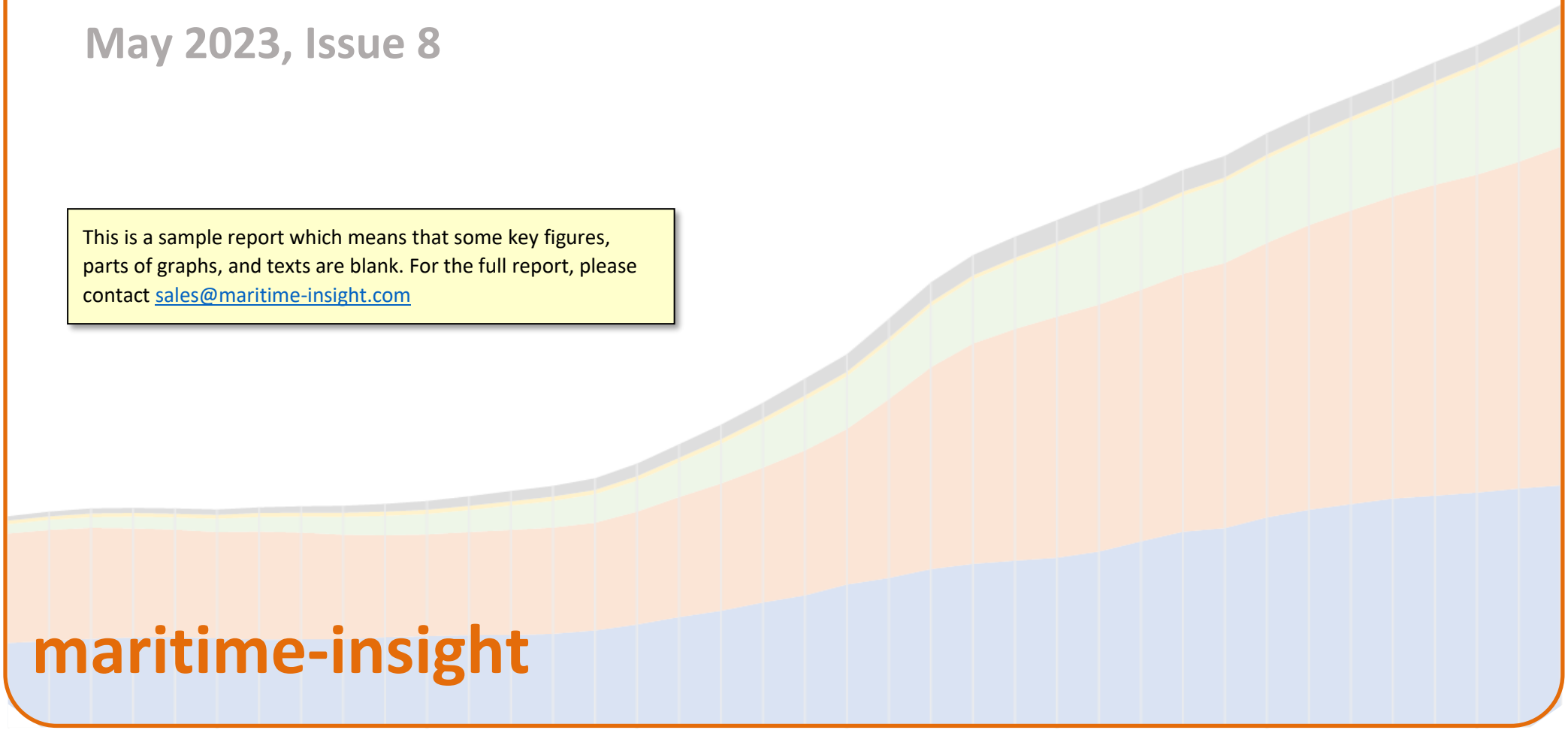
mi shipbuilding & fleet forecast

the dry bulk carrier market

May 2023, Issue 8

This is a sample report which means that some key figures, parts of graphs, and texts are blank. For the full report, please contact sales@maritime-insight.com



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Contents

The monthly maritime-insight!

Ukrainian grain exports are crucial to the country's revenues, and to millions of people whose survival ultimately could depend on continued grain imports. The exports are also important for dry bulk demand. The grain export deal runs out 18th May. Its renewal is subject to geopolitics.

The environmental has been tightened even more as the EU has decided to include shipping in the regional Emissions Trading Scheme (ETS) and has also decided upon another mechanism called FuelEU Maritime, which will come into effect in 2025.

Fluctuating commodity prices impact the demand for dry bulk shipping services quite seriously. Steel demand is particularly sensitive and the knock-on effect on shipping hits three important services; the transports of iron ore, coal and steel.

The relatively low dry bulk carrier fleet age gives a continued modest dwt removal forecast for 2023-2027. In dwt the total will be dwt, plus %, whereof M dwt in 2027 alone. Given the many old smaller ships in the fleet the increase will be higher in numbers. Looking further ahead, all the ships delivered in 2009 and onwards will be on schedule for removals and thus the total removals will increase dramatically towards the end of this decade. This will impact the ordering of new ships.

The forecast stands at new dry bulkers, than in the previous five years. In dwt the increase is . The largest increase will come in the dwt segment.

Dry bulk carrier owners have started to consider methanol and ammonia as ship propulsion fuel. New designs have won class approval and a few new orders have been placed.

Chris & Niklas, all@maritime-insight.com

Business environment

Political, social & cultural development

Many military experts say they expect a counterstrike from Ukraine on the Russian occupied areas in the eastern part of the country as soon as the clay have dried up and it will be easier to handle logistics without getting stuck.

Much of the financing of the Ukrainian efforts relies on incomes from grain exports and the deal to ship grain from the Black Sea. The deal runs to the 18th of May but has been challenged. Ship inspections in the Bosporus have been stopped and Ukraine blamed Russia, which in turn blamed Ukraine and the United Nations.

The Joint Coordination Centre in Istanbul that oversees operations once again said “inspections are already at work”, but the talks on extending the Black Sea grain deal beyond the deadline have not produced any results. It is crucial for the global grain supply that this is done.

Up until recently, China has refrained from having a dialogue with Ukraine about the Russian invasion, but on the 26th of April the Chinese President Xi Jinping and the Ukrainian President Volodymyr Zelenskyy had a one-hour long phone conversation. They discussed a full range of issues of bilateral relations, among them grain supply to the rest of the world. Volodymyr Zelenskyy stated that "Before the full-scale Russian invasion, China was Ukraine's number one trading partner” and he said that he hoped that this will again be the case soon. The Ukrainian president continued with "Nobody wants peace more than the Ukrainian people… There can be no peace at the expense of territorial compromises. The territorial integrity of Ukraine must be restored within the 1991 borders," and that really is what this is all about. The two leaders agreed to maintain a regular dialogue, so China may step up its engagement in this conflict.

China has again rattled part of the world by having military drills around Taiwan. This time shortly after the Taiwanese president Tsai Ing-wen returned from a meeting with US congress. The Chinese – America relation is tense.

Ecology and technology

EU has decided to include shipping in the regional Emissions Trading Scheme (ETS). The CO^2 emissions from ships ≥5,000gt that report under the EU Monitoring, Reporting and Verification (MRV) system will be included in the ETS. This means that those ships will need to buy EU Allowances (EUA) to cover half of their greenhouse gas (GHG) emissions to and from EU, Norwegian and Icelandic (EEA) ports, and all emissions for intra-EEA voyages and while at berth at EEA ports.

The EU has also decided upon another mechanism called FuelEU Maritime, which will come into effect in 2025. The regulation sets targets for reducing the yearly average GHG intensity of the energy used by a ship or a fleet, pool, of ships.

Short-term the first set of rules will affect the market the most, whereas analysis from Lloyd’s Register reveals that the latter will have a clearly higher and thus costlier impact over the next ten years.

Production factor indicators

In April India allegedly became most populated country in the world with 1.4286bn people, passing China’s 1.4257bn. The US is still the distant third placed country. The population development will affect future commodity consumption.

The Material Price Index (MPI) by S&P Global Market Intelligence has decreased so far in April, it has decreased in 10 out of the last 14 weeks and is now 30% below its level one year ago, which was near the all-time peak.

