



COVID-19 TRANSPORT BRIEF

Global Container Shipping and the Coronavirus Crisis

29 April 2020

As a result of Covid-19, container trade volumes and container port volumes have declined over the first months of 2020. Container freight rates have remained fairly stable because carriers have idle capacity, yet the high debt level of container carriers creates insolvency risks. Any bailouts for the sector should address offloading of risks to the public.

Global container trade volumes declined by 8.6% in February 2020 compared to the same month of 2019. Official figures for March 2020 have not been released, but in view of widespread lockdowns the reduction will likely be larger. The decline in container trade was particularly marked in the Far East. In Europe, North America and Oceania it is also significant, while it is not yet noticeable in other emerging economies (Latin America, Sub-Saharan Africa and the Indian Subcontinent and the Middle East). The table below lists the changes in January and February 2020 for different world regions. The recent development of container trade volumes is depicted in Figure 1 at the end of this Brief.

Table 1. Changes in container trade volume by world region, 2020

| | Change Jan 2019 to Jan 2020 (%) | Change Feb 2019 to Feb 2020 (%) |
|--|---------------------------------|---------------------------------|
| Far East | 0.0 | - 17.5 |
| Europe | 0.7 | - 4.0 |
| North America | - 0.3 | - 7.0 |
| Australasia and Oceania | - 6.5 | - 2.8 |
| Indian Subcontinent and M. East | 3.7 | 6.1 |
| South and Central America | 2.4 | 2.8 |
| Sub-Saharan Africa | 5.4 | 7.4 |

Source: International Transport Forum, CTS

The main response of carriers to falling demand has been to reduce supply. Ship operators have massively started to idle vessels by cancelling services. These blank sailings have increased significantly compared to previous years, with 188 in February/March 2020, of which 85 were on the Asia-North America West Coast trade lane and 49 on the Asia-North Europe trade lane (Figures 2, 3).

More cancellations have been announced. They concern up to 30% of the Far East-Europe service capacity and up to 20% of the Trans-Pacific service capacity in coming weeks.¹ The share of idle container ship capacity reached 2.5 million Twenty-foot Equivalent Units (TEU) or 10.6% of capacity in early March 2020 (Figure 4).

These capacity reductions by the major carriers have managed to avoid price reductions for container shipping services: despite the deteriorating economic conditions, ocean freight rates have remained remarkably stable recently, both at a global level (Figure 5) and along the trade routes for the moment most affected by the economic standstill: Asia-North Europe, Asia-Mediterranean and Asia-North America West Coast (Figure 6).

Looking for cost reductions

Carriers will continue to look for ways to reduce costs. In 2015, carriers re-routed traffic after the opening of the new Suez Canal, forcing the Canal Authority to cut rates by 65%. Now, some are again re-routing Asia-Europe services via the Cape of Good Hope to avoid Suez Canal charges, a course of action made viable by very low oil prices.

The current oversupply of vessels could become even more problematic. Container ship supply is set to increase 5% in 2020 and 3% in 2021, based on the current ship order book (Figure 7). Demand for container freight, however, could fall by 10% to 30%, depending on the assumptions.

If global container trade volumes were to contract by 11% in 2020 (in line with International Monetary Fund (IMF) projections of an 11% contraction of global trade), even an all-time high container ship idling rate of 15% would not be able to bridge the gap with the reduction of demand (Figure 8).

Some shipyards are already slashing prices to preserve their order book. Similar price reductions during the post-2008 crisis contributed to a race to build mega-ships. Government support for the maritime sector seems also intended to keep local shipbuilding industries in business.

Over the past decade, carriers mitigated excess capacity by lowering ship speeds, scrapping older vessels and cancelling orders for new ships (Figure 7). Carriers will likely resort to a mix of similar instruments in the second and third quarter of 2020.

Reduced demand has so far not translated into lower prices for customers of container shipping services, since the system of alliances and consortia in container shipping can control prices to a certain degree.² Avoiding a collapse of freight rates helps container shipping to survive, yet it also deprives its customers of cost reductions that would normally occur in times of declining demand. In addition, blank sailings reduce the service offer for shippers, while slow steaming can increase their inventory costs, considering that goods take longer to arrive.

Impacts on ports

Lower demand for container shipping has translated into less activity in container ports. Volumes handled in the main global container ports fell by 6% in both February and March 2020 on the previous year (Figure 9). In Chinese ports, containerised cargo declined by 5% in volume terms in January 2020,



followed by a dramatic fall of 17% in February 2020 and a further slight decrease of 2% in March 2020 (Figure 10).

