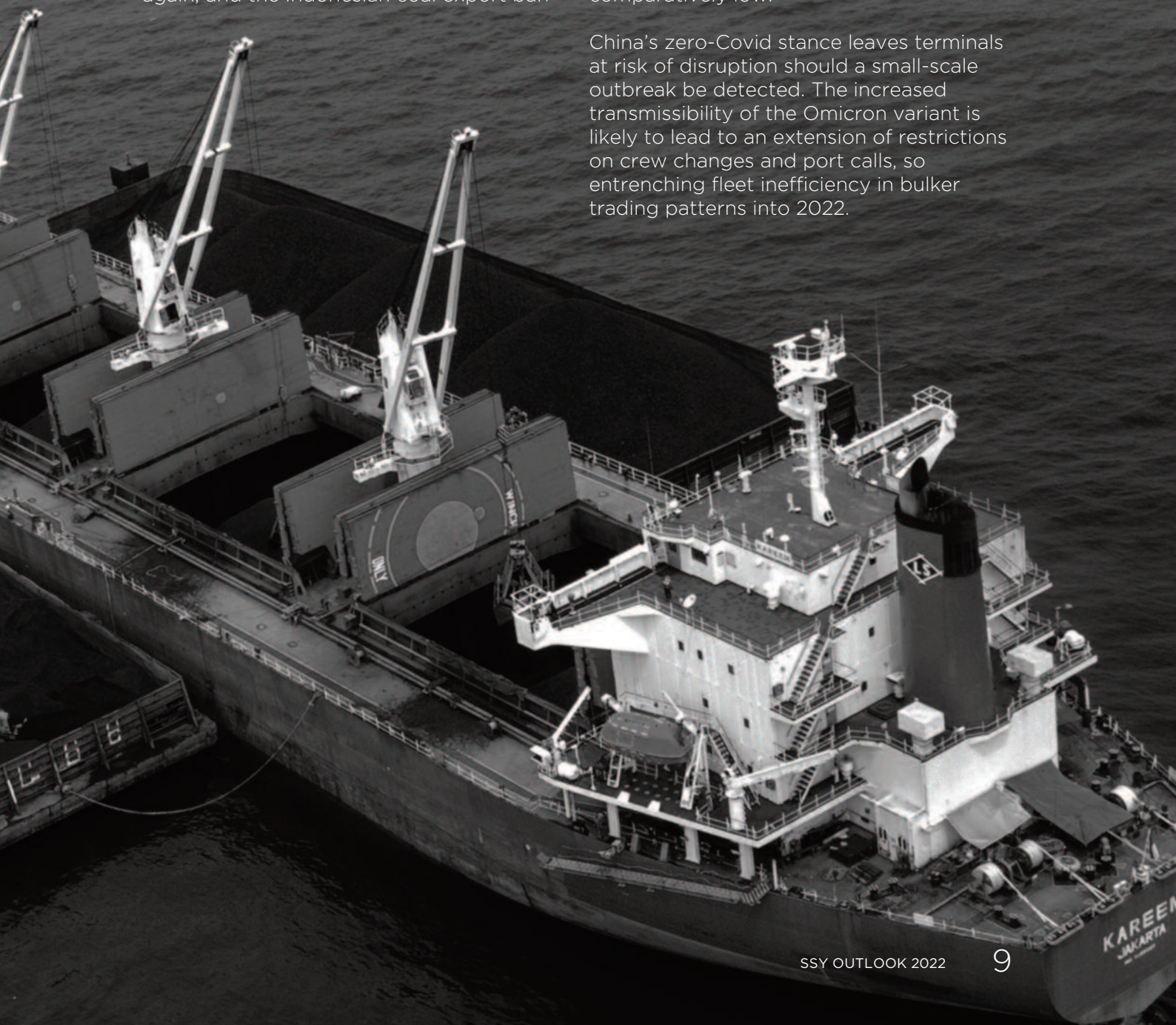
There can be no doubting the pressures on credit and the real estate sector in China, but we are also aware of the potential for some form of stimulus package should the government deem it necessary.

Although facing structural decline in many parts of the world, coal trade dynamics still exert a significant influence on the dry bulk freight markets. Fluctuating coal import volumes into China are likely to contribute to freight rate volatility in the Pacific once again, and the Indonesian coal export ban

announced for January 2022 is an example of how government intervention can distort trade flows. Recovering Indian coal imports would be a positive for bulker demand, as would some grain trade seasonality, with Australian wheat and Brazilian soyabean cargoes lending support in early 2022.

The newbuilding orderbook equates to less than 7% of the existing dry bulk fleet. Although annual newbuilding contracting in 2021 ran at more than double the pace of the previous year, by the standards of previous strong markets (when the Baltic Exchange Dry Index averaged 3,000+ points annually) this percentage is comparatively low.

China's zero-Covid stance leaves terminals at risk of disruption should a small-scale outbreak be detected. The increased transmissibility of the Omicron variant is likely to lead to an extension of restrictions on crew changes and port calls, so entrenching fleet inefficiency in bulker trading patterns into 2022.







OPTIMISM FOR TANKER MARKETS IN 2022

Claire Grierson

Head of Tanker Research

Challenging trading conditions persisted for crude tankers in the second half of 2021 leaving annual earnings at their lowest for over 20 years. Many countries continued to draw down on crude stocks in the face of higher oil prices, and an oil futures market in backwardation, that curtailed fresh crude purchases. The rapid spread of the Delta variant hit the demand of major crude importers in Asia that are the biggest drivers of crude tanker tonne miles, as many countries implemented lockdowns. The largest Asian importer of crude, China, scaled back its volumes as it continued to use domestic inventories and made a release from its Strategic Petroleum Reserve (SPR). Greater oversight by Beijing of the country's independent refining sector led to reduced and delayed crude import quotas for this sector that was already feeling the effect of higher feedstock costs due to new taxes on bitumen and LCO, which weighed on refining runs and import needs. Unfavourable price spreads that made it less attractive for Asian refiners to buy Atlantic Basin crude also reduced tanker tonne miles, especially for VLCCs. Refiners instead sought short and medium-haul crude supply, which helped underpin Suezmax and Aframax rates at times when compared with VLCCs. Certainly, the

“ Smaller tanker sizes experienced periods of more buoyant earnings, sometimes led by unexpected factors.

smaller tanker sizes experienced periods of more buoyant earnings, sometimes led by unexpected factors. East of Suez Aframaxes for instance benefited from delays to ships from typhoons in North Asia while vessel availability was restricted by crew changes that meant vessels could not comply with minimum Covid quarantine times at Chinese ports.

Clean tanker markets largely outperformed the crude tanker sector overall, despite many newbuild crude tankers lifting product cargoes from East of Suez to the West in 2021. A growing surplus of refined

products in Asia amidst reduced domestic demand due to the Covid restrictions led to longer haul trading opportunities, particularly to the US and Europe where oil consumption was quickly rising as Covid restrictions were eased. The impact of refinery outages and closures in Australia, the USWC and South Africa was also felt as this created regional oil product shortfalls. Still Atlantic clean tanker markets struggled, especially MRs in the third quarter, as exports from key regional producers Russia and the US, were down. US product exports were further hampered by Hurricane Ida-related refinery



disruptions while the arrival of refined product from Asia and the Middle East meant this fed Atlantic product import demand beyond the traditional regional MR trade flows. But Atlantic product tanker rates had strengthened by year end, a function of seasonal winter demand and weather-related disruptions amidst lower stockpiles.

Omicron risk near-term

The emergence of the Omicron variant does pose a risk to oil consumption and therefore tanker demand in early 2022 but

this will depend on the severity of this strain and the scale of country-led responses to curtailing its spread. Many countries are banking on vaccine boosters to stem the level of risk. But Europe had already introduced restrictions that were limiting mobility and oil demand as it was amidst a fresh Covid wave before Omicron developed. The co-ordinated announcement of SPR releases by the US, India, South Korea, Japan and the UK are also a short-term negative as this is likely to restrict crude purchases. China too is reportedly considering further SPR releases and its crude import growth in

“ Europe introduced restrictions that were limiting mobility and oil demand as it was amidst a fresh Covid wave before Omicron developed.

