



Container Shipping Market

Project Poseidon: Industry Report

October 24, 2024

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A handwritten signature in blue ink, appearing to read "Han Ning", written over a horizontal line.

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**For and on behalf of
Drewry Shipping Consultants Ltd**

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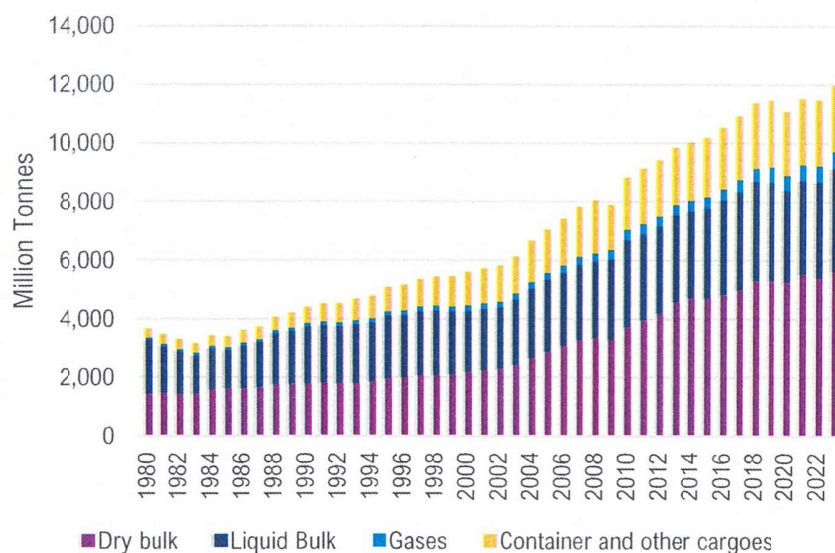
Global container shipping industry



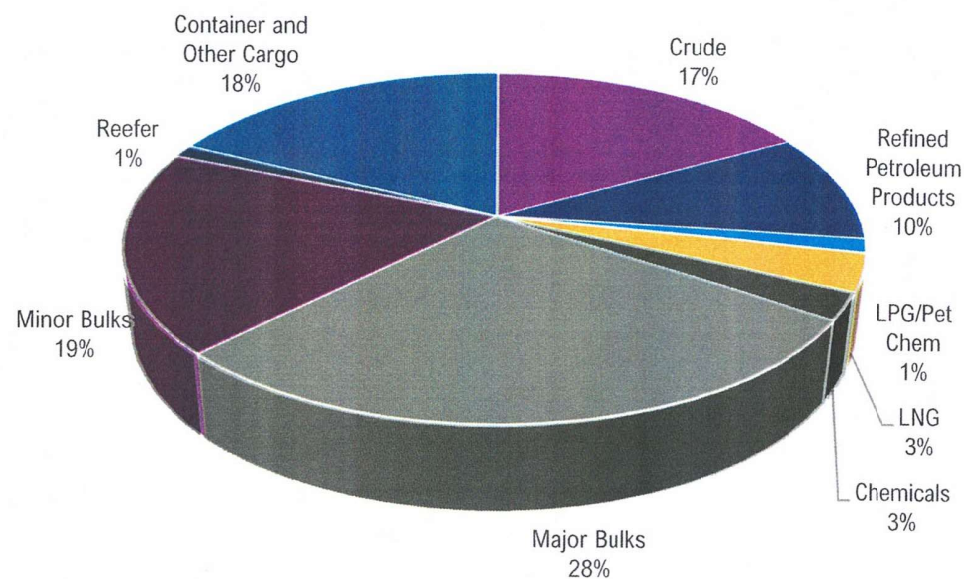
International maritime transport growth

Since the 1950s, the container shipping has played an increasingly important role in the global economy and world trade. In 1991, the market share of container shipping trade accounted for 13.9% of the total seaborne trade in terms of weight. The market share increased rapidly and reached 20.0% in 2000 and has been relatively stable since then.

Seaborne international trade growth: Major cargoes



Share of major seaborne cargoes



Source: Drewry

Container shipping: value chain

Typical container supply chain logistics, as illustrated below, consists of participants including container shipping lines, port and terminal operators as well as logistics service providers such as trucking companies, railways, barge operators, and warehousing companies.

Container shipping value chain



Twenty-foot equivalent unit (TEU) is a 20-foot standard sized shipping container. Forty-foot equivalent unit (FEU), is a 40-foot standard sized shipping container. Two TEUs have the capacity of a single FEU.

Source: Drewry

Container shipping: Advantages

Advantages of containerization that have contributed to the development of the container shipping industry since its inception include faster and more flexible cargo movements, standardized loading and discharging, better security and lower costs.

Advantages of container shipping

Flexible cargos movements

- Containers provide a secure environment for cargo. The contents of a container, once loaded, are not handled directly until they reach their final destination. Using other shipping methods, cargo may be loaded and unloaded several times, resulting in a greater risk of breakage and loss.

Standardized loading and discharging, and lower costs

- With specialized cranes and other terminal equipment, containerships can be loaded and unloaded in significantly less time and at lower cost than other cargo ships

Highly Developed Intermodal Network and better security

- Onshore movement of containerized cargo, from points of origin, around container ports, to and from staging or storage areas, and to final destinations, benefits from the physical integration of the container with other transportation equipment such as trucking chassis for road transport, railcars and other means of hauling the standard-sized containers. Sophisticated port and intermodal industries have developed to support container transportation.

Reduced Shipping Time

- Containerships travel at a maximum speed of up to 21.5 knots, even in rough seas. It is considerably more than other merchant shipping segments.

Source: Drewry

Fundamentals of container shipping industry

The high entry barriers of the container shipping industry are mainly due to the requirement of high capital expenditure, a global and regional network with partners, customers and suppliers, ship management and operation capabilities, as well as the importance of long-established brand and market awareness.

Economies of scale have been a key feature of the container shipping industry. Besides this high operational gearing, commoditized service offering and inelastic demand curve are fundamental drivers of container shipping industry.

Economies of scale and network effect coupled with technical management capability and container shipping operations and customer service (including IT) are main barriers to entry into container shipping industry. In addition, most container shipping companies are long-established with strong brands. This is important because the relationship of cargo owner and carrier has to be a relationship of trust. Cargo owners will not entrust their goods to the care of an entity that may be unreliable. Cargo shipment that requires on-time delivery, specific container condition or careful handling of high value goods generally demand a relatively higher freight rate than other cargos.

Fundamentals

Economies of scale	• Lines always build bigger vessels to exploit economies of scale. This leads to continual overcapacity
Network effect	• Container shipping companies operate within complex ecosystems of partners, customers and suppliers. These require significant time and effort to establish
Perishability	• Push for short-run contribution which leads to rate erosion. Unused capacity cannot be stored. Lines cut rates in order to boost utilisation
High operational gearing	• Lines' networks represent a high fixed cost burden. The logical response is to maximise utilisation. Therefore, there is a push for short-run contribution which leads to rate erosion.
Commoditised service offering	• Limited differentiation of product therefore there is price competition
Inelastic demand curve	• Seafreight is a negligible element in the landed cost of manufactured goods and makes no difference to end market demand.

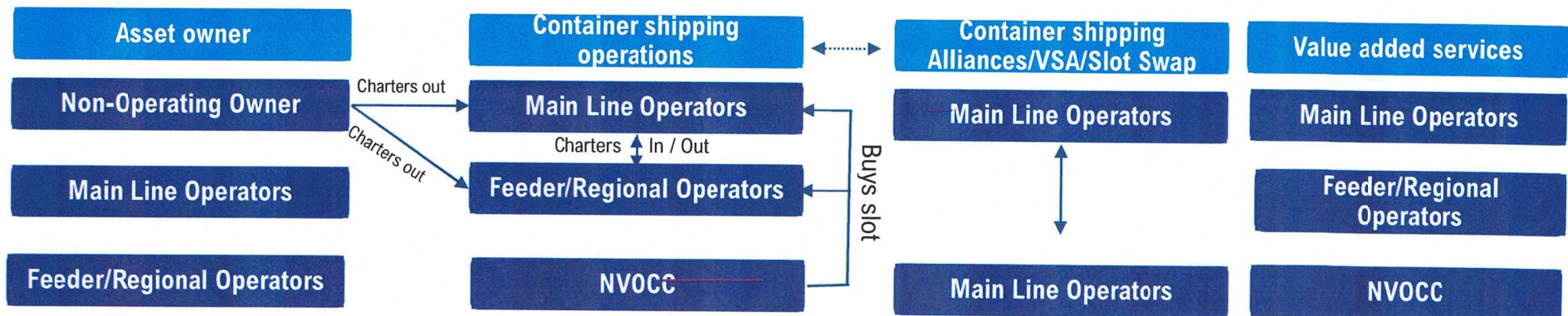
Source: Drewry

Operating models

As of the Oct 17, 2024, there were over 100 container shipping carriers in the world, of which the world's top 10 carriers accounted for approximately 84.3% of the global container shipping capacity. Set forth below is a summary of certain key participants in the container shipping industry.

- ❖ Container shipping companies own or charter vessels from tonnage providers, and provide shipping services to beneficial cargo owners (BCO) or freight forwarders at ocean freight. Container shipping companies consist of global operators and regional operators.
- ❖ There are over 500 tonnage providers, some of which only own container ships, and are known as non-operating owners.
- ❖ BCOs are the ultimate owners of the products being shipped.
- ❖ Freight forwarders act on behalf of the BCOs to coordinate with all relevant stakeholders and organize customs clearance as well as prepare other required documentation.
- ❖ Non-vessel operating common carriers are freight forwarders that transport goods under their own bill of lading, or equivalent documentation, but they do not operate any vessels. They buy capacity from the container shipping companies and sell to the shippers.

Container shipping operating models



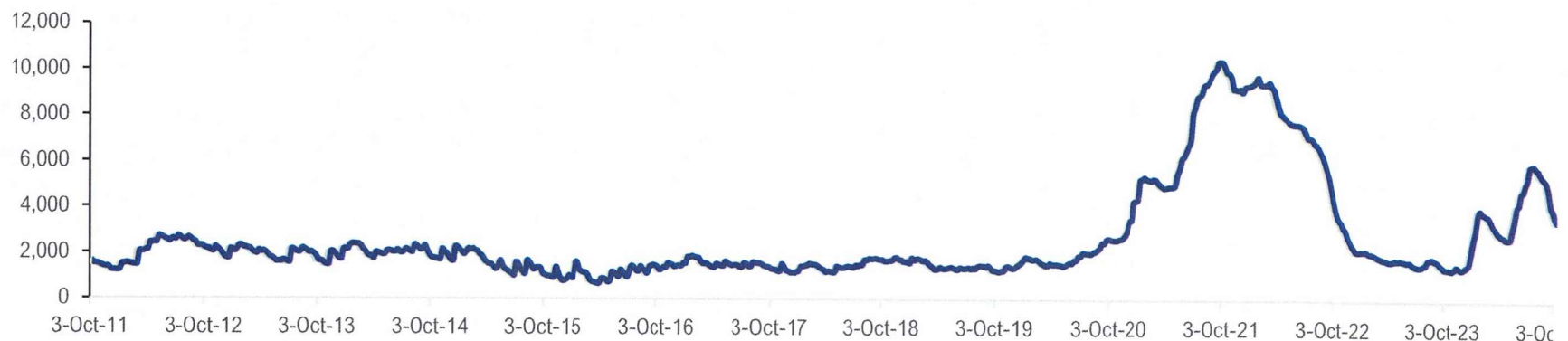
Note: VSA: Vessel Sharing Agreement
NVOCC: Non-Vessel Operating Common Carrier
Source: Drewry

Cyclicalty in container shipping industry

The container shipping industry is cyclical as demand and supply fluctuate. Container shipping companies tend to increase vessel investments when they earn profits from container shipping. However, overcapacity may arise when most container shipping companies increase new vessel investments in response to the same market trend. This affects the balance between shipping capacity and demand, causing container shipping companies' profitability to decline and vessel investments to decrease. Higher capacity utilization and profitability may result from growing shipping demand, which may trigger another cycle of vessel investments. Up until 2019, freight rates were depressed by overcapacity as container shipping companies increased their vessel sizes. According to the weekly World Container Index published by Drewry, the average freight rate between 2012 and 2019 was US\$1,632.3 per FEU. Freight rates increased dramatically from mid-2020, which was mainly due to the improved capacity management, a subsequent surge in demand, container equipment shortage and supply chain inefficiency. Drewry's World Container Index peaked in September 2021, at US\$10,377.2 per FEU. Since the peak, freight rates have begun and continued to fall as a result of slowing demand growth and the easing of supply chain disruption and port congestion, which increased effective capacity.

The World Container Index reached its lowest point at US\$1,341.6 per FEU at the end of October 2023 before its recovery. The attacks on vessels in Red Sea by the Houthis in the fourth quarter of 2023 have precipitated market panic and the diversion of containerships, which in turn has driven an uptick in freight rates in early 2024. There was an increase in demand in January 2024 due to a substantial rise in exports before the Chinese New Year holiday, driving freight rates to increase. Freight rates temporarily dropped after the Chinese New Year, followed by a recovery from early May 2024 as global consumer demand surged during the summer, contributing to higher freight rates. In early May 2024, there was an increase in demand from U.S. importers, partly due to the post-Labor Day surge as businesses prepared for summer sales and consumer spending. Moreover, the shipping industry continues to face equipment shortages and complicating logistics. These factors pushed spot rates up across major trade lanes, and on July 18, 2024, Drewry's World Container Index peaked at \$5,937 per FEU. In August 2024, carriers added more shipping services, particularly on trade lanes from the Far East to North America, which increased the market capacity. This eased pressure on rates, allowing shippers to negotiate lower freight rate. In September and early October 2024, the overall market continued to normalize, and Drewry's Global Freight Rate Index decreased 16% to \$4,265 per FEU in September 2024, reflecting soften demand after the summer peak. Despite the decline, spot rates on this trade remain 140% higher than pre-pandemic levels. Even if this downward trend persists, it will take a significant amount of time for rates to normalize. As of October 3, 2024, Drewry's World Container Index has reached US\$3,489.3 per FEU, representing an increase of 160.1% from the end of October 2023.

World Container Index: Freight rate \$ per 40 ft container

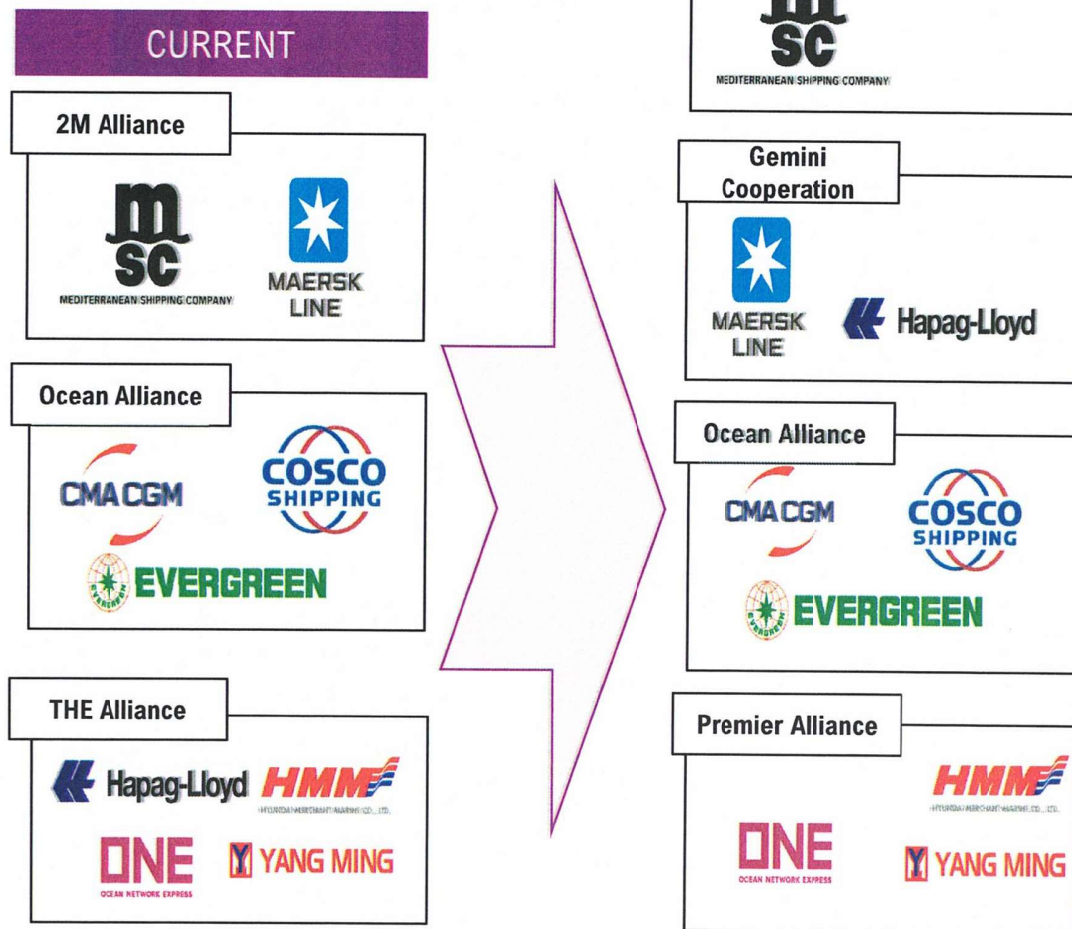


Note: Drewry publishes World Container Index (WCI). It is an average of container freight rate indices on eight East-West routes.

Source: Drewry

Container shipping consolidation, alliances, joint services and Slot swap

Current and future alliance structure on major east-west trades



Alliances

Alliances and industry consolidation led to more disciplined capacity management and improved profitability. The container shipping industry underwent consolidation among container shipping companies via mergers and acquisitions. Besides, container shipping companies formed alliances in order to improve coordination of capacity on core trades while also benefiting from economies of scale. These alliances focused on the core East-West trades (i.e., Transpacific, Asia-Europe and Transatlantic). The structure of alliances has changed over the past few years, with the current three shipping alliances taking effect from April 2017, namely 2M Alliance (Maersk and MSC, initially in cooperation with Zim), Ocean Alliance (CMA CGM, Evergreen and COSCO Shipping), and THE Alliance (Hapag-Lloyd, Yang Ming, ONE and HMM). On January 25, 2023, Maersk and MSC announced that the 2M Alliance will cease to operate from January 2025. On January 17, 2024, Maersk and Hapag-Lloyd announced they will start a new long-term operational collaboration, namely, Gemini Cooperation, which is set to commence on February 1, 2025. Ocean Alliance announced in February 2024 to further extend for additional five years through to 2032. With MSC, the world largest carrier, boasting a substantial orderbook, the forthcoming phase is anticipated to feature three major alliances, namely, Ocean Alliance, Gemini Cooperation and the successor to THE Alliance, alongside MSC as a prominent independent carrier on the core East-West trade routes, beginning in 2025.

Container shipping consolidation, alliances, joint services and Slot swap

Joint Services and Slot Swap

A joint service agreement is an agreement between container shipping companies to operate a service using a specified number of vessels. A slot exchange agreement is an agreement between container shipping companies to exchange a certain number of slots in container vessels deployed in different services. Apart from alliances, joint services and slot exchange arrangements are also common cooperation models between container shipping companies, which improve utilization rates and create economies of scale. Joint services can also enable carriers to broaden their networks while mitigating risks. The potential upheaval of the current alliance structure could pave the way for new collaboration or vessel sharing opportunities for carriers. For example, THE Alliance member ONE announced to collaborate with Wan Hai Lines on a service connecting Asia and the West Coast of the United States, anticipated to commence towards the end of April or May 2024. Additionally, MSC may also explore collaboration with other carriers or even consider some cooperation with the remaining members of THE Alliance.

