World shipping in 2024: fleet growth should offset the effects of geopolitical tensions in the Red Sea for container ships, but not for oil tankers

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Confidential

Summary

Since 2020, the shipping industry has had to cope with several major changes. In addition to the effects of various crises on the supply and/or demand of sea freight (Covid-19, war between Russia and Ukraine), its players have to take into account other upheavals, less sudden but nonetheless structuring in the long term, such as anti-pollution regulations (forcing a reduction in sailing speed) or the evolution of global trade routes. The latter is reflected in longer average distances for the transport of energy and agricultural raw materials (linked to geopolitical tensions between major exporting and importing powers), but shorter distances for containers, due to the regionalization of trade.

These many changes have led to erratic variations in demand, and consequently to high volatility in world sea freight prices in recent years. Against this backdrop, we anticipate that global demand for maritime freight will grow by an average of 2.1% per year between 2024 and 2028, a lower rate than in the 2010s (3.5%). On the supply side, the outlook will depend in particular on the evolution of geopolitical tensions in the Red Sea in the short term. And they differ from one segment to another. In the oil transport segment, the market is likely to remain tight in 2024 and 2025 - even in the event of a rapid normalization of the situation in the Red Sea - due to the expected low growth in the fleet. On the other hand, the strong increase in the world container ship fleet should be sufficient to meet demand, even assuming that tensions in the Red Sea do not ease by the end of the year, and that ships have to reduce their speed further to comply with anti-pollution regulations.

1. Between 2000 and 2020, an abundant supply of shipping services has been able to meet rapidly expanding demand.

Over the past two decades, sea transport has expanded rapidly, driven by the growth in trade and the deepening of globalization. With **85% of the volume of goods traded worldwide transiting by sea[1] , it remains the dominant mode of transport, forming the backbone of global supply chains**.

The development of the sector is closely linked to that of trade, and therefore reflects trends in the global economy (see chart 1). After recording dynamic average annual growth of 4.4% between 2000 and

[1] Source: Clarkson PLC, 2022 Annual Report

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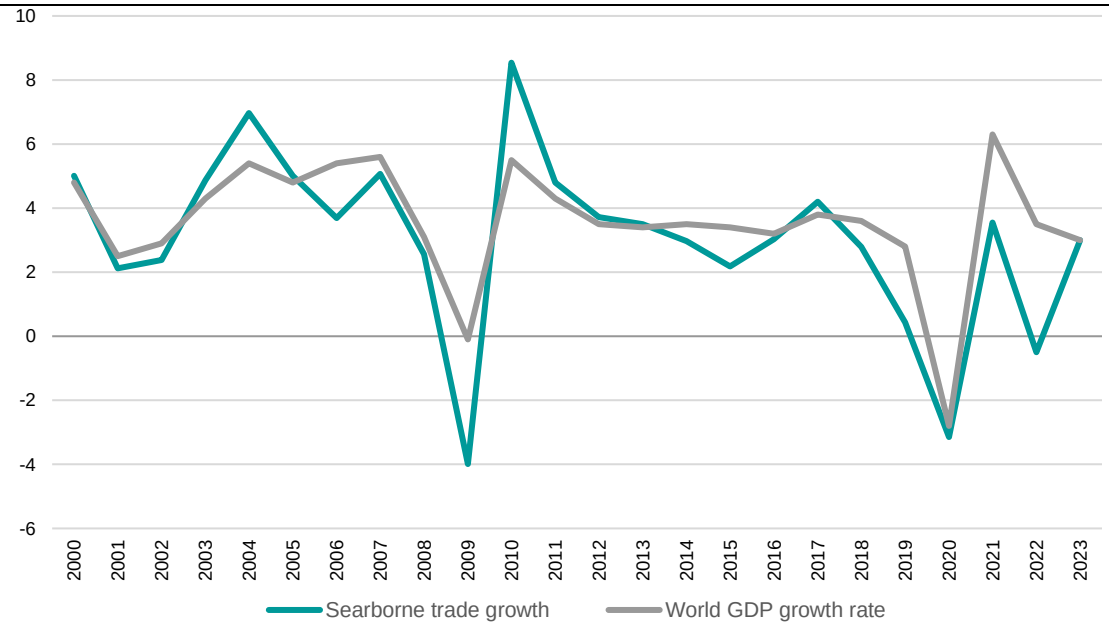
2007, the volume of seaborne trade contracted sharply during the global financial crisis of 2008 (-4%), before returning to stable but more modest growth between 2010 and 2018 (around +4%). Finally, since the major disruptions induced by the Covid-19 pandemic - in particular port closures, reduced working hours, equipment and labor shortages, and strong growth in demand for goods linked to the change in consumption and purchasing habits triggered by the pandemic - **seaborne trade has alternated between phases of expansion and contraction, posting an average annual growth rate of just 0.6% over the past five years**.

Chart 1 - Growth rates of world GDP and world trade (volume, %)



Source : UNCTAD, GSA

Despite these recent developments, the supply of sea freight has continued to grow dynamically. In 2023, the world fleet carried 2,273 million deadweight tons of goods,[2] , almost three times the volume transported at the beginning of the century (794 million tons in 2000), a growth rate equivalent to that of world GDP. Container shipping capacity has seen the most significant growth over a period of 23 years, increasing exponentially by a factor of 4.8. Bulk carrier and tanker transport capacities increased by 255% and 130% respectively (see chart 2).