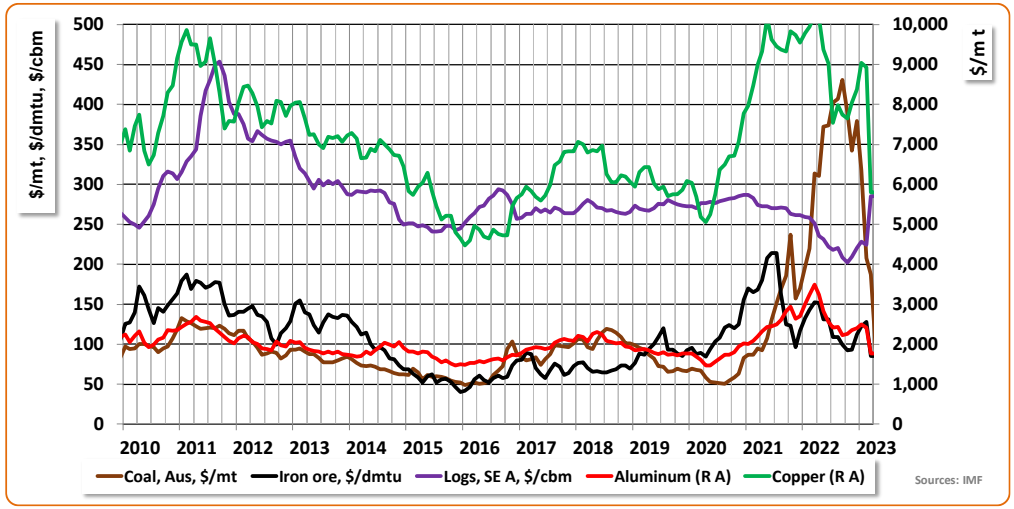


Figure 1: Dry bulk commodities

Prices for some of the dry bulk commodities are illustrated in Figure 1. Most of them were higher priced a year ago. Coal is the only energy commodity in the graph and that has fallen dramatically since Q3 as the uncertainty weakened about Russian gas deliveries to Europe. Iron ore and copper were more expensive in 2021 than in 2022 and are even cheaper now. Log prices have gone in the opposite

direction and are higher now than a year ago. Most other commodities are on a downward trajectory which really should help the fight on inflation.

Figure 2 shows the steel price development. The price is obviously depending on demand but since the cost of production of steel is highly reliant on energy (coal) and iron ore, climbing raw material prices will drive the price for steel upwards. Customers are quite price sensitive so if prices are too high, demand will ease, and producers will eventually close production.

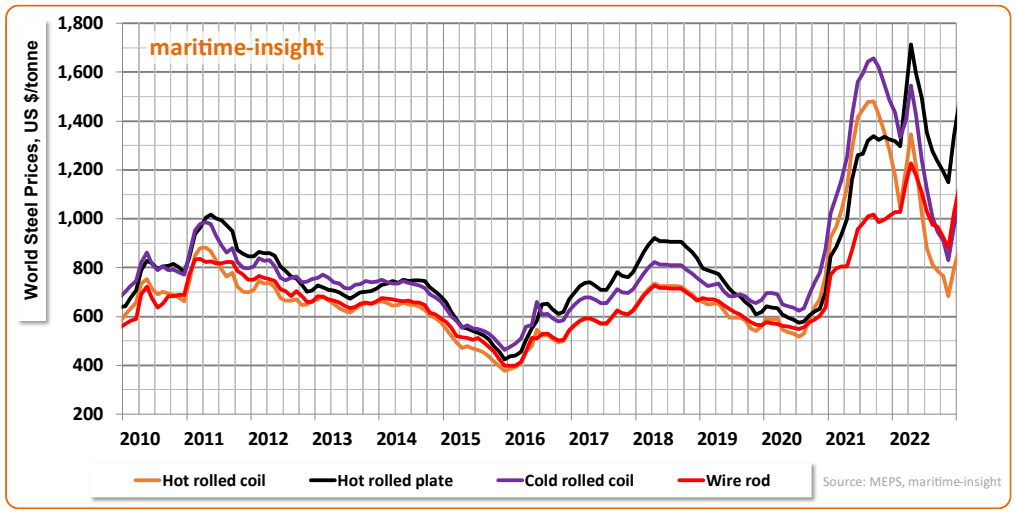


Figure 2: Steel prices, US$/tonne

The World Steel Association has recently published their steel demand forecast for 2023 and 2024. In total numbers they expect steel demand to reach 1,822M tonnes in 2023 (up 2.3%) and up an additional 1.7% to 1,854M tonnes in 2024. Manufacturing is the largest growth factor, but high inflation and the high interest rates will continue to weigh on steel demand also in 2023. In 2022, recovery momentum after the pandemic was hampered by high inflation and increasing interest rates, the Russian invasion of Ukraine, and the lockdowns in China.

Chinese steel demand contracted in both 2021 and 2022 due to the lockdowns that extended across the country. After the 3.5% decline in 2022, China's total steel demand is expected to grow by 2.0% in 2023, partly due to infrastructure projects initiated at the end of 2022. It is expected to stay flat in 2024.

Demand in the developed economies shrank in 2022 due to monetary tightening and high energy costs. After falling by 6.2% in 2022, it is expected to increase by 1.3% in 2023. In 2024, a recovery of 3.2% is foreseen. In the EU and the UK demand is expected to fall by 0.4% in 2023 but rebound with 5.6% in 2024. In the US steel demand is forecast to grow by 1.3% in 2023 and then by 2.5% in 2024. In Japan a 4.0% increase is foreseen up to the level of 2021, while South Korea's 8.6% fall will take many years to regain.

India showed 8% steel demand growth and is forecast to a 7.3% growth in 2023. Overall, developing Asia showed more resilience in 2022 and will as a group see increased demand for steel both in 2023 and in 2024, 3.6% and 3.9% respectively.

As Figure 3 illustrates steel production started to decrease in March 2022 and has shown negative growth since then. In volume most tonnes have disappeared in China, but all countries have produced less. As stated above the forecast is that demand will increase during 2023 and 2024 and production likely will follow. In volume most of the increase will be produced by Chinese steel mills.

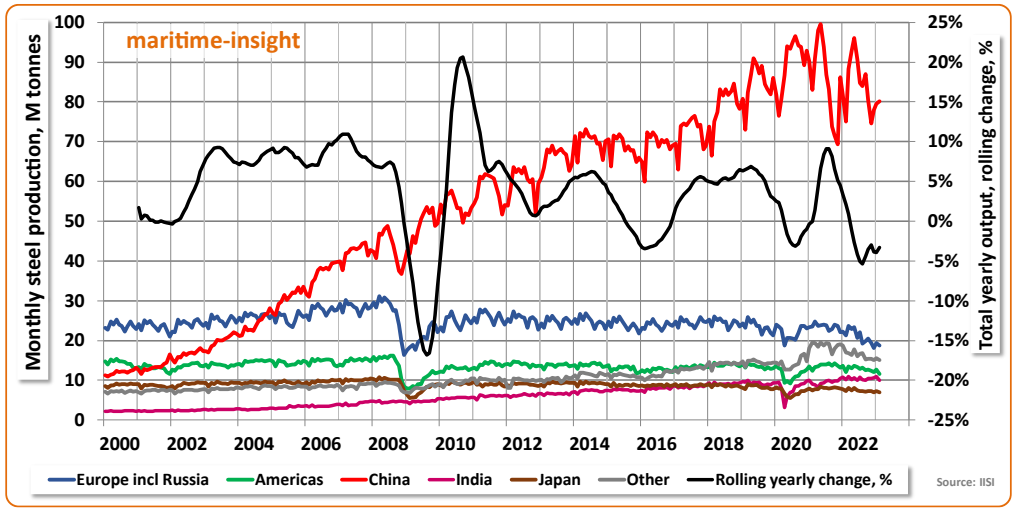


Figure 3: Monthly steel production, million tonnes

For the dry bulk market, the steel industry is vital. The larger carriers carry both iron ore and coal to steel producers and the smaller dry bulkers carry the steel to the customers. Thus, the growth in this market bodes well for the dry bulker owners.

Demand for transport

Economic growth

The IMF has published its April 2023 forecast for GDP growth for most countries in the world in the coming five years, and presented what they believe will affect the development up or down. Baseline is that global growth will fall from 3.4% in 2022 to 2.8% in 2023 and regain slightly to 3.0% in 2024. The advanced economies will fare worst in 2023 with a fall from 2.7% in 2022 to a meagre 0.3% in 2023, with the Euro area and the UK having the lowest growth. Global inflation in the baseline is forecast to fall from 8.7% percent in 2022 to 7.0% in 2023, mostly due to lower commodity prices. The IMF underscores that if the financial sector gets more stressed, global growth may decline even further in 2023, to 2.5%, with advanced economies coming in at below 1.0%.

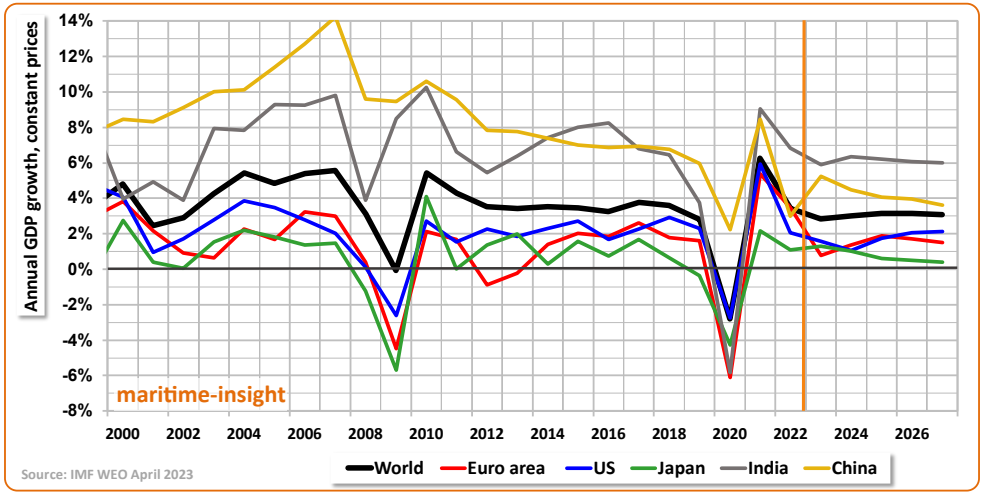


Figure 4: Annual GDP growth, percentage

Positive for the baseline forecast is that China seemingly has rebounded strongly when it opened its economy after the latest Covid lockdown. Global supply-chain disruptions are almost gone, and the global energy and food markets have sorted themselves out after the initial severe problems that arose from the invasion of Ukraine by Russia. The massive and synchronous tightening of monetary policy by most central banks should according to the IMF be effective, with inflation moving back towards its targets. Many of the emerging markets and developing economies are already powering ahead. The most negative factor of growth right now looks to be inflation.