The standard principle that is applied in these agreements is that each line participating line has an allocation of capacity on each vessel in the shared service equivalent to the capacity it provides to the service as a whole. Thus, if a line contributes four 2,000 teu vessels to a service in which ten 2,000 teu vessels are deployed, the line will be allocated 40% of the available space on each vessel in the service. Where a line contributes more space than it wishes to use, it may sell space to other participating lines for a “slot fee”. Each line is typically responsible for the technical management of the vessels it contributes and for voyage management and vessel stowage. Typically, such arrangements are governed by a multi-year operating agreement; if the arrangement simply involves the purchase of vessel capacity by one line from another, it may be ad hoc or governed by an annual agreement.

Drivers and emerging trends in container shipping industry

Economic growth is the main underlying driver of container volumes growth. This growth drives global trade in general cargo, the market served by container shipping.

Drivers of container trade growth

Economic growth is generally accepted as the main underlying driver of container volumes growth.

- For **gateway** cargo this will be driven by the economic performance of the importer countries. We measure this via GDP
- For **transshipment** cargo the underlying driver will be the economic performance of the origin/destination markets connecting to the ports/terminals in question. We measure this via GDP.

External Market Drivers – Gateway

- Economic outlook for the relevant geographies (gateway)
- Modal conversion (TEU conversion rate)
- Proximity to population and industrial centres
- Hinterland connections (road & rail)

External Market Drivers – Transshipment

- Economic outlook for hub & spoke/relay market (Transshipment)
- Shipping line strategy
- Existing trade routes/service network

Digitalization is a key trend in the container shipping industry. The container shipping industry is undergoing a transition towards digitalization. Digital technologies are used to improve service quality, operational efficiency and competitiveness of container shipping companies. Digital technologies also improve decision-making process and enhance monitoring, control, quality assurance and verification. Therefore, digitalization is a critical measure to strengthen the resilience of the supply chain.

Container shipping industry market drivers

The container shipping demand is shaped by multiple factors that influence the movement of goods. We set forth the following primary drivers:

Global economic growth

Global economic growth plays a critical role in shaping container traffic demand. Particularly the economies of major trade hubs such as the United States, China, and the European Union have a direct impact on the volume of containerized trade. In periods of economic expansion, consumer spending and industrial production typically rise, leading to increased demand for containerized shipments.

Consumption

Demand for containerized goods is heavily influenced by population growth and consumer behavior.

- Population growth: Increasing global population, especially in developing regions, generates higher demand for consumer goods, food products, and manufactured goods, and in turn drives the need for containerized imports and exports.
- Purchasing power and income levels: As household incomes rise, particularly in emerging economies, which leads to increased spending on imported goods and in turn, boosts container traffic.
- E-Commerce growth: The rise of e-commerce, driven by large e-commerce platforms, has created significant demand for containerized shipping, especially for consumer goods and electronics. The shift to online shopping necessitates efficient global shipping infrastructure to meet consumer demand for faster delivery.

International trade and globalization

The globalization of production and trade has substantially increased the demand for container shipping:

- International trade: Global trade agreements and the liberalization of markets have facilitated specialization, whereby countries focus on producing goods where they have a competitive advantage. This leads to higher volumes of containerized exports and imports.
- Outsourcing of manufacturing: In an effort to lower production costs, many companies outsource manufacturing to countries with lower labor costs. This strategy increases the need for container shipping to transport both raw materials and finished goods. Furthermore, global production networks, where components are manufactured in various countries and assembled elsewhere, require frequent container movements across multiple borders.
- Trade policies and external factors: A variety of external factors also impact global trade, including trade policies, tariffs, geopolitical tensions, and conflicts. Additionally, pandemics and natural disasters can disrupt trade flows, while fluctuations in currency exchange rates influence the competitiveness of exports and imports, all of which can affect container traffic volumes.

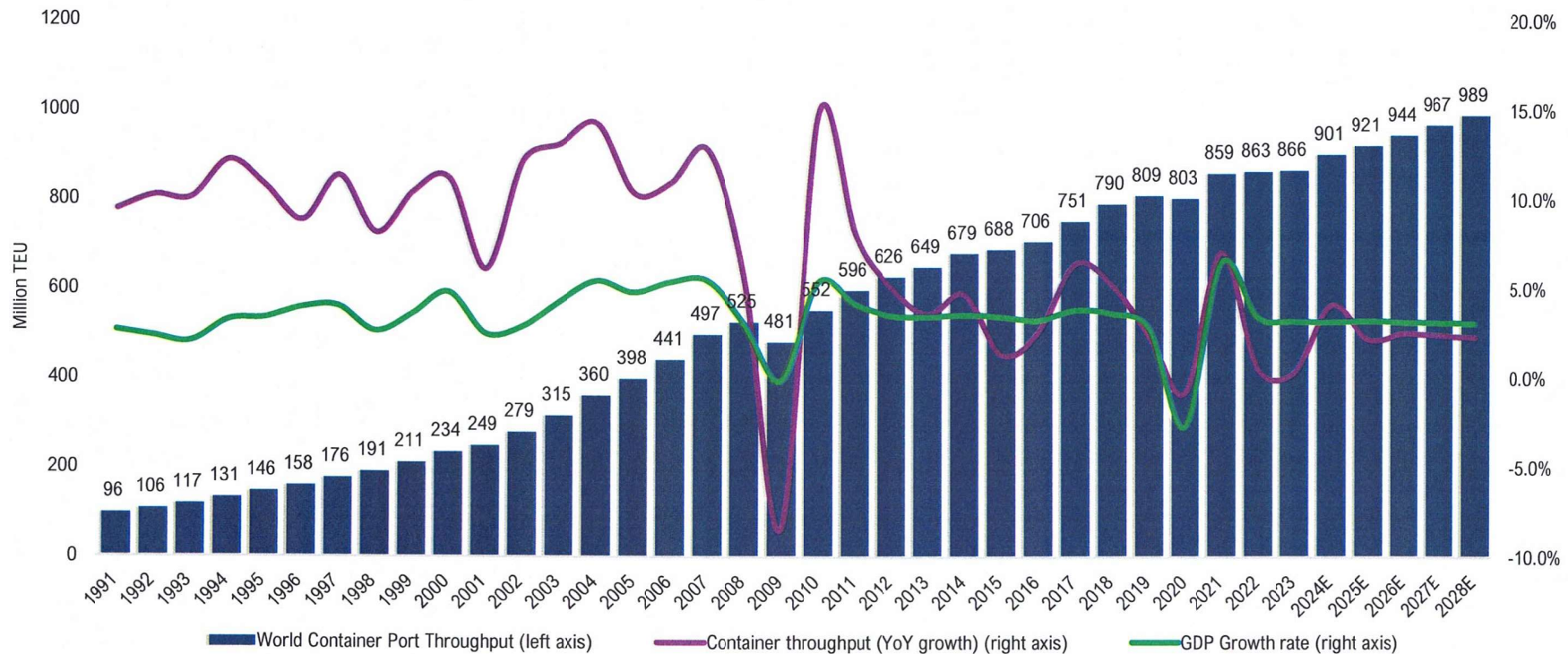
Logistical and infrastructure developments

Efficient logistics and robust infrastructure are crucial for containerized shipping. Investments in expanding port capacity, developing new container terminals, and improving supporting infrastructure such as rail and road networks allow ports to handle larger volumes of container traffic. Enhanced port efficiency also reduces delays and increases the throughput of goods, enabling shipping lines to better meet the growing demands of global trade.

Containerised trade growth

Driven by the global economy and trade, world container port throughput increased from 96.5 million TEU in 1991 to 869.2 million TEU in 2023, at a CAGR of 7.1%. The global economy had been negatively affected by COVID-19, leading to a decrease in global GDP by 3.0% in 2020, followed by a strong recovery in 2021. According to IMF estimates in April 2024, the global economy is expected to increase by 3.2% in 2024, 3.2% in 2025, 3.2% in 2026, 3.1% in 2027 and 3.2% in 2028, respectively. According to the Container Forecaster published by Drewry in the second quarter of 2024, the world container port throughput is expected to grow at a CAGR of 2.7% from 2023 to 2028.

Container port throughput growth and real GDP growth



Source: Drewry, IMF (April 2024)

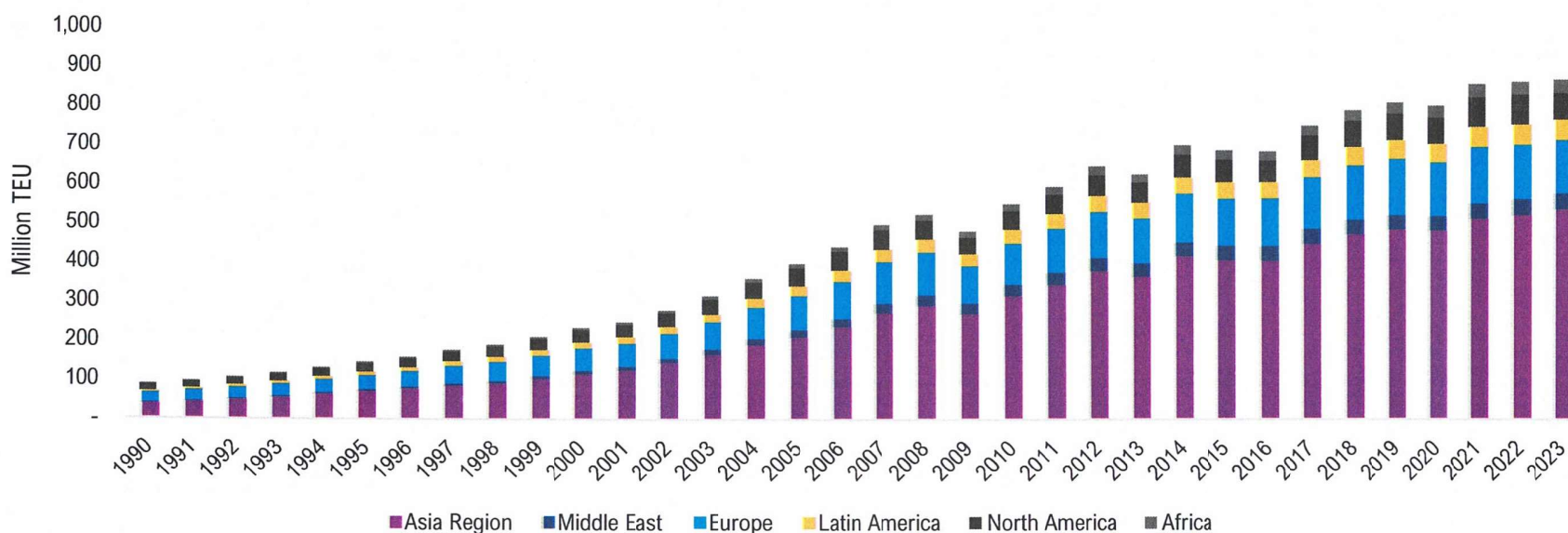
Container port throughput by major regions

The Asia Pacific Region has been the largest and one of the fastest growing regions over past three decades. The Asia Pacific Region (including Greater China, North Asia, Southeast Asia, Indian Subcontinent and Oceania) accounted for approximately 61.6% of global container port throughput in terms of TEU in 2023. Market share of the Asia Pacific Region container port throughput in the world increased from 43.4% in 1991 to 61.6% in 2023.

Container port throughput by major country

Country	Container port throughput in 2023 (million teu)	CAGR 2000-2023	Share in global throughput in 2023
China	310.6	8.6%	35.7%
USA	55.1	3.0%	6.3%
Singapore	39.0	3.7%	4.5%
South Korea	30.0	5.9%	3.5%
Malaysia	28.2	7.6%	3.2%
Japan	21.0	1.8%	2.4%
India	21.8	9.8%	2.5%
UAE	20.2	6.2%	2.3%
Vietnam	18.0	13.7%	2.1%
Spain	14.6	4.0%	1.7%

Container port throughput by major region



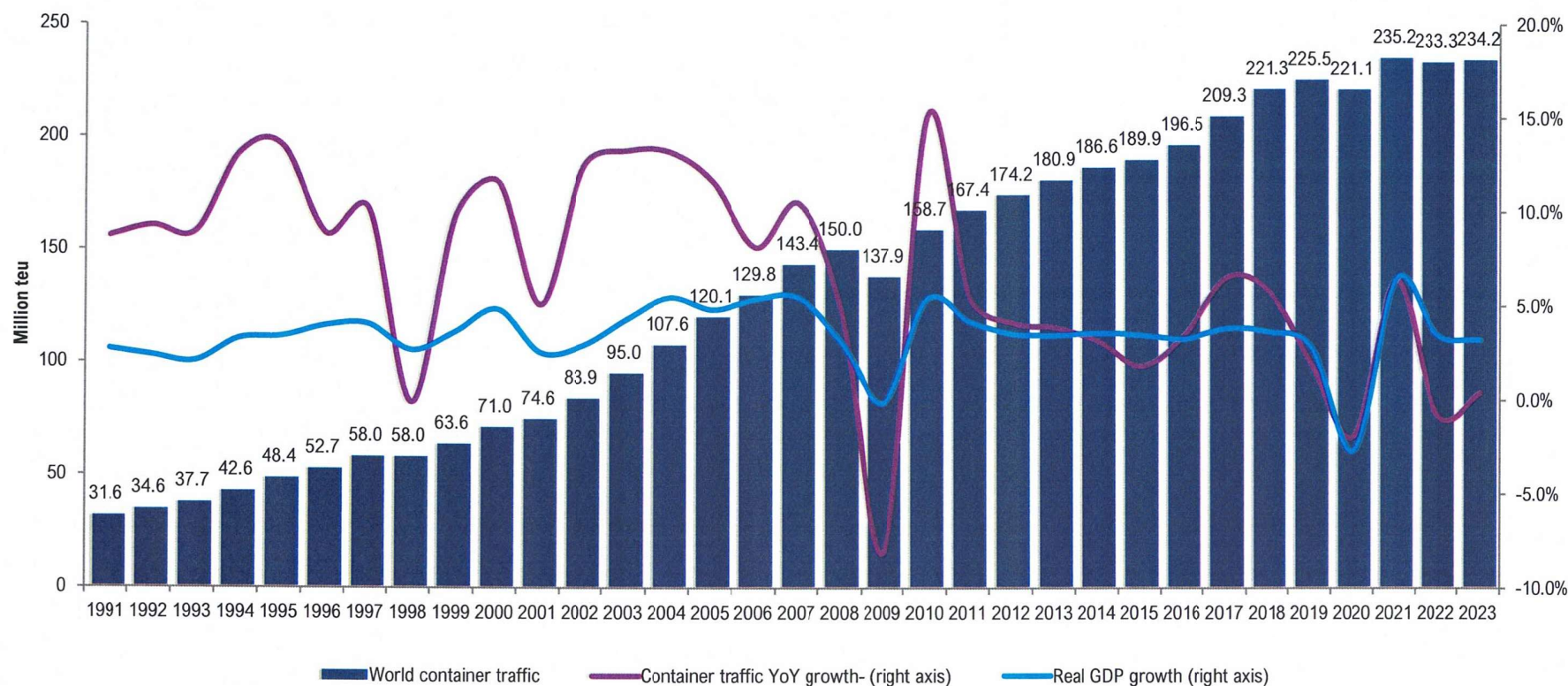
Source: Drewry

Global containerised shipping volume growth

Container shipping volume, or container traffic, is another widely used indicator for demand in the industry. Different from container throughput, container shipping volume is the number of loaded containers moving from origins to destinations, without considering empty containers and transshipment containers.

The global container shipping volume reached 234.2 million TEU in 2023, increasing at a CAGR of 1.1% from 2018, with two years of contraction, which occurred during and subsequent to the COVID-19 pandemic.

World container shipping volume



Source: Drewry

Container traffic by major trade lanes

Intra-Asia (including Greater China-North Asia, Greater China-Southeast Asia, Greater China and North Asia and Southeast Asia) is one of the largest markets, accounting for a 15.0% market share of the global container shipping volume in 2023 and increased at a CAGR of 1.2% from 2018 to 2023. The Transpacific and Asia-Europe, two major East-West trades, accounted for 12.0% and 9.6% of the global shipping volume in 2023, respectively, and their shipping volume increased at a CAGR of 0.1% and decrease at a CAGR of 0.7%, respectively, from 2018 to 2023. Trade lanes between Asia and Indian Subcontinent has experienced a rapid expansion with the shipping volume increased at a CAGR of 3.2% from 2018 to 2023, mainly attributable to India's robust economic growth. According to IMF's forecast published in April 2024, India's economy is expected to grow strongly at 6.8% in 2024, followed by a 6.5% increase in 2025. Among all the major trade lanes, Intra-Asia is one of the fastest growing markets in terms of container shipping volume, mainly attributable to the increase in the middle-class population and the relocation of manufacturing centers in the region, which are expected to continue to facilitate the Intra-Asia trade. According to the Container Forecaster published by Drewry in the second quarter of 2024, the global container shipping volume is expected to reach 263.2 million TEU in 2028, increasing at a CAGR of 2.4% from 2023 to 2028.

Seasonality

Demand for global container shipping business can be highly usually seasonable. Third quarter of each year for is the traditional peak season for Transpacific and Asia – Oceania routes and the Asia – Europe routes, as overseas sellers are to prepare for the Christmas and New Year holidays. For Asia – Indian Subcontinent and Middle East route, second quarter is a major peak season due to Muslims Ramadan holidays, and December is another small peak before New Year holiday. The traditional peak season in intra-Asia shipping routes is the fourth quarter and before Chinese New Year. However, there could be disturbance in special years, such as trade war and COVID-19, which result in port congestions.