Not all regions have contributed equally to the increase in shipping capacity[3] . **This trend has been largely driven by Asia and Europe.** In 2023, 18 of the 35 largest shipowners were based in Asia, and the region had a significant share of the world fleet, at 53.8%. China, Japan and South Korea alone held over a third of the world's shipping capacity (15.9%, 11.8% and 4.3% respectively)[4] . Moreover, **Asia remains the main driver of global fleet expansion**. In 2023, China accounted for more than half of the world's shipbuilding (up 10% year-on-year), while India, Bangladesh and Pakistan are the main recyclers. Finally, **the region stands out for the performance of its port infrastructures**. The latest rankings of the Container Port Performance Index (CPPI) - jointly developed by the World Bank and S&P Global Market Intelligence, which assesses ports based on the average time ships spend in port between arrival and departure - placed eleven Asian ports in the world's top twenty, including seven Chinese ports[5] . **Europe positions itself as the second major player in the global shipping supply chain**. While the region holds a significant 38.5% of the world's shipping capacity,

[2] Source: UNCTAD, Maritime Transport Data Centre
[3] Note: the supply of maritime transport refers to the capacity of shipowners to provide sea transport services by making their merchant ships available. It depends on the number of ships available, their carrying capacity, their operational status and the geographical coverage of shipping routes.
[4] Source: UNCTAD, Review or maritime transport 2023, facts and figures on Asia, Sept 2023
[5] Source: World Bank and S&P Global Market Intelligence, The container port performance index 2022

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it is in fact **Greece that plays the leading role, owning almost half of the European fleet** (19%)[6] , particularly bulk carriers and tankers (Asia, on the other hand, holds more container ships).

Chart 2: Evolution of the world fleet by merchant ship type[7] (1983-2023, million deadweight tons)

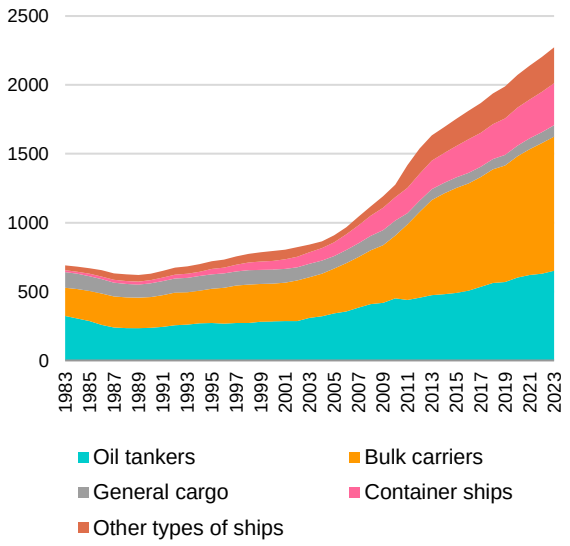
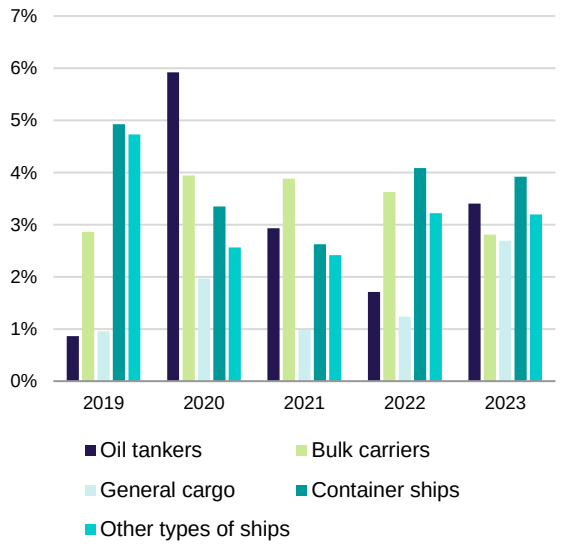


Chart 3: World fleet growth rate by merchant ship type (2019-2023, %)



Source : UNCTAD, GSA

In addition to strong growth in demand, global transport capacity has had to adapt to structural changes in international trade. Indeed, changes in the global production system and in trade relations between countries have led to profound changes in demand for sea transport. For example, the rise in hydrocarbon exports from the United States, combined with increased refining capacity in Asia, has contributed to an increase in tanker traffic on the transpacific route. In another more recent example, changes in globalization - in particular the development of new trade barriers and "friend-shoring" policies against a backdrop of rising geopolitical tensions - have also helped to modify certain shipping routes. The "trade war" between the USA and China has helped to reduce **trade flows on East-West routes**, particularly for containers. Indeed, while containerized maritime transport on "East-West" routes represented 39.1% of total containerized transport in 2020, it had fallen by two percentage points two years later. At the same time, **intra-regional trade grew,** particularly in Asia. This will account for 27.6% of containerized trade in 2022, compared with 26.9% in 2020[8] .

These developments are changing the distances traveled by goods at sea. While **the average distance covered by containers is shrinking, driven by the development of intra-regional trade, it is reaching unprecedented levels for other types of goods**. For example, the distance travelled by a ton of grain has risen from 6,847 nautical miles in 2010 to 7,389 nautical miles today, with an increase of 2% between 2022 and 2023 due to the war in Ukraine and its impact on the grain trade. Similarly, the distance covered by a ton of petroleum products has increased by 14%, from 4,080 nautical miles in 2010 to 4,653 today[9] . The distances covered by tankers have recently increased significantly (+5.2% in 2023), as Russia has turned to new Asian export markets, while Europe is sourcing from more distant suppliers.

[6] Source : Hellenic shipping news worldwide, Greek and Chinese companies own 34% of the global fleet's cargo capacity, nov 2023
[7] Note: A container ship is a specialized vessel designed to carry standardized freight containers of various sizes. A general cargo vessel is used to transport different types of goods and adapt to changing freight requirements. A tanker is a vessel specially designed to safely transport large quantities of liquid cargo over long distances. Dry bulk carriers are vessels designed to carry non-liquid, non-containerized bulk goods (raw materials).
[8] Source: UNCTAD, Review of maritime transport 2023, Sept 2023
[9] Source: UNCTAD, Maritime Transport Data Centre