The GDP forecast indicates that the global growth could trend wise be slowing down slightly due to lower growth in China, since China's share of global GDP is significant.

Trade

Global coal trades rose 20% in 1Q 23, with exports increasing from Indonesia and Australia. The gains continued in April. Thermal coal dominated the trades, with Europe, China and India driving imports. Banchero Costa stated that seaborne coal imports into mainland China were up 100% in January to March to 80M tonnes versus the same period last year, while volumes into India increased by 15% to 48M tonnes.

After the Russian invasion of Ukraine Europe has grown to be the fifth-largest importer of coal behind China, India, Japan and South Korea.

Iron ore rose too in 1Q 23 but by a more modest 4% as demand increased from infrastructure and property construction in China. Australia and Brazil were the exporting countries that increased output the most. Chinese steel exports increased in 1Q 23, but steel production is predicted to remain flat in 2023 due to stricter environmental requirements to reduce pollution in some of the major Chinese steel production hubs.

Global grain trade was down 10% in 1Q 23 versus 1Q 22 due to the war in Ukraine and bad weather in Brazil. However, Brazil expects to set a record grain harvest in 2023 and that should give a better 2Q 23. China is the largest importer and thus will tonne-mile demand be boosted.

The dry bulker shipping market

This mi shipbuilding & fleet forecast include dry bulk carriers. The dry bulkers account for almost 45% of the total tonnage in the world fleet. The cargo they carry is dominated by iron ore and coal, but other ores and grain volumes are also large.

Structure, strategies, products and services

China's importance for the dry bulk market is clear, especially for large ships. China imports ¾ of all iron ore traded internationally and is also the largest shipbuilder of dry bulkers. Forty-five percent of the ship capacity delivered since 2000 was from China. In the recent five years that figure has been 60%. Chinese owners also own and operate most ships ahead of Greek and Japanese operators.

Dry bulk carrier market, supply & demand balance

In April 2023 the dry bulk fleet was 953M dwt large spread on 12,693 ships. In Figure 5 the fleet is illustrated according to the year of delivery, including the current orderbook to the right-hand side of the orange line. For comparison the capacity of the dry bulker fleet is more than twice the size of the crude oil carrier fleet, which is the second largest ship segment.

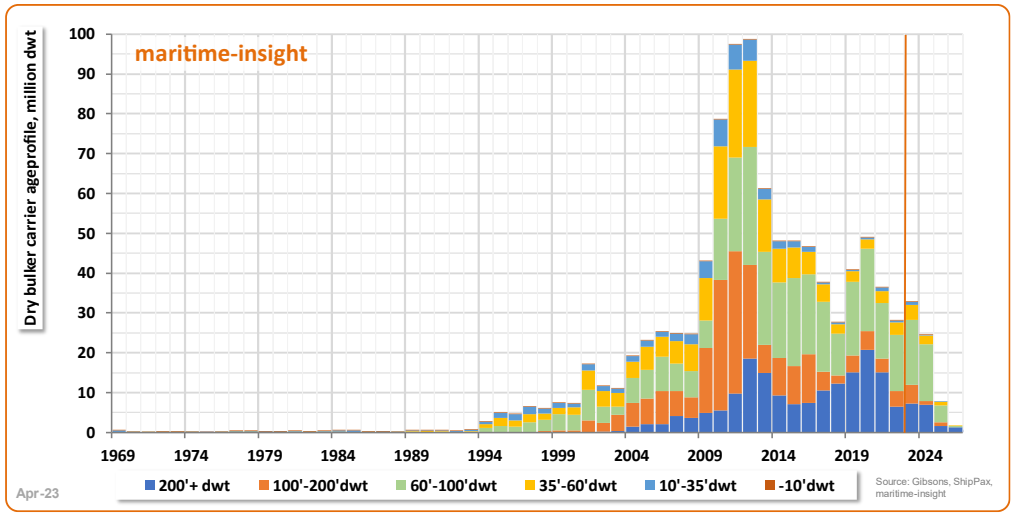


Figure 5: Dry bulk carrier fleet, age profile, million dwt

The orderbook stands at dwt spread on ships, which equals % of the fleet capacity – exactly as half a year ago.

In 2023-2027 the deliveries are forecast to ships and thus many of them will be both ordered and delivered within the period. The total is more ships than in the previous five years. Corresponding figures in dwt is that dwt is forecast to be delivered until year end 2027, which is an increase by dwt from the previous five years.

In Figure 6 the forecasted removals from the dry bulker fleet are illustrated. As the age profile graph indicates, most dwt in the fleet is less than 20 years old. Only 8% or 77M dwt of the fleet is 20 years or older, but in number of ships the equivalent is 16% or 1,968. In 2018-2022 the removals stood at 40M dwt or 465 ships. This gave an average of 86,000dwt.

The relatively low fleet age gives a continued modest dwt removal forecast for 2023-2027. In dwt the total will be , plus %, whereof dwt in 2027 alone. Given the many old smaller ships in the fleet the increase will be higher in numbers with a forecast for ships to be removed equal to a % increase. The average size of removed ships in the period will thus come down to 50,000dwt. Looking further ahead, all the ships delivered in 2009 and onwards will be on schedule for removals and thus the total removals will increase dramatically, as the age profile graph suggests.

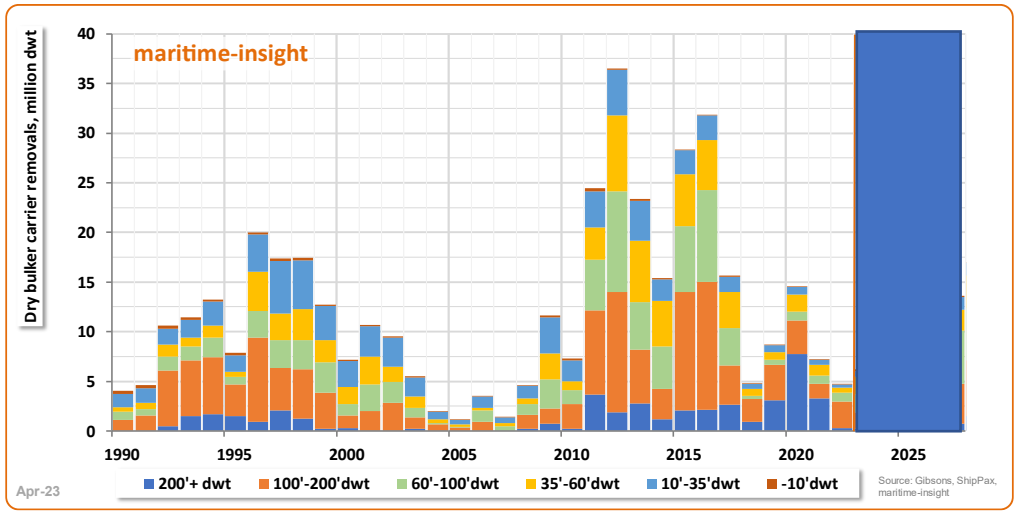


Figure 6: Removals from the dry bulker fleet, million dwt

Figure 7 shows the dry bulk freight rates for three ship sizes and the "Baltic Dry Index" – BDI (red line, right hand axis). As can be seen, the market fell away dramatically in 2Q 22, and it took until 1Q 23 for it to start recovering.

As many times before the main reason was China. Expanded economic activity in China led to increased demand for iron ore, coal and some minor bulks, which all affected rates positively.

The BDI doubled from the February low, but the bulk market segments were not equally affected. Market spot rates for Handymax 58k dwt ships averaged US$9,660 net per day in the first quarter of 2023, a 60% decrease compared to the same period in 2022, but better than most periods pre-covid.

The Capesize ships have been on an upwards trend from mid 4Q 22 and onwards, up to above US$21,100 and even though the Panamax ships has fallen slightly in the recent weeks, they have moved to above US$15,000 per day, figures not seen other than during the pandemic.