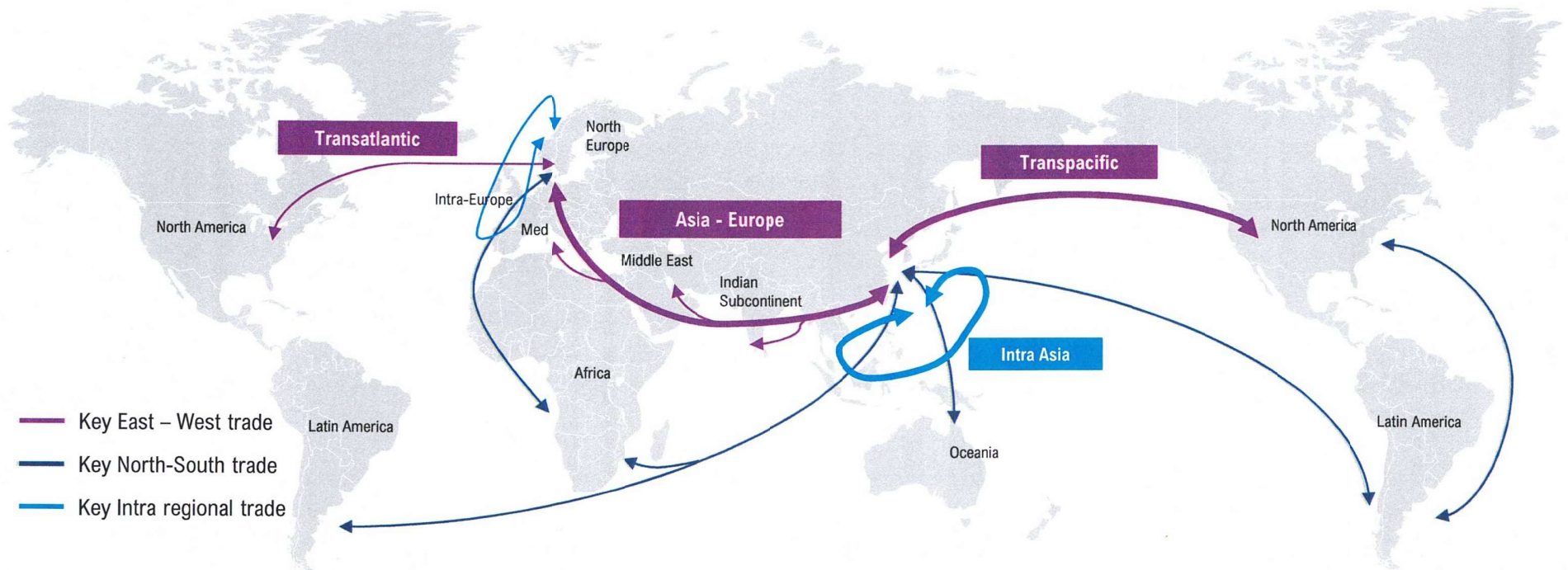
Container shipping volume by major trade lanes

Trade Lanes	Shipping volume in 2023 (million TEU)	Share in 2023	CAGR 2018-2023	2023-2028 CAGR (forecast)
Major East-West trade lanes				
Transpacific	28.2	12.0%	0.1%	3.4%
Asia-Europe	22.4	9.6%	-0.7%	2.5%
Transatlantic (North Europe)	4.9	2.1%	-2.1%	2.5%
Asia-Indian subcontinent	6.4	2.7%	3.2%	N.A.
Selected North-South trade lanes				
Asia-Oceania	4.4	1.9%	-0.5%	N.A.
Major Regional trade lanes				
Intra-Asia (exclude China domestic trade)	35.2	15.0%	1.2%	N.A.
Others	132.7	56.7%	1.8%	N.A.
World total	234.2	100.0%	1.1%	2.4%

Source: Drewry Container Forecaster, 2Q2024, Container Trades Statistics

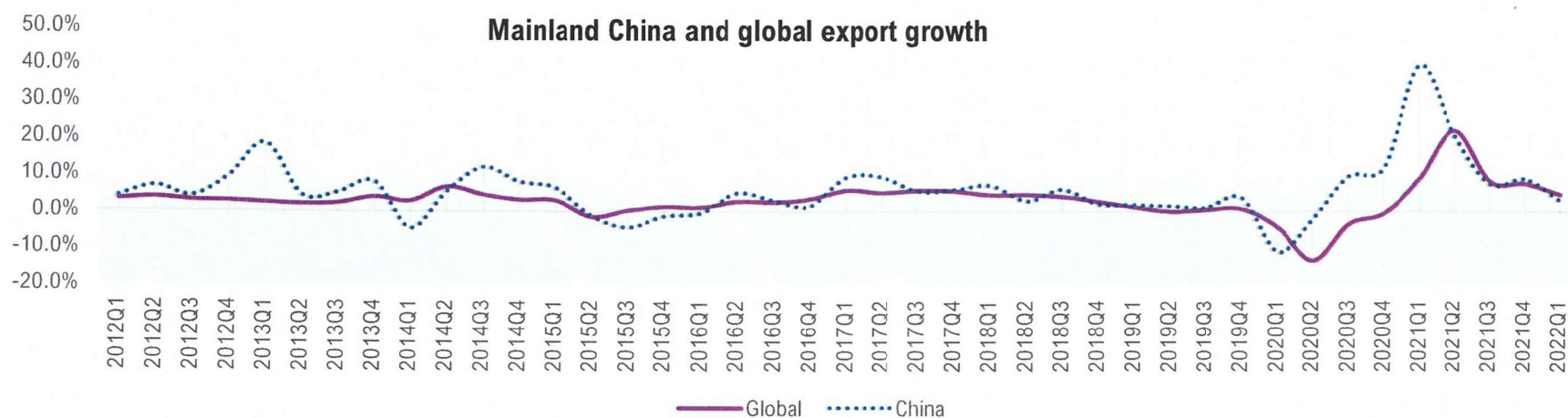
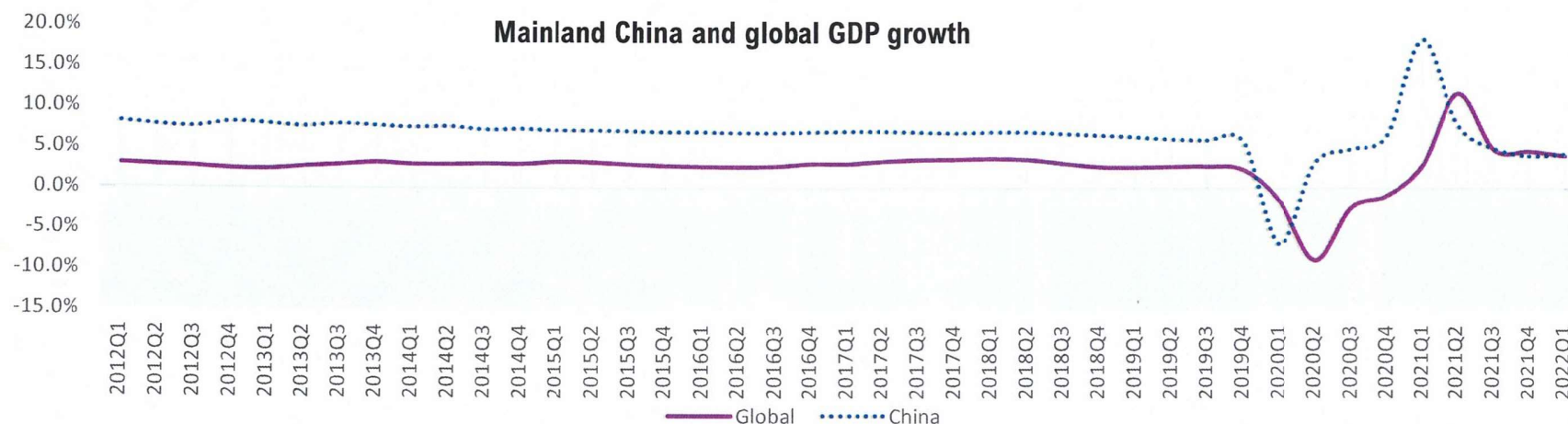
Note: N/A is due to the unavailability of the forecasted data of these trade lanes.

Map of major container shipping trade lanes



Impact of COVID-19 on container shipping industry -Macroeconomy

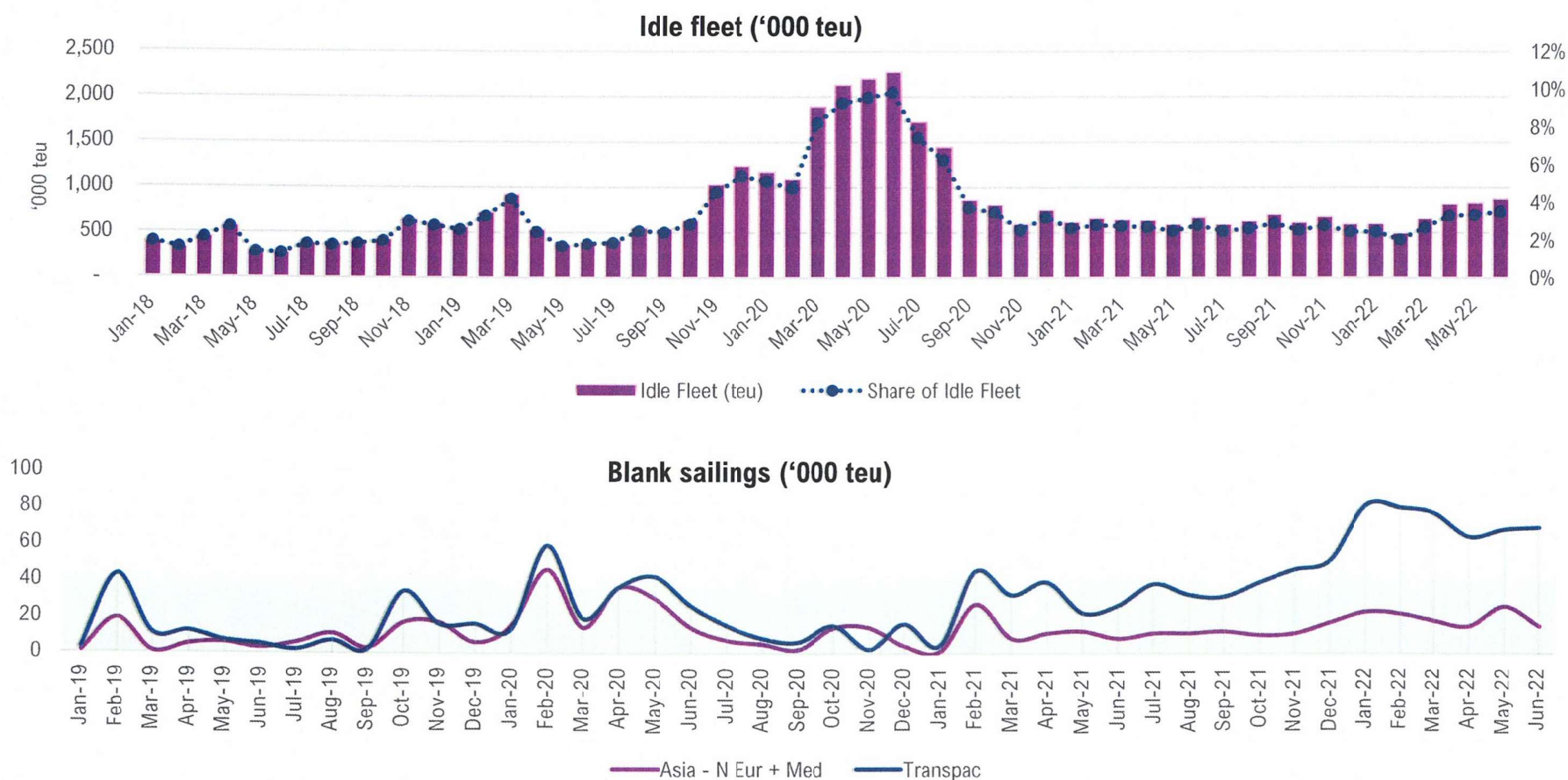
The outbreak of COVID-19 led to a collapse in demand and lockdowns in mainland China, resulting in GDP reduction of 6.9% in Q1 2020, leading to a contraction in the Chinese economy for the first time since 1992. Subsequently, the global economy declined significantly by 8.9% in Q2 2020. There was a commensurate decline in the export volume as well with China dropping by 11.0% during Q1 2020. On the other hand, at global level there was a fall of 13.4% during Q2 2020. However, as new variant spread fast in China since Mar 2022, the GDP growth has slowed down.



Impact of COVID-19 -Idle fleet and Blank Sailings

From early 2020 when the demand started to collapse, container shipping companies actioned immediately and implemented capacity management methods including capacity reduction, blank sailings and reduced services in some of their routes. During 2Q2020, idle fleet shot up close to 10% of the total fleet. It gradually returned to pre-COVID-19 levels during latter part of the year.

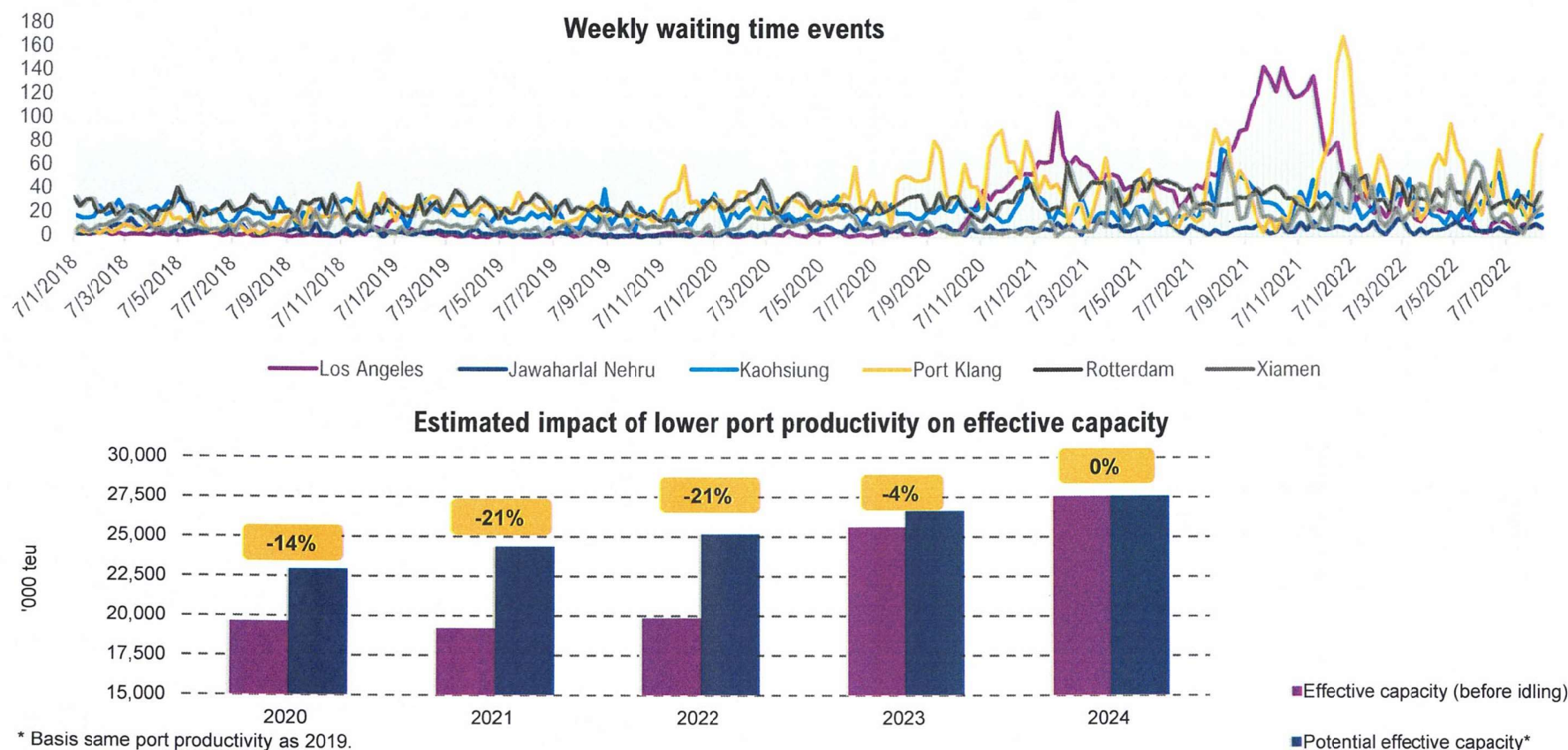
In terms of blank sailings, the first spike occurred during the month of Jan and Feb 2020 as a result of the COVID-19 outbreak in China, followed by a second spike during the month of Apr and May 2020 as a result of worldwide pandemic caused by COVID-19. Since then, shipowners have been adjusting the blank sailings and released appropriate slot to take care of the market demand.



Source: Drewry

Impact of COVID-19 –Waiting time and lower productivity

Since 2H2020, the average waiting time in Los Angeles port increased to a much higher level compared to pre-COVID-19 times. It reached its historical high at about 190 hours in November 2021. Subsequently, the waiting duration decreased to around 15.5 hours in July 2022. The effective capacity of container fleet has been reduced due to lowered port productivity (long queues of ships waiting outside ports, slower ship turnarounds when finally berthed) and shortages of yard, warehousing, trucking capacity / labour. As a consequence of congestion, effective liner capacity has reduced by 17% in 2021, and this is expected to begin to unwind in 2022. This reduction is estimated to fall to 15% in 2022 and 7% in 2023.



Source: Drewry



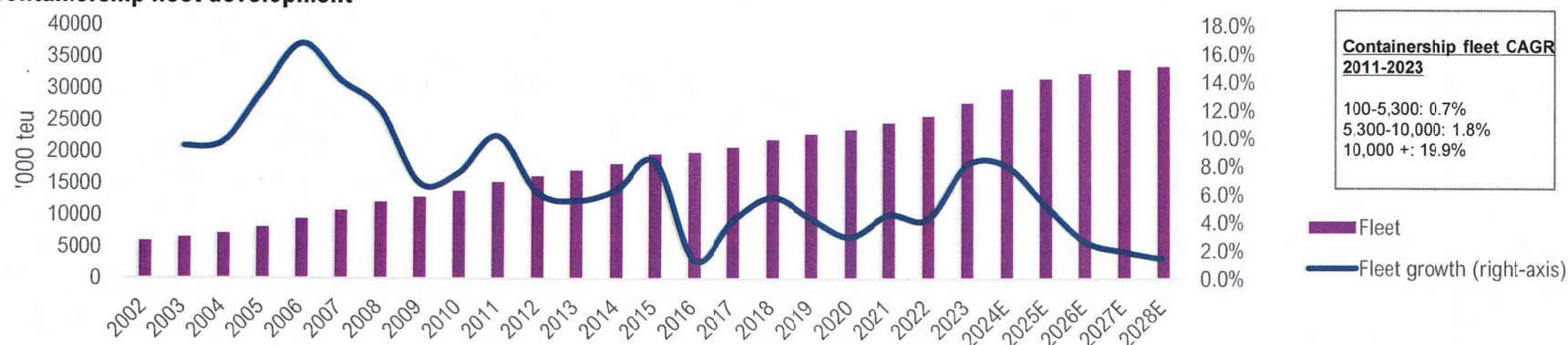
Supply and demand analysis

Container fleet development and outlook

There were 6,115 container ships as of January 1, 2024, with a total capacity of 27.8 million TEU, exclusive of demolished vessels and multi-purpose and ro-ro ships that may carry containers. As of the same date, the average age of existing fleets was 14.2 years, and the average age of vessels with size ranging from 100 to 2,000 TEU was 16.0 years, due to the growing preference for larger vessels in the past years.

The global fleet capacity increased from 15.3 million TEU in 2011 to 27.8 million TEU in 2023, with a CAGR of 5.1%, and is expected to reach 33.5 million TEU in 2028, representing a CAGR of 3.8% between 2023 and 2028. The container fleet of 10,000 TEU or above increased from 1.3 million TEU in 2011 to 11.8 million TEU in 2023, with a CAGR of 19.9%. The container fleet of 100-5,300 TEU increased from 8.2 million TEU in 2011 to 8.9 million TEU in 2023, with a CAGR of 0.7%.

Containership fleet development



World cellular containership fleet by size range (Jan 1, 2024)

Drewry classification	Size range (teu)	Number of vessels	Share (%)	Capacity (000 teu)	Share (%)	Average age (years)	Typical deployment range
Small Feeder	100-2,000	2,619	42.8%	2,801	10.1%	16.0	Short haul
Large Feeder	2,000-3,000	832	13.6%	2,117	7.6%	13.5	Regional Trade
Classic Panamax & wide beam	3,000-5,300	942	15.4%	3,946	14.2%	15.0	Regional Trade
Small neo-Panamax	5,300-10,000	945	15.5%	7,171	25.8%	14.8	Long haul
Large neo-Panamax	10,000-12,500	182	3.0%	2,004	7.2%	8.1	Long haul
Large post-Panamax	10,000-12,500	11	0.2%	122	0.4%	16.8	Long haul
VLCV - Maxi neo-Panamax	12,500-18,000	242	4.0%	3,442	12.4%	5.8	Long haul
VLCV - Neo post-Panamax	12,500-18,000	160	2.6%	2,339	8.4%	9.6	Long haul
ULCV [#]	18,000+	182	3.0%	3,888	14.0%	4.9	Long haul
Grand Total		6,115	100%	27,829	100%	14.2	

Noted:

1) The average age for Large neo-Panamax and Large post-Panamax combined is 8.6 years old.