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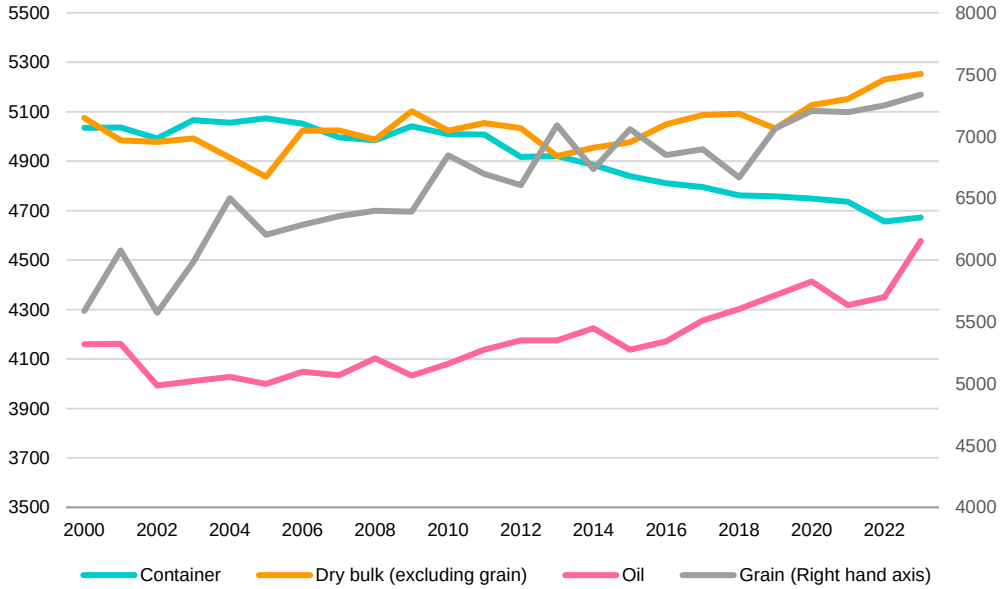
Chart 4: Average distance travelled by type of goods (nautical miles, 2000-2023)



Source: UNCTAD, GSA

2. Since 2020, frequent supply/demand shocks have made freight rates more volatile

Since 2020, the sea freight sector has been disrupted by the health crisis and its economic consequences, followed by those of the war between Russia and Ukraine. These frequent shocks have led to greater volatility in flow volumes, and therefore in shipping rates (see chart 5).

Indeed, the shutdown **of global production as part of the containment measures in the first part of 2020 caused international trade to decline, and the rapid post-Covid economic recovery caught the shipping sector unawares, as it was still disorganized by the mobility and border access restriction measures**. The world fleet was unable to meet the 11% increase in demand for container transport in 2021, leading to a sharp rise in the container order book. Faced with this imbalance, freight prices rose sharply: the Shanghai Containerized Freight Index (SCFI) reached a level five times higher than at the start of 2020 in January 2022. Similarly, on October 8, 2021, the Baltic Dry Index was 11 times its January 2020 level.

The challenges faced by ocean freight in 2022, including tougher sanitary conditions in China and the outbreak of war in Ukraine, helped to push indices back down to lower levels. But this **combination of geopolitical and sanitary events in 2022 also led to chronic congestion in ports, reducing global container shipping capacity by almost 16%**. Although the arrival on the market of new vessels ordered in 2021 ensured the normalization of the market during 2023, rates remained volatile throughout the year.

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Chart 5: Ocean freight rates (1er January 2019 - February 21, 2024)[10]

Source: Datastream, GSA

And since the end of 2023, the sector has had to cope with the effects of geopolitical tensions and unfavorable climatic conditions. On the one hand, **a severe drought episode forced the Panama Canal to reduce the number of ships authorized to cross it each day in 2023**. According to data from the Panama Canal Authority (ACP), 12,638 ships passed through this strategic point of world trade last year, compared with 13,003 ships in 2022 (i.e. around 10% less cargo volume), which was marked by normal weather conditions. Due to water levels more than 1.5 meters lower than normal[11] , the ACP imposed **water restrictions and reduced loading levels**. Although these restrictions have recently been relaxed due to lower-than-expected precipitation levels in November and December 2023, navigation capacity remains limited. Normally allowed 36 crossings per day, only 24 crossings per day are currently permitted, following a minimum of 22 last December[12] . **The ACP has announced that navigation restrictions will continue until at least April 2024[13] , with a re-evaluation in May depending on rainfall, shipping traffic was 14.2% below normal levels in January 2024**.

On the other hand, **since November 19, 2023, trade in the Red Sea has been disrupted by Houthi attacks on merchant ships crossing the Bab el-Mandeb Strait, a natural bottleneck in the southern Red Sea**. **While this major maritime zone is usually crossed by 20,000 merchant ships every year (representing 12% of international trade and 30% of world container traffic)[14] , the volume transported via the Red Sea has fallen drastically**. Indeed, the world's leading shipowners, such as Maersk, MSC, CMA-CGM, Cosco and Hapag-Lloyd, have announced the suspension of their Red Sea operations, preferring to divert their

[10] Note: The Shanghai Containerized Freight Index (SCFI) measures price variations for containerized sea freight departing from the port of Shanghai, while the Baltic Dry Index (BDI) measures the cost of shipping dry bulk goods. The Baltic Clean Tanker Index (BCTI) and Baltic Dirty Tanker Index (BDTI) focus on freight rates for the transport of petroleum products and crude oil respectively.
[11] Source: Bloomberg, Saving the Panama Canal will take years and cost billions, if it's even possible, Jan 2024
[12] Source : ACP, Panama Canal to increase daily transits to 24 starting in January, Dec 2023
[13] Source: Reuters, Exclusive: Panama Canal does not plan transit restrictions at least until April, fev 2024
[14] Bloomberg, Houthi Attacks Start Shutting Down Red Sea Merchant Shipping, Dec 2023

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itinerary from the Suez Canal to the Southern African route via the Cape of Good Hope (see chart 6b). Although this itinerary adjustment extends the voyage time of merchant ships by around two weeks, Clarkson Research estimates that 300 container ships, or 4 million TEU, have already been diverted since the start of this crisis.