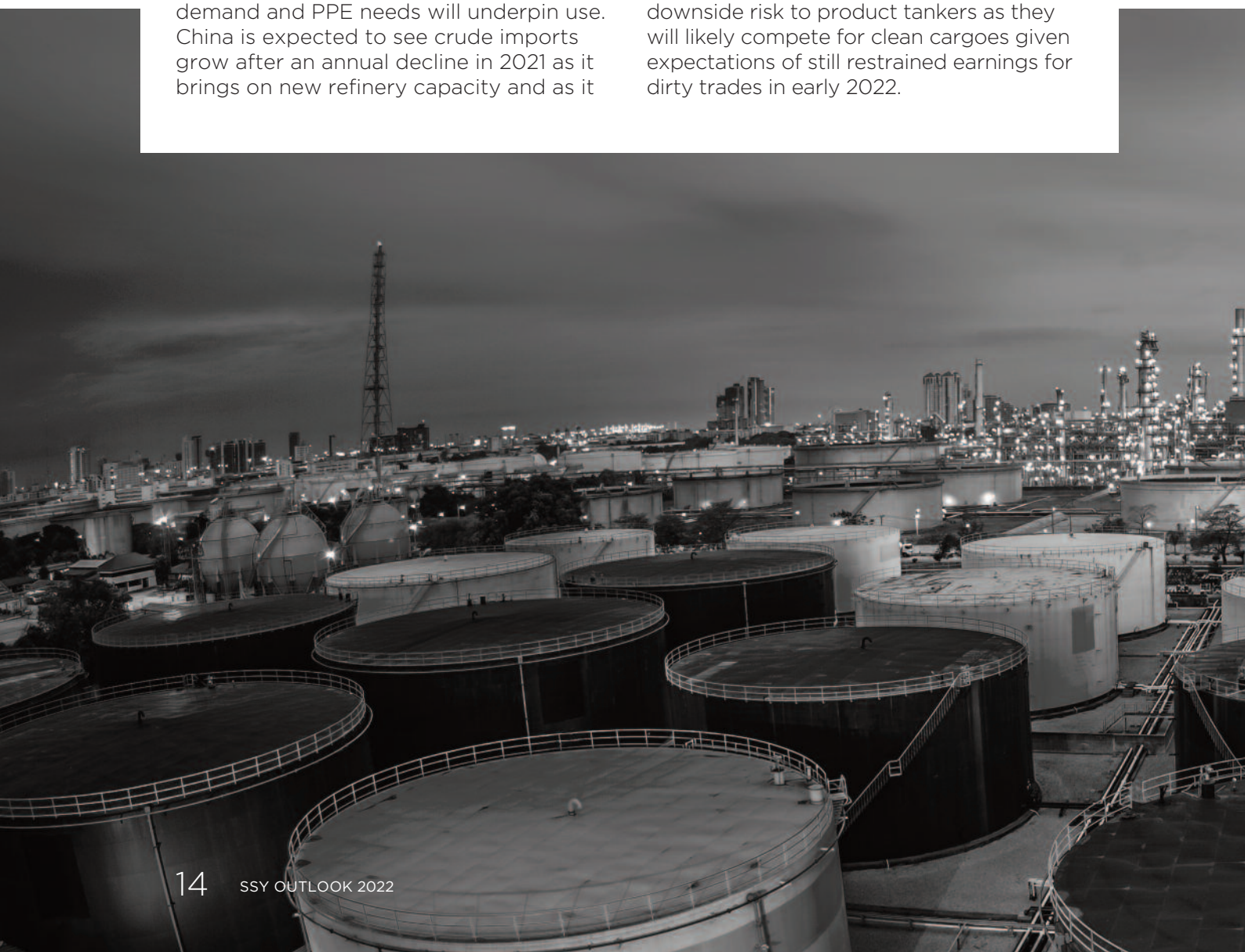


early 2022 may also be capped by its zero-Covid policy that is dampening oil consumption. Refinery runs may be clamped by emission controls in China when it hosts the Beijing Olympics in February while newswires had noted a rise in Iranian imports into China moving on older tonnage that would normally have left the fleet.

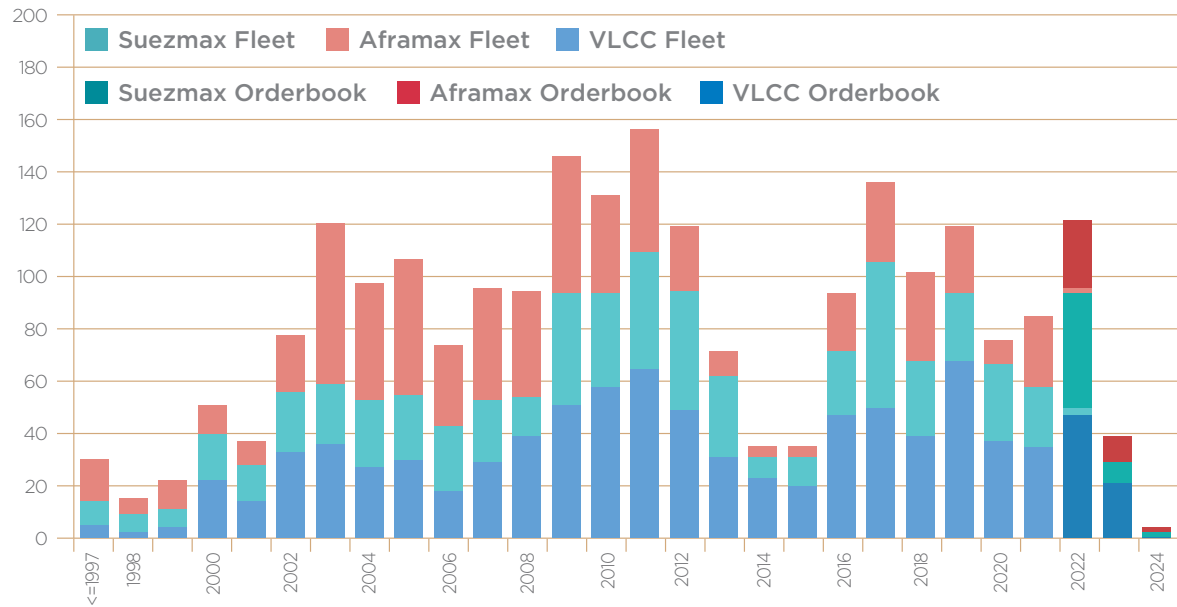
But factors are pointing to a more optimistic outlook heading into the second half of 2022. There is no longer a massive cushion of domestic stocks for countries to use and that will mean greater import demand across the crude and product sector. SPRs will also need to be refilled. More refineries are set to close or be converted to renewable fuel plants and that will continue to support longer-haul clean tanker trade flows, especially with new export refineries ramping up in the Middle East. Asian naphtha demand is to remain elevated as wider petchem demand and PPE needs will underpin use. China is expected to see crude imports grow after an annual decline in 2021 as it brings on new refinery capacity and as it

can't continue to draw on domestic reserves. Crude oil production will rise, with non-OPEC output from North and South America increasing and OPEC+ still on course for a gradual boost in supply despite Omicron, which it expects to have milder and more short-lived impact on oil demand than previous strains/waves.

Tanker scrapping should pick up in 2022, specifically for crude ships, given the recent lengthy period of earnings weakness, multi-year high scrap prices and the introduction of decarbonisation regulations in 2023. Clean tanker scrapping in 2021 was at its highest level since 2010, when single-hulled tankers were phased out, but crude removals have lagged. However, the orderbook for crude tankers is hefty for 2022 with over 45 VLCC and Suezmaxes apiece scheduled for delivery. Scrapping will need to keep pace for crude tanker earnings to show a significant recovery. This volume of new crude tankers also creates a downside risk to product tankers as they will likely compete for clean cargoes given expectations of still restrained earnings for dirty trades in early 2022.



No. of ships Crude Tanker Fleet Age Profile



Source: IHS Fairplay, SSY

“ Factors are pointing to a more optimistic outlook heading into the second half of 2022.



THE CHEMICALS MARKET

Adrian Brown

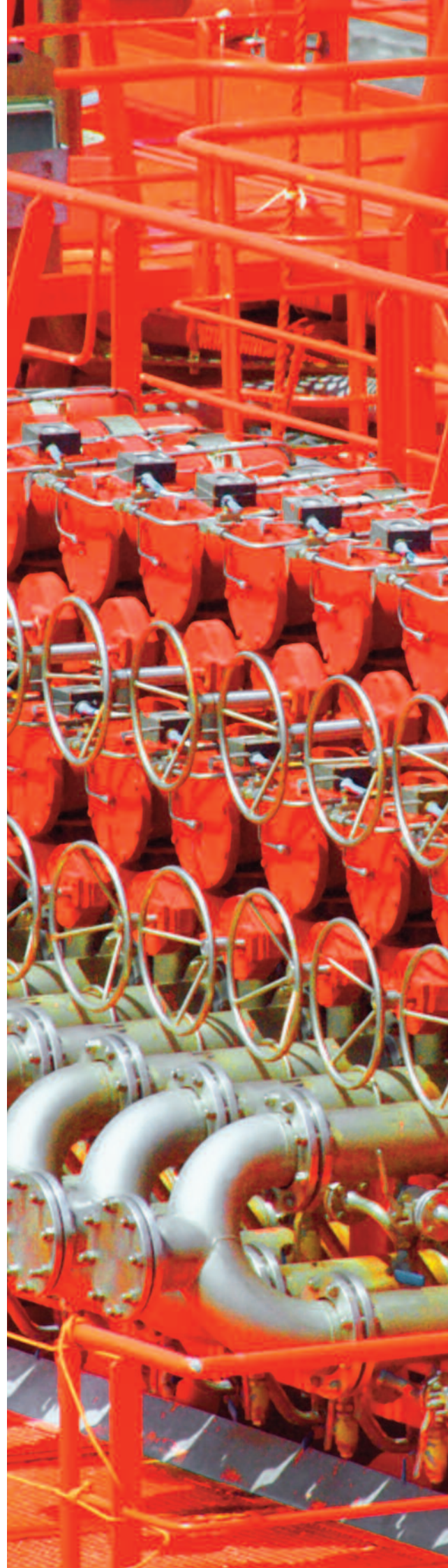
Director, SSY Chemical Research

3Q21 was not kind to the industry. The US was already struggling with a shortage of material from the earlier winter storm in the US Gulf, when it was blasted by Hurricane Ida. The outcome was a prolonged shortage of product for export that lasted until the end of October. Freight rates plummeted, and ship owners shunned the region, not wishing to be left with idle ships in the Gulf. However, the European market was no better, and with very poor demand from markets in both the west and the east, ships became trapped through the summer and consequently dragged freights even lower.

European coastal markets endured an awful summer. Bunker prices rose quickly, but spot demand was so weak that owners were unable to recoup the extra cost. Many vessels suffered idle time and were it not for an active biofuels market the situation would have been much worse.

Asian markets were fundamentally more sound, but restrictions introduced to combat Covid caused a reduction in the amount of chemical traffic in areas such as SE.Asia. However, they had more of a positive impact with regards to China since the process of testing crews caused numerous delays which led to a vacuum, whereby shipping space tightened throughout the entire region. By end 4Q21, this shortage of space was so profound that freight rates on every route within Asia rocketed, and owners of even small 4,000 tonners were claiming TCE earnings of \$15,000 p/d.

Deep-sea markets from Asia also responded to the lack of space, which came at a period of strong demand, with Asian product continuing to replace



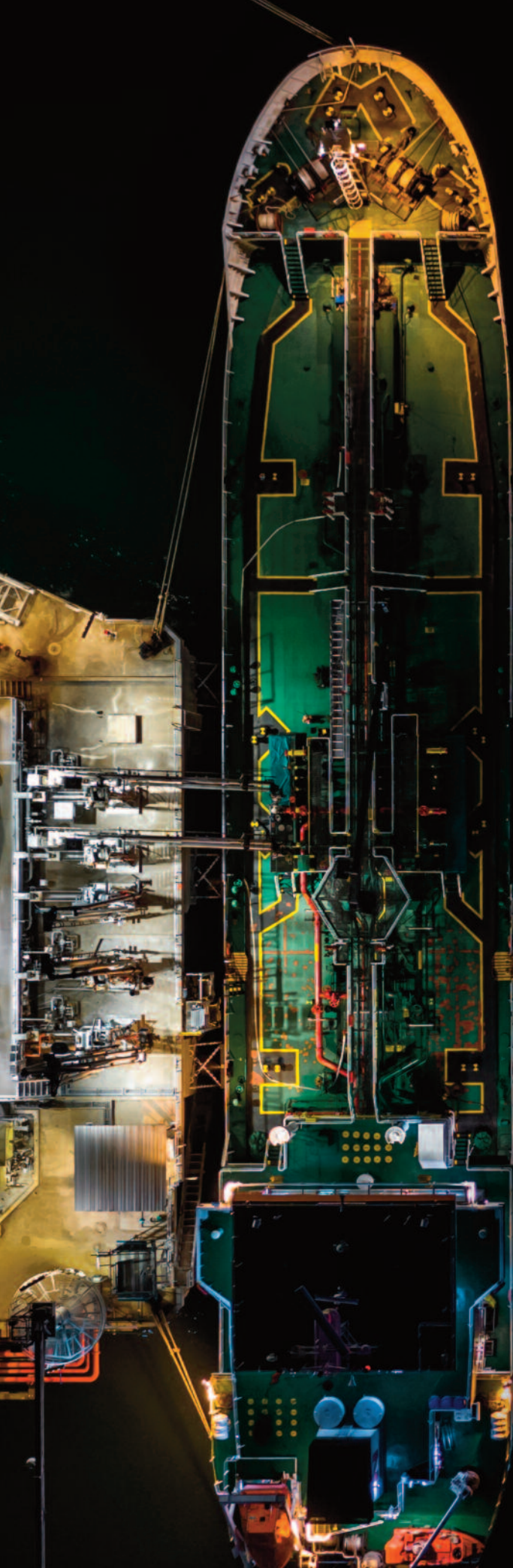


“ In terms of tonnage supply, few pure chemical carriers will be delivered during 2022, while we expect the high price of scrap steel to continue to tempt owners to recycle ships that are still relatively young.