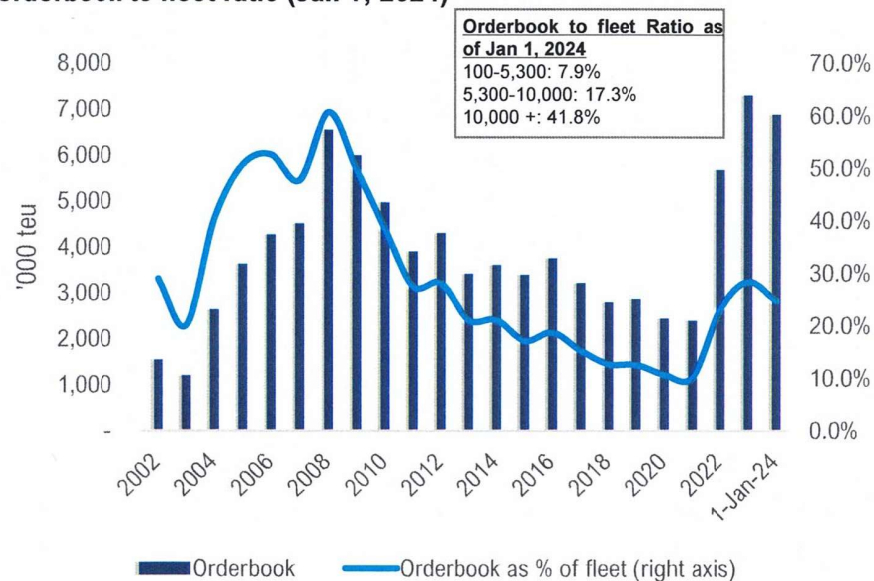
2) The average age for VLCV - Maxi neo-Panamax and VLCV - Neo post-Panamax combined is 7.3 years old.

Source: Drewry

Orderbook to fleet ratio and orderbook by size segment

The number of new container ship orders in the past 10 years before 2021 was relatively low. The ratio of container ships capacity on the order book to the total existing container fleet capacity (orderbook to fleet ratio) was 10.1% at the beginning of 2021. Due to a surge of new orders in 2021 and 2022 which was mainly driven by the significant increase in container freight rates as well as the need for more environmental-friendly ships, the orderbook to fleet ratio increased dramatically in 2022 and 2023. With the gradual delivery of the newbuilding vessels, the orderbook to fleet ratio dropped to 24.7% as of January 1, 2024. As of January 1, 2024, the orderbook-to-fleet ratio of 100-5,300 TEU was 7.9%, while the larger container ships of 10,000 TEU or above had a higher orderbook-to-fleet ratio of 41.8%. As of January 1, 2024, 73.7% of the ordered capacity (before adjusted for the delay in delivery) is scheduled to be delivered in 2024 and 2025. In light of the profitability concerns for carriers, alongside the escalating costs of newbuilding and the constraints faced by shipyard in terms of capacity, it is expected that there will be a decrease in the rate of newbuilding orders. The global container fleet capacity experienced a significant growth of 8.1% in 2023 and is expected to increase by 11.1% in 2024 and by 4.0% in 2025 according to the Container Forecaster published by Drewry in the second quarter of 2024. The strong supply and moderate demand, unless otherwise changed by unexpected factors, are expected to put pressure on carriers' profitability over the next one to two years. However, unexpected factors such as the prolonged Red Sea diversion has led to multiple consequential effects on the spot market freight rate which has surged. According to Drewry's weekly World Container Index, there was a 97% increase in the market freight rate from the last week of April to the final week of June in 2024. By the end of July 2024, the market had witnessed a significant uptick in containership newbuilding contracts, with more being signed in the past two months than previously observed.

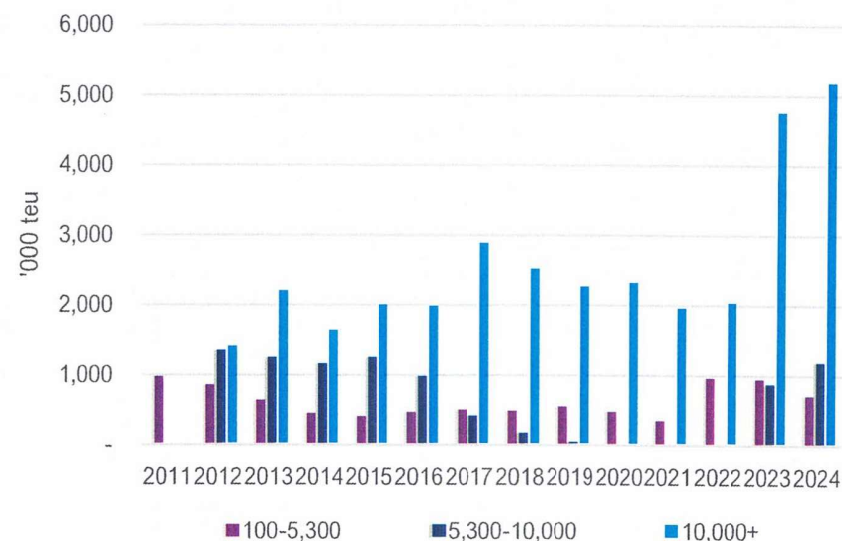
Orderbook to fleet ratio (Jan 1, 2024)



Source: Drewry

Note: annual number was at the start of year

Orderbook development: by size segment (Jan 1, 2024)



Note: annual number was at the start of year

Container fleet scheduled delivery (Jan 1, 2024)

Drewry classification	Size range (teu)	2024		2025		2026		2027		2028		Total		Current fleet	% of current fleet
		No.	'000 teu	No.	'000 teu	No.	'000 teu	No.	'000 teu	No.	'000 teu	No.	'000 teu		
Small Feeder	100-2,000	154	207	41	49	21	25	0	0	0	0	216	281	2,801	10.0%
Large Feeder	2,000-3,000	57	146	10	25	3	7	0	0	0	0	70	178	2,117	8.4%
Classic Panamax & wide beam	3,000-5,300	42	148	16	56	6	21	6	21	0	0	70	246	3,946	6.2%
Small neo-Panamax	5,300-10,000	103	705	41	322	17	139	6	55	2	18	169	1,239	7,171	17.3%
Large neo-Panamax	10,000-12,500	8	85	13	149	10	110	6	62	0	0	37	406	2,004	20.3%
Large post-Panamax [#]	10,000-12,500	0	0	0	0	0	0	0	0	0	0	0	0	122	0.0%
VLCV - Maxi neo-Panamax	12,500-18,000	77	1,133	70	1,049	39	584	12	192	0	0	198	2,958	3,442	85.9%
VLCV - Neo post-Panamax [#]	12,500-18,000	22	344	11	172	0	0	0	0	0	0	33	516	2,184	22.1%
ULCV [#]	18,000+	17	405	3	72	8	192	11	264	5	120	44	1,053	3,888	27.1%
Unadjusted Total		480	3,173	205	1,894	104	1,078	41	594	7	138	837	6,877	27,829	24.7%

Notes: # These ships cannot transit the Panama Canal due to exceeding the size restrictions
Source: Drewry

Fleet, demolition, and deliveries based on vessel size

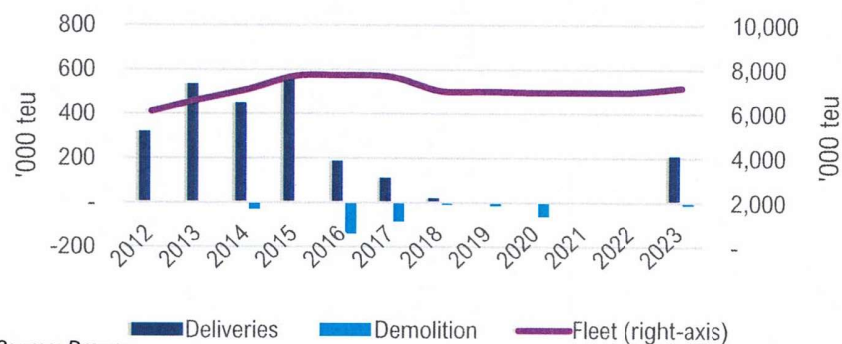
The fleet growth for 100 to 5,300 TEU vessels are expected to be moderate, given the limited deliveries and the current older age of the vessels as described below:

- The orderbook to fleet ratio for vessels from 100 to 5,300 TEU was 7.9% based on the global containership fleet capacity as of January 1, 2024, which are expected to be delivered in 2024 (5.7%), 2025 (1.5%), 2026 (0.6%) and 2027 (0.2%), respectively.
- The global containership orderbook to fleet ratio as of January 1, 2024 was 24.7%, while the ratios for vessels from 5,300 to 10,000 and above 10,000 TEU were 17.3% and 41.8%, respectively.
- as of the beginning of 2024, the average age of existing fleets was 14.2 years, and the average age for vessels from 100 to 2,000 TEU, from 2,000 to 3,000 TEU and from 3,000 to 5,300 TEU was 16.0 years, 13.5 years and 15.0 years, respectively, which were all older than the larger vessels above 10,000 TEU, as illustrated in the table below. The older average age shows a higher likelihood of older vessels in the 100 to 5,300 TEU segment being demolished in the future, which could further constrain the supply of vessels in this segment.

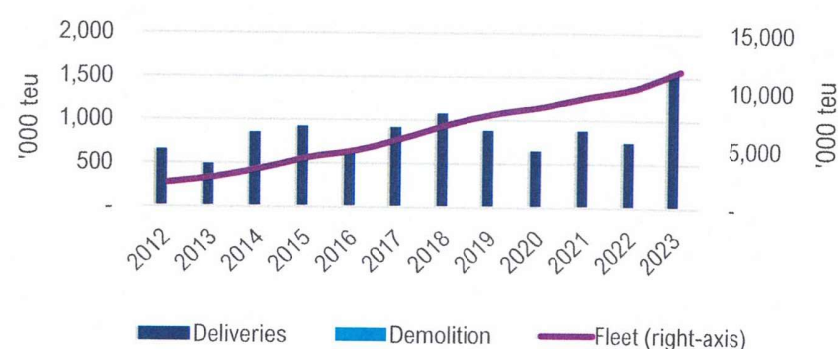
Fleet, demolition, and deliveries: 100-5,300 teu



Fleet, demolition, and deliveries: 5,300-10,000 teu



Fleet, demolition, and deliveries: 10,000+ teu

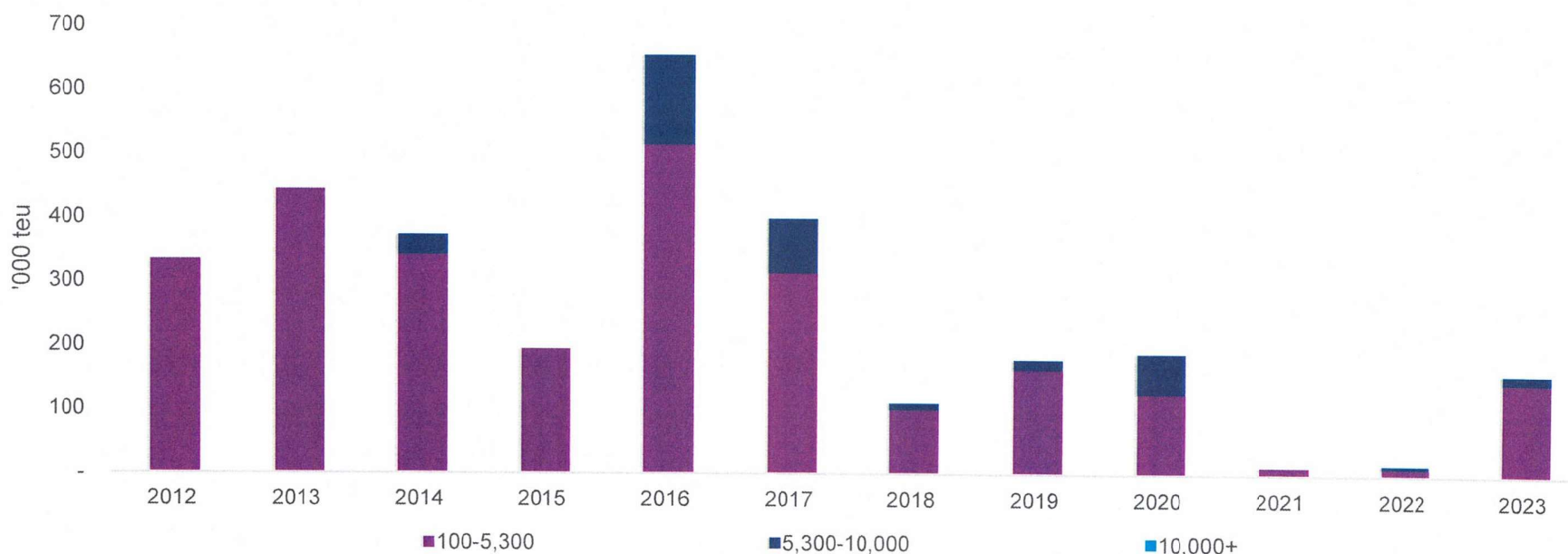


Source: Drewry

Scrapping

Demolition of vessels will reduce the container ship supply. Old- and small-sized vessels have been gradually and consistently demolished in the past decade. Due to aging, the container fleet of 100-5,300 TEU has consistently been the most demolished vessels every year. Between 2012 and 2023, 66.1% to 100% of the total scrapped fleet was vessels of 100-5,300 TEU, where 100% of the demolished fleet in 2021 was vessels of 100-5,300 TEU. In 2023, the global fleet experienced a scrapping rate of 0.6%, driven by a variety of factors including the weak demand prospection, newbuilding deliveries and the downturn in both freight rates and charter markets. The rate of containership demolitions has slowed down during the first two months of 2024 due to the Red Sea crisis which has necessitated considerably longer sailing distances for major Asia — Europe trade lanes. Consequently, carriers need more capacity to maintain the same frequency of service. However, the situation is subject to change. Should the Suez Canal transit operations return to normalcy, it is anticipated that carriers will be increasingly motivated to scrap vessels at a higher rate, particularly given the abundance of old and less energy-efficient vessels within the global fleet. As of January 1, 2024, containerships that were 25 years or older accounted for 3.0% of the world's total containership fleet capacity. The percentage of vessels aged 25 years or above in the small size segment of 100 to 2,000 TEU surged to 13.3% as of the same date. These vessels are beyond the typical working age and may be subject to demolitions. According to the Container Forecaster published by Drewry in the second quarter of 2024, approximately 0.3%, 1.3%, 1.9%, 2.1% and 2.1% of the global fleet capacity (based on the capacity as of the beginning of each year) are estimated to be demolished from 2024 to 2028, respectively.

Scrapping



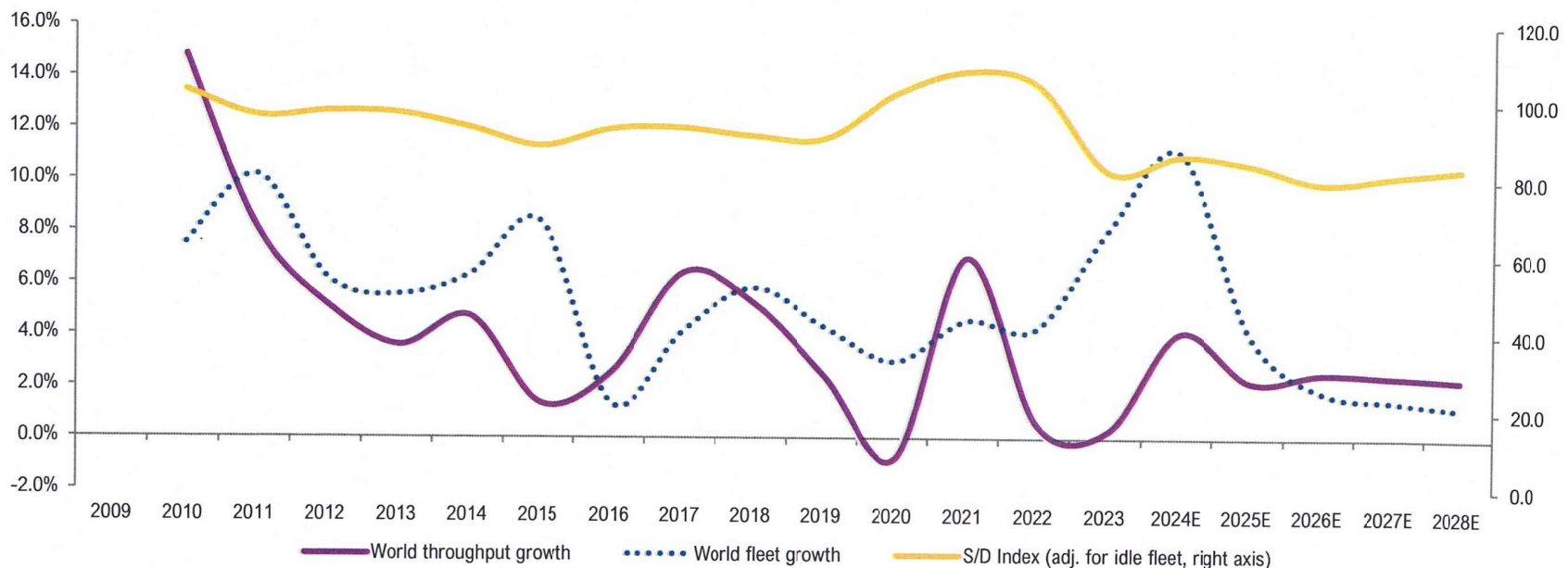
Source: Drewry

Supply – demand balance

Container shipping supply and demand are impacted by many factors that lead to fluctuations in freight rates. For example, on the supply side, the COVID-19 pandemic caused a major disruption in the global supply chain, which substantially decreased the effective capacity in shipping and at ports, driving freight rates to historically high levels. On the demand side, the global lockdowns prompted a shift in consumer spending from services to goods, particularly consumer durables and the surge of e-commerce sales. The combination of heightened consumer demand and constrained shipping capacity caused freight rates to increase. Drewry's World Container Index peaked in September 2021 and the rates were more than four times higher than the pre-pandemic average.

As the world recovered gradually from the COVID-19 pandemic, with the easing of movement restrictions, consumers shifted their spending from the pandemic-induced physical goods demand to services expenditures. In the United States, the government's COVID-19 stimulus and relief measures were concluded in 2021. Subsequently, the Federal Reserve embarked on a phase of quantitative tightening since early 2022, aiming to address the unprecedented levels of inflation. All these factors resulted in a reduction in shipping demand. On the supply side, the relaxation of COVID-19-related social distancing has helped alleviate congestion at container terminal yards and ports, despite some interruptions due to regional labor disputes. The combination of diminishing cargo demand and the expansion of effective supply capacity has been instrumental in driving the correction of freight rates since early 2022.