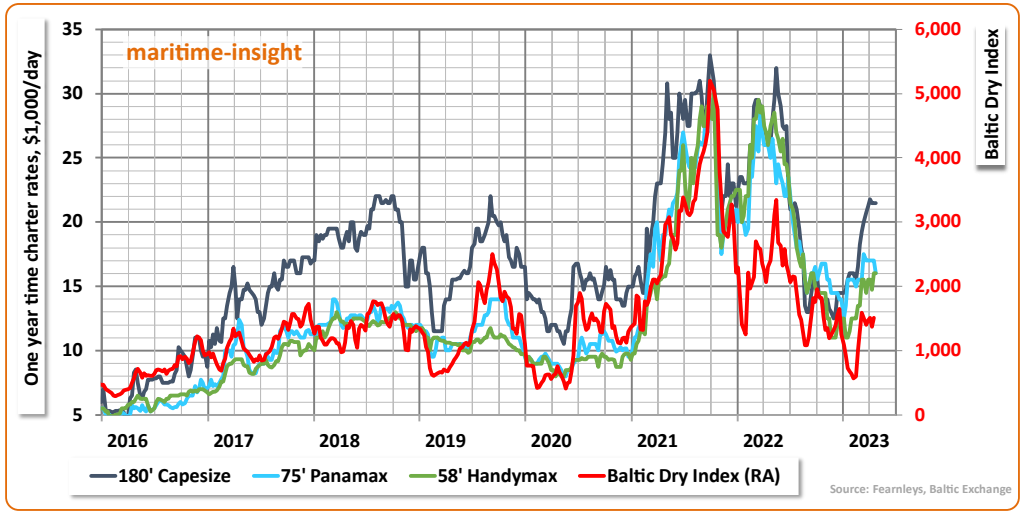


Figure 7: Dry bulk carrier charter rates, $1,000/day & Baltic dry index (right hand axis)

Figure 8 illustrates the fleet development of dry bulkers. In April 2023 the 60'-100'dwt part of the fleet had 34% of both the capacity and number of ships of the total fleet with 327M dwt spread on 4,320 ships. The 35'-60'dwt part of the fleet stood for 29% of the number of ships but 19% of the capacity. The two segments larger than 100'dwt had 40% of the capacity together, but 15% of the number of ships.

In 2018-2022 the dry bulker fleet grew by 3.3% yearly measured in dwt capacity. The fastest growing segment was the 200'dwt+ with a yearly growth of 7.9%, with 60'-100'dwt as runner up with an average growth of 5.3%. The other segments grew in between -0.1 to 1.0%, indicating which tonnage that was needed most.

The forecast for fleet growth in 2023-2027 stands at % yearly. The fastest growing segment will be the 60'-100'dwt segment with a yearly growth of % in average and dwt added to the fleet, which is dwt more than in the previous five years. The fleet of the 200'dwt+ ships will also continue to grow, now with dwt, which is dwt less than in 2018-2022. This is compensated by the 100'-200'dwt segment that will grow by dwt or dwt more than in the previous five years.

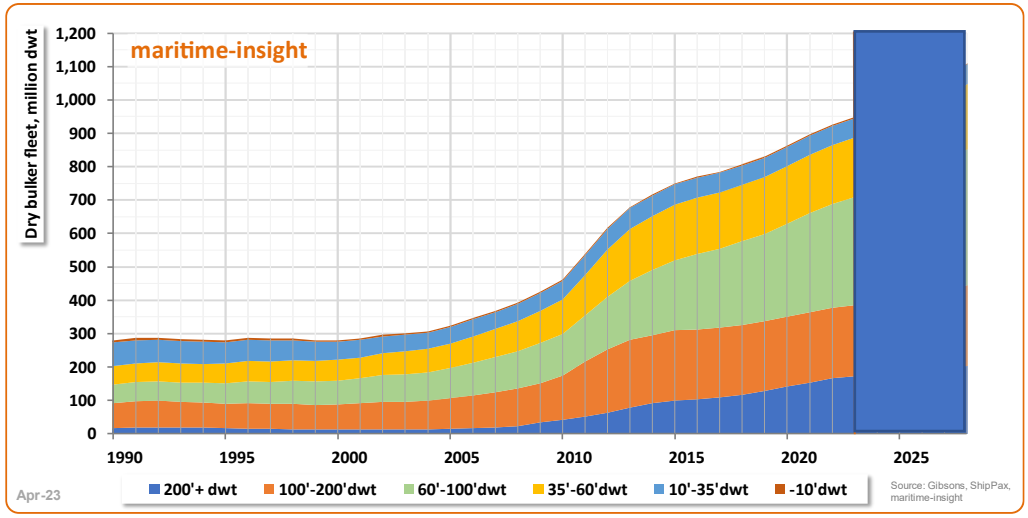


Figure 8: Dry bulker fleet development, million dwt

The orderbook development for dry bulk carriers is illustrated in Figure 9. The extremes from 2007-2009 will not be repeated. They were boosted by the inclusion of China in the global trade. Currently the orderbook to fleet ratio (black line, right hand axis) is below 10%. There are many reasons to believe that this ratio will tick upwards in the future once the high inflation, war and political tensions fade off.

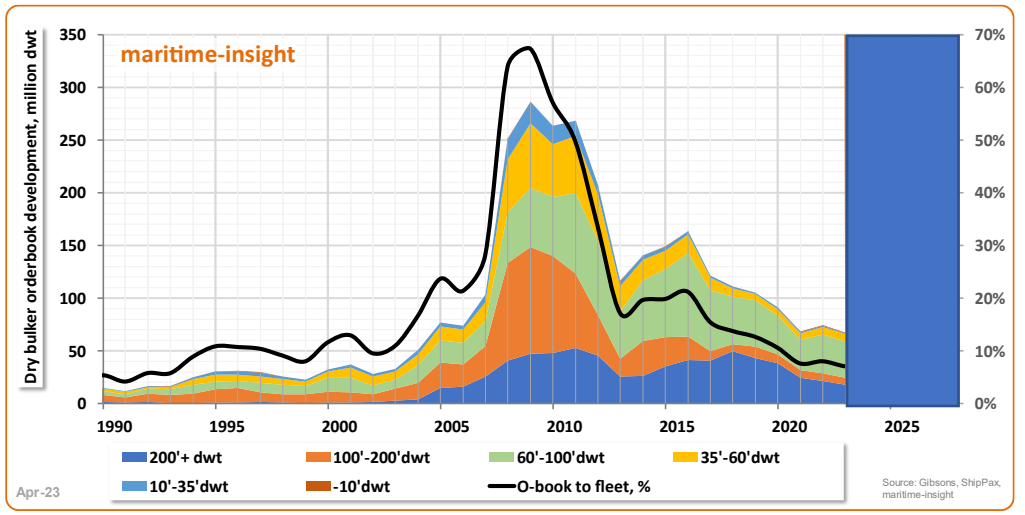


Figure 9: Dry bulker orderbook development put in relation to the fleet

For the 2023-2027 period the forecast is reasonable cautious due to the reasons stated above. In general, there are many large countries in the world that need to

invest in their infrastructure and that will propel the demand for dry bulk carriers, so in the longer term we are more optimistic.

The forecast (Figure 10) stands at new orders of dry bulkers, which is (%) more than in the previous five years. In dwt this corresponds to dwt compared to dwt, which is an increase by %.

The largest increase will come in the dwt segment with an increase from orders to . The orders for 200'dwt+ ships are forecast to be fewer than in the previous five years at , down by ships.

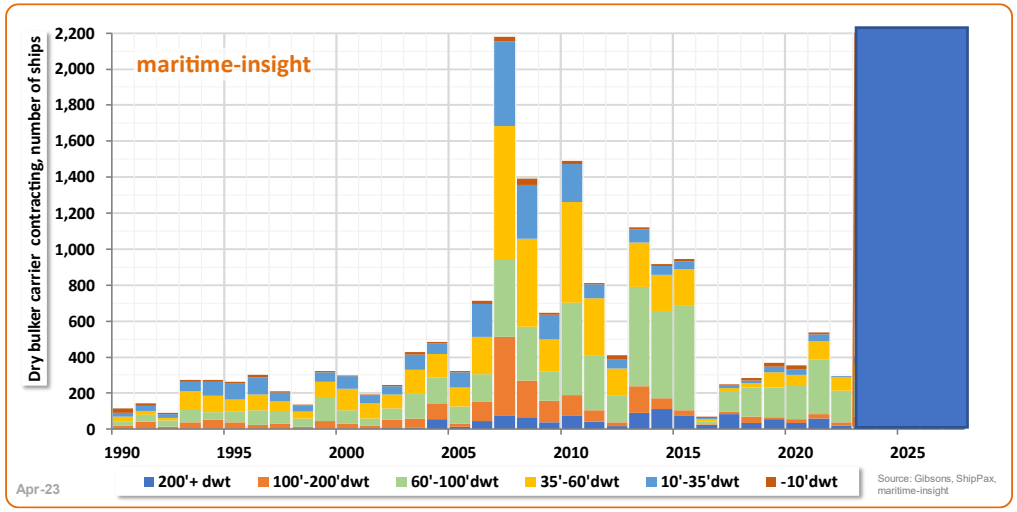


Figure 10: New contract development, dry bulk carriers, number of ships

The dry bulk shipbuilding market

Figure 11 shows the total deliveries for dry bulk carriers in dwt according to where the ships were built. 182M dwt were delivered in 2018-2022 – far from the 395M dwt delivered in 2009-2013, but the forecast dwt for 2023-2027. Of the 182M dwt, Chinese shipyards delivered 109M dwt or 60% ahead of Japan with 59M dwt or 33%.

In 2023-2027 China is forecast to increase their share further and stand for % of the total deliveries with dwt, whereas Japan will decrease their output by dwt to dwt over the five years. Other Asia is forecast to double the output from dwt.