As a result, on February 13, 2024, traffic on the Suez Canal was 57.7% below its usual level (see chart 6a), while the number of daily calls at the Cape of Good Hope had increased by 76.1% compared with the same date the previous year[15] . **These disruptions are also having a significant impact on many ports around the world** (see charts in appendix), **particularly in Europe and the Middle East** due to their geographical location. The European port of Rotterdam recorded an almost 10% drop in arrivals between January 1 and February 11, 2024, compared with the same period the previous year. The Red Sea port of Jeddah has also suffered a 20% drop in arrivals since the start of the year, while Alexandria has seen its arrivals fall by 26% over the same period. **Due to their size and the wider diversification of their destinations for inbound and outbound goods, the major Asian ports held up better,** recording declines of 4% for the port of Singapore and 6% for Busan in South Korea.

Chart 6a: Number of daily calls on the Suez Canal (January 2023 - February 2024)

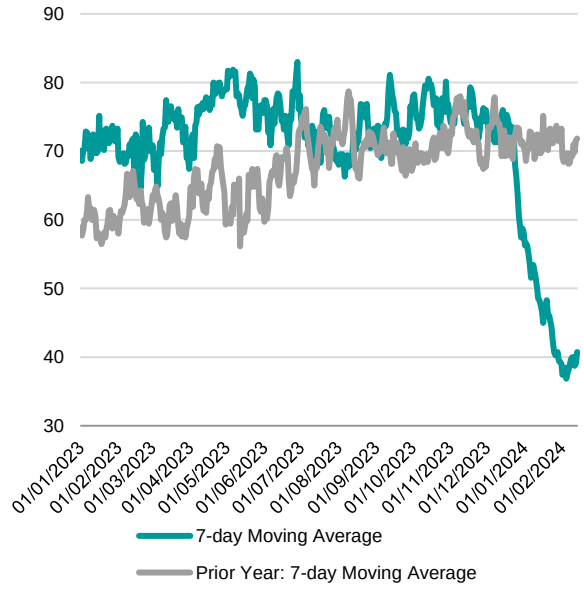
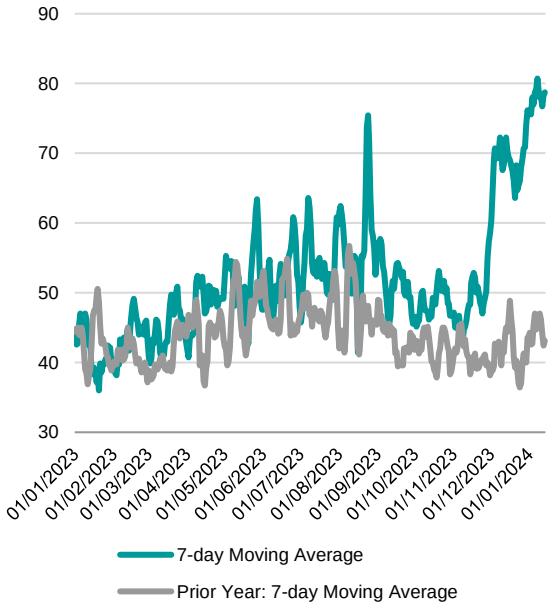


Chart 6b: Number of daily calls to the Cape of Good Hope (January 2023 - February 2024)



Source : IMF, GSA

These recent events explain the rise in shipping rates at the start of 2024. Costs associated with routes between China and Europe have seen a particularly significant increase: the SCFI index has recorded a notable rise of 1,153 points since November 1, 2023, reaching 2,166 on February 9, 2024. During January 2024, posted rates for a standard container exceeded the $5,000 mark, followed by a 15% decrease in February. **However, these variations remain well below the peaks reached in 2022,** when freight rates peaked at $15,000 for a container[16] .

[15] Source: IMF and Oxford University, Portwatch
[16] Source: Kiel institute, Cargo volume in the Red Sea collapses, Jan 2024

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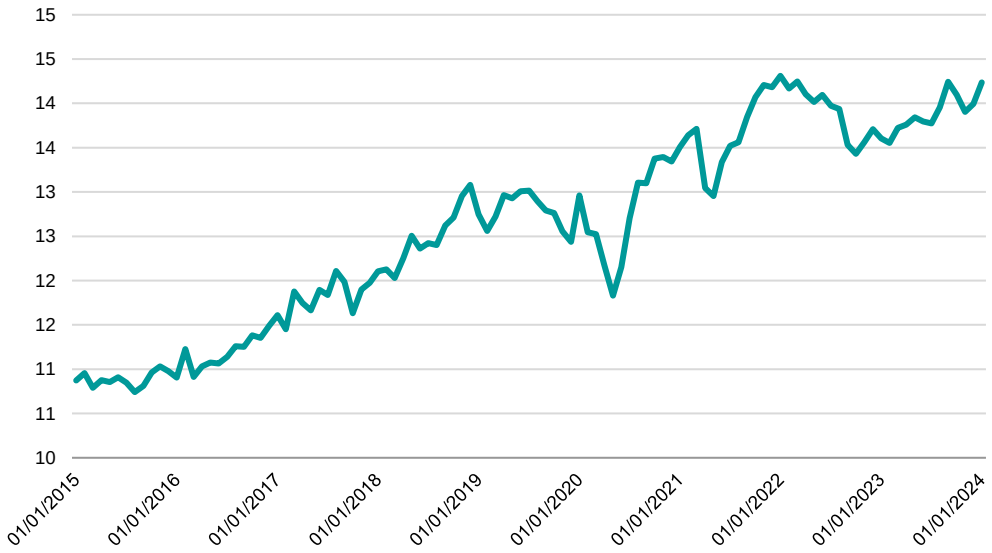
3. What is the short-term outlook for global shipping?

3.1. Excess supply could offset the effects of turbulence in the Red Sea for container transport, but not for crude and refined oil transport.

Despite these price variations, the impact of the events in the Red Sea on the overall volume of freight transported seems to have been limited at this stage, with **the quantity of goods shipped by container worldwide even increasing in January** (see chart 7).