Supply – demand balance



Note: A figure of 100 represents equilibrium between supply and demand; above 100 (adj. for idle fleet) demand exceeds supply, below 100 the opposite.
Source: Drewry Container Forecaster, 2Q2024

Supply – demand balance

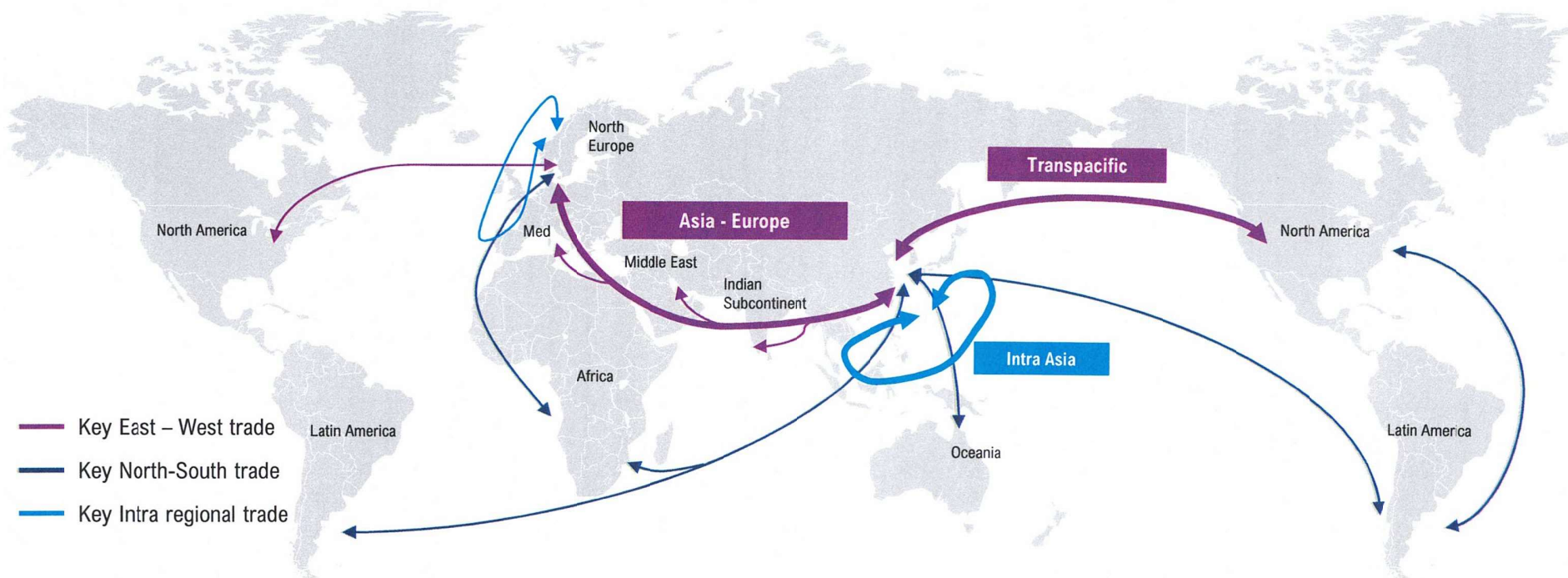
In addition to the above factors affecting container shipping supply and demand, the Houthi militants have initiated attacks on vessels traversing the Red Sea since the fourth quarter of 2023 which also affected the supply. As a result, most of major container shipping companies opted to sail their vessels via the Cape of Good Hope (commonly referred to Red Sea diversion) starting from mid-December 2023. This increases both the sailing time and distance for vessels bound for European destinations, leading to incurring additional bunker costs. Drewry estimated that if Suez Canal has to be bypassed for the entirety of 2024, assuming a 30% increase in trade distance for the roughly 30% of container shipping capacity that would have otherwise transited the Suez Canal, the global effective shipping capacity could be reduced by approximately 9%. The Red Sea diversions occurred simultaneously with the pre-Lunar New Year cargo rush in January 2024, which drove up the spot market rates. During the first quarter of 2024, the spot rates started to stabilize. In May 2024, the spot rates experienced another surge due to a number of factors, including a stronger-than-expected demand for consumer imports into the United States, preemptive ordering or shipping as a hedge against anticipated prolonged lead times and geopolitical tensions in the Middle East, constrained capacity supply from Asia to Europe, adverse meteorological conditions and congestion at key Asian ports, as well as container equipment shortage in major export regions. According to the Container Forecaster published by Drewry in the second quarter of 2024, the global average freight rate (referring to the weighted average freight rate, inclusive of fuel charges, covering both spot and contract markets) in 2024 is forecasted to increase by 27.0%, compared to that in 2023, which is 83% higher than that in 2019. The global average freight rate in 2025 is forecasted to further increase by 3.9% year-over-year.



Key relevant trade lanes analysis

Key relevant trade lanes

The global container shipping industry consists of three main type of trade lanes: East-West, North-South and intra-regional. Major East-West trades include Asia-North America (“Transpacific”), Asia-Europe and Europe-North America (“Transatlantic”), Asia- Middle East and Asia-Indian Subcontinent. East-West trades are typically characterized by bigger market size with medium- to large-sized vessels deployed. North-South trades mainly include Asia-Africa, Asia-Latin America and Asia-Oceania, which generally utilize medium- sized vessels. Intra-regional trades are usually serviced by smaller vessels which provide express services. Typical main intra-regional trades are Intra-Asia and Intra-Europe. Due to the geographical proximity, intra-Asia, Asia-Oceania and Asia-Indian Subcontinent can be grouped as the Asia Pacific Region trade. The company mainly operate services in the Asia Pacific Region.



Source: Drewry

Asia Pacific Region

The Asia Pacific Region is one of the fastest growing container shipping markets, which is mainly driven by the high level of manufacturing activities of products and increasing consumption from the growing middle-class Asian population. Regional free-trade agreements, such as the Regional Comprehensive Economic Partnership ("RCEP") and the China – ASEAN Free Trade Agreement ("AFTA"), also boost trade volume among relevant countries and regions.

Container port throughput in the Asia Pacific Region reached 535.3 million TEU in 2023, accounting for 61.6% of the global port throughput. Nine of the top 10 container ports in the world in 2023 in terms of container port throughput were located in Asia, and seven were in Greater China. ASEAN countries have been emerging and benefiting from the shift in manufacturing production lines to Southeast Asia countries. Container port throughput of the Indian Subcontinent grew at a CAGR of 3.2% from 2018 to 2023. Container port throughput of India increased at a CAGR of 5.6% from 2018 to 2023, being the main driver for Indian Subcontinent container port throughput growth. Australia and New Zealand collectively contribute more than 90% of the container port throughput in Oceania. Their combined container port throughput surged in 2021 and 2022 supported by the increased commodity demand and robust domestic spending. The throughput dropped in 2023 to around the 2019 level.

In Asia Pacific region, certain terminals have capacity constraints, including i) natural restrictions (such as tide shifts); ii) port capacity occupied by dedicated liners/services; iii) investment/maintenance postponed during Covid. These constraints set further barriers for such terminals to the new entrants.

Asia Pacific region container ports throughput volume ('000 TEU)

Asia Pacific Region	2018	2019	2020	2021	2022	2023	2018-2023 CAGR	2023-2028 CAGR (Forecast)
Asia	427,481	438,694	438,110	463,288	472,024	486,339	2.6%	2.2%
Greater China	262,544	270,149	272,021	289,649	299,596	310,615	3.4%	N.A.
Mainland China	230,980	239,797	242,846	258,900	270,377	282,312	4.1%	N.A.
North Asia	53,373	53,466	51,800	53,711	52,756	53,617	0.1%	N.A.
Southeast Asia	111,564	115,080	114,289	119,928	119,672	122,107	1.8%	N.A.
Indian Subcontinent	30,073	31,120	29,591	34,091	33,244	35,119	3.2%	5.4%
Oceania	14,059	13,943	13,750	14,646	14,797	13,838	-0.3%	3.8%
Total	471,614	483,757	481,450	512,025	520,065	535,295	2.6%	2.5%

Additional notes:

•Asia include Greater China, North Asia and Southeast Asia. Greater China includes mainland China, Hong Kong and Taiwan. North Asia includes Japan, South Korea and Russian Far East. Southeast Asia includes Indonesia, Malaysia, Thailand, Singapore, Vietnam, Philippines, Cambodia, Brunei and Myanmar.

•Indian Subcontinent includes India, Sri Lanka, Pakistan, Bangladesh.

•Oceania includes Australia, New Zealand, PNG, Fiji, New Caledonia, Samoa, Tahiti, Tuvalu, Vanuatu, Guam.

Source: Drewry, Drewry Container Forecaster, 2Q2024

Asia Region services information for Greater China related routes

Greater China Related Asia Region Trade Lanes

Greater China is one of the most important markets with the most extensive shipping services. Regarding shipping services in the Asia Pacific Region, there were around 400 services operated by over 80 container shipping companies calling at ports in Greater China in December 2023.

Asia region services data for Greater China related trade lanes, as of Dec 2023

Greater China Related Asia Pacific Region Services by Route	Number of services	Average service capacity per week (TEU)	Number of ships deployed	Fleet capacity (TEU)	Average vessel size (TEU)	Max vessel size (TEU)	Min vessel size (TEU)
Intra-Asia							
Greater China – North Asia	139	168,598	226	273,857	1,212	6,332	84
Greater China – Southeast Asia	88	185,544	244	608,320	2,493	7,100	707
Greater China – North Asia – Southeast Asia	93	200,445	355	826,091	2,327	6,080	907
Greater China within (excluding China domestic services)	29	39,242	39	49,472	1,269	2,038	420
Asia-Indian Subcontinent							
Greater China – Indian Subcontinent	32	127,629	174	786,424	4,520	10,062	1,228
Asia-Oceania							
Greater China - Oceania	18	54,689	82	367,890	4,486	8,888	777
Grand Total	399	776,147	1,120	2,912,054	2,600	10,062	84

Additional Note:

Asia Region Routes:

- The intra-Asia route refers to the container trade among countries and regions including China, Japan, South Korea, Russian Far East, Taiwan, Hong Kong, Singapore, Malaysia, Vietnam, Indonesia, Thailand, Philippines, Cambodia, Myanmar and Brunei.
- Asia-Oceania route refers to the container trade connecting Asia and Oceania countries.
- Asia-Indian Subcontinent route refers to the container trade connecting Asia and Indian Subcontinent countries.

Source: Drewry, Alphaliner

Asia Region market competitive landscape

Competitive landscape

There are three major types of container shipping companies in the Asia region market: (i) global operators with long-haul focus, serving the Asia region to support long-haul services or as service extension; (ii) global operators focusing on regional services but having significant existence in multiple continents; and (iii) Asia region focused container shipping companies whose business focus is Asia region services. TS Lines is one of the major Asia region focused container shipping companies.

Ranking of container shipping companies globally (as of 1st January 2024)

Rank	Operator	TEU	Share
1	MSC	5,608,197	19.8%
2	Maersk	4,115,598	14.5%
3	CMA CGM	3,578,066	12.6%
4	COSCO Group	3,054,323	10.8%
5	Hapag Lloyd	1,963,934	6.9%
6	ONE	1,801,472	6.4%
7	Evergreen	1,644,883	5.8%
8	HMM	783,732	2.8%
9	YM Marine	707,423	2.5%
10	Zim	619,407	2.2%
.....			
21	TS Lines	87,028	0.3%

Source: Alphaliner, containing both owned and chartered in capacity.

Ranking of Container Shipping Companies by capacity deployed in Asia Region (December 2023)

Rank	Company Name	Company Type	Capacity (teu)	Capacity Share	% of number of Asia Pacific Region service vs total service
1	COSCO	Long Haul Focus	270,483	7.5%	39%
2	OOCL	Long Haul Focus	253,996	7.0%	40%
3	Wan Hai	Asia Pacific Region Focus	248,510	6.9%	79%
4	Evergreen	Long Haul Focus	248,084	6.8%	45%
5	MSC	Long Haul Focus	226,560	6.3%	12%
6	Sealand	Global existence	215,759	6.0%	26%
7	CNC	Asia Pacific Region Focus	210,466	5.8%	97%
8	ONE	Long Haul Focus	189,184	5.2%	47%
9	CMA CGM	Long Haul Focus	164,102	4.5%	16%
10	SITC	Asia Pacific Region Focus	160,949	4.4%	100%
11	KMTC	Asia Pacific Region Focus	121,832	3.4%	93%
12	Maersk	Long Haul Focus	112,023	3.1%	18%
13	Sinokor	Asia Pacific Region Focus	84,644	2.3%	98%
14	Yang Ming	Long Haul Focus	83,396	2.3%	52%
15	TS Lines	Asia Pacific Region Focus	82,665	2.3%	90%
16	X-Press Feeders	Global existence	67,280	1.9%	33%
17	PIL	Long Haul Focus	64,130	1.8%	58%
18	RCL	Asia Pacific Region Focus	58,852	1.6%	88%

Note: Asia Region focused container shipping companies are defined as companies in which the number of Asia Region services accounts for more than 70% of total number of services.

Source: Drewry, Alphaliner.

Asia Pacific Region Market freight performance

Intra-Asia Market freight performance

Intra-Asia market's container shipping volume accounted for 15.0% of the global container shipping volume in 2023, which increased at a CAGR of 1.2% between 2018 and 2023, and was faster than the world average annual growth rate of 1.1%. Intra-Asia freight rate was steady before COVID-19. Drewry's Intra-Asia freight rate index ranged from US\$717 to US\$882 per FEU between 2017 and 2019, due to relatively balanced supply and demand dynamics. Since November 2020, freight rates increased sharply due to the global supply chain disruption, container box shortage, port congestion, and most importantly the re-assignment of vessels by container shipping companies to more profitable East-West trade lanes further reduced the capacity deployed in the Intra-Asia market. The freight rate index peaked in January 2022 after which it began a correction, returning to pre-pandemic levels in the second half of 2023. In September 2024, the freight rate index was at US\$908 per FEU, which is 10.3% higher than the average freight rate for the year 2019.

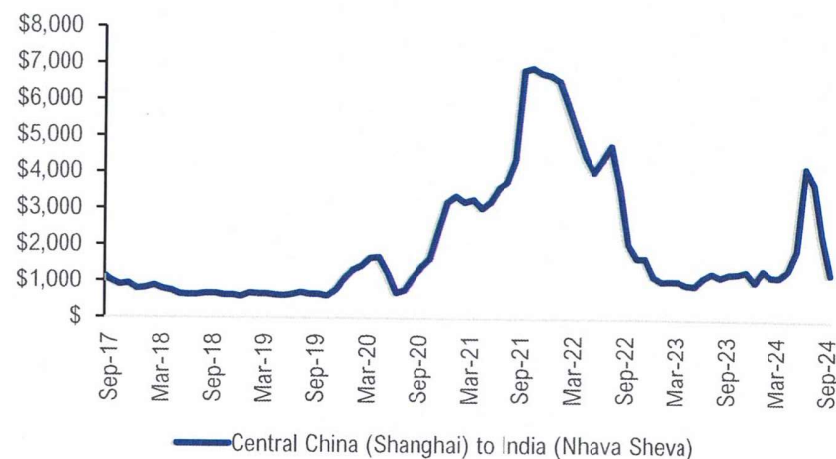
Intra-Asia freight rate Index (US\$ per FEU)



Asia – Indian Subcontinent Market freight performance

The Asia-Indian Subcontinent container shipping volume accounted for 2.7% of world container shipping volume in 2023, increasing at a CAGR of 3.0% between 2018 and 2023. Drewry's Central China (Shanghai) to India (Nhava Sheva) average freight rate ranged from US\$570 to US\$1,290 per FEU between 2017 and 2019. The freight rate started increasing from the second half of 2020 and peaked in October 2021 due to the shortage of container boxes, as well as the reduced vessel supply. Since reaching its peak, the freight rate has begun a correction until it reached a point of relative stability at the beginning of 2023. In September 2024, the freight rate was at US\$1,277 per FEU.

Central China (Shanghai) to India (Nhava Sheva) freight rate (US\$ per FEU)



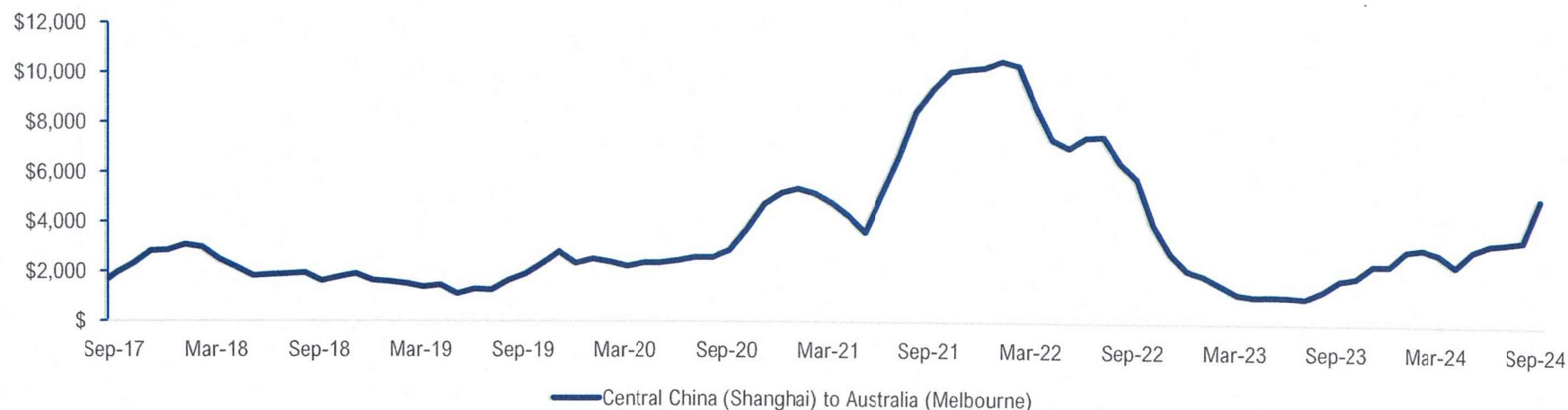
Source: Drewry

Asia Pacific Region Market freight performance

Asia – Oceania Market freight performance

The shipping volume for Asia-Oceania accounted for 1.9% of the global container shipping volume in 2023. The shipping volume for this trade lane has maintained a relative stability, with the volume of 2023 returning to that of 2019. Drewry's Central China (Shanghai) to Australia (Melbourne) average freight rate ranged from US\$1,090 to US\$3,060 per FEU from 2017 to 2019. The benchmark rate started increasing from September 2020 and peaked in January 2022, supported by the strong demand in the Oceania region as well as the capacity reduction. Following the peak, the freight rate experienced a sustained correction, culminating in relative stability since the second quarter of 2023. Since October 2023, dockworkers at Australia's four largest ports, namely Melbourne, Sydney, Brisbane and Freemantle, had been striking in a pay dispute against port operator DP World Australia. Port operator and the Maritime Union of Australia finally reached an agreement in early February 2024, thereby concluding four months of strike action. The strike caused significant congestion at the affected Australian ports and resulted in delays in shipments, which also led to an increase in freight rates throughout the duration of the strike. In September 2024, the freight rate was at US\$5,102 per FEU.

Central China (Shanghai) to Australia (Melbourne) freight rate (US\$ per FEU)



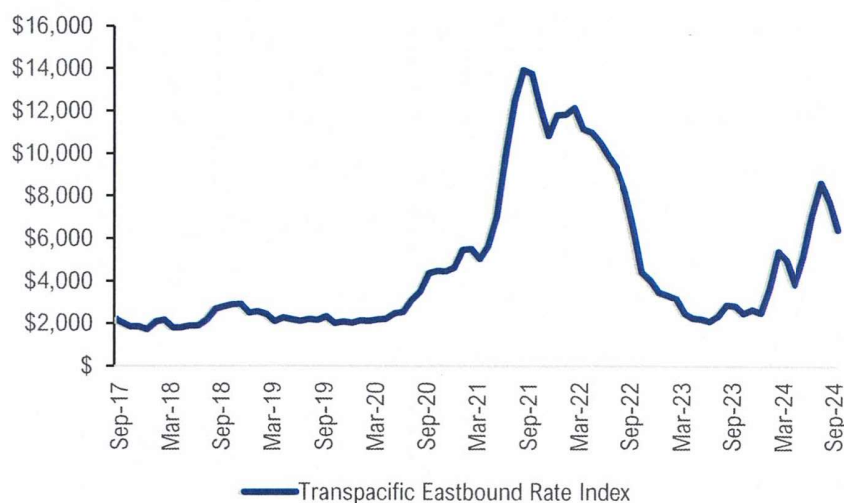
Source: Drewry

Other Markets freight performance

Transpacific Market freight performance

The Transpacific shipping volume accounted for 12% of the global shipping volume in 2023. Eastbound is the head haul trade lane with rapid growth of container shipping volume after the COVID-19 outbreak, driven by strong demand from North American consumers for Asian-manufactured products. Drewry's Transpacific eastbound freight rate index ranged from US\$1,697 to US\$2,885 per FEU between 2017 and 2019. In September 2024, the freight rate was at US\$6,407 per FEU.