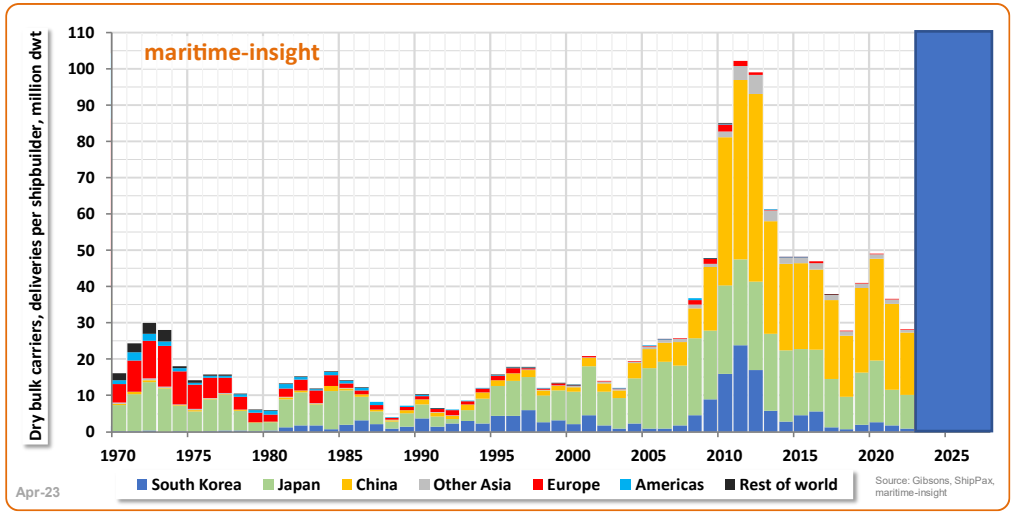


Figure 11: Shipbuilding region, deliveries, dry bulk carriers, M dwt

In Figure 12 the orderbook for dry bulkers is displayed. There are ships on order, whereof are in the 60'-100'dwt size. The total orderbook in dwt stands at dwt with the 60'-100'dwt having of those. The orders of 200'dwt+ ships stand for dwt.

China has ships on order or % ahead of Japan with ships or %. Measured in dwt the Chinese dominance is even larger with ahead of Japan with %.

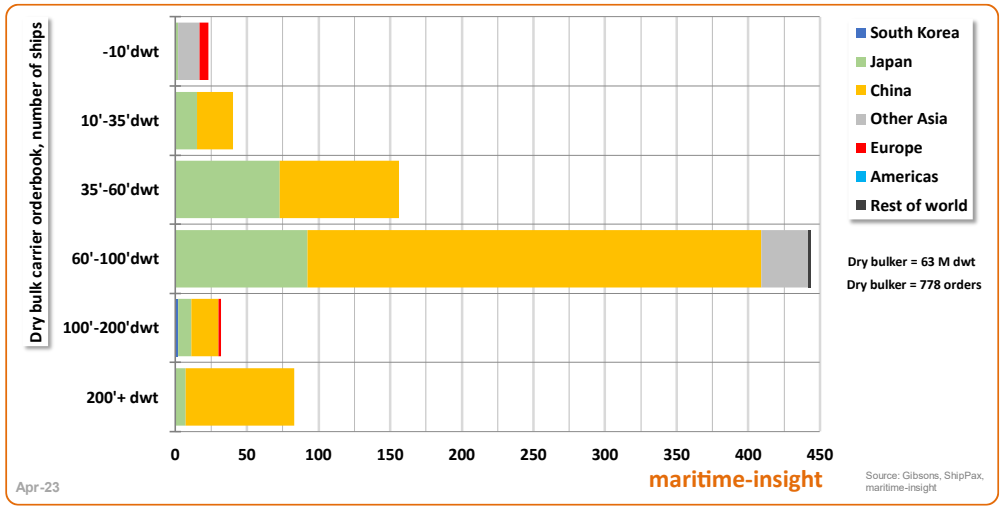


Figure 12: Orderbook for dry bulk carriers, million dwt

Total shipbuilding & fleet forecast

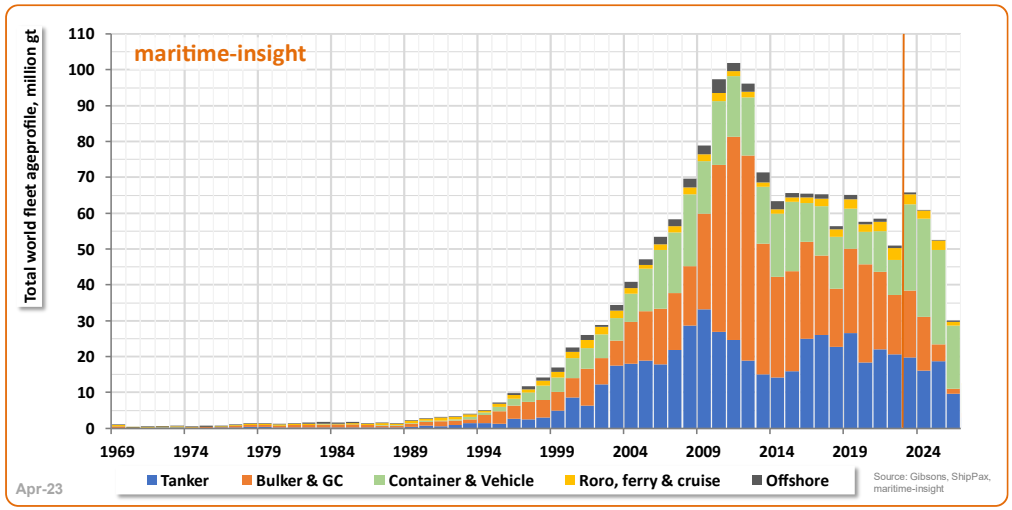


Figure 13: Total world fleet age profile, including orderbook, million gt

The world fleet age profile (including the orderbook) is illustrated in Figure 13 and Figure 14 according to when the ship is delivered to the fleet in gt and number of ships respectively. There are 33.4M gt that are older than 30 years, or 2.2%. The corresponding number of ships is 14.6%, which highlights the numerous small ships in the current fleet. This will affect the removal activity going forward.

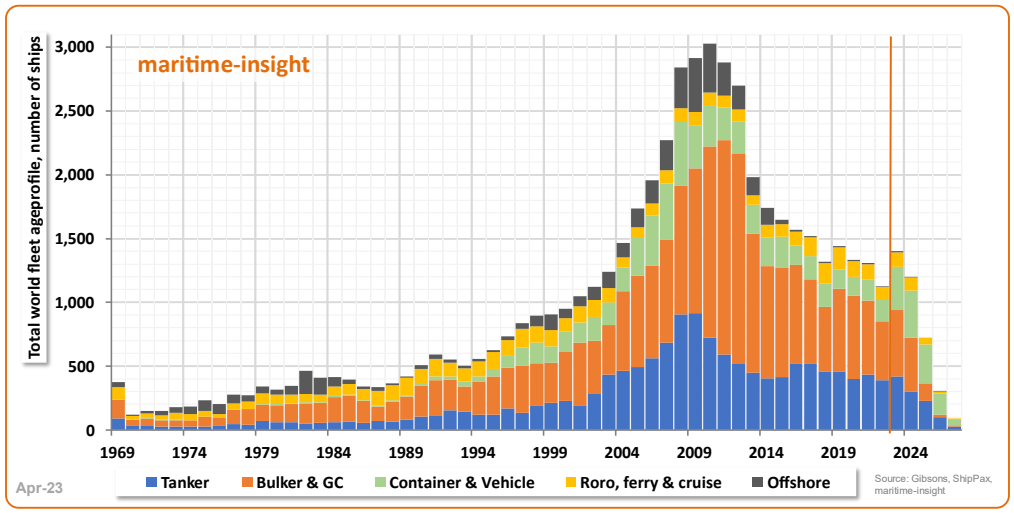


Figure 14: Total world fleet age profile, including orderbook, number of ships

Removals

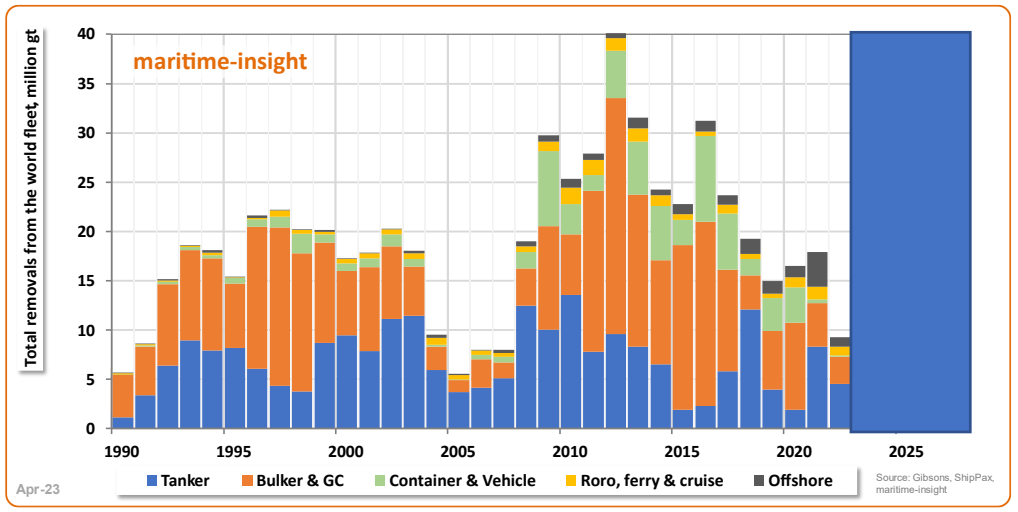


Figure 15: Removals from the world fleet, million gt

In Figure 15 and Figure 16 the total removals are illustrated in gt and numbers. There are most likely ships that have been removed 2022 that we do not yet know about, especially smaller ones. The number of ships to be removed will be higher in the next five years at around . The removals in gt will increase over the period from a rather low level. At the end of the period large tankers will be removed driving the removal gt-number upwards.