Chart 7: World container trade (January 2015 - January 2024, million TEUs)



Source: Kiel Institute, GSA

This resilience in the container trade sector can be explained by the market's surplus situation, which could partly contain the surge in ocean freight prices, as evidenced by the slight decrease in rates recorded in February 2024. Indeed, the addition of over 300 new container ships in 2023, with a total capacity of 1.8 million TEUs, has led to a significant 7% increase in the capacity of the world container fleet. This expansion, combined with a reduction in port congestion (which ensured an 8% increase in transport supply) and a smaller-than-expected reduction in vessel sailing speeds under more ambitious anti-pollution standards[17] (resulting in a 3% drop in transport capacity, compared with the 5% initially anticipated), generated a **surplus of container shipping supply over demand in 2023** (see chart 8).

However, **the resilience of the sector over the next two years will depend on the duration of the disruption in the Red Sea**. We have assessed the impact of a persistent blockage on this seaway, with a duration of one year in our first scenario, compared with six months in the second[18] . Considering the assumptions presented in the annexed table, **we estimate that a prolonged disruption throughout 2024 could reduce container shipping supply by almost 4%**, due to extended journey times and a prolonged mobilization of merchant vessels for cargo transport. Thus, despite an 8.8% increase in world fleet capacity and a 2% reduction in transport capacity due to the regulatory slowdown in shipping, the increase in container transport supply (2.8%) would barely offset the 3.5% increase in robust demand projected for 2024 (see next section). Moreover, this imbalance could be exacerbated if port congestion were to increase. Nevertheless,

[17] Note: In line with the shipping industry's ambitions to reduce CO2 emissions, the average sailing speed of container ships has been reduced from 14.3 knots in 2022 to 13.9 knots in 2023. Source: UNCTAD, Review of maritime transport 2023, Sept 2023
[18] Note: Our projections are based on supply and demand data published by BIMCO. Source: BIMCO, Container shipping market overview and outlook Q4 2023, nov 2023

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according to our estimates, **if the disruptions last only six months, they would reduce transport supply by around 2% over the course of the year, allowing the projected 4.8% growth in maritime supply to exceed that of maritime transport demand**.

Chart 8a: Scenario 1 (Red Sea disruptions last a year) - Estimated and forecast changes in supply and demand for containerized sea freight (%)

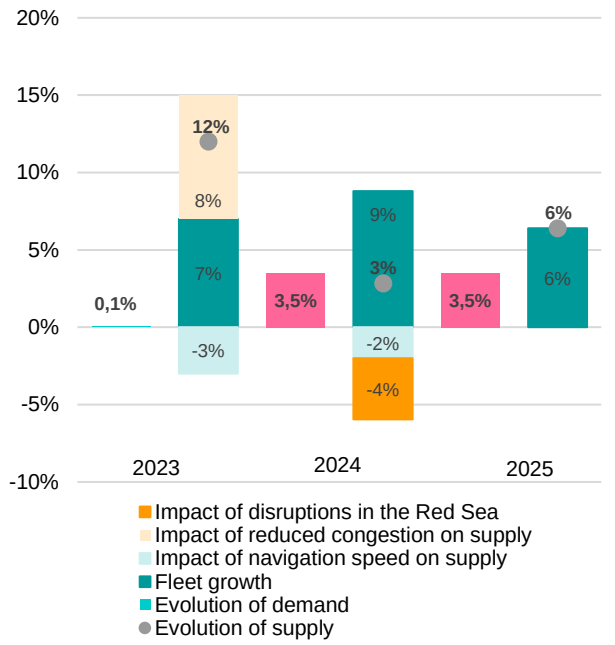
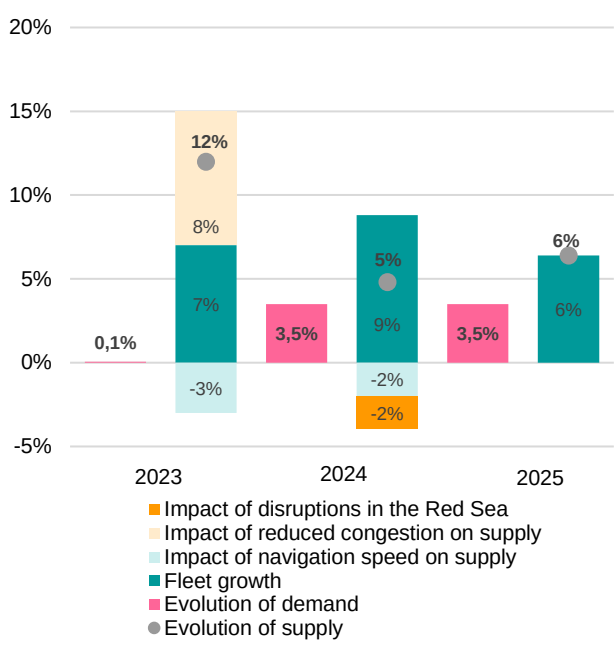


Chart 8b: Scenario 2 (Red Sea disruptions last 6 months) - Estimates and forecasts of containerized sea freight supply and demand trends (%)



Source : BIMCO, GSA

Market dynamics differ, however, for the transport of crude and refined oil, which is likely to come under supply pressure. Prior to 2022, new tanker construction activity was limited due to the limited capacity of Asian yards, which preferred to build container ships and LNG carriers, which were more profitable at the time[19] **. As a result, the ageing tanker fleet has not grown fast enough to meet growing demand, against a backdrop of restructuring of global oil flows.** However, the imbalance between supply and demand for sea transport has already led to a 1.8% increase in the crude oil fleet by 2023 and a 2% increase in the refined products fleet, and oil transport capacity is set to continue growing in the coming years[20] . Strong demand, particularly for refined product tankers (10% in 2023), has effectively filled tanker order books: the order book/fleet ratio for crude oil reached 4.3% by the end of 2023, while that for refined products stood at 10.6% at the same date.