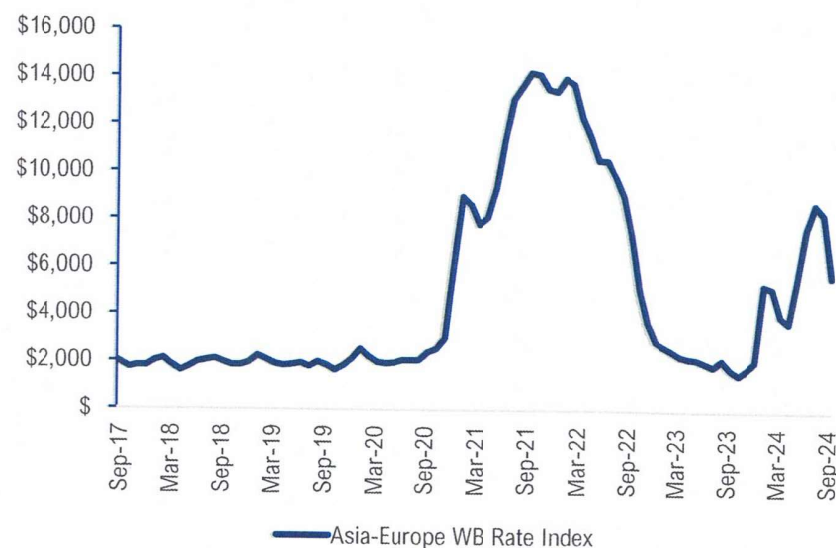
Transpacific Eastbound freight rate Index (US\$ per FEU)



Asia-Europe Market freight performance

Asia-Europe trade lane, which is segmented into Asia-North Europe trade lane and Asia-Mediterranean trade lane, accounted for approximately 9.6% of the global shipping volume in 2023. There was a notable increase in demand for the westbound head haul service after the COVID-19 outbreak in 2021. Drewry's Asia-Europe westbound freight rate index ranged from US\$1,602 to US\$2,405 per FEU between 2017 and 2019. In September 2024, the freight rate was at US\$5,682 per FEU.

Asia-Europe Westbound freight rate Index (US\$ per FEU)



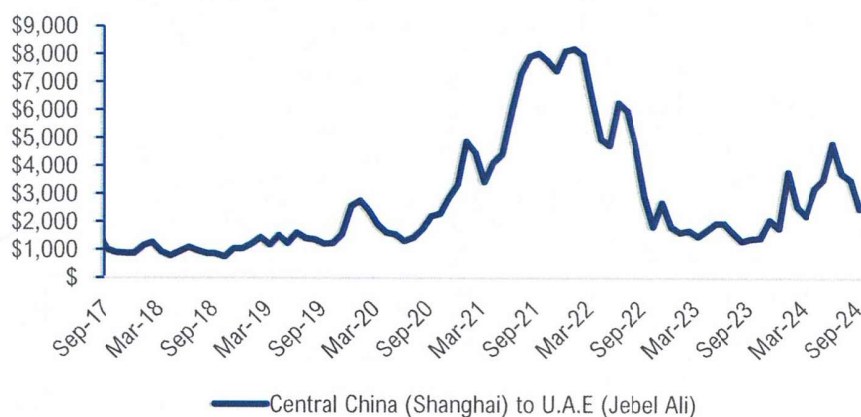
Source: Drewry

Other Markets freight performance

Asia-Middle East Market freight performance

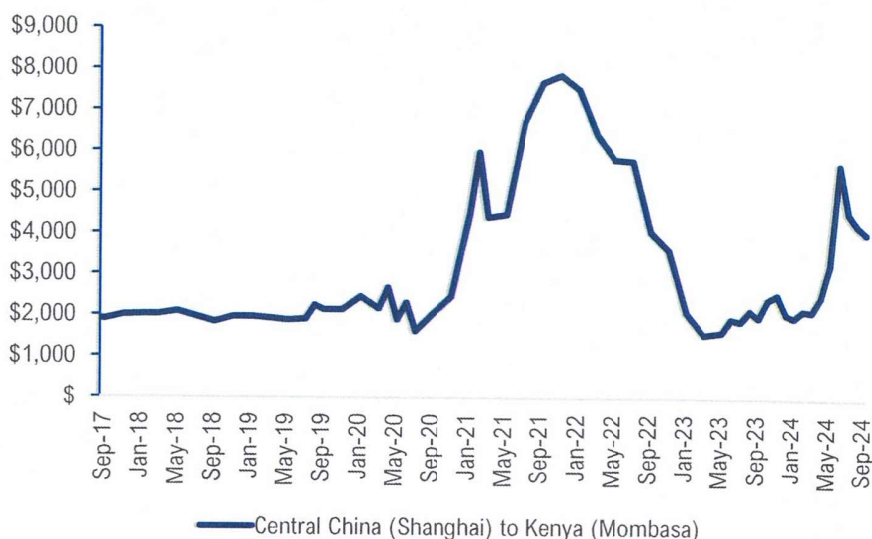
In 2023, Asia-Middle East trade lane accounted for approximately 2.3% of global shipping volume, with the westbound head haul service representing more than 70% of the trade volume. Drewry's Central China (Shanghai) to UAE (Jebel Ali) average freight rate ranged from US\$740 to US\$2,550 per FEU from 2017 to 2019. The freight rate for this trade lane was in line with the market trend during the COVID-19 period, which saw a shift in capacity from this trade lane to the more profitable long-haul East-West trade lane, resulting in a capacity reduction for the Asia-Middle East trade lane. Exports from Asia to the Middle East had a prosperous 2023, with the Asia to Middle East westbound trade volume surged by an impressive 25%. In September 2024, the freight rate was at US\$2,470 per FEU.

Central China (Shanghai) to UAE (Jebel Ali) freight rate (US\$ per FEU)



Asia-East Africa Market freight performance

The key East African ports are Mombasa in Kenya and Dar es Salaam in Tanzania. The combined container port throughput for Kenya and Tanzania accounted for 46.7% of the total East Africa throughput in 2023. East Africa's main importing goods include motor vehicles and spare parts, electrical appliances, and other consumer products, while the main exporting goods are agricultural products, raw materials, and other commodities. China is one of the main trading partners to both Kenya and Tanzania. In 2023, the container port throughput in East Africa increased remarkably by 20.5% compared to 2022. Drewry's Central China (Shanghai) to Kenya (Mombasa) average freight rate ranged from US\$1,450 to US\$2,250 per FEU from 2017 to 2019. In September 2024, the freight rate was at US\$4,045 per FEU.



Remark: Freight rates for this trade between 2017 and April 2023 were recorded bimonthly. The missing data points in the chart are filled with a smoothing curve.

Source: Drewry

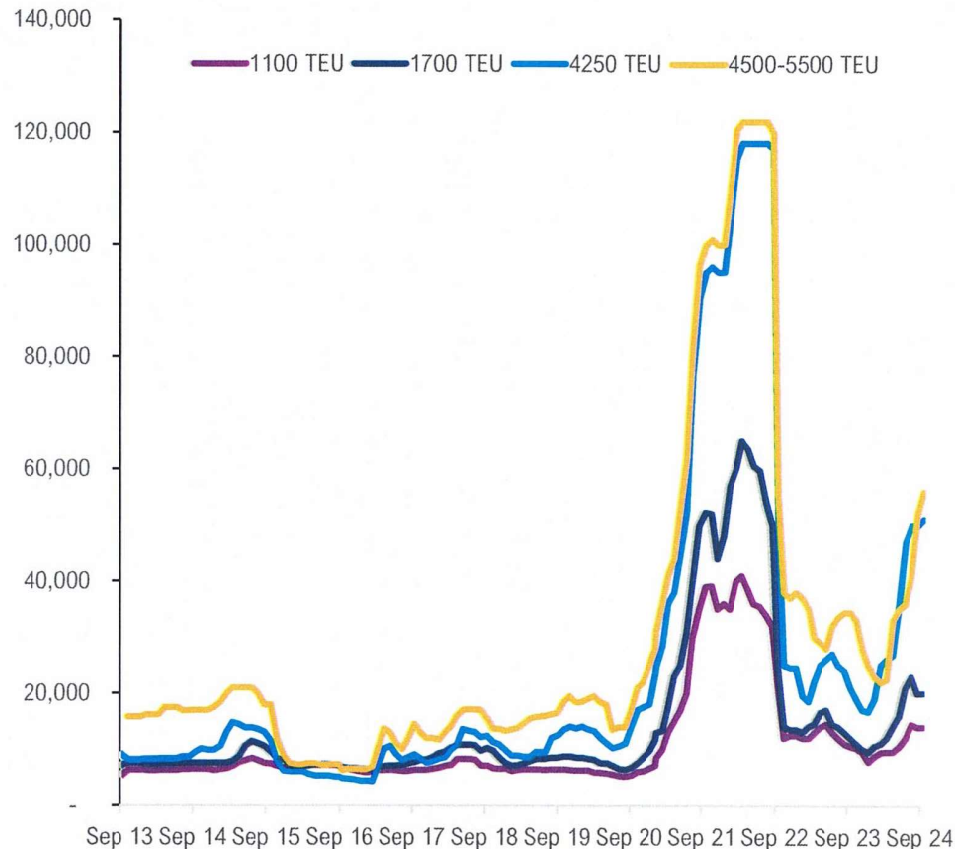


Container shipping asset price, earnings and bunker prices



Time charter rates

One-year TC rate by vessel size (US\$ per day)

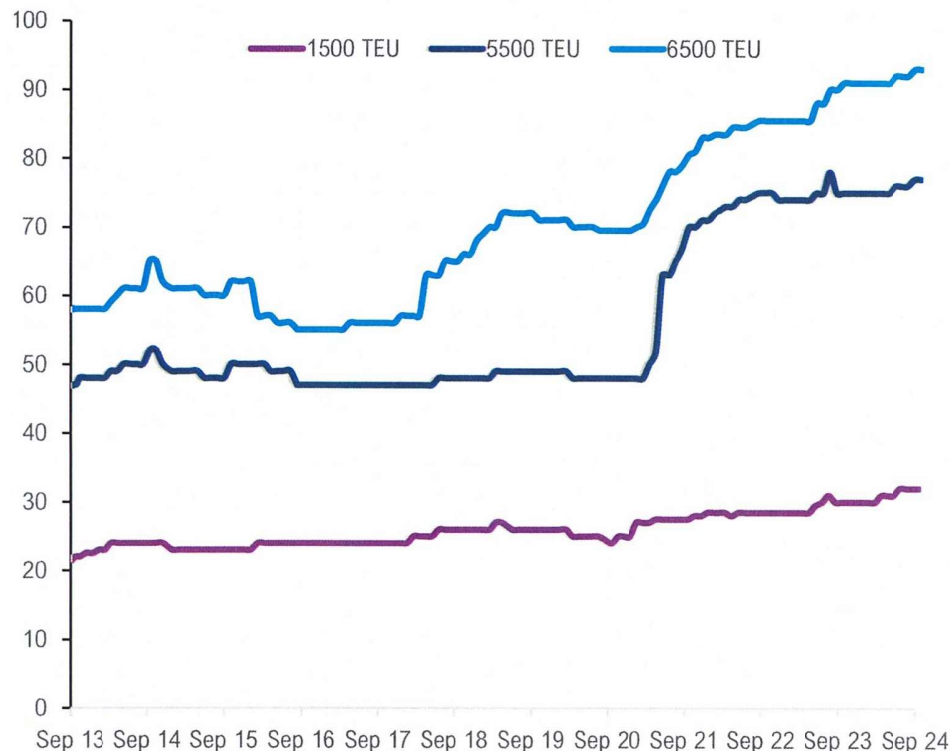


Charter rates are mainly dependent on the prevailing supply and demand dynamics in the market (especially for shorter charters). The COVID-19 pandemic brought significant adverse impact on the world's container handling capacity, resulting in the low efficiency in many major ports globally, which in return further reduced the effective supply of container ships, and pushed up charter rates dramatically. In 2021, the charter rates increased along with the increase in freight rates. As container freight rate started falling since its peak in September 2021, TC Rates have followed the trend. TC Rate decreased sharply in the fourth quarter of 2022, due to the slowdown in port handling and the decrease in freight rates which have softened demand for container ships. The downturn in late 2023 was halted by a surge in demand for tonnage demand due to Red Sea diversion, leading to a notable increase in the early months of 2024. However, as the underlying conditions in the container shipping market indicate an excess of supply. Consequently, it is expected that the time charter rates will experience a downturn again in the near future.

Source: Drewry

Newbuilding prices and secondhand prices

Newbuilding price (million USD)



The newbuilding prices and second-hand vessel prices remained at a low level from 2012 to 2020. Since 2021, the new orders for container ships have increased significantly, causing ship building capacity constraints globally. The high charter market rates have also driven the second-hand vessel market price to a much stronger level. Since August 2022, the second-hand vessel market started to weaken with declining charter rates. However, since 2020 there has been considerable newbuilding orders in container vessels and other vessel sectors. The shipyards are now highly utilized which is supporting the newbuilding prices.

Newbuilding prices

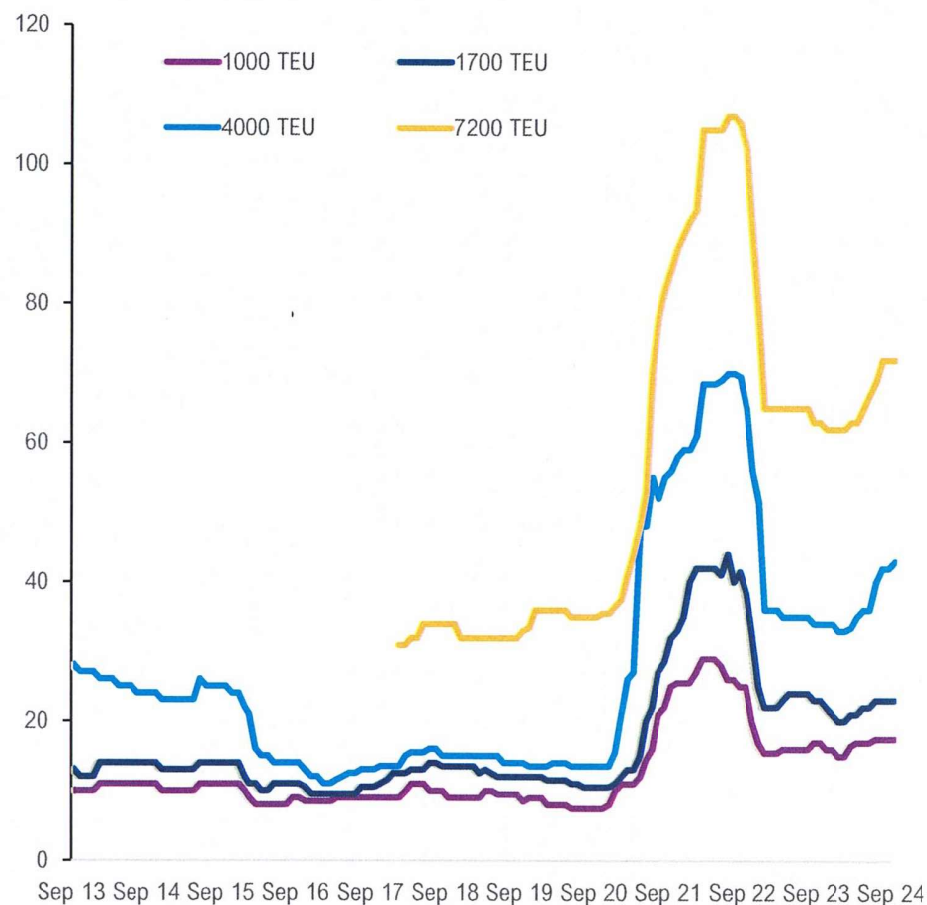
The factors which influence newbuilding prices include ship type, shipyard capacity, demand for ships, 'berth cover', i.e., the forward book of business of shipyards, buyer relationships with yard, individual design specifications, including fuel efficiency or environmental features, and price of ship materials, engine and machinery equipment and particularly the price of steel.

The newbuilding prices had stayed low during 2012 to 2020, across all size segments. Strong demand and improved charter rates in 2018 pushed the newbuilding prices upwards, especially for bigger size segment. Since Jan 2021 onwards, the new orders for container ships and LNG ships increased considerably causing shipbuilding capacity constraint globally. In addition, there has been upward movement in input costs. These factors led to increase in newbuilding prices across the board.

Source: Drewry

Newbuilding prices and secondhand prices

Secondhand price – five years old vessel (million USD)



Source: Drewry

Second hand prices

Ships are usually sold through specialized brokers who report transactions to the maritime transportation industry regularly. The sale and purchase market for ships is usually quite transparent and liquid, with several ships changing hands on an annual basis. A large part of the interest in second-hand container ships arises from companies wishing to speculate in short term or spot market type opportunities. Second-hand prices are also influenced if a charter contract is attached to the vessel. A second-hand vessel already deployed on a long-term charter with a blue-chip customer at a profitable price will generally command higher price compared to a similar vessel with no charter contract.

Second-hand values for containerships also remained low for the last 10 years before picking up steeply from 2021. During 2012-2017 the second-hand values weakened in the face of much softer charter rates and freight rates. Asset prices have improved since 2017 due to the slightly optimistic view on market rate. Lower charter rates again led to a decline in second-hand prices in 2019 and 2020. From 2021, the super high market rate has driven the second-hand market to a much stronger level.

According to Drewry Container Forecaster published in second quarter of 2024, the forecast average price for a five-year-old 3,500 TEU vessel in 2024 is US\$33.6 million, compared to the average of US\$57.3 million in 2022 and US\$33.2 million in 2023. The average price in 2025 is expected to decline to US\$29.1 million, but it will still be twice of the level in 2019.

Bunker prices

Bunker price is highly correlated with global crude oil price. The bunker price maintained a relatively low level between the second half of 2014 and 2020. It remained low in 2020 due to the fall in global oil prices caused by the COVID-19 pandemic. Bunker prices recovered gradually in 2021 and rose sharply in the first half of 2022, due to the energy crisis situation caused by the Russia-Ukraine war and the recovery in demand for oil. Since the middle of 2022, the bunker price has decreased dramatically due to the rising concern of the global economy. The bunker prices have increased from the low levels experienced in the second quarter of 2023 primarily due to the voluntary production curbed by OPEC+ and increased geopolitical tensions, resulting in a strengthening of oil prices. Additionally, the ongoing Red Sea crisis is likely to maintain a heightened state of alert in the oil market. Any escalation in tension in the Middle East will pose a significant risk to the global supply of oil.

The IMO introduced a new regulation to limit the fuel oil used by ships with a maximum sulfur content of 0.5% from the beginning of 2020. Ships need scrubbers if they want to burn high-sulfur fuel oil (HSFO, having a maximum sulfur content of 3.5%). Low sulfur marine gas oil (LSMGO) is also considered as low sulfur fuel oil as it usually has a maximum sulfur content of 0.1%. When the market price of VLSFO is remarkably higher than HSFO, scrubber-fitted vessels will enjoy cost benefits on bunker cost.

Average bunker price (USD per ton)



Note: Historical average bunker prices in Singapore

Source: Drewry



IMO environmental regulations and its impact

Environmental regulations in shipping

The stricter IMO environmental standards will limit vessel supply and demand environmentally-compliant vessels. Current IMO regulations include ballast water management and low sulfur fuel requirement. IMO also adopted decarbonization initiatives including Energy Efficiency Existing Ship Index (EEXI) and Carbon Intensity Indicator (CII), effective from January 1, 2023. All of these regulations are likely to have significant impact on shipping companies. To comply with IMO regulations, container shipping companies have to optimize their fleet operations by using low sulfur fuel oil, installing scrubbers or investing in new vessels which are powered by clean fuels such as liquefied natural gas, methanol, liquefied petroleum gas, or any other compliant fuels, or implementing other measures to improve vessel operational efficiency. Shipping companies may also choose to retrofit or demolish non-IMO compliant vessels. In addition, the European Union legislative bodies have implemented the EU Emissions Trading System (ETS) for the shipping sector on January 1, 2024. The EU ETS will generally affect the operations, costs and contractual agreements of shipping companies whose vessels operate to or from ports in the European Union. FuelEU Maritime, the proposed regulations aimed to promote the decarbonization of fuels used by vessels, sets requirements on annual average greenhouse gas intensity of energy used by vessels trading in the EU or European Economic Area (EEA) which is expected to come into effect on January 1, 2025. FuelEU Maritime is expected to influence the operating costs for vessels that rely on conventional fuel, which is anticipated to progressively increase over the years. Similarly, IMO is currently in the process of developing technical and economic measures which are expected to come into effect from 2027. These measures are likely to have a similar impact as that of European regulations, with the significant distinction that they will be enforced on a global scale. Consequently, it is expected that the environmental regulations governing shipping industry will become increasingly stringent in the coming years and have a mid-term impact on the supply of vessels.