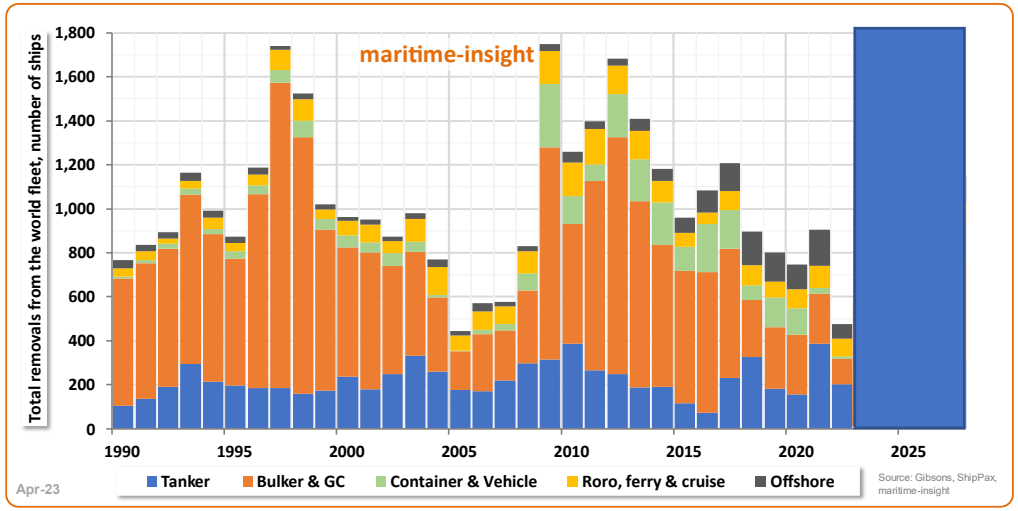


Figure 16: Removals from the world fleet, number of ships

Shipbuilding regions

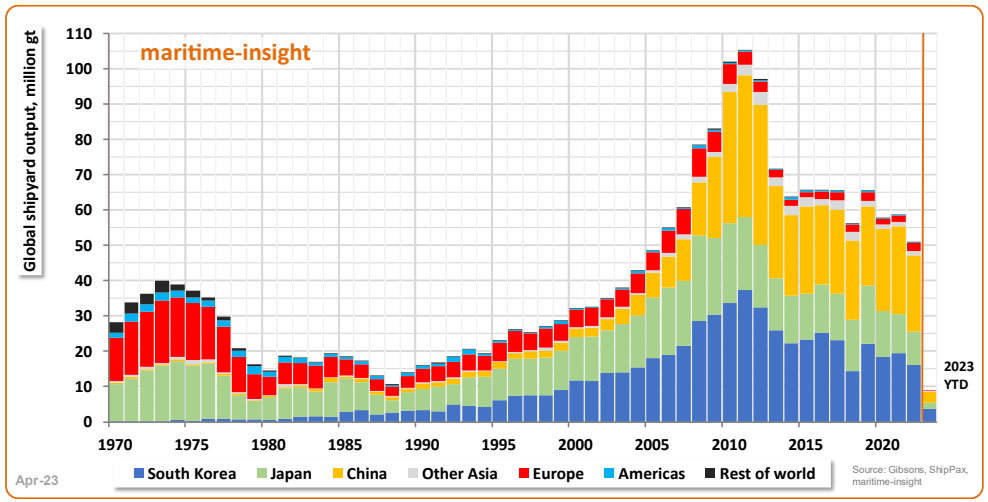


Figure 17: The shipyard output (deliveries), million gt

Figure 17 illustrates the gt deliveries by shipbuilding nations/regions. In 2018-2022 the deliveries came in at 289M gt. China delivered 40%, South Korea 31% and Japan 22%. Other ship producers altogether delivered 6.6%. Deliveries in 2022 came in lower than expected, mostly due to the Covid policies in China. Most likely there are smaller ships that have been delivered but have not yet been registered. The orderbook shares in gt are China 51%, South Korea 33% and Japan 8%.

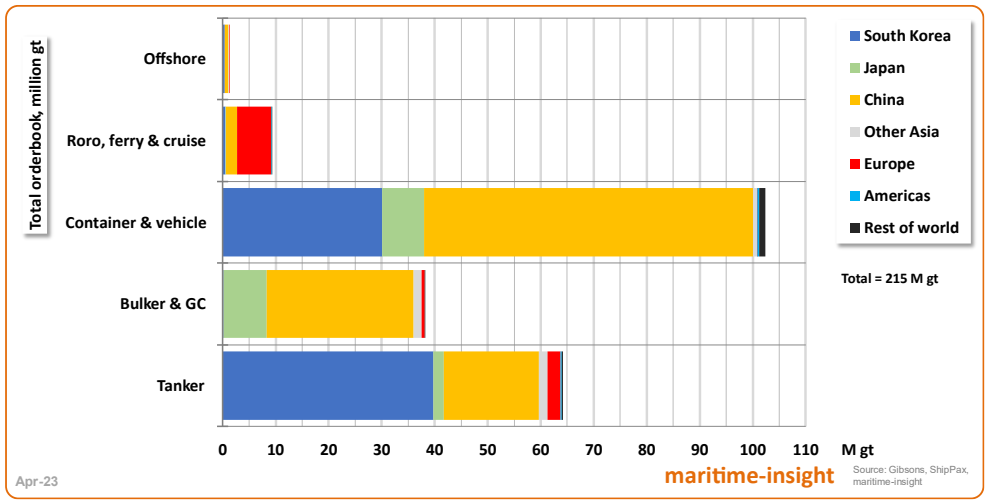


Figure 18: Total orderbook, million gt

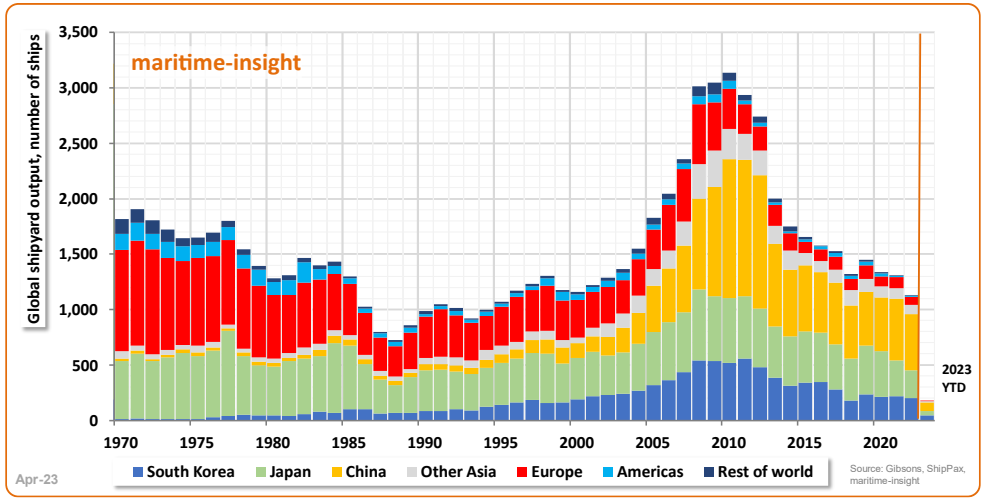


Figure 19: The shipyard output (deliveries), number of ships

In 2018-2022 the number of deliveries came in at 6,539 ships, whereof China delivered 2,506 or 38%, Japan 1,813 or 28% and South Korea 1,038 or 16%. Other Asia stood for 538 deliveries, Europe 484 and Americas 112.

In April 2023 the orderbook contained ships. were container carriers and dry bulkers. There are gas carriers and oil & chemical tankers on order.

China holds % of the orders, South Korea %, Japan % and Europe %.

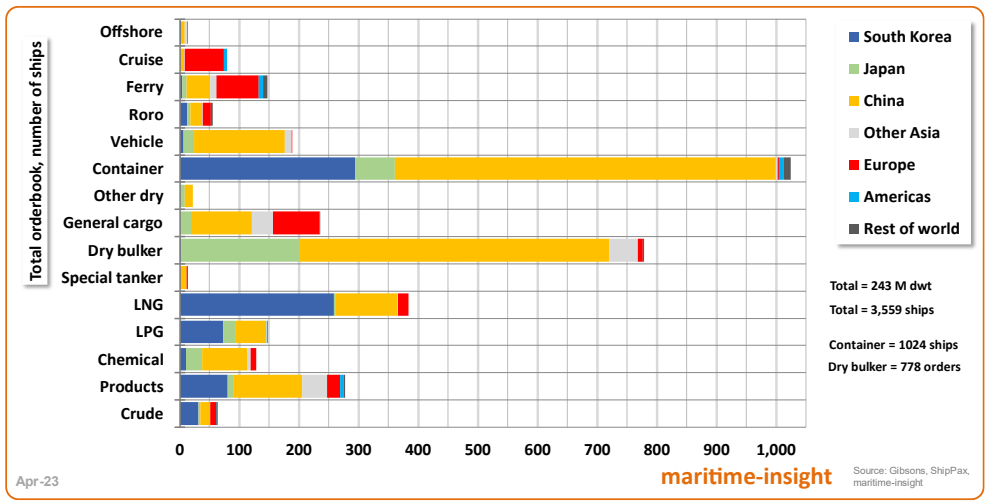


Figure 20: Total orderbook, number of ships.