US material in Europe all the way through 4Q21. Chemical tankers ballasted from Europe to Asia to reap the rewards, something hitherto unseen in the chemical sector.

During 4Q21, the European coastal market became less stressful for Owners. Overall chemical demand improved, but it still relied heavily on the biofuels/renewables sector. Deep-sea demand fractionally edged upwards, and rates either stabilized or firmed slightly.

In the US, exporters began to rediscover their customary export markets late in 4Q21, all except for the routes to Asia, where commodity prices remained too competitive to regain their usual market share, causing freights to languish. Elsewhere however, there was a rapid tightening of available space, which was reflected in higher rates on all the other trade lanes out of the USG.



Outlook 1H22

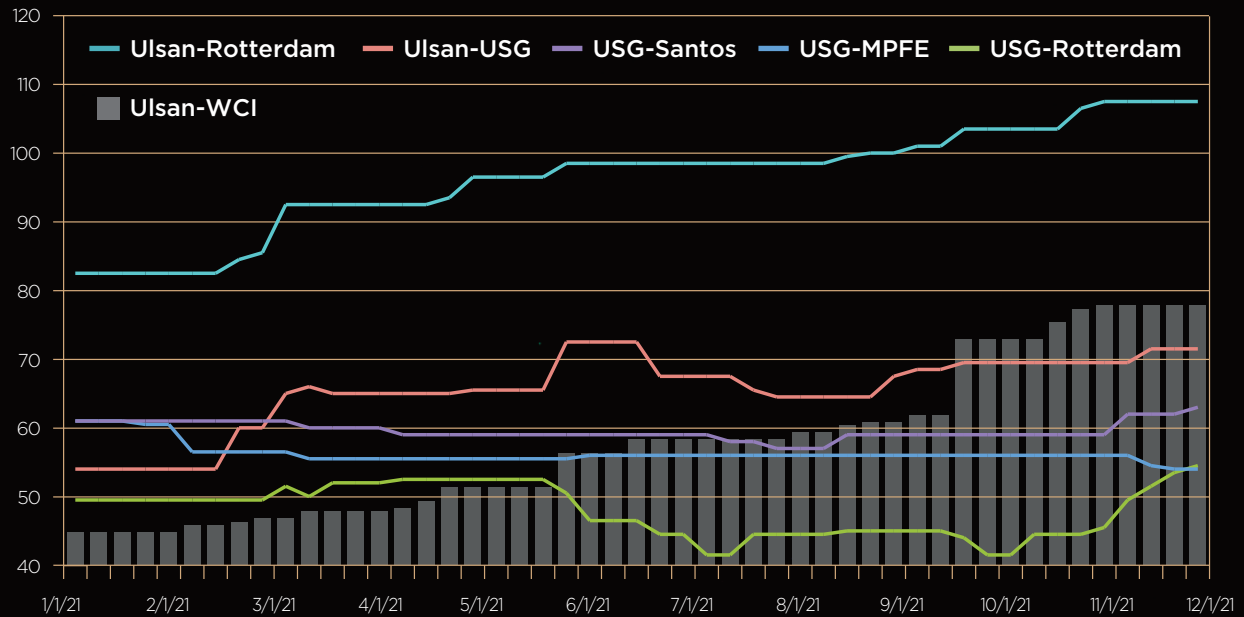
Much will depend on Covid. New variants, and their resistance to the current range of vaccines could potentially derail the economic recovery that was looking so positive in 2H21. Lockdowns, and the tightening of restrictions create uncertainty among end users, as well as reducing the consumption of chemicals associated with automotive fuels. The appearance of Omicron triggered a substantial reduction in the price of crude oil, showing how volatile the markets can be, and how commodity prices can be affected.

Lower feedstock values however can give chemical demand a boost, especially in the case of products that were facing potential demand destruction through excessively high prices. High feedstock prices can threaten refinery margins, forcing vulnerable petrochemical producers to cut production runs, and thereby reduce the amount of material to be shipped.

There are still concerns that products such as sulphuric acid, phosphoric acid and used cooking oil (UCO) could face demand destruction through higher prices. In the case of sulphuric acid, prices have increased eight-fold since January 2021. All are major bulk commodities and very important for the chemical tanker fleet. Tight supply and a lack of alternative products however suggest that demand will remain on track into 2022. Asia is a key supplier of sulphuric acid and UCO, and freights for both have nearly doubled through 2021. Moreover, competition for other chemical and edible oil cargoes has been reduced, boosting freights for those.

The situation in China will also have a large impact on tonnage availability, and not just in Asia. Chinese authorities have placed restrictions on how many foreign ships a pilot is permitted to board, and the length of time the pilots must remain in quarantine afterwards. This has led to a shortage of pilots, and whilst berthing delays at some ports have eased, the more popular ports remain heavily congested, and this situation will continue into 2022.

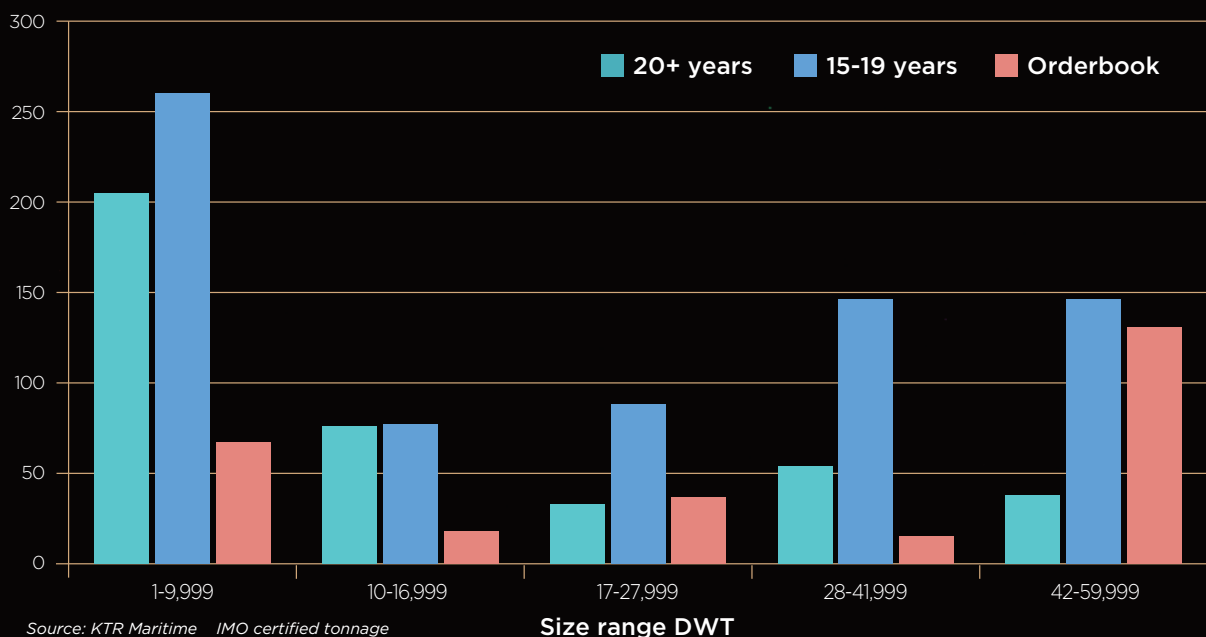
US\$ Freights out of the US vs rate development out of Asia



In terms of tonnage supply, few pure chemical carriers will be delivered during 2022, while we expect the high price of scrap steel to continue to tempt owners to recycle ships that are still relatively young. This remains especially pronounced in the sector that is under 15,000 dwt.

We envisage continued growth in chemical demand through 2022, subject to Covid. Through the benefit of cheap natural gas feedstock prices, we expect the US to become a major exporter again, which will be at the expense of European and Asian exporters. However, major petrochemical plant expansions in China will add a new dimension later in 2022 which could see further export potential from Asia.

No. of ships Global chemical fleet orderbook vs older tonnage





Toby English

Global Head of S&P


It would be an understatement to describe the Sale and Purchase market over the course of 2021 as anything other than extraordinary, particularly in the drybulk and container segments. Owners within those two sectors, having spent the past decade awaiting a recovery, have over the course of this year been able to finally reap the benefits of the myriad factors driving those markets, not least consumer demand as the world edges its way back from Covid, combined with the congestion havoc that the pandemic has created. Unfortunately, the same can't be said for tanker owners, who in turn have suffered the effects of lower demand and consequently lower freight rates.

The most obvious element underpinning both freight rates and pricing is of course the supply/demand balance, and after years of the lack of ordering in both the container and bulk segments, increased demand in the latter part of 2020 completely outstripped supply in these two markets, leading to the sort of anecdotes not heard of since the mid-2000s – for example capesize bulkers loading cargoes of logs out of South America, and handysize bulkers being chartered by end users to ship their containers due to a lack of alternatives.

In the drybulk sector, expectations were certainly high as we moved into the second half of 2020. However - unusually for shipping - reality significantly outperformed expectation, and as we subsequently moved through 2021 we saw a significant increase in freight rates across all sectors, leading in turn to a hugely increased demand for ships, and of course increased pricing. To highlight this, we can look at rates across the various segments.