Environmental regulations in shipping

Shipping is a highly regulated industry. International Maritime Organisation (IMO) is the United Nations specialised agency. It regulates global shipping industry. IMO has the responsibility for the safety and security of shipping and the prevention of marine and atmospheric pollution by ships. All ships are required to comply with these regulations. The regulations keep evolving over time. Currently, there are regulations pertaining to ballast water and ship emissions, which are likely to have significant impact on shipping companies.

Ballast Water Management Convention (BWM): All deep-sea vessels engaged in international trade are required to have ballast water treatment system before 8 September 2024. For a container feeder ship less than 3,000 TEU, the retrofit cost could be as much as USD 0.1 to 0.2 million per vessel, including labour. Expenditure of this kind has become another factor impacting the decision to scrap older vessels after the BWM Convention came into force in 2019.

The IMO has formulated regulations to limit emissions and sulfur emission regulation was implemented on January 1, 2020. The **IMO 2020 Law Sulphur Regulation** mandates a maximum of 0.5% (from 3.5%) sulphur content in marine fuels globally.

Emission control regulations: The IMO has been devising strategies to reduce greenhouse gases (GHG) and carbon emissions from ships. According to the announcement in 2018, the IMO plans to initiate measures to reduce CO2 emissions intensity by at least 40% by 2030 and 70% by 2050 from the levels in 2008. It also plans to introduce measures to reduce total GHG emissions by 50% by 2050 from the 2008 levels. These are likely to be achieved by setting energy efficiency requirements and encouraging shipowners to use alternative fuels such as biofuels, and electro-/synthetic fuels such as hydrogen or ammonia. It may include limiting the speed of the ships. Currently, there is uncertainty regarding the exact measures that the IMO will undertake to achieve these targets. The vessels with conventional propulsion system may have a high environmental compliance cost and possible faster depreciation in asset values.

in the future. Some shipowners are ahead of the curve by having ordered LNG-fuelled/methanol ships in order to comply with stricter regulations that may be announced in future. In container segment some of the shipping companies have been trailblazers namely CMA CGM, MSC, Hapag Llyod etc

In June 2021, the IMO adopted amendments to the International Convention for the Prevention of Pollution from ships (MARPOL) that will require vessels to reduce their GHG. These amendments are a combination of technical and operational measures and are expected to come into force on 1 November 2022, with the requirements for Energy Efficiency Existing Ship Index (EEXI) and Carbon Intensity Indicator (CII) certification, effective 1 January 2023. These will be monitored by the flag administration and corrective actions will be required in the event of constant non-compliance. A review clause requires the IMO to review the effectiveness of the implementation of the CII and EEXI requirements, by 1 January 2026 at the latest. EEXI is a technical measure and would apply to ships above 400 GT. It indicates the energy efficiency of the ship compared to a baseline and is based on a required reduction factor (expressed as a percentage relative to the Energy Efficiency Design Index baseline).

On the other hand, CII is an operational measure which specifies carbon intensity reduction requirements for vessels with 5,000 GT and above (approximately 500 TEU and above). The CII determines the annual reduction factor needed to ensure continuous improvement of the ship's operational carbon intensity within a specific rating level. The operational carbon intensity rating would be given on a scale of A, B, C, D or E indicating a major superior, minor superior, moderate, minor inferior, or inferior performance level, respectively. The performance level would be recorded in the ship's Ship Energy Efficiency Management Plan (SEEMP). A ship rated D for three consecutive years, or E, would have to submit a corrective action plan, to show how the required index (C or above) would be achieved. To reduce carbon intensity, shipowners can switch from oil to alternative fuels such as LNG or methanol.

Environmental regulations in shipping

Some marine fuels such as ammonia and hydrogen have zero-carbon content. In the long term, ammonia can emerge as a cost-effective alternative fuel but in the short term, it seems unviable. Other options include propeller upgrading/polishing, hull cleaning/coating and retrofitting vessels with the wind-assisted propulsion system. Reducing ship speeds also helps in complying with the regulations as it lowers fuel consumption and it is easy to implement.

The emission control regulations are likely to slow the speed of vessels in next few years. Consequently, it will lead to a reduction in the supply of ships and therefore, it will benefit shipowners and operators with younger fleet in short to medium term as charter rates should potentially increase with lower supply of ships. In the long term, ships may switch to alternative low/zero carbon fuels to comply with emission regulations.

Besides the IMO regulations, the decarbonization of shipping is being propelled by various state and non-state stakeholders of the shipping industry. Some of the initiatives have been mentioned below:

In addition, there has been several industry led initiatives to facilitate movement towards low/zero-carbon shipping such as Getting to Zero Coalition, The Castor Initiative for Ammonia, Global Centre for Maritime Decarbonisation and the Mærsk Mc-Kinney Møller Center for Zero Carbon Shipping.

Given the strong momentum in decarbonization initiatives in shipping from the multilateral agencies, state and non-state stakeholders, the shipping industry is slowly moving in the right direction to reduce greenhouse gas and carbon emissions. These initiatives are likely to have following impacts in coming years:

1. The development of low/zero carbon vessels by 2025. However, it will be at a significantly higher CAPEX than conventional fuel oil propelled vessels.
2. Older inefficient tonnage with higher CO2 intensity is less likely to be chartered.
3. Inability to decrease carbon intensity of the fleet will constrain access to ship finance.

Initiatives	Year of commencement	Description
Poseidon Principles	2019	World's first sector-specific, self-governing climate alignment agreement amongst 27 financial institutions (with equivalent to more than 50% of global shipping loan portfolio) to integrate the IMO's policies on climate change into ship finance decision making processes.
Poseidon Principles for Marine Insurance	2021	Group of six insurers. The aim is to enable insurers to assess and disclose their portfolios with responsible environmental impacts and incentivize international shipping's decarbonization
The Global Environment Facility Trust Fund	2020	IFC-GEF Green Shipping Investment Platform was approved in 2020. The Green Shipping Platform aims to create a first-of-its-kind global investment vehicle solely focused on decarbonizing the shipping industry.
Sustainability-linked bond/loan		Sustainability linked loans/bonds aim to facilitate and support environmentally and socially sustainable economic activities and growth. These principles are voluntary recommended guidelines for loans/bonds to be recognized as sustainable. The sustainability linked loans/bonds enable lenders/investors to incentivize the sustainability performance of the borrower/issuer and align the cost of financing with a borrower's performance measured against prescribed sustainability performance targets. Sustainable linked finances have clearly defined sustainability targets. Improvements in CO2 intensity are measured using Average Efficiency Ratio (AER). Across all shipping sectors, 15 sustainability-linked deals worth USD3 billion were concluded from Jan-Aug 2021.
The Castor Initiative	2021	A group formed to develop an ammonia-fuelled tanker, with representation from all areas of the maritime ecosystem.
Clyde Bank Declaration	2021	It is a coalition of 22 governments to support the establishment of green shipping corridors – zero-emission maritime routes between 2 (or more) ports. It aims to establish at least 6 corridors by 2025.

Environmental regulations in shipping – EU ETS

EU's legislative bodies have agreed to include shipping in the EU Emissions Trading System (ETS) from 2024 to cover CO2 emissions from large ships (above 5000 gross tonnage), regardless of the flag they fly. The EU ETS will include 100% of the emissions from ships calling at an EU port for voyages within the EU (intra-EU) as well as 50% of the emissions from voyages starting or ending outside of the EU (extra-EU voyages), and all emissions that occur when ships are at berth in EU ports. Shipping companies with ships operating to or from EU ports will incur additional cost for their applicable CO2 emissions. Shipping companies will pay for the emissions they have reported on the previous year on a phase-in approach initially: in 2025, shipping companies will pay for 40% of the emissions reported in 2024; in 2026, they will pay for 70% of their 2025 emissions, and from 2027 onwards, they will pay for 100% of their reported emissions.

EU-Fit for 55

- Aims to enable the EU to reduce its net greenhouse gas (GHG) emissions by at least 55% by 2030 compared to 1990 levels and to achieve climate neutrality in 2050. This aim requires contributions from all sectors of the economy.
- For maritime sector, EU aims to reduce the annual average GHG intensity of energy used on board ships (related to EU ports) by 6% in 2030 and 75 % in 2050, compared to a 2020 baseline.

EU-Fit for 55 (shipping industry)

- Shipping (above 5,000GT) is included in EU Emission Trading System (EU ETS) from 2024.
- It will be phased in gradually
 - 2024: 40%
 - 2025: 75%
 - 2026: 100%
- 100% of emissions are included on voyages and port calls within the EU. 50% of emissions on voyages into and out of the EU are included.
- Ships are required to acquire and surrender emission allowances for their CO₂ emissions from 2024.
- Methane (CH₄), Nitrous oxide (N₂O) will be included from 2026.



Appendix



Definition and Terminology for Route Ranking

Definition and Terminology:

1. Services in ranking discussion includes Asia Pacific region services only, which are services operates in Russia Far East, North Asia, Greater China, Southeast Asia, South Asia (India, Pakistan) and Australia & New Zealand.
2. Greater Gay Area (GBA): include Hong Kong Port, Shekou, Chiwan, Da Chan Bay, Yantian, Nansha, Guangzhou, Yantian, Dongguan, Huangpu.
3. Ranking analysis for individual carrier is calculated based on the vessel providers for the services.
4. Both weekly capacity and fleet capacity in the rankings are nominal capacity.
5. The weekly capacity per carrier within a single service is calculated pro rata based on the capacity of vessels provided by respective carriers.
6. Number of port calls in related regions only count the number of ports calls in the mentioned regions only. For example, GBA to Japan route only count the port calls in GBA and Japan. If there are multiple port calls at one particular port for the carrier's counted services, the actual number of port calls are recorded into calculation.
7. Services are removed from ranking analysis if they fall under either of following two criteria: 1) Opposite direction: calling Phil first, then Bay. 2) Backhaul to Phil: after calling Bay, ship route to Malaysia/Indo/SG or Thai, then calling Phil ports. For such cases, believe the Phil port calls are more for loading instead of discharging.

Capacity Ranking by Carrier: GBA→ Japan, December 2023

Carrier ranking (listed by number of service ranking)

Carrier	No. of Service [extensive shipping network]	Ranking of No. of Service	No. of Voyage per week [frequency]	Ranking of No. of voyage per week	Ave. Weekly Capacity (TEU) [capacity]	Ranking of Ave. Weekly Capacity (TEU)	No. of port calls in related regions [comprehensive port coverage]	Ranking of No. of port calls in related regions
Wan Hai	9	1	9.0	1	17,218	1	70	1
Evergreen	5	2	5.0	2	7,513	3	40	3
TS Lines	5	2	5.0	2	6,304	4	47	2
Interasia Lines	4	4	4.0	4	1,830	9	28	5
OOCL	4	4	4.0	4	12,453	2	32	4
Shanghai	3	6	3.0	6	3,300	8	13	9
Jinjiang	3	6	3.0	6	3,533	7	16	7
SITC	3	6	3.0	6	5,613	5	25	6
Yang Ming	2	9	2.0	9	4,490	6	14	8
.....								
Grand Total	31-		31.0		65,196			

Source: Drewry, Alphaliner, as of December 2023

Capacity Ranking by Carrier: GBA→ Philippines, December 2023

Carrier ranking (listed by number of service ranking)

Carrier	No. of Service [extensive shipping network]	Ranking of No. of Service	No. of Voyage per week [frequency]	Ranking of No. of voyage per week	Ave. Weekly Capacity (TEU) [capacity]	Ranking of Ave. Weekly Capacity (TEU)	No. of port calls in related regions [comprehensive port coverage]	Ranking of No. of port calls in related regions
CNC	3	1	3.0	1	7,954	1	19	1
Wan Hai	2	2	1.5	3	3,061	3	11	2
Evergreen	2	2	2.0	2	4,506	2	8	4
TS Lines	1	4	1.0	4	1,726	5	10	3
SITC	1	4	1.0	4	809	8	6	6
Sealand	1	4	1.0	4	2,814	4	7	5
Asean Seas Line Co (ASL)	1	4	1.0	4	1,118	7	3	8
Interasia Lines	1	4	1.0	4	1,710	6	4	7
Grand Total	12		11.5		23,698			

Source: Drewry, Alphaliner, as of December 2023

Capacity Ranking by Carrier: GBA→ Oceania, December 2023

Carrier ranking (listed by number of service ranking)

Carrier	No. of Service [extensive shipping network]	Ranking of No. of Service	No. of Voyage per week [frequency]	Ranking of No. of voyage per week	Ave. Weekly Capacity (TEU) [capacity]	Ranking of Ave. Weekly Capacity (TEU)	No. of port calls in related regions [comprehensive port coverage]	Ranking of No. of port calls in related regions
COSCO	4	1	3.4	1	5,415	1	26	1
TS Lines	3	2	2.3	4	1,959	9	19	3
ONE	3	2	3.0	2	4,651	3	16	4
PIL	3	2	2.5	3	2,444	6	20	2
Maersk	2	5	2.0	5	5,059	2	12	6
OOCL	2	5	2.0	5	3,298	5	13	5
Evergreen	2	5	2.0	5	2,381	7	8	8
Hapag-Lloyd	2	5	2.0	5	1,562	11	8	8
Yang Ming	2	5	2.0	5	2,355	8	9	7
.....								
Grand Total	12		9.7		41,537			

Source: Drewry, Alphaliner, as of December 2023

Capacity Ranking by Carrier: GBA→India, December 2023

Carrier ranking (listed by number of service ranking)

Carrier	No. of Service [extensive shipping network]	Ranking of No. of Service	No. of Voyage per week [frequency]	Ranking of No. of voyage per week	Ave. Weekly Capacity (TEU) [capacity]	Ranking of Ave. Weekly Capacity (TEU)	No. of port calls in related regions [comprehensive port coverage]	Ranking of No. of port calls in related regions
Wan Hai	7	1	7.0	1	14,229	1	26	1
COSCO	6	2	6.0	2	11,566	3	24	2
KMTC	5	3	5.0	3	5,239	5	20	4
TS Lines	5	3	5.0	3	2,337	11	21	3
Evergreen	5	3	4.9	5	4,917	6	20	4
Interasia Lines	4	6	4.0	6	3,030	9	14	6
CMA CGM	3	7	3.0	7	12,089	2	10	9
RCL	3	7	2.9	9	3,349	8	12	7
ONE	3	7	3.0	7	1,962	14	12	7
UniFeeder	2	10	2.0	10	1,561	15	7	15
Emirates	2	10	2.0	10	1,302	19	9	10
X-Press Feeders	2	10	2.0	10	2,890	10	8	12
OOCL	2	10	2.0	10	5,711	4	9	10
Sinokor	2	10	2.0	10	2,017	13	8	12
.....								
Grand Total	19		18.3		86,928			

Source: Drewry, Alphaliner, as of December 2023

Greater China Related Asia Pacific Region services: number of services

Number of services for Greater China Related Asia Pacific Region services by carrier

Carrier Name	GC	GC-ISC	GC-NA	GC-NA-SEA	GC-Oceania	GC-SEA	Grand Total	Rank
SITC	1	2	12	16	0	12	43	1
Wan Hai	5	8	2	12	0	10	37	2
Evergreen	5	6	2	9	2	10	34	3
KMTC	0	5	9	15	0	2	31	4
COSCO	2	7	2	2	5	11	29	5
Sinokor	0	3	14	11	0	0	28	6
TS Lines	1	6	3	8	3	5	26	7
Sinotrans	4	1	12	1	1	4	23	8
OOCL	1	3	0	6	4	5	19	9
Sealand	0	3	0	6	0	9	18	10
Yang Ming	1	1	2	4	2	7	17	11
CNC	1	2	0	5	0	8	16	12
Namsung Shipping	0	0	5	10	0	0	15	13
ONE	0	4	0	6	3	1	14	14
Interasia Lines	0	5	0	4	0	3	12	15

**Data as of December 2023.*

**Only Top 15 players are listed.*

**Total 82 players. 5 players have services covering all route types.*

Source: Drewry, Alphaliner, as of December 2023

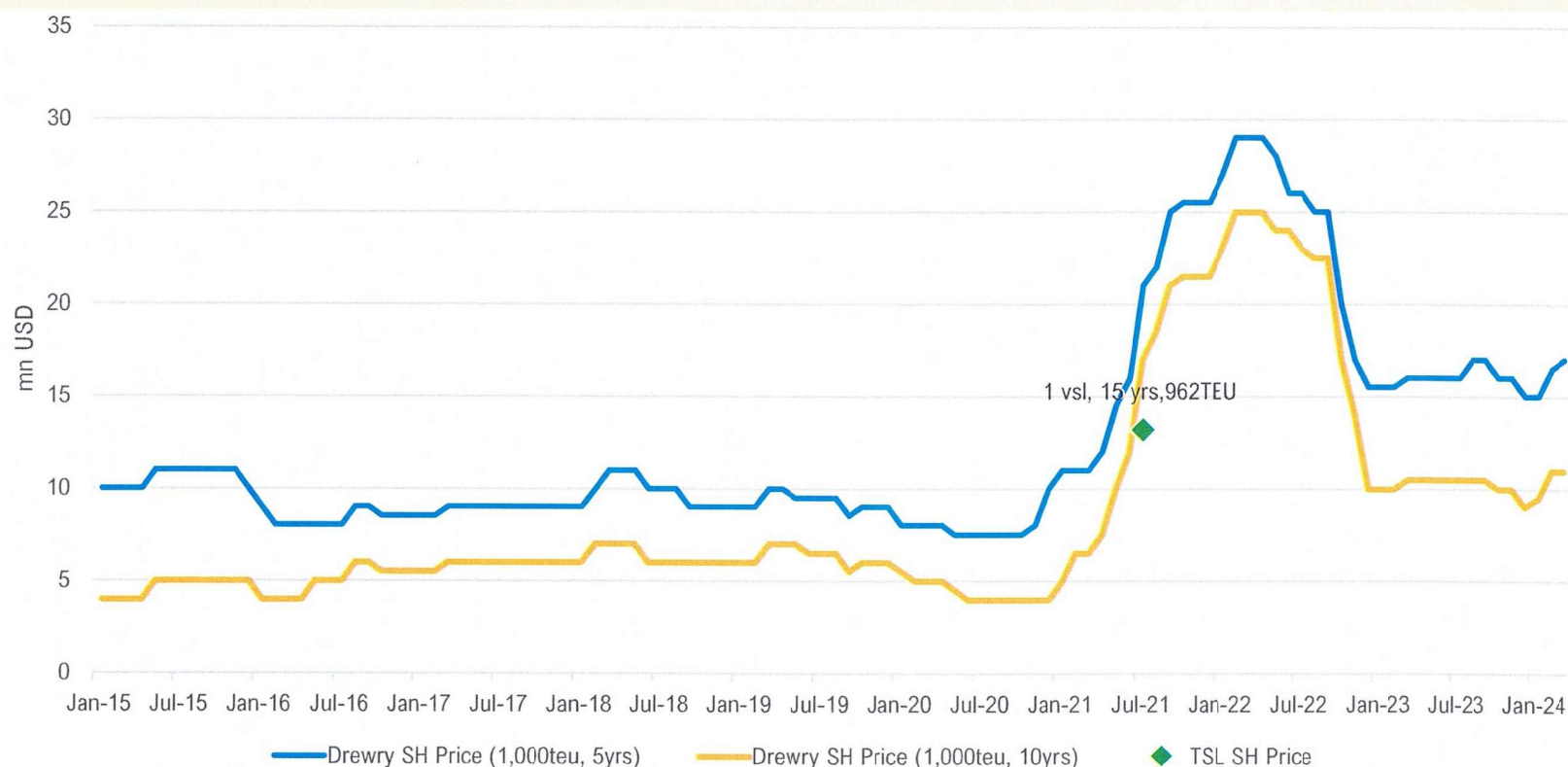
TSL asset price assessment: Overall comments & 1,000TEU sector

Overall Comments for TSL vessel purchase (all sectors):

- Overall, TSL's vessels purchases were generally made during the market bottom or at the early stage of the up trending market. TSL's new building and second hand prices were generally more competitive comparing to the market average at the time of purchase or investment.