New contracts in 2023-2027

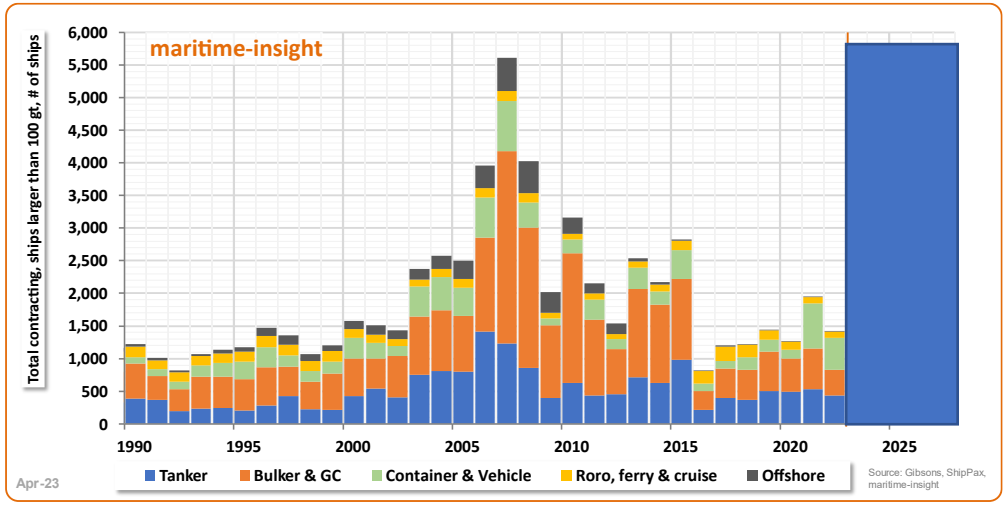


Figure 21: New contracts for ships larger than 100gt, 1990 and onwards

In 2018-2022, 7,278 new contracts were signed. Bulker & GC stood for 2,594, tankers for 2,328 and container & vehicle for 1,695.

The forecast for new orders in 2023-2027 stands at ships, an increase by ships. Bulker & GC will increase its share to , tankers will have basically as in the previous five years at and container & vehicle will .

Measured in GT the orders in 2018-2022 were 378M gt, whereof container & vehicle were 132M gt. In 2023-2027 the forecast is for M gt – down gt. The main explanation is that the orders for container & vehicle are down gt.

Fleet changes

In April 2023 the total fleet stands at 1.49bn gt (Figure 22) spread on 54,305 ships (Figure 23). In 2018-2022 the fleet grew by 211M gt or 3.1% in yearly average. The Bulker & GC segment and the tanker segment both grew by 80M gt. The container & vehicle segment grew by 47M gt.

In 2023-2027 the forecast is that the fleet will grew by M gt or % yearly. This higher growth is mostly attributed to the M gt that will be added to the container & vehicle segment – giving it a yearly average growth of %. The total tanker fleet will grew by gt and the bulker & GC fleet will grow by gt – both more than in the previous five years, but given the larger fleet at the starting point a lower percentage growth.

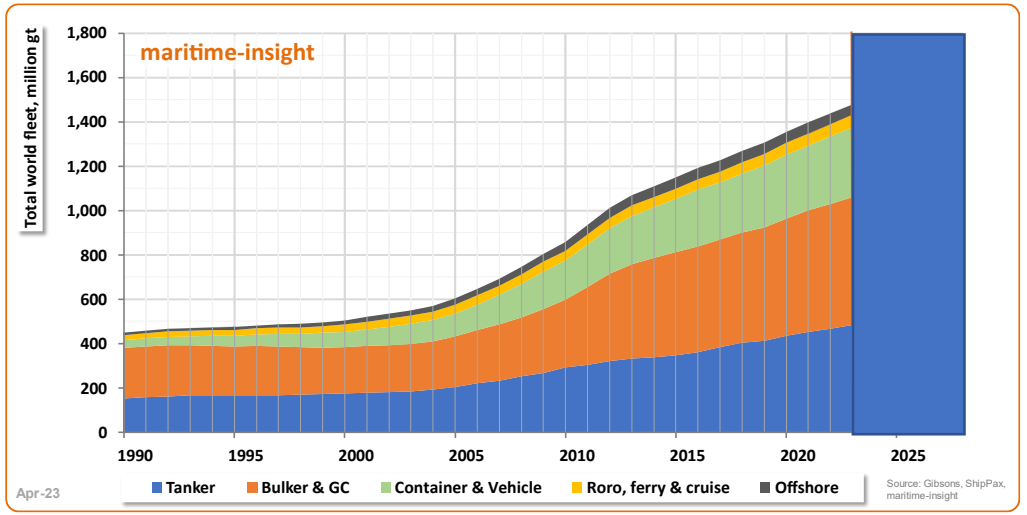


Figure 22: Global fleet development, million gt

The forecast for fleet growth measured in numbers in 2023-2027 is ships growth, or % over the five years. This is less than in the previous five years – due to higher removals of old and small ships. The Offshore sector continue to shrink; down another ships which are more than in the previous five years.

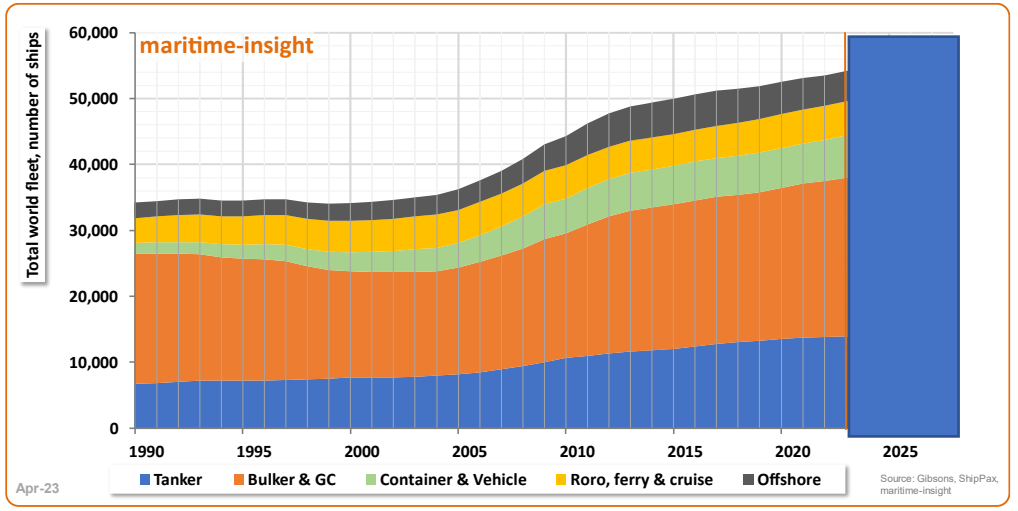


Figure 23: Total fleet development, number of ships

Ship propulsion & fuels

Most dry bulkers and general cargo carriers are still ordered with conventional fuels for propulsion. The energy efficiency gains of a newbuild over a 20+ year old vessel often ensures the ship will meet with environmental demands for many years.

Most new ships contracted today are ordered with some degree of future readiness, which often means the engine and propulsion can be retrofitted to run on another type of fuel.

With that in mind, most ships with an LNG-fuel label on them are in fact equipped with dual-fuel engines with the ability to switch between LNG and various qualities of oil. Since the prices for LNG have been extreme in the recent past many operators have been forced to run their vessels on oil.

Methanol has up until recently not really been any bulk carrier owner's choice. This spring we have however recorded a few orders that made the news. Cargill has reportedly joined forces with Mitsui to build methanol-fuelled kamsarmax bulkers in Japan. Rumours have it that Pacific Basin could be on a similar track.

According to Hellenic Shipping News and Marine Link, Berge Bulk and ABS have agreed to explore the possibility of retrofitting the 210,000dwt HFO propelled bulk carrier BERGE MAUNA KEA to operate on methanol fuel. The vessel is currently under construction for a 2024 delivery.

Another step towards methanol-fuelled bulk carriers was taken in December last year as China Classification Society (CCS) issued an approval in principle (AiP) for an 85,000-ton methanol dual-fuel dry bulk carrier.

Similar developments have been recorded for ammonia-fuelled bulk carriers. MOL and Mitsui acquired approval in principle in January 2023 for a 210,000dwt bulk carrier fuelled by ammonia, and featuring two ammonia fuel tanks on deck.

Viridis Bulk Carriers is active in short-sea bulk shipping. The company received an AiP for ammonia propulsion from Bureau Veritas. Orders are expected to be placed this year.