Sharp reductions occurred in ports on the West Coast of North America. Here, year-on-year volumes dropped by 13% in February 2020 and by a further 18% in March 2020. These are very significant declines, although not yet in the order of the cargo volume decreases triggered by the 2008 crisis (Figure 11).

Container carriers are the main customers of container ports and terminals. Service cancellations will cascade through the containerised transport system and reduce the number of feeder services. Carriers will transfer some of the large ships no longer needed on usual trade routes to other routes in order to optimise utilisation. This will intensify peaks and troughs in ports not used to handling these large vessels.

More blank sailings will deprive some ports of a significant share of the container cargo. For some ports this could be up to 30% less. Blank sailings will thus likely result in rationalisation of terminal networks and increase the bargaining power of carriers vis-à-vis terminals. Likely, this will play out via increased arrears for terminal handling charges, as happened during the last economic crisis. It is already occurring in some places: in Hamburg (Germany) terminal charges are usually paid after 60 days, but liners have now reportedly asked for 90 days.

The charter market

Non-operating vessel owners also feel the consequences of carriers' mitigation strategies. Container lines charter a considerable part of their fleet from these tonnage providers. The drop in container transport demand has led carriers to return charter tonnage and prioritise using their own vessels or those of carriers that operate in the same alliances and consortia.

Various container-shipping companies are replacing chartered vessels with much bigger ships that are underutilised in other trades. It also seems cheaper for liner companies to return a chartered vessel than idling their own bigger ships even if the size of their own vessels is too big for the trade. Arguably, this tendency has been made possible by policies that facilitate alliances and vessel sharing agreements.

Container shipping's debt burden

The freeze of economic activity caused by the Coronavirus pandemic inevitably means lower demand for traded goods and this will affect carriers' earnings. The high debt levels of container carriers makes them ill-prepared for the impending shock. Cumulated debt of fourteen major container carriers reached USD 95 billion by 2019 (Q3), this was USD 76 billion in 2010. Credit financed larger ships and mergers and acquisitions both within container shipping and within the containerised transport chain.³ As a result, since 2016 fourteen major carriers scored on average 1.3 on the Altman-Z index, suggesting they are "very likely" to become insolvent within two years.⁴ This score worsened in 2019 (Q3) when the score declined to 1.16.⁵



This makes it likely that the coming months will see carriers seeking more government aid. And governments wary to disrupt supply chains during the current pandemic might, a priori, be willing to bail out container carriers. Yet this scenario raises a number of concerns.

Moral hazard

A first concern relates to moral hazard: the likelihood that a bailout will increase risk-taking of firms to levels that would be considered unsustainable if there would be no bailouts. The danger of such behaviour is certainly present in container shipping: various carriers have negative working capital and major container carriers have been able to rely on government support in recent history, with the notable exception of Korean shipping line Hanjin in 2016.

Government policies have encouraged this risk-taking. Favourable fiscal arrangements, such as accelerated depreciation regimes for investments have stimulated over-investment in ship capacity, often with borrowed money. In most sectors, corporate income taxes smooth out cyclical investment by reducing the room for investments during booms and enlarging it during busts. The shipping sector is generally exempt from corporate income taxes, however.

Instead, shipping companies pay a fixed “tonnage tax” on the tonnage they operated by – which does not smooth out cyclical investment behaviour. Tonnage tax arrangements can hurt companies in times of very low demand, whereas they provide them with ample financial space in good times. These fiscal arrangements tend to increase risky corporate investments. Government bailouts for container shipping companies also risk being unfair vis-à-vis shipping companies that have low debt levels.

Externalised risks

Secondly, the externalisation of risks is in fact a wider problem in container shipping. Liner companies have shifted not only the bankruptcy risk to the public sector, but also climate change risks, health risks from air pollution and financing risks of public infrastructure.

The re-routing of vessels via the Cape of Good Hope to avoid the Suez Canal provides a good example: The longer distance means burning more ship fuel and thus increasing both greenhouse gas emissions and local air pollution in coastal regions, while avoiding canal charges reduces the operator’s revenues and thus cost coverage of the public investment in the Canal.

Such externalisation of risks have been facilitated by tax exemptions of ship fuel, lack of inclusion of shipping in carbon pricing initiatives and generous exemptions of infrastructure charges by infrastructure managers – like canal and port authorities – in order to be more attractive than the competitor. The shipping firm can reduce its costs, but in the process increases the costs for society.⁶

Race to the bottom?