In early January 2020, a 38,000 dwt handysize bulker would have earned an average of circa US\$ 12,000 per day, and a supramax potentially even a little less. As we neared the midpoint of the year, we saw rates of around US\$28,000 and 32,500 respectively, and highs points for both sectors neared US\$40,000 per day. Consequently, we saw prices rise significantly. A 10-year-old 38,000 dwt Japanese handysize at the start of the year would have cost the buyer US\$11 million, and circa US\$21 million later in the year. A 10-year-old Chinese “Dolphin 57” supramax has seen its value increase from US\$8 million in the 1st quarter of 2021 to in excess US\$19 million at the high point towards the end of October. The graph below illustrates the pricing developments during 2021.

“ The tanker S&P market has been more of an area for opportunistic buyers over the course of the year, which has meant the focus has tended to be on older tonnage.

In the container market, it was the liner companies leading the huge amounts of activity across all sizes, again with prices benefitting significantly as a result. At the start of this year, a 15-year-old 5,500 TEU container vessel would have cost something approaching US\$20 million, whereas 12 months later a smaller ship of the same age has achieved more like US\$70 million, close to 300% increases. It is not hard to see why. Average rates for a similarly sized ship averaged levels in the mid US\$ teens for 2017 and 2018 and nudged closer to the US\$20,000 per day mark in 2019 and 2020. They now stand at well over US\$100,000 per day.

Conversely, the tanker S&P market has been more of an area for opportunistic buyers over the course of the year, which has meant the focus has tended to be on older tonnage, despite the various regulatory changes affecting the industry in the coming years. Interestingly, despite earnings being weak, the pricing for more modern tonnage has not changed, and if anything, the significant increase in newbuilding pricing due to both demand and steel price increase has meant that there has still been relatively high demand for the sparse modern ECO second hand



tonnage available, and as a result prices have been steady. Of the few illustrative sales of modern tonnage we have seen, representative pricing for a 5 year old MR today would be in the low US\$30 million, and if we look at examples of sales from a more positive tanker market of the 1st half of 2020, the sale pricing was similar when accounting for the age difference. This could be said most of the modern tanker segments. Regulatory change is no doubt effecting owners' sentiment in the tanker segment. The larger/older vessels are expected to be particularly hard hit by EEXI being implemented, and with the tanker segment being much more consolidated, it means in turn that owners' eyes are significantly more focused on fuelling developments, and engine technology.

The backdrop to all of this has been an increase in activity in the Newbuilding market, and as mentioned earlier this demand in conjunction with steel price increase has led in turn to substantial increases in newbuilding cost. As examples the cost of an MR tanker in Korea has risen from lower US\$30 million to a shade over US\$40 million depending on which yard you talk to. Likewise, a Newcastlemax in China would have cost US\$51 million at the end of 2020 and now stands at US\$64 million, a 25% increase for ships not now delivering until the second half of 2024. The newbuilding strategy amongst the container operators seems to have tended towards "as many as possible, as early as possible" with a split between those sticking with conventional fuels, and those opting for next generation fueling options now on offer. Likewise, with the limited support from longer term charters, owners of drybulk and tanker tonnage have tended to opt towards ordering conventional tonnage. And this is no surprise. With the upgrade of dual fuel technology adding US\$10 million and above to the cost of a medium sized product tanker, there are going to be few takers on a speculative basis.

The question now of course is what does 2022 hold for shipping, and in turn how

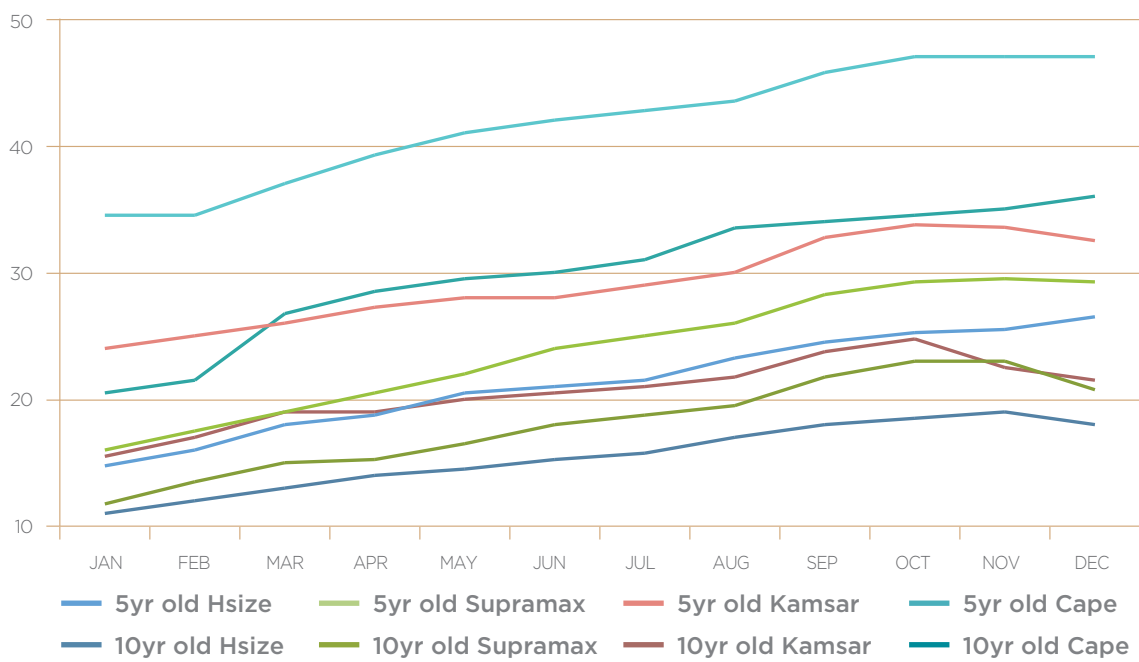


“ Owners’ eyes are significantly more focused on fuelling developments, and engine technology.

this will affect the S&P and newbuilding markets. There is no doubt that from a fundamentals perspective the signs are interesting. Emission regulatory changes will no doubt have a huge impact. But with the debate still hot in terms of the next generation fuelling and newbuilding capacity being limited, we expect that owners will still take the less risky option of looking at the more modern economical tonnage rather than (with the exception of the container fleet) looking at newbuilding replacement tonnage from the yards, particularly with capacity so tight and prices unlikely to soften dramatically. As a result, we could well see a busy year in the S&P sector for 2022.



US\$ millions Second hand dry cargo average valuations 2021



Source: SST

FFAS - 2021 IN RETROSPECT AND WHAT TO EXPECT IN 2022

Duncan Dunn

Senior Director, SSY Futures Ltd

It is always revealing to compare the Baltic's average price for the past year with the FFA market price for the year ahead. This instantly refreshes one's memory of the past year and gives perspective to what has formed the markets view on the year ahead.

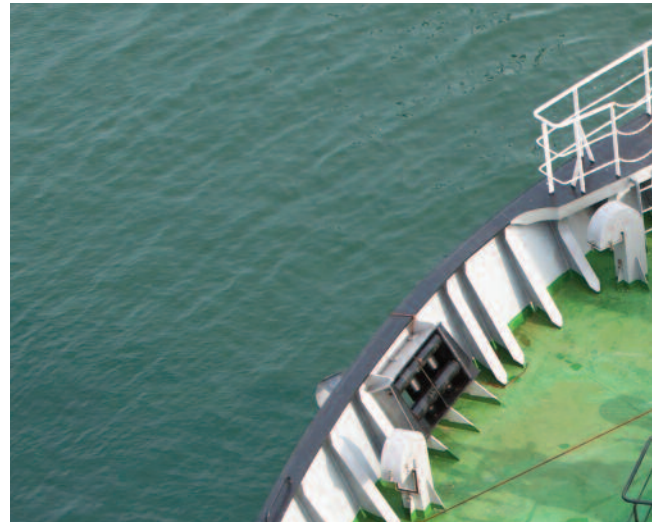
24/12/21	Cape Avg 5TC	Pmax Avg 5TC	Supramax 58 Avg 10TC	Handysize 38 Avg 7TC
2021 Avg YTD	33165	26854	26751	25702
Cal '22	25550	25625	23000	21825
Cal '23	20000	17625	16450	15000

The prices above evidence the markets expectation for a restrained continuation of the recent firm pricing in 2022 but for the market to fade somewhat thereafter in 2023.

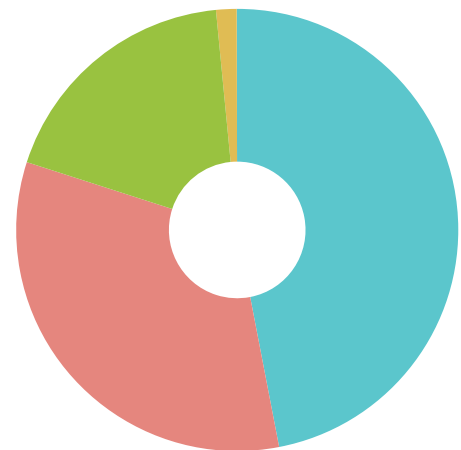
This discounting of the forward price is not unusual and is more dramatically evidenced in the drop from the average price in December to the forward price for January '22.

24/12/21	Cape Avg 5TC	Pmax Avg 5TC	Supramax 58 Avg 10TC	Handysize 38 Avg 7TC
Avg MTD	29767	25071	26716	27622
Jan '22	23000	26950	25375	25250

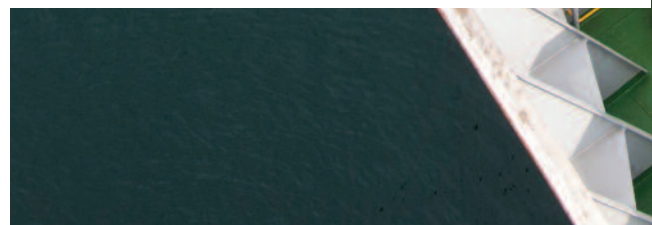
As well as evidencing the ongoing opportunity in the FFA markets for those either caught in adverse fixed price contracts or facing the uncertainty of a floating price; the table above also goes a long way to explaining why 2021 has been such a busy year for the Dry Cargo FFA Markets.