However, before the new vessels are delivered, tanker freight may come under pressure. Indeed, total oil shipments via the Red Sea, which accounted for 12% of the total volume of oil traded by sea in the first half of 2023[21] , were 48.5% below their usual level on February 13, 2024. Our estimates suggest that, if the disruptions persist throughout 2024, **they will lead to a reduction in crude oil transport supply of around 1.6%. With** the naval fleet expected to grow by just 0.7% over the year, supply would therefore be unable to meet a 2.5% increase in demand, even if ship speeds were increased, as was observed in 2023 (crude oil

[19] Source: DNV, Strong outlook for the tanker market in 2024 and beyond, fev 2024
[20] Source: BIMCO, Tanker market report, fev 2024
[21] Source: AIE, Red Sea chokepoints are critical for international oil and natural gas flows, dec 2023

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tankers sailed around 2% faster in 2023 than in 2022, enabling a 1.5% increase in transport supply) (see charts 9)[22] .

Chart 9a: Scenario 1 (Red Sea disruptions last one year) - Estimates and forecasts of crude oil sea freight supply and demand (2023 - 2025, %)

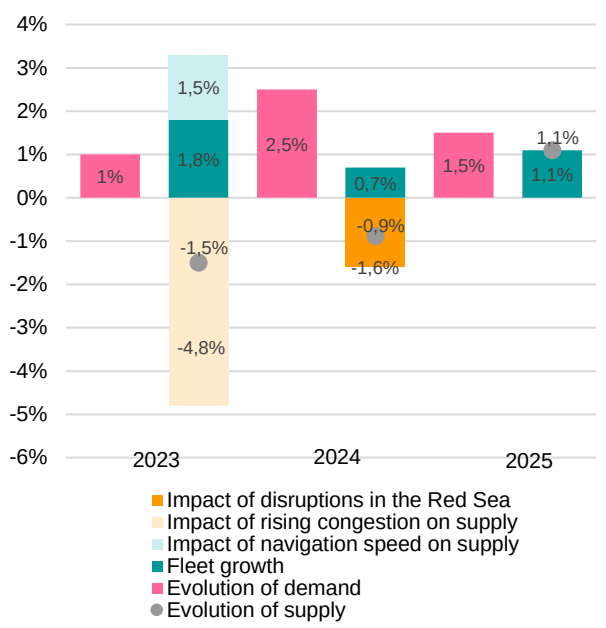
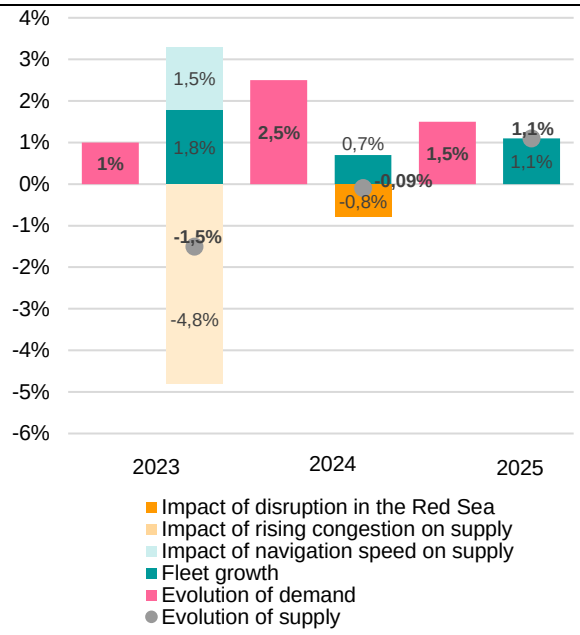


Chart 9b: Scenario 2 (Red Sea disturbances last 6 months) - Estimates and forecasts of crude oil sea freight supply and demand trends (2023 - 2025, %)



Source : BIMCO, GSA

3.2. Global shipping demand should stabilize from 2024 onwards, in line with the trend in aggregate global demand.

Against this backdrop of severe constraints on global supply, the question of how demand will evolve arises. According to UNCTAD, global demand for sea freight transport, measured by the total volume of goods unloaded, is expected to grow by 3% in 2023, after a 0.5% decline in 2022. **From 2024 onwards, growth in demand for sea freight should stabilize, in line with the normalization projected by the IMF for world GDP growth, the share of investment in GDP, and total trade**. **Historically, the total volume of goods landed follows a similar trend to these three variables** (see chart 10). Indeed, these variables are informative indicators of aggregate demand on a global scale, exerting a significant influence on global demand for sea transport.

We anticipate continued growth in global shipping demand, with an **average annual variation rate of 2.1% between 2024 and 2028**. **This represents a slowdown compared with the average of 3.5% observed in the decade prior to the pandemic**. Our projection is based on the elasticity of shipping demand with respect to the three variables mentioned above [23]

According to the IMF, they should grow at a lower rate than their pre-pandemic average (3.1% for GDP, 3.4% for exports, and 0.2% for the share of investment in GDP) between 2024 and 2028. As a result, **growth in global demand for maritime transport would stabilize at a moderate pace.**

[22] Source: BIMCO, Tanker market report, fev 2024
[23] Note: See methodological box for more details on regression.

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Methodological box: Regression model for projecting shipping demand

The model's explained variable is total merchandise landed (Mar_t)and the explanatory variables include real world GDP (PIB_t), the share of investment in world GDP (Inv_t), and total exports in world volume (X_t). All these variables are expressed in terms of annual growth. Thus, the estimated parameters (see Table 1) represent the elasticity of the dependent variable with respect to the independent variables.