Comments on 1,000TEU sector:

- Though company's second-hand purchase was not at the lowest point, TSL successfully secured the price before the market climb higher. Purchase price was in-line with market average.

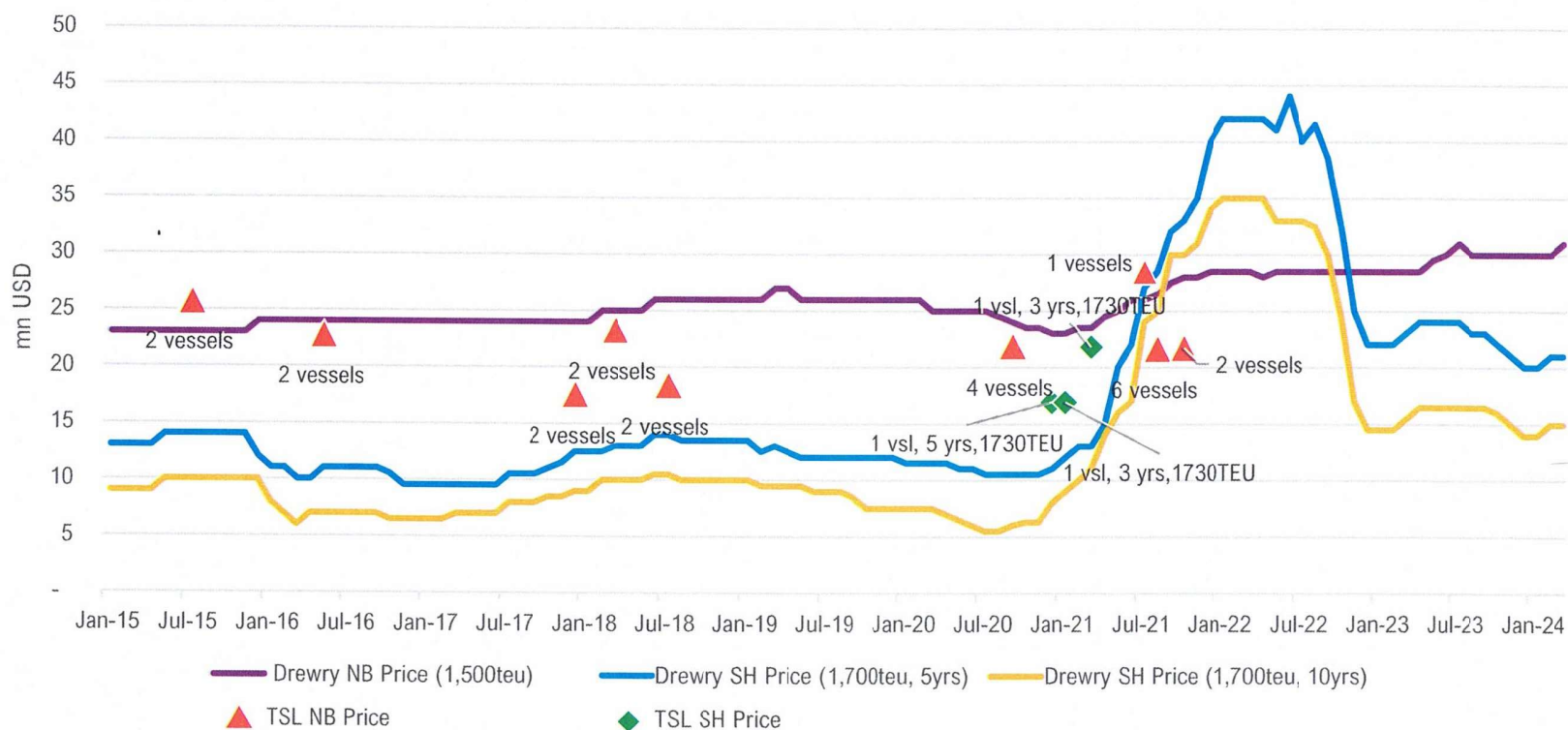


Source: Drewry

TSL asset price assessment: 1,500TEU sector

Comments on 1,500TEU sector:

- Though company's second-hand purchase was not at the lowest point, TSL successfully secured the price before the market climb higher. Most of TSL purchase prices are very competitive.

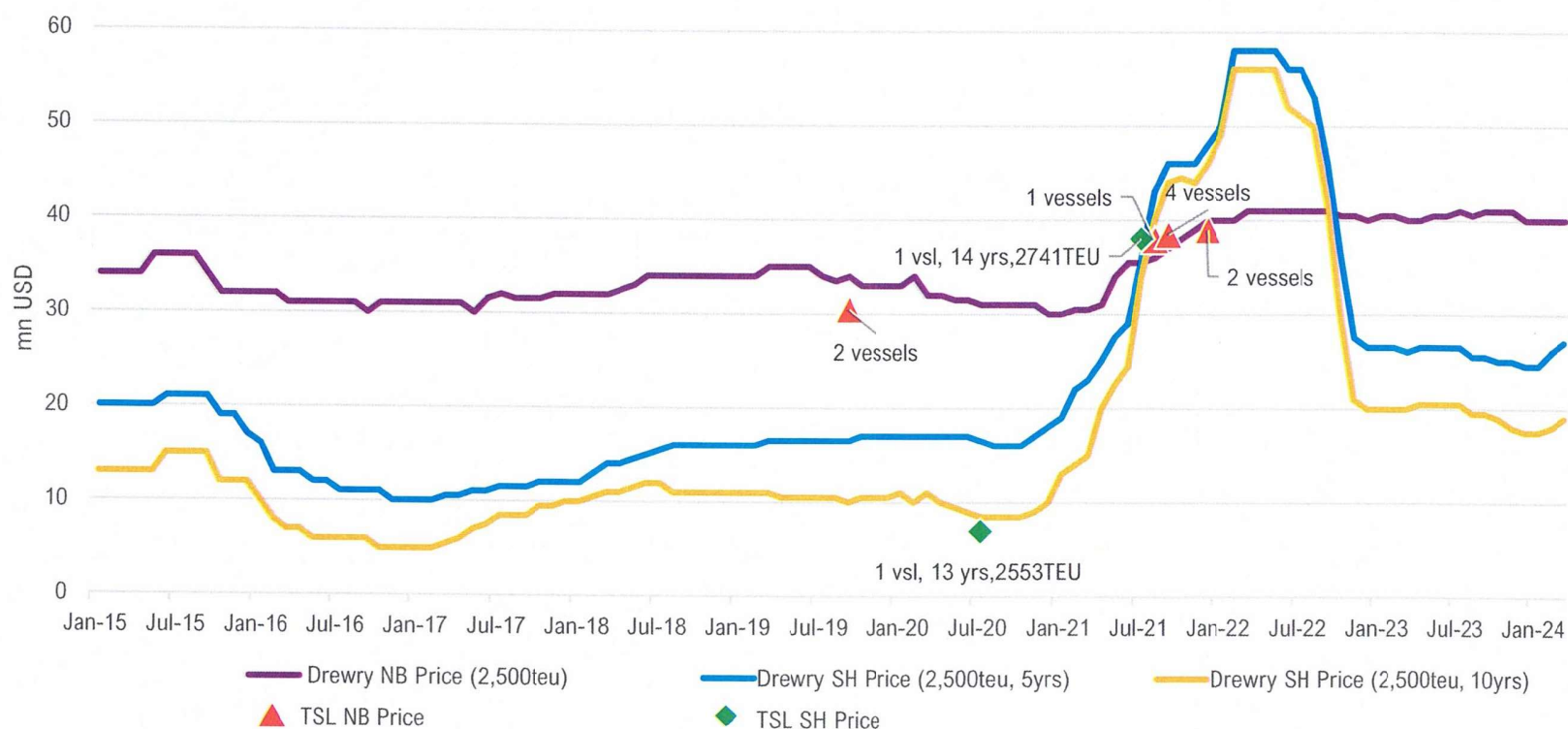


Source: Drewry

TSL asset price assessment: 2,500TEU sector

Comments on 2,500TEU sector:

- Most of the newbuilding purchase price are in line with the market average, with some price lower than the market average. One of two second-hand vessel was bought around the market bottom, and the other one was secured before the market trending higher.

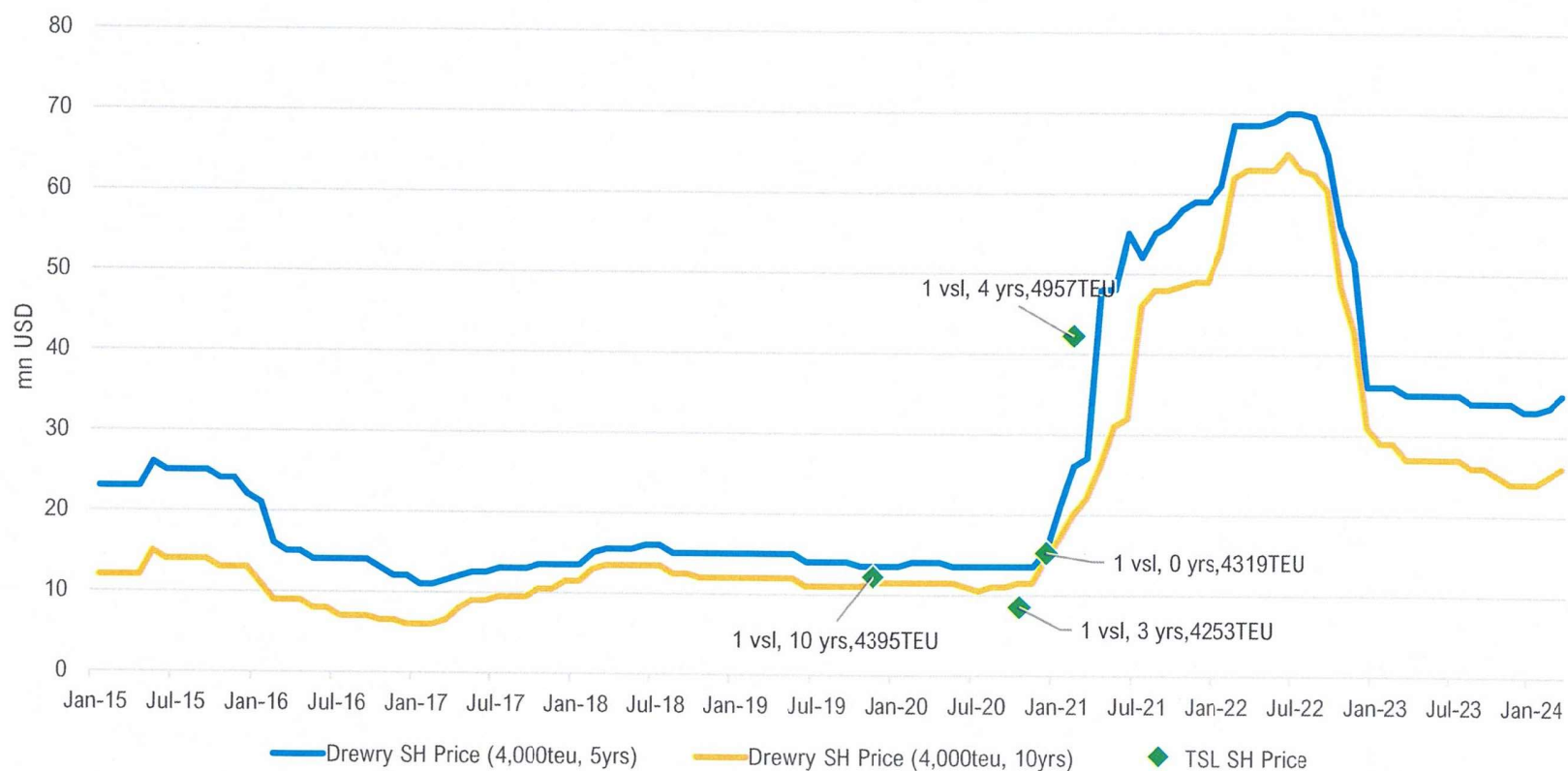


Source: Drewry

TSL asset price assessment: 4,000TEU sector

Comments on 4,000TEU sector:

- Majority of the second-hand purchase were around market bottom.

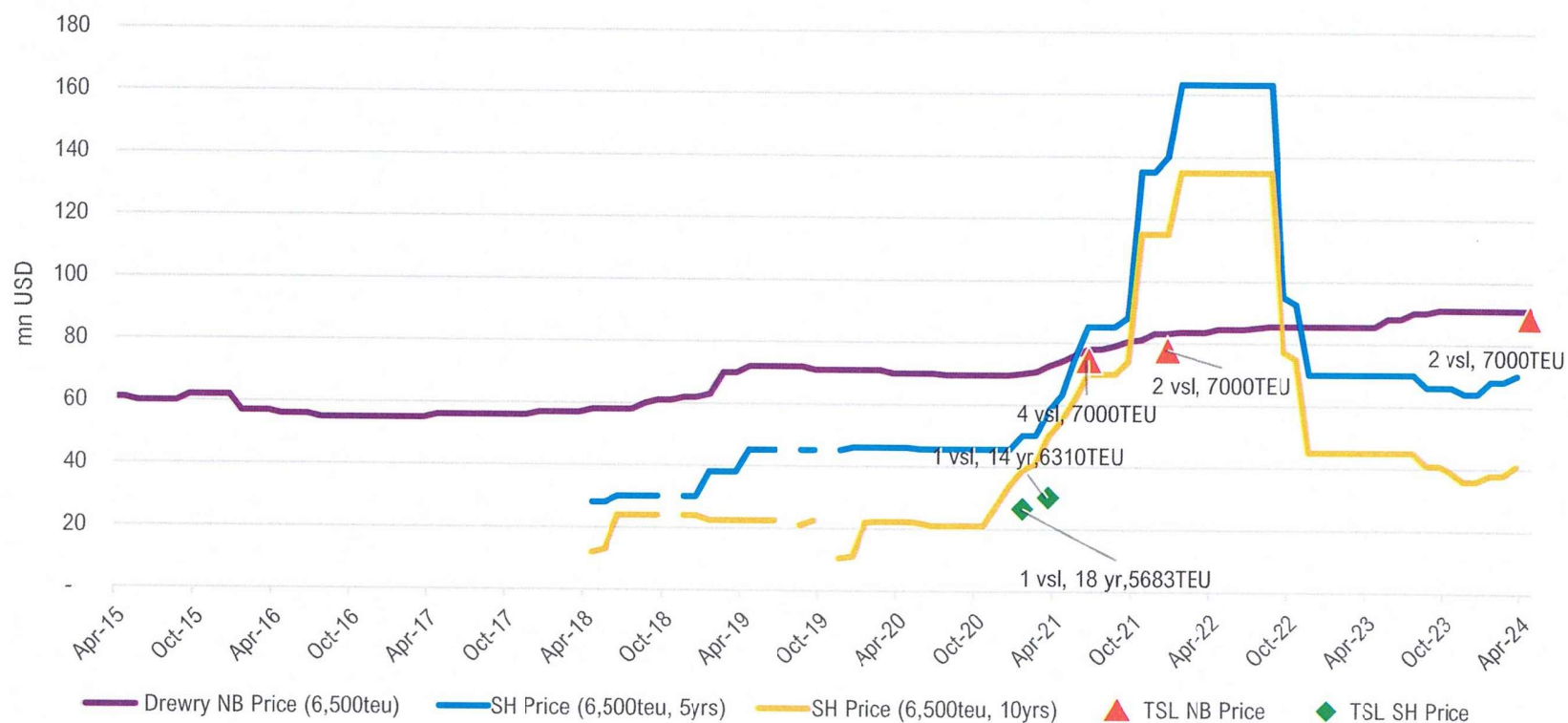


Source: Drewry

TSL asset price assessment: 6,000-6500TEU sector

Comments on 6,000-6500TEU sector:

- Second-hand purchases were around the market bottom. Newbuilding purchase prices are lower than market average.

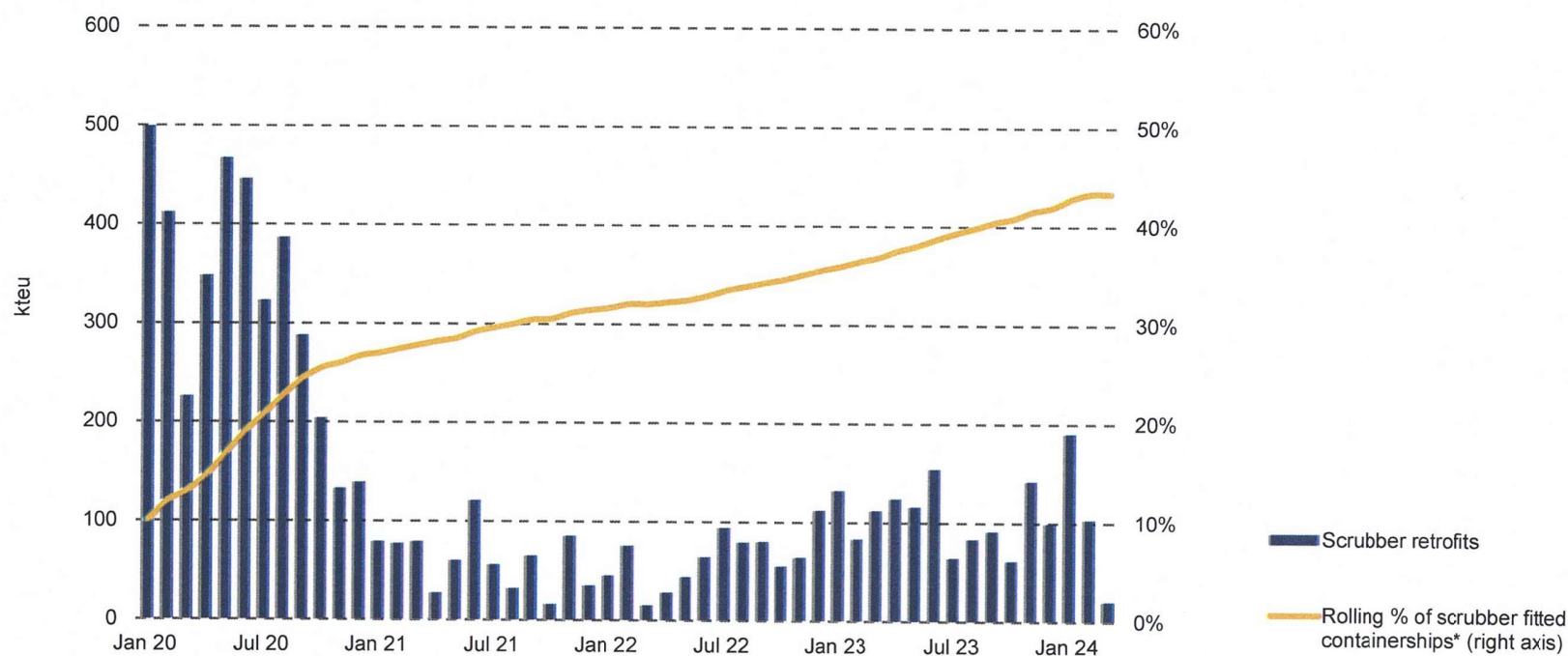


Source: Container Intelligence for 6,500teu SH price 5 yrs & 10 yrs; Drewry for NB price.

Exhaust scrubber retrofits on containerships

As of March 2024, 43.3% of the global containerships (in terms of TEU) were fitted with scrubbers.

Percentage of exhaust scrubber retrofits on containerships (in terms of TEUs)



Notes: Data subject to change; * Includes ships fitted with exhaust scrubbers from newbuild.

Source: Drewry Maritime Research, as of March 2024.



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