The entrance of these new fuels into the dry bulk and general cargo fleets is of course exciting and maybe also trailblazing – at least for these vessel types. The share of total new ship deliveries the next five years is however low. This may very well change rapidly as knowledge and best practices spread, but until the point when enough many ships have been successfully sailing, we do not foresee a massive increase in ordering numbers for yet a few years.

LNG has been mentioned as a potential ships' fuel for decades. Policy makers around the world aired their expectations that LNG would take over as ships' fuel already ten years ago. Forecasts made prior to the introduction of the first sulphur emission control areas in 2015 pointed at thousands of new ships to be equipped with dual-fuel LNG engines.

We are still far from that level, but significant shares of installed power for propulsion have indeed been for dual-fuel LNG in recent years. So, this is not a statement of opposing transition. It is rather a position that we need to understand that change takes time. It is a ship owner behind each and every investment that need to be certain that he/she does not endanger the future of the company.

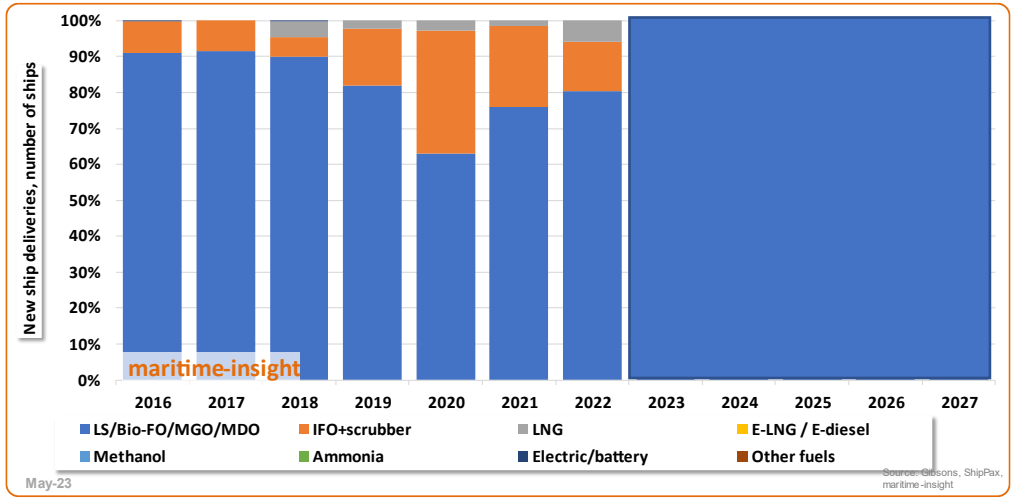
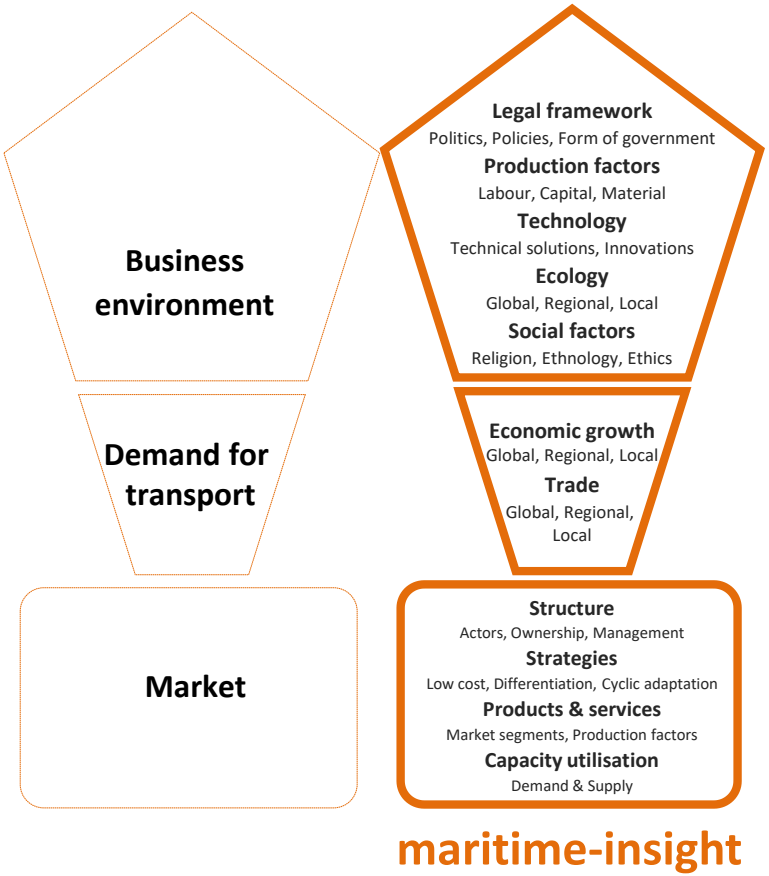


Figure 24: New ship dry bulk & general cargo deliveries by type of fuel, from number of ships

miTYPE May-23	miSUBTYPE /SIZE	Deliveries YTD	2021	2022	2023	2024	2025	2026	2027	Contracting YTD	2021	2022	2023	2024	2025	2026	2027	Removals YTD	2021	2022	2023	2024	2025	2026	2027	Fleet development YTD	2021	2022	2023	2024	2025	2026	2027
Crude	200'+ dwt																																
	120'-200'dwt																																
	60'-120'dwt																																
	10'-60'dwt																																
	-10'dwt																																
Crude																																	
Products	60'+ dwt																																
	20'-60'dwt																																
	10'-20'dwt																																
	-10'dwt																																
Products																																	
Chemical	20'+ dwt																																
	10'-20'dwt																																
	-10'dwt																																
Chemical																																	
LPG	50'+ m^3																																
	-50'm^3																																
LPG																																	
LNG	200'+ m^3																																
	-200'm^3																																
LNG																																	
Special tanker																																	
Dry bulker	200'+ dwt																																
	100'-200'dwt																																
	60'-100'dwt																																
	35'-60'dwt																																
	10'-35'dwt																																
	-10'dwt																																
Dry bulker																																	
General cargo	10'+ dwt																																
	-10'dwt																																
General cargo																																	
Other dry	Reefer																																
	Special																																
Other dry																																	
Container	>Panamax																																
	10'teu -Panamax																																
	5'-10'teu																																
	3'-5'teu																																
	2'-3'teu																																
	1'-2'teu																																
	-1'teu																																
Container																																	
Vehicle	4'+ ceu																																
	-4'ceu																																
Vehicle																																	
Roro	2,000+ lm																																
	-lm 1,999																																
Roro																																	
Ferry	Ropax, 2,000+ lm																																
	Ropax, -1,999 lm																																
	Pax only, 1kgt+																																
	Pax only, 25kn+																																
	Pax only, <25kn																																
Ferry																																	
Cruise	1,000+ berths																																
	-999 berths																																
Cruise																																	
Offshore	Drilling																																
	Production																																
	Construction																																
	AHT/S																																
	PSV																																
Offshore																																	
	Total																																

miTYPE	miSUBTYPE		Fleet		Averages				20 years +		Orderbook		
May-23	/SIZE	Unit	1,000 cap	no	size	newbuildings	removals	age	1,000 cap	% of fleet	no	1,000 cap	% of fleet
Crude	200'+ dwt	dwt											
	120'-200'dwt	dwt											
	60'-120'dwt	dwt											
	10'-60'dwt	dwt											
	-10'dwt	dwt											
Crude		**dwt**											
Products	60'+ dwt	dwt											
	20'-60'dwt	dwt											
	10'-20'dwt	dwt											
	-10'dwt	dwt											
Products		**dwt**											
Chemical	20'+ dwt	dwt											
	10'-20'dwt	dwt											
	-10'dwt	dwt											
Chemical		**dwt**											
LPG	50'+ m^3	m^3											
	-50'm^3	m^3											
LPG		**m^3**											
LNG	200'+ m^3	m^3											
	-200'm^3	m^3											
LNG		**m^3**											
Special tanker		**dwt**											
Dry bulker	200'+ dwt	dwt											
	100'-200'dwt	dwt											
	60'-100'dwt	dwt											
	35'-60'dwt	dwt											
	10'-35'dwt	dwt											
	-10'dwt	dwt											
Dry bulker		**dwt**											
General cargo	10'+ dwt	dwt											
	-10'dwt	dwt											
General cargo		**dwt**											
Other dry	Reefer	dwt											
	Special	dwt											
Other dry		**dwt**											
Container	>Panamax	teu											
	10'teu -Panamax	teu											
	5'-10'teu	teu											
	3'-5'teu	teu											
	2'-3'teu	teu											
	1'-2'teu	teu											
	-1'teu	teu											
Container		**teu**											
Vehicle	4'+ ceu	ceu											
	-4'ceu	ceu											
Vehicle		**ceu**											
Roro	2,000+ lm	lm											
	-lm 1,999	lm											
Roro		**lm**											
Ferry	Ropax, 2,000+ lm	pax											
	Ropax, -1,999 lm	pax											
	Pax only, 1kgt+	pax											
	Pax only, 25kn+	pax											
	Pax only, <25kn	pax											
Ferry		**pax**											
Cruise	1,000+ berths	berths											
	-999 berths	berths											
Cruise		**berths**											
Offshore	Drilling	dwt											
	Production	dwt											
	Construction	dwt											
	AHT/S	dwt											
	PSV	dwt											
Offshore		**dwt**											
	Total	***dwt***											



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