$$Mar_t = \alpha + \beta_1 PIB_t + \beta_2 Inv_t + \beta_3 X_t + \varepsilon_t$$

Table 1: Regression details

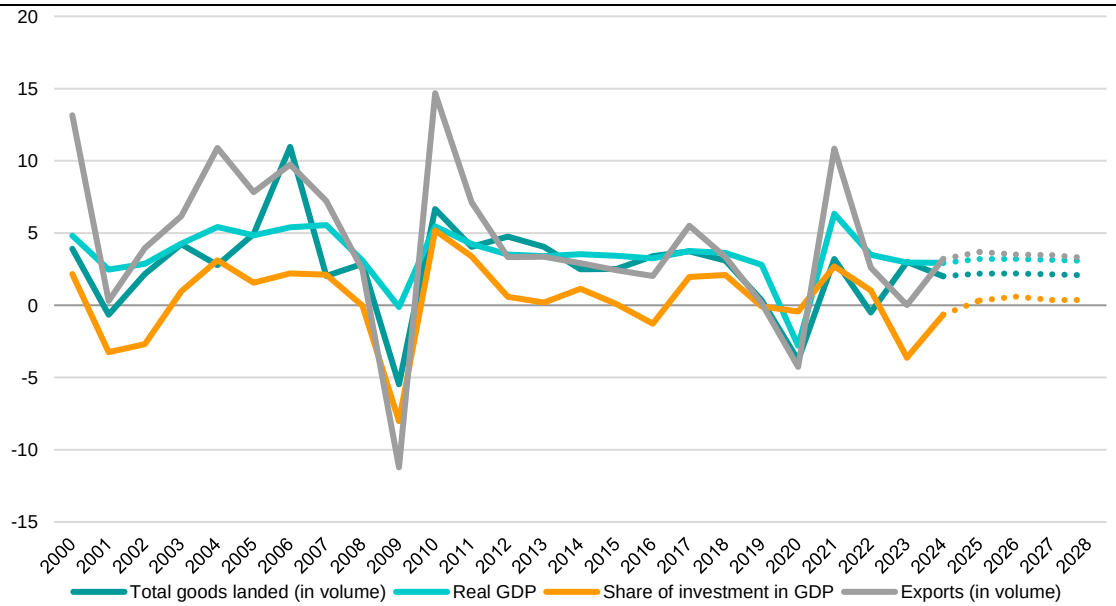
	Coefficients	t-stat	p-value
Constant	0.01	-0.84	0.39
World GDP	0.43	2.18	0.02
Investment as a percentage of GDP	0.38	2.55	0.01
Worldwide exports	0.18	1.54	0.11
R2	0.74		
Sample size	43		

Source: GSA

Note: The estimation range extends from 1981 to 2023.

Our projections of total merchandise landings from 2024 onwards (see Table 2) are based on applying the estimated coefficients to the explanatory variables projected by the IMF.

Chart 10: Trends in demand for maritime transport and their explanatory variables (World, annual growth in %)



Sources: UNCTAD, IMF, GSA

Note: IMF projections from 2024 for GDP, share of investment in GDP, and exports. GSA projections for total landed cargo.

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Table 2: Projections of shipping demand and its explanatory variables (World, annual growth in %)

	2024	2025	2026	2027	2028
Total goods landed (by volume)	2.0	2.2	2.2	2.1	2.1
Real GDP	2.9	3.2	3.2	3.1	3.1
Investment as a percentage of GDP	-0.7	0.3	0.6	0.4	0.4
Exports (in volume)	3.2	3.7	3.5	3.5	3.3

Sources: UNCTAD, IMF, GSA

Note: IMF projections for GDP, share of investment in GDP, and exports. GSA projections for total landed cargo.

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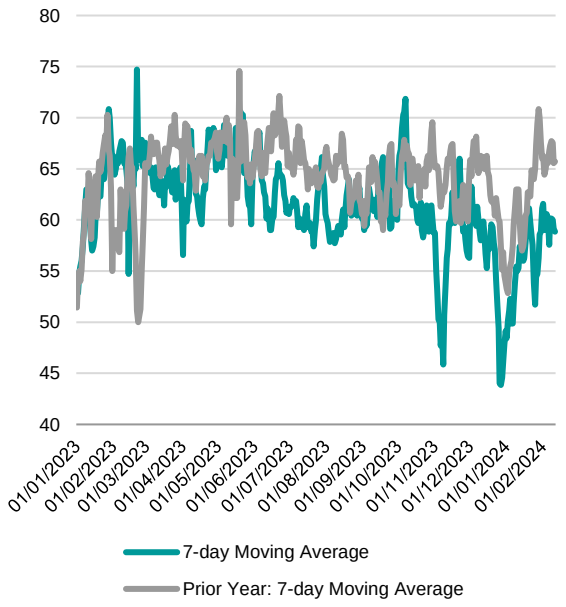
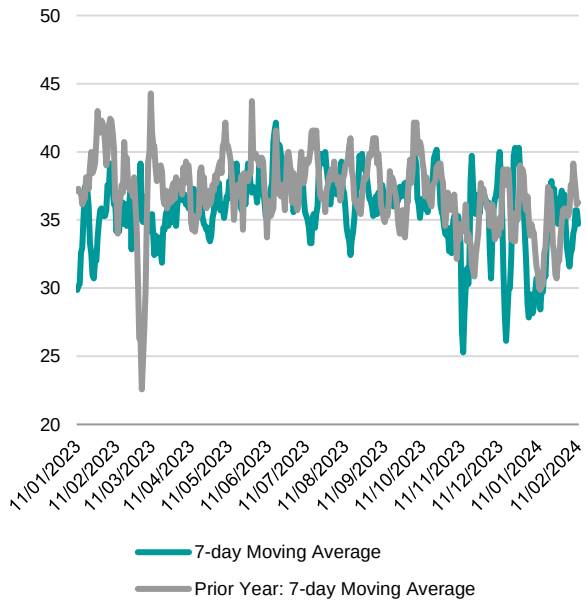
Appendices

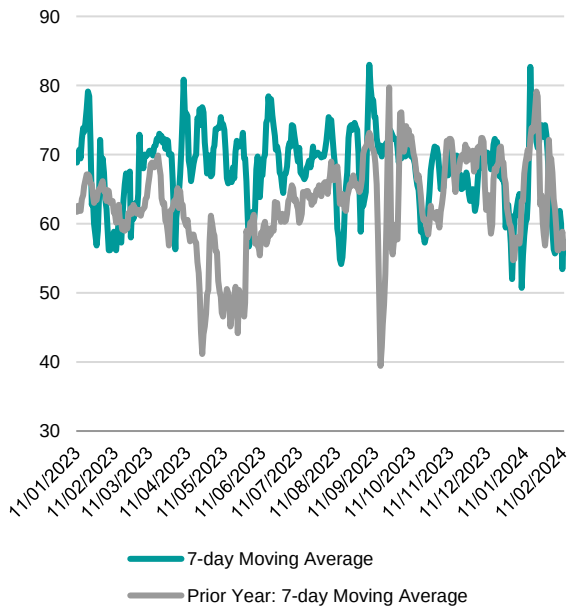
Number of daily calls at the Port of Rotterdam (January 2023 - February 2024)