The third concern is a “race to the bottom”, where governments’ desire to protect their container fleets causes a vicious cycle of regulatory competition for the most generous subsidies and tax exemptions. By this logic, temporary support to weather a crisis become permanent; one country’s support



measures invite others to match or outdo them; and some countries will expand their support measures to increase their shipping sector's competitiveness.

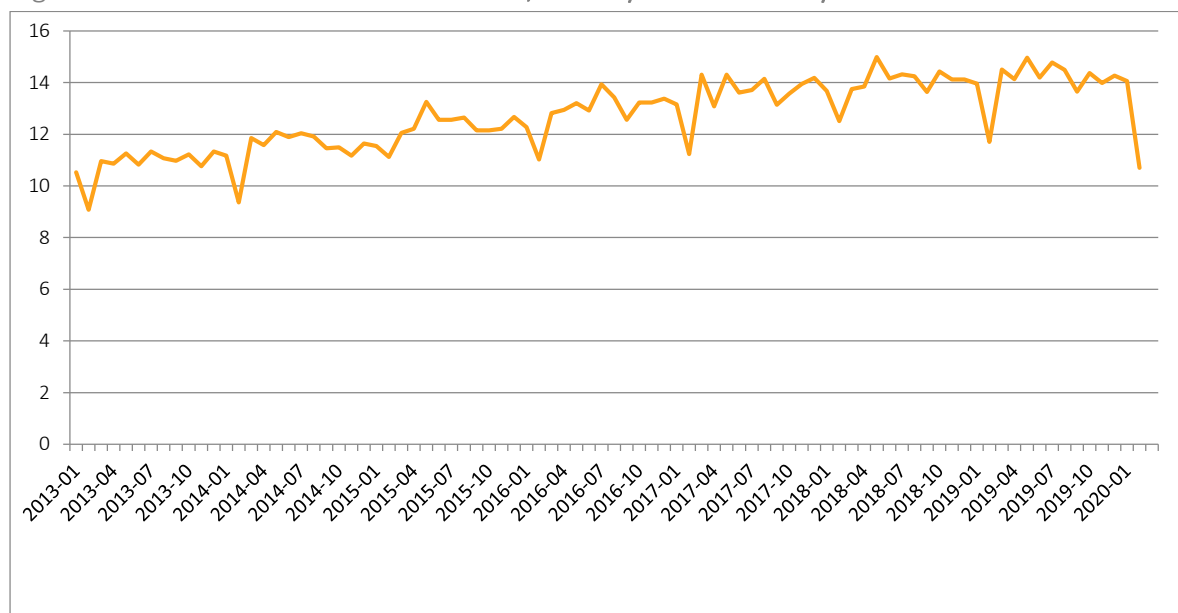
The shipping subsidies introduced during Great Depression in the 1930s generally continued, even if the form and character of the aid changed over time. More recently, the aftermath of the 2008 financial crisis saw an accumulation of government support packages that generally remained in place, followed by an expansion of scope of the schemes.⁷

As a result, the shipping sector can in fact be considered as a sort of hybrid sector: it is supported in multiple ways by the public sector, but without aligning with public policy priorities such as creation of employment, generation of fiscal revenues and improvement of environmental performance because few conditions are attached to government support. In some cases, this leads to paradoxical situations where shipping companies ask for government support despite registering their ships in other countries to avoid taxation or labour regulations. In addition, the tax-exempt status of container shipping companies provides them with an unfair advantage when they want to compete in other markets, for example in terminal handling, logistics or digital freight transport platforms.

Governments should use the economic leverage of the Covid-19 crisis to address these concerns. Actions could include closing tax loopholes, reducing exemptions and introducing carbon pricing for shipping. Governments could also halt the unfair competition of tax-exempt carriers with non-tax-exempt companies with regards to logistics activities. They could stimulate a more crisis-resilient container shipping model that includes clear conditions regarding the value the sector creates for society, embraces environmental sustainability and internalises external costs and risks in the price of containerised ocean transport.