Dry FFA market by open interest

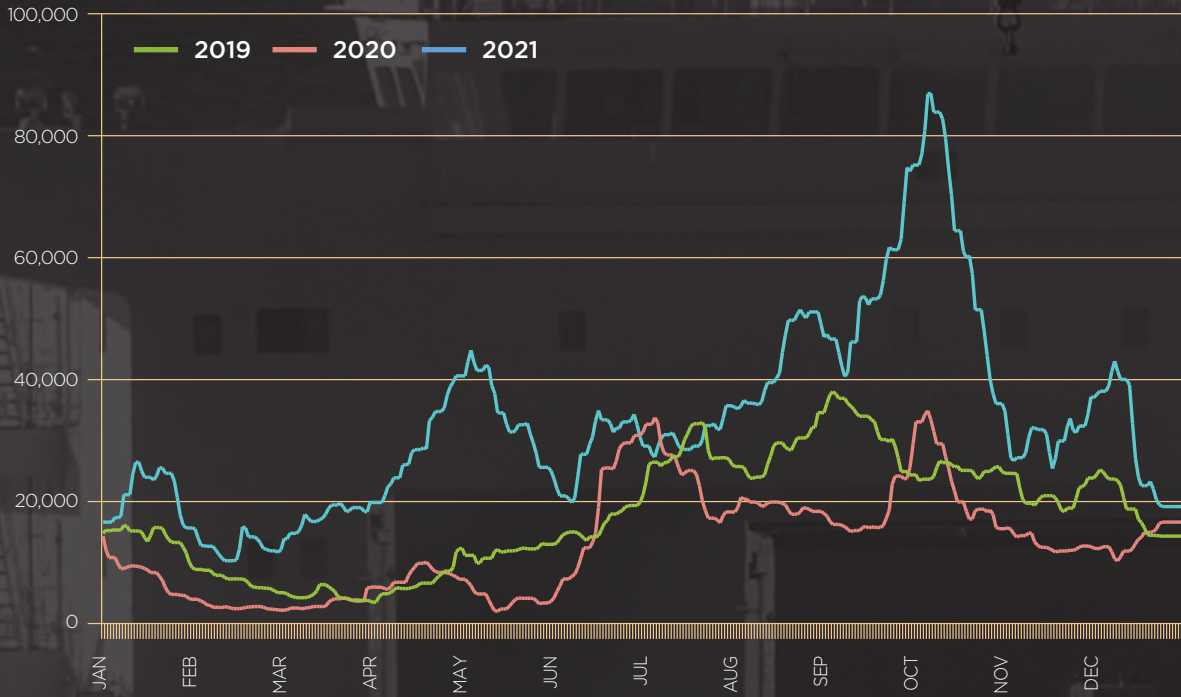


- Panamax 47%
- Supramax 18.5%
- Capesize 33%
- Handysize 1.5%

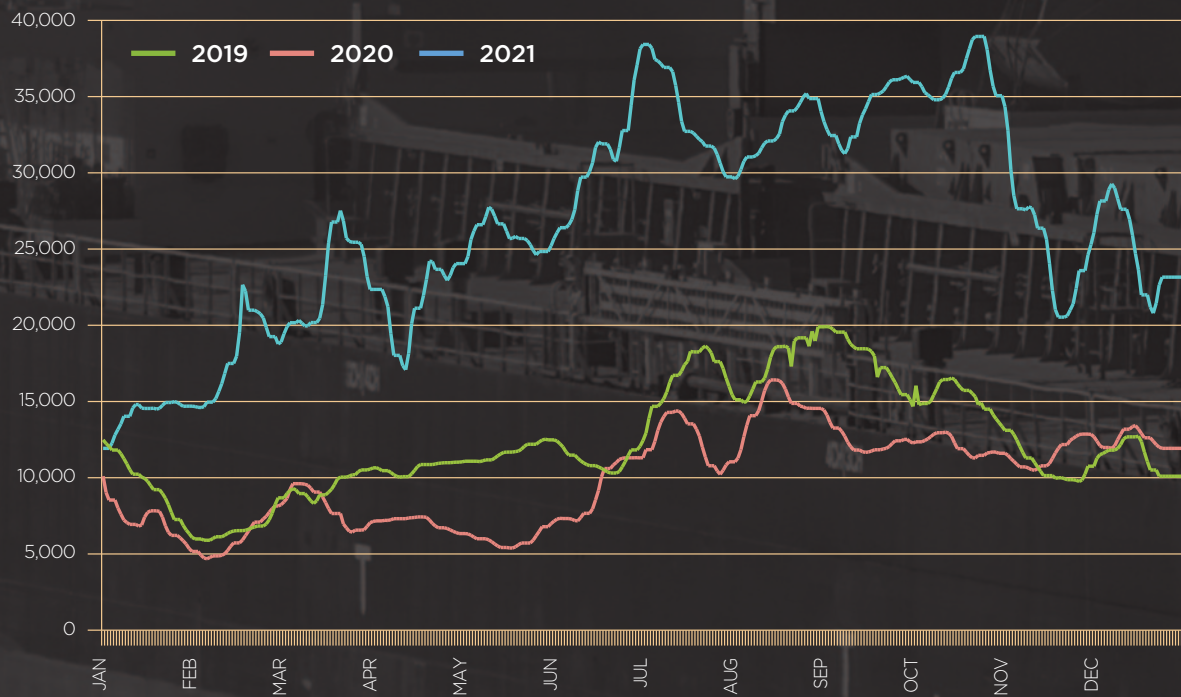




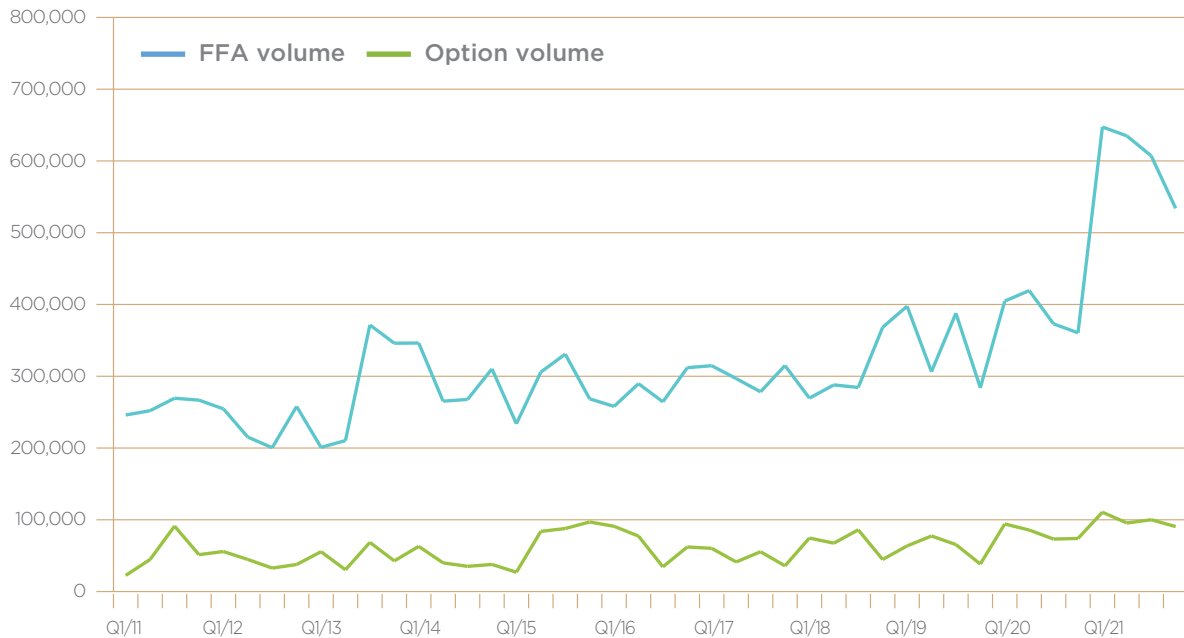
Price \$/day Cape 5TC Index



Price \$/day PMX 5TC Index



Lots/Qtr Dry FFA & Options Quarterly Volumes



A look at the price action in the Cape and Panamax markets over the past twelve months in comparison to the preceding years further illustrates the recent volume boost for Dry FFAs; clearly higher rates in the FFA markets stimulate volume growth, as the volatility that comes with an increased price range is also a measure of increased risk which generates both demand from hedgers and attracts risk takers such as hedge funds and other financial traders.

FFA market growth in 2021 was anticipated by many. In last year's edition of this publication, we confidently anticipated a year-on-year growth of 20% but this was far exceeded by the actual growth of over 60%, driven by a strong resurgence in Panamax, Supramax and even Handysize FFA trading. The pie chart on page 26 shows the share of currently open FFAs, with the Panamax dominating the open interest, taking the lead back from the Cape sector which for years had been the driver of FFA volume.

“ Last year we confidently anticipated a year-on-year growth of 20% but this was far exceeded by the actual growth of over 60%.

This volatility will continue to draw newcomers into derivatives trading. We are also confident that opportunities in Carbon futures trading, which can be quickly and easily adopted by those traders who have already assimilated FFA strategies will also be a big draw in 2022 as EU legislation brings cargo owners visiting EU ports into the Cap and Trade system. It is worth noting as 2023 and the EU's Carbon legislation for shipping approaches, that futures and option strategies are one the cheapest and easiest ways to accumulate EU Offsets.

SSY Futures look forward to helping you find a competitive edge in the freight markets and to working with you in the carbon markets in 2022!

METALS DERIVATIVES MARKET

Ben Taylor

Head of Metals Derivatives, SSY Futures Ltd

The second half of 2021 had humbled a few with regards to the question 'is this the beginning of a new supercycle?'. With many moving parts to consider, it's not yet clear which shines through as the lead indicators on the direction of base metals.

Inflation and global stimulus still remains at the forefront of the minds of the majority, however % increases YTD are highlighting the weighted importance of each metal. As the market expected easing into 2H21 as PBOC continued with the RRR rate cut in December, providing liquidity following slower GDP growth as industrial activity rose less than expected earlier in the year. US unemployment figures return to near pre pandemic levels, giving a platform for some tighter monetary policy to control inflation.

LME index momentum remained positive, pushing higher in 2H21. Power in Europe has exacerbated tightness in energy intensive metals such as zinc and aluminium, causing supply cuts and pushing prices/premiums as stocks still remain low in those regions. Demand has been damaged through lack of raw materials needed in some manufacturing processes, such as those used in automotives, causing some respite from highs.

In addition to this, the Omicron variant of Covid-19 emerged towards the end of 2021, proving a challenge for governments to control. This may create a lag leading from end of year into 1H22 for logistics and international trade to continue, also potentially inciting further easing for increased liquidity. All metals on the base complex continued to trade above their 200d SMA as we moved into year end.