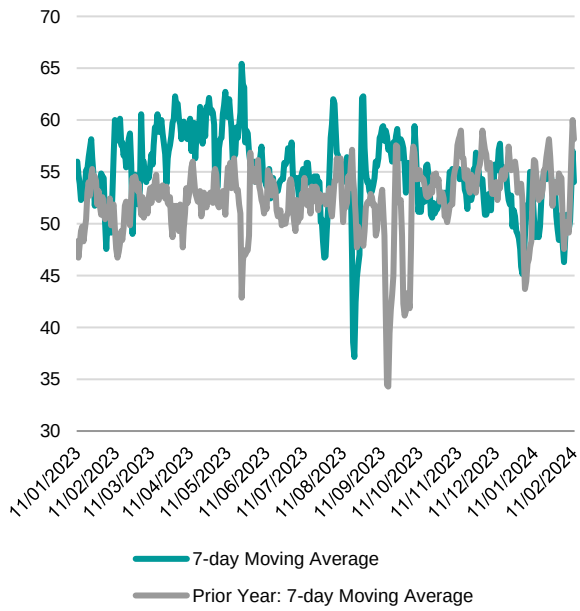
Number of daily calls at the port of Antwerp (January 2023 - February 2024)



Number of daily calls at the Port of Shanghai (January 2023 - February 2024)



Number of daily calls at Busan port (January 2023 - February 2024)



Source : IMF, GSA

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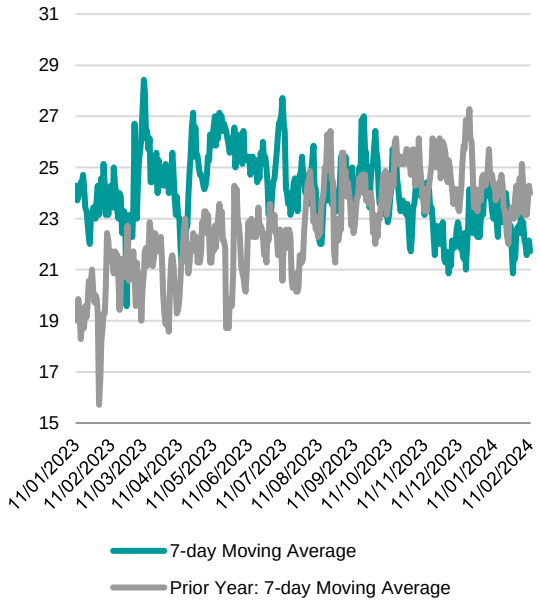
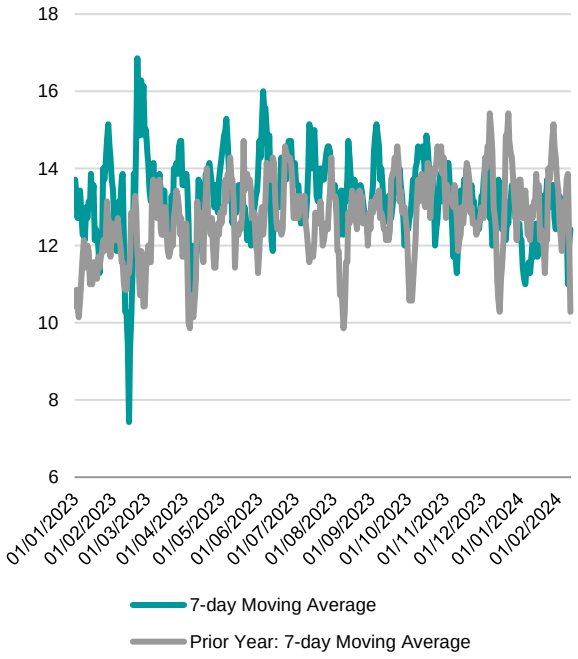
Number of daily calls to Jebel Ali port (January 2023 - February 2024)



Number of daily calls at Tanger Med port (January 2023 - February 2024)



Source : IMF, GSA

Table 3 - Assumptions for estimating the impact of disruptions in the Red Sea on global shipping supply

	Container ship	Crude oil tankers
Additional journey time	The average journey time for a container ship from the port of Singapore to Rotterdam, via the Red Sea, is 27.8 days (9343 nautical miles) at a speed of 14 knots[24] . A detour via the Cape of Good Hope, at a speed of **16 knots**, adds a further 9.2 days. The additional travel time is **33%**.	The average journey time for a tanker from the port of Singapore to Rotterdam, via the Red Sea, is 27.8 days (9343 nautical miles) at a speed of 14 knots. A detour via the Cape of Good Hope, at a speed of **16 knots**, adds a further 9.2 days. The additional travel time is **33%**.
Share of cargo affected by ship diversion	Every year, 30% of the world's containers pass through the Suez Canal[25] . By mid-February, according to PortWatch data, container ship traffic had fallen by 41% compared with normal levels. This means that **12% of goods** shipped worldwide are directly affected by ship diversions.	Every day, 5 million barrels of oil, representing 10% of the world's crude oil traffic[26] , pass through the Suez Canal. In mid-February 2024, according to PortWatch data, tanker traffic was 48.5% lower than normal. As a result, **4.85% of crude oil** shipped worldwide is directly affected by ship diversions.

[24] Source: Ports.com
[25] Bloomberg, Houthi Attacks Start Shutting Down Red Sea Merchant Shipping, Dec 2023
[26] Source: Statista, Strategic maritime straits for world trade, Dec 2023

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