LNG MARKET

Toby Dunipace

Head of LNG

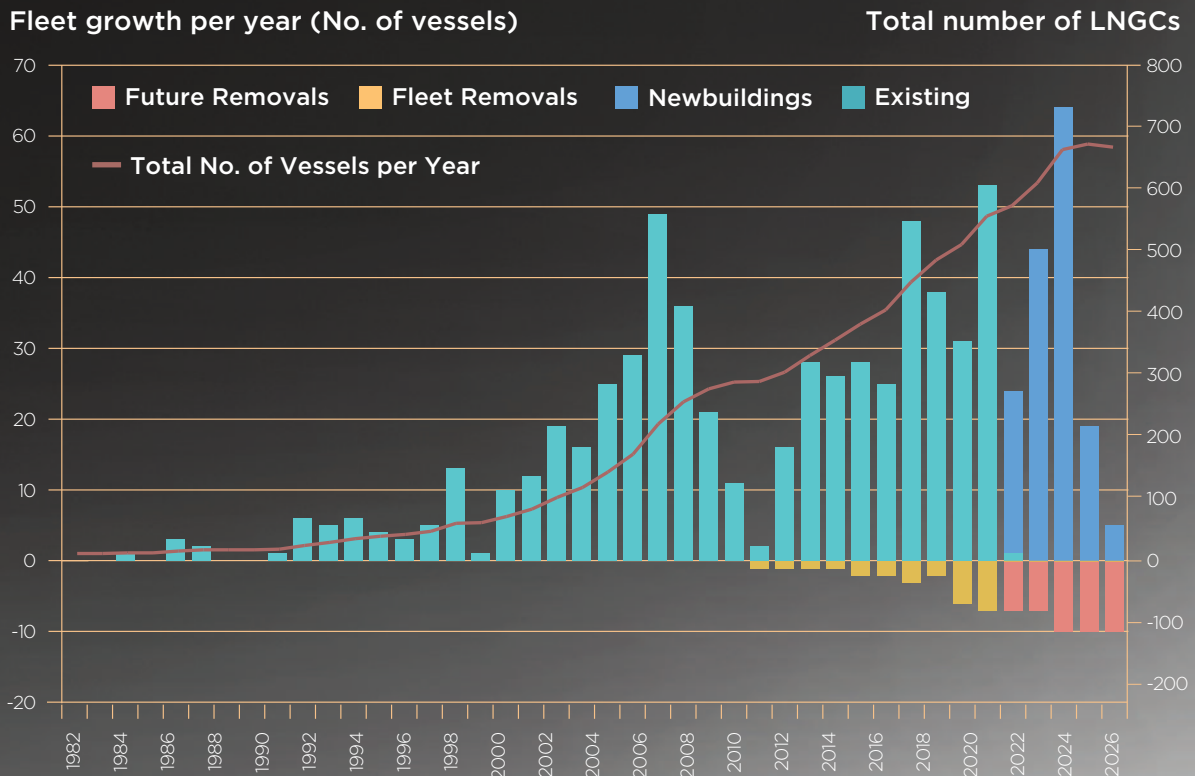
The second half of 2021 in the LNG shipping market has seen largely positive results for ship owners. There has been a steadily healthy spot market that saw standard seasonal fluctuation during the summer months, before seeing an incredible rise from September onward.

The shipping markets were driven by an astonishing jump in the commodity pricing, as the world experienced a genuine energy crisis and a lack of access to gas supply. Historically the Far Eastern gas markets have been the driving force for this type of market reaction, however in 2021 we saw a worldwide rally for gas purchasing.

LNG prices in the Far East (represented by the “JKM” marker) and Europe (TTF/NBP) were the highest they have ever been in October 2021. As a result, the chartering / trading players were more concerned with having shipping security i.e., freight on their books, that was able to transport volumes, than the commercial charter rates. This is the perfect scenario for ship owners as Charterers were paying top dollar and Owners could leverage the strong market conditions to secure good economics.

Not only were headline rates strong during the end Q3/Q4 period but also TCE levels were very bullish. For most of the latter half of 2021 round trip and economics were secured, meaning a full fuel and hire ballast bonus as well as an element of positioning fee. The spot market has been, by all accounts, very strong. It has mirrored largely the pattern of the end of 2020, which ended in similar record-breaking fashion for shipping.

Fleet & Orderbook - Conventional LNGC (>100k cbm)



2021 also saw the increase of a very lively term market. High cargo fundamentals and general low levels of supply (relative to demand) as previously mentioned have forced Charterers to think more long term. Discussions for 1,3,5,7, and even 10-year charters were commonplace in the market as once again, security of shipping trumped everything else. With cargo prices where they have been over the last six months, it really has been a case of charterers having a fear of not being able to lift cargoes. After the majority of 2020 was such a misery for those moving LNG molecules, due to the Covid-19 pandemic, 2021 was a year to try and make it all back. Oddly, and in contrast slightly to the

above, December was a little slower than most expected. Historically November and December are the peak months as cargoes are being sold into December and January delivery slots, and the Far East usually has the higher pricing, which leads to a wider arbitrage, which in turn leads to longer tonne miles. However, the demand for energy in Europe has been so strong that it makes more sense for cargoes to divert into the European markets. This resulted in shorter tonne miles and the spot levels came off. There was not a huge amount of concern from market players that this would drastically alter the 2022 outlook too much, however it was unusual to see a slower December than previous years.

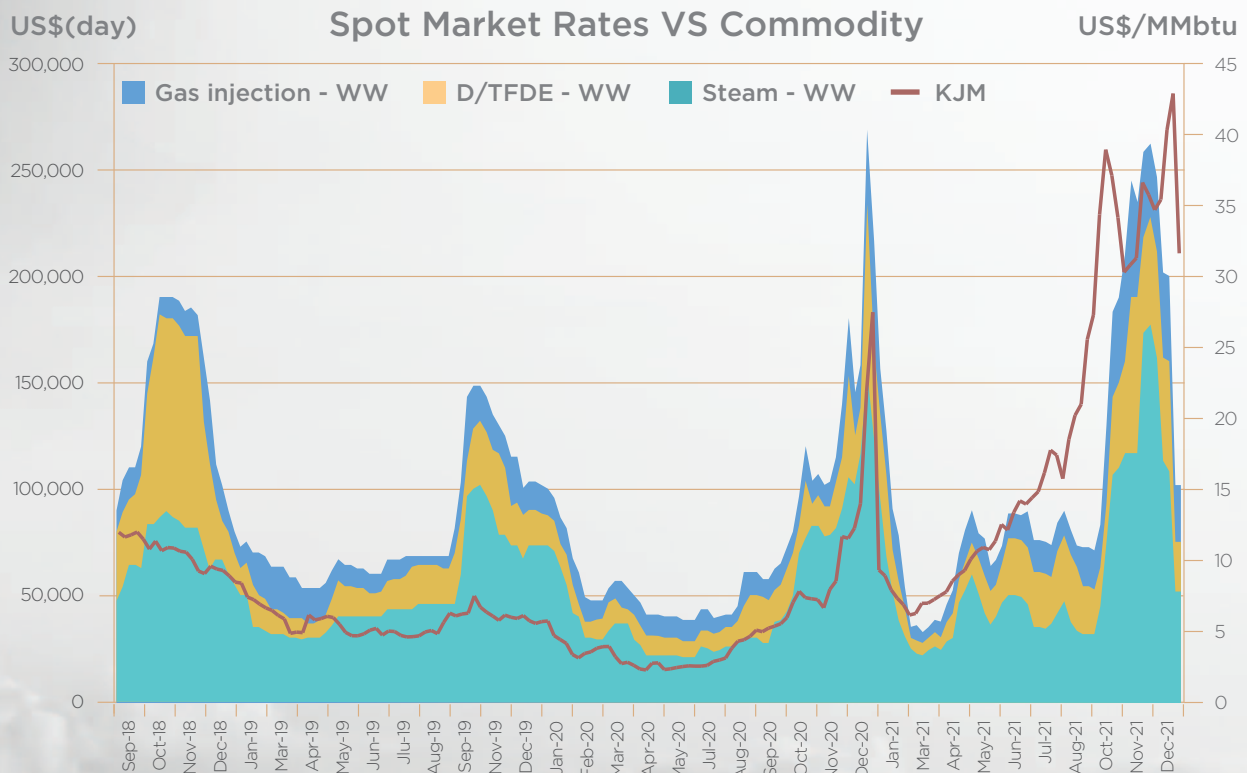
Shipyard capacity

From 2024 onward the LNG market will see a serious uptick in LNG production coming online. As a result, Owners in the last six months have moved aggressively with the yards in South Korea to book slots and to try and secure competitive prices. As a result, in the period of July-December, new building prices have increased over \$10 million dollars for a single unit. The issue is not only price however, due to LNG markets being so strong as well as very healthy container shipping orders, yard slots are now fully booked until 2025. This adds further strong sentiment to the chartering markets. Will there be enough shipping to satisfy the growing LNG market? Can shipping keep up with this LNG boom that we are seeing?

For the first quarter of 2022, the market will keep a very close eye on the weather

patterns in order to determine the fortunes of the spot market. January and February can still be busy periods if there is cold weather, especially in the East. With the market still fundamentally quite short on shipping length, the market can quickly improve and ships can disappear. The term market is likely to continue to see strong levels whilst the worldwide gas prices remain so high; at the moment the 2022 average is over \$20/MMbtu on a worldwide basis. If this number starts to drop as demand for LNG diminishes (if it diminishes) then Charterers may reassess their positions and be more comfortable taking spot market exposure as opposed to term freight on their books.

If one thing is to be certain, it is that LNG remains an unpredictable and volatile market. Making predictions gets more and more difficult every year.



THE CARBON MARKET

James Ash

Head of Environmental Markets, SSY Futures Ltd

EU Allowances

2021 has certainly been an interesting year for the carbon market. Back in December 2020 the EU Emissions Trading Scheme (ETS) had already started to rise with Dec21 EUA contract opening on the first day of trading in 2021 at €32.70.

At that point, the "fit for 55 package" – the EU's plan to reduce emissions by 55% from 1990 levels by 2030, was very much in market participants thoughts. Not least because this included a proposal to include the Maritime industry into the EU ETS in 2023.

As we moved through 2021, uncertainty within the regulatory framework, diminishing free allocation and the introduction of the Carbon Border Adjustment Mechanism (CBAM), were all factors that added to the rising price of EUAs (EU allowances), as industries holding those allowances seemed reluctant to sell. As a result, EUAs started attracting more financial speculators within the space, largely from the buy-side.

Below average renewable energy generation in the first half of the year also had an impact and we saw Dec21 EUAs trade above €50.00 in May, which at that time was an all-time high. As a result, utilities would have to rely more on fossil fuel for power generation. Gas, Coal and Power all rallied in 2021 with European Gas far outperforming other commodities, up 245% at one point, and this also gave the EUA carbon market more support.

2021 saw increases in EUA Option activity, with large positions being placed on upside calls as the market began to rally. As we neared option expiry





in December the market continued to rally forcing option traders to hedge. The rally largely being attributed to speculator buying and a lack of Industrial sell side.

In December the EU commission confirmed that 23 member states had handed out free EUAs to industrial installations, representing 53% of the total free allocation for 2021. The market continued to rally setting daily all-time highs.

The Voluntary Carbon Market

The Voluntary carbon market also saw rapid growth in 2021 and by mid-year this had increased by over 50% in value from the previous year.

The rise in prices and volume was largely driven by an increase in corporate net zero commitments, as organisations looked to the carbon markets to support their carbon reduction strategies.

All eyes were on COP26 as negotiators looked for a breakthrough on the rules for global carbon emission reduction trade. After five years of talks COP26 finally came to an agreement on the "rulebook" for this new market. Some of the major loopholes, such as double accounting, have now been addressed but there is further work to be done as other areas remain unspecified.

The new Integrity Council for Voluntary Carbon Markets (IC-VCM) has been

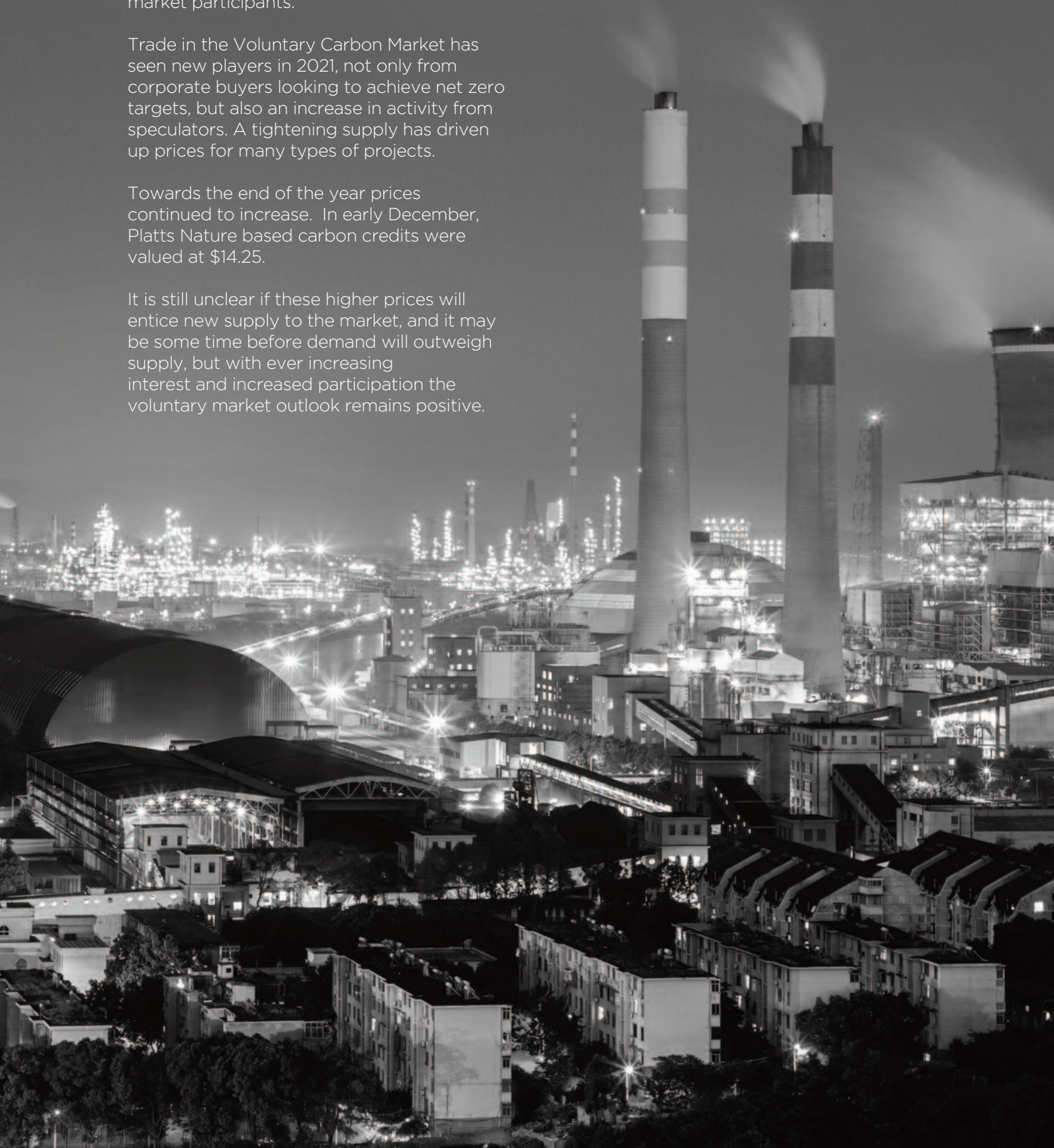
“ The rise in prices and volume was largely driven by an increase in corporate net zero commitments, as organisations looked to the carbon markets to support their carbon reduction strategies.

established. Its role is to act as a governing body for the entire voluntary marketplace adding integrity and credibility and encouraging more activity and increased market participants.

Trade in the Voluntary Carbon Market has seen new players in 2021, not only from corporate buyers looking to achieve net zero targets, but also an increase in activity from speculators. A tightening supply has driven up prices for many types of projects.

Towards the end of the year prices continued to increase. In early December, Platts Nature based carbon credits were valued at \$14.25.

It is still unclear if these higher prices will entice new supply to the market, and it may be some time before demand will outweigh supply, but with ever increasing interest and increased participation the voluntary market outlook remains positive.





SMOKE AND MIRRORS: NEW DECARBONISATION REGULATIONS MEET RISING EMISSIONS

Alastair Stevenson

Head of Digital Analytics

Paradoxically 2021 marks a year featuring increases in both CO₂-related shipping regulations and underlying CO₂ shipping emissions.

Decarbonisation Regulations

On the regulation front, the IMO and EU have developed new carbon intensity metrics requiring owner compliance from 2023 onward.

The IMO released two metrics, one covering vessel design and the second aimed at vessel operations. The new EEXI¹ design index is analogous to the current EEDI² that has applied to new vessels since 2013, except that it applies to all vessels. In addition, the IMO has developed an operational CII³ index based on the Poseidon Principle's AER⁴ measure but graded from 'A' to 'E'. The EEXI and CII share the same unit - CO₂ per nautical mile divided by vessel size. The key difference is that the EEXI theoretically measures the vessel emissions at a certain engine rating, while the CII rates the vessel's CO₂ emissions based on actual, annual real-world operations.

The EEXI and CII take effect from 2023 and are in addition to the IMO's overriding goal to halve CO₂ emissions by 2050 relative to 2008 levels.

¹Energy Efficiency Existing Ship Index (EEXI)

²Energy Efficiency Design Index (EEDI)

³Carbon Intensity Indicator (CII)

⁴Annual Efficiency Ratio (AER)

Meanwhile, as part of their #FitFor55 package, the European Union has developed the FuelEU Maritime initiative which creates an additional well-to-wake design measure for owners to comply with from 2025 – potentially tighter than the EEXI – and covering additional gas emissions. The #FitFor55 package also includes shipping as part of the European Union Emissions Trading System (ETS) from 2023, removes fuel tax exemptions for intra-EU voyages⁵, and initiatives to provide for LNG bunkering infrastructure at European ports⁶.

Against a backdrop of mandatory regulation, 2021 has also seen an increase in voluntary decarbonization activity by charterer and owner alike. At last count 27 shipping companies have signed the Sea Cargo Charter accord, more than treble the eight original signatories in late 2020. The Sea Cargo Charter creates a standard greenhouse gas emissions reporting process for signatories, providing transparency on shipping CO₂ emissions not provided by the IMO's DCS database. Meanwhile RightShip membership continues to increase, with more owners agreeing to voluntary measures to reduce greenhouse gas ratings, while an increasing number of shipping companies are offsetting their carbon emissions in verified voluntary markets.

2021 Shipping Emissions

Despite the intensifying regulatory landscape, global shipping's 2021 CO₂ emissions increased 4.9% from 2020, not only rebounding from the 2020 Covid lows but also surpassing 2019 levels.

The key driver was the recovering 2021 world economy where demand for durable goods has remained firm while services demand has increased. Added to this is a trend towards longer ton-mile trade, higher steaming speeds in some segments, and increased port congestion.

⁵Energy Tax Directive

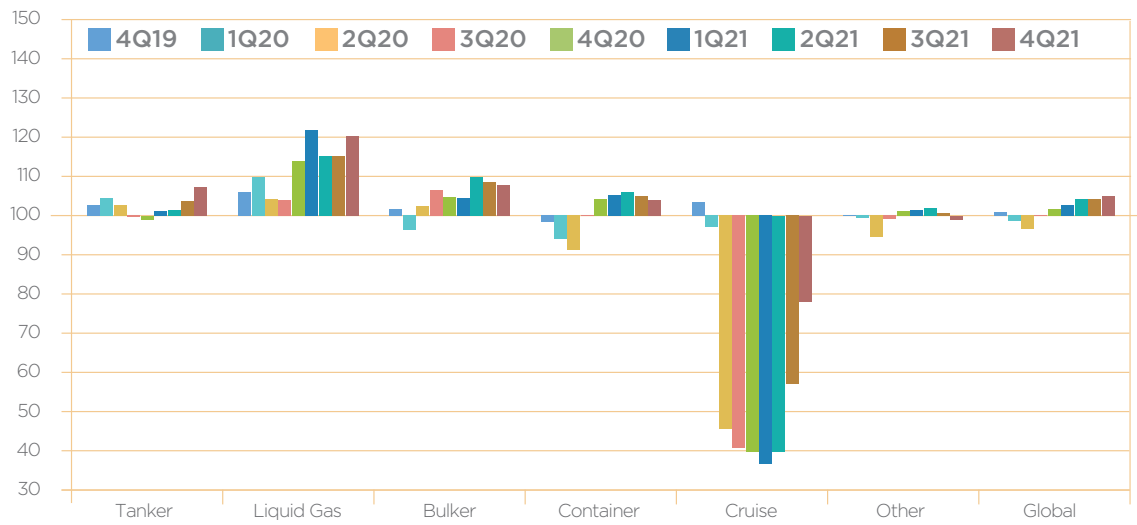
⁶Alternative Fuels Infrastructure Regulation (AFIR)





Quarterly International Shipping CO2 Emissions Trends

Index: 2019=100



Source: MarineBenchmark.com



Recent global shipping emissions are summarized in the chart relative to 2019 levels. At first glance, the highlight is the decline and now recovery in Cruise ship operations as global lockdowns have eased. Liquid Gas dominates the positive side of the ledger with added gas capacity, strong demand and longer ton-mile trade all pushing emissions higher. Container and Bulker emissions, two of the larger segments, have continued to increase as durable goods demand remains firm, but also with a potent combination of faster steaming speeds, longer trade routes and port congestion raising emissions. Lastly, Tanker emissions began to recover in the second half of 2021 as global lockdowns eased and transportation demand moved higher.

IMO Challenges

The increase in 2021 shipping emissions represents an inconvenient truth for the IMO, particularly following the 'keep 1.5 alive' commitments emerging from COP26. As the EU Commission noted during the launch of their #FitFor55 package, while the IMO actions are welcome the "measures are insufficient to decarbonise international shipping in line with international climate objectives".

Certainly, the IMO's medium term strategy to lower the energy- and carbon-intensity of global shipping will not meaningfully reduce CO₂ emission. SSY estimates that approximately 75% of the tanker and bulker fleets will not comply with the EEXI 2023 requirements without remedial action.



However, for most vessels, achieving EEXI compliance will have little bearing on actual vessel operations and leaves tangible CO₂ reductions to a smaller number of heavily affected older vessels that are approaching retirement. The CII ratings system may encourage more slow steaming from 2023 to limit CO₂ emissions but, as we have seen in the 2021 bulker fleet, vessel speeds have been more responsive to market conditions than environmental objectives.

Ultimately the challenge is maritime decarbonisation and for that we look to new technologies, new fuels, new infrastructure and new ship designs. Economising existing fleet emissions through the EEXI and CII might be a step in the right direction, but it also risks diverting focus from the overriding decarbonisation goal.

“ Despite the intensifying regulatory landscape, global shipping’s 2021 CO₂ emissions increased 4.9% from 2020, not only rebounding from the 2020 Covid lows but also surpassing 2019 levels.

IMO MEPC77 Update

The latest IMO Maritime Environmental Protection Committee meeting (MEPC77) in November provided further guidance on the direction of energy regulations.

On the EEXI, the vessel's design speed - V_{ref} - is measured at 75% of the engines maximum continuous rating at laden draft. A problem facing pre-EEDI vessels is whether, or not, this speed was recorded during sea trials. In its absence, the IMO provides a more conservative V_{app} calculation which is used with additional penalty. The problem is that V_{app} presupposes those older ships are less efficient, requiring onerous engine power limitations to meet required EEXI levels. A BIMCO/RINA/Japan proposal to allow V_{ref} to be established in-service is likely to be introduced in 2022, preventing owners of older, efficient, but less well documented vessels to avoid draconian EPLs.

The IMO is also looking to slightly reformulate the operational Carbon Intensity Indicator which, in its existing form, effectively ranks a vessel's Annual Energy Ratio (AER) for 'A' to

'E'. The proposals provide for voyage- and fuel-based adjustments that would see the IMO's version of the AER deviate from that used in the Poseidon Principles. The fuel adjustments would adjust emissions so that it predominantly reflects fuel used in ship propulsion, rather than auxiliary onboard demands. The voyage-based corrections would include the removal of excess stationary periods, yard visits and include normalizing factors for some ship types such as ice class vessels.

If approved, these changes would improve the introduction of the IMO's medium term efficiency goals from 2023.

The IMO MEPC meeting also discussed a modest bunker levy, accelerating decarbonisation timelines (net zero by 2050), clean arctic fuel initiatives, increasing DCS transparency, as well as introducing carbon levies. Reflecting the difficulty of achieving consensus in a UN body, each of these proposals has been deferred to future discussion through expert working groups or the ISWG-GHG⁷. Not ideal for a meeting taking place immediately after COP26.

⁷IMO Intersessional Working Group on the Reduction of Greenhouse Gases

SSY FINANCE

Henry MacLellan

Director, SSY Finance

&

Nikos Stratis

Director, SSY Finance

The regulatory landscape across the shipping sector is developing at pace and meeting the new targets within the given timeframes is becoming ever more challenging for ship owners and capital providers alike.

Specifically, the principles of Green Finance and Environmental, Social and Governance (ESG) objectives continue to drive the agenda and policies for all traditional ship financiers, with leasing houses and alternative investors not far behind. Indeed, a number of ESG-themed funds have entered the market whose sole objective is to accelerate decarbonisation and energy transition within the sector by only financing technologies that can demonstrate a marked reduction in carbon intensity relative to traditional options e.g., dual-fuel and hybrid battery propulsion.

A less talked about issue relates to the political and commercial decisions affecting lending and investment policies, which can conflict with the implementation of decarbonisation strategies. Decarbonisation-specific lending policies must on the one hand appease shareholders, regulators, and public opinion, while on the other hand ensure that any actions taken do not destroy shareholder value by diminishing the value of the existing exposures.

Almost all ship finance desks within the leading shipping banks are now required to report the carbon intensity of their portfolios, as well as demonstrate clear targets and action plans for reducing greenhouse gas emissions by 50% by 2050 compared to 2008. Consistent with other industries addressing sustainability goals, a plethora of



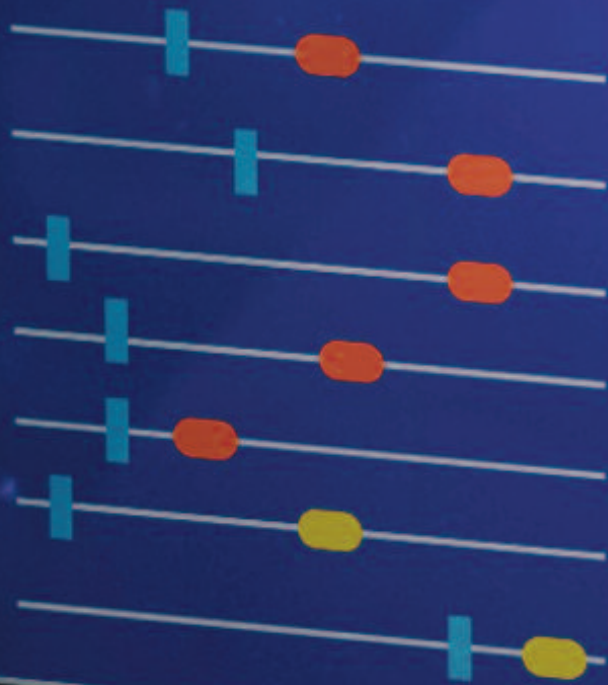


Price

Chg

%Chg

Shares



28,812	56,965	+56,965	+56,965
247	478	+478	+478
207	109	+109	+109
500	770	+0.770	+0.770
678	346	+0.2346	+0.2346
28,812	56,965	+56,965	+56,965
247	478	+478	+478
207	109	+109	+109
500	770	+0.770	+0.770
678	346	+0.2346	+0.2346

service providers, spanning from classification societies to non-profit government backed organisations and private consultancy groups, have emerged to support the banks during this transition. These groups are primarily offering data gathering, analytical tools and assurance services to allow financiers to report tangible results to their stakeholders.

Carbon intensity reporting, however, is not a static exercise focused on existing portfolios only. Indeed, lenders are required to adopt investment policies that cater for changing thresholds, as well as allow portfolios to be assessed on a forward-looking basis, which will inevitably dictate capital availability (or not) for each market segment.

From a capital deployment perspective, we have categorised the shipping markets into three groups: i) Newbuilding Market; ii) Second-hand Market; and iii) Recycling Market and highlighted the possible impact from green finance in each case.

Newbuilding Market

Logically, constructing new state-of-the-art vessels using the latest propulsion technologies should offer owners almost unrestricted access to capital. However, uncertainties around which technology should prevail and commercialisation of new fuels pose several financial and residual value risks, which at present neither debt nor equity providers seem willing to assume. Even if a single technology or fuel were singled out today with ample availability, the carbon intensity associated with the construction of each new vessel must not be ignored.

Given these uncertainties, we are currently observing a preference from many debt and equity financiers to support transitional hybrid technologies that are largely based on combining proven “old” technologies with some future proofing around possible new fuels e.g. LNG or methanol dual fuel.


Second-hand Market

The global commercial fleet on the water amounts to approximately 100,000 vessels with an average age of circa 14 years and an orderbook of circa 5%. Less than 1% of the fleet is on a path to meet GHG emissions targets. Despite these unfavourable statistics there are a few reasons - in our view - for which the existing fleet cannot be disregarded. Retrofitting of energy saving devices on existing fleets not only come at manageable capex requirements, but when combined with globally implemented speed reductions (‘slow steaming’), the combined result can have a meaningful impact on emissions. The above-mentioned high carbon intensity associated with newbuilding activity would also suggest that capital providers should prefer to finance retrofitting of existing fleets and fully utilise the remaining economic lives and carbon already emitted during the construction of these older vessels.

Finally, economic interests of existing fleet stakeholders (debt and equity investors) are expected to promote action plans that support GHG reductions from these assets; having noted this, capital providers will be selective as to which clients to support on this journey - size does matter!

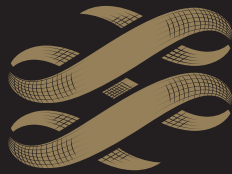
Recycling Market

While the ship recycling market is not typically funded by traditional ship financiers (save for limited positions assumed by alternative capital providers), it is a market segment which has relevant impact on ESG rating of shipping companies. ESG forms an integral part of lending policies for most shipping banks. The burden of compliance here is placed on the shipping company/borrower and lack of recycling policy adversely impacts the company’s appeal towards financiers - even if the financing considered relates to newbuildings only.



“ The principles of Green Finance and ESG objectives continue to drive the agenda and policies for all traditional ship financiers, with leasing houses and alternative investors not far behind.

In conclusion: continued uncertainties over the prevailing future technology, fuel and supporting infrastructure, combined with the high carbon footprint associated with newbuilding activity, should support the implementation of global standards on existing fleets (e.g. speed reduction) and channelling capital towards retrofits. Such measures will not only improve the industry's decarbonisation trajectory but would also be supportive for the freight markets and thus shipowners' profitability. From the capital providers perspective, the result should be preservation of economic value on existing shipping exposures and healthy amortisation of the same. An overall economically buoyant shipping industry will find it easier to invest and implement the transition to new fuel(s), ramp-up of infrastructure and gradual fleet replacement under eventually accepted technologies.



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