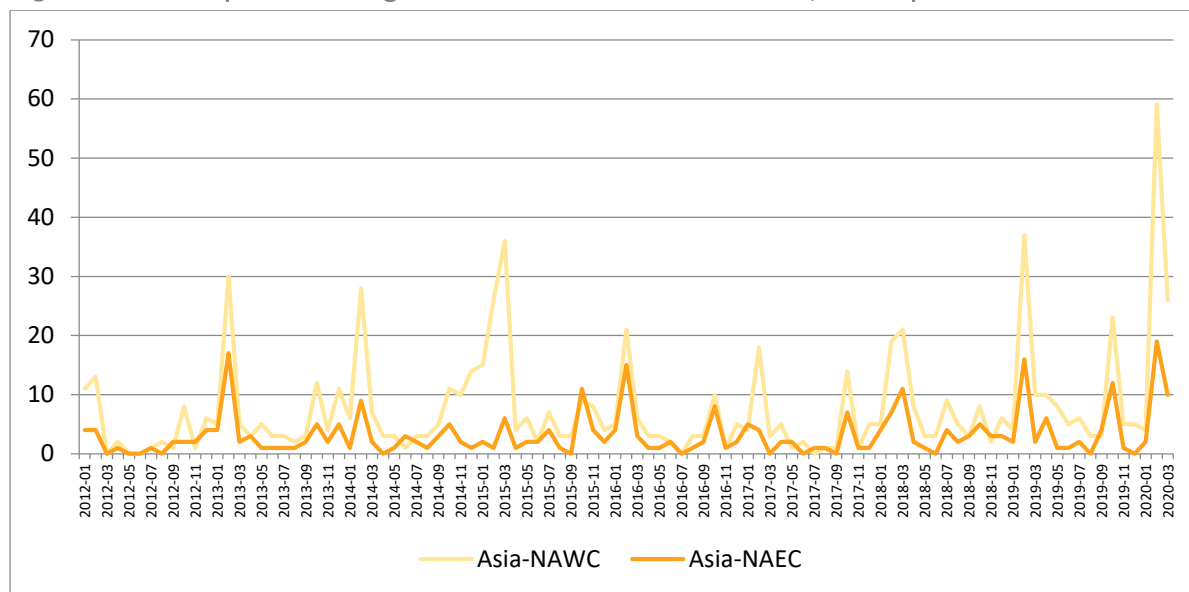
Container shipping in charts

Figure 1: Global container trade volumes, January 2013-February 2020



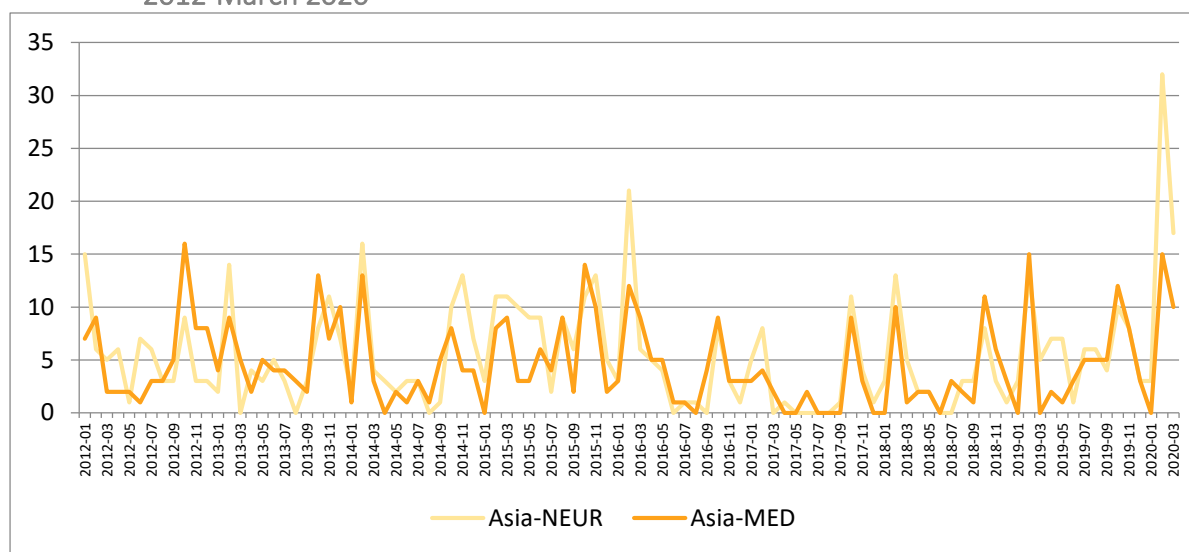
In million Twenty-foot Equivalent Units (TEU). Source: International Transport Forum, CTS

Figure 2: Monthly blank sailings Asia-North America trade lanes, January 2012-March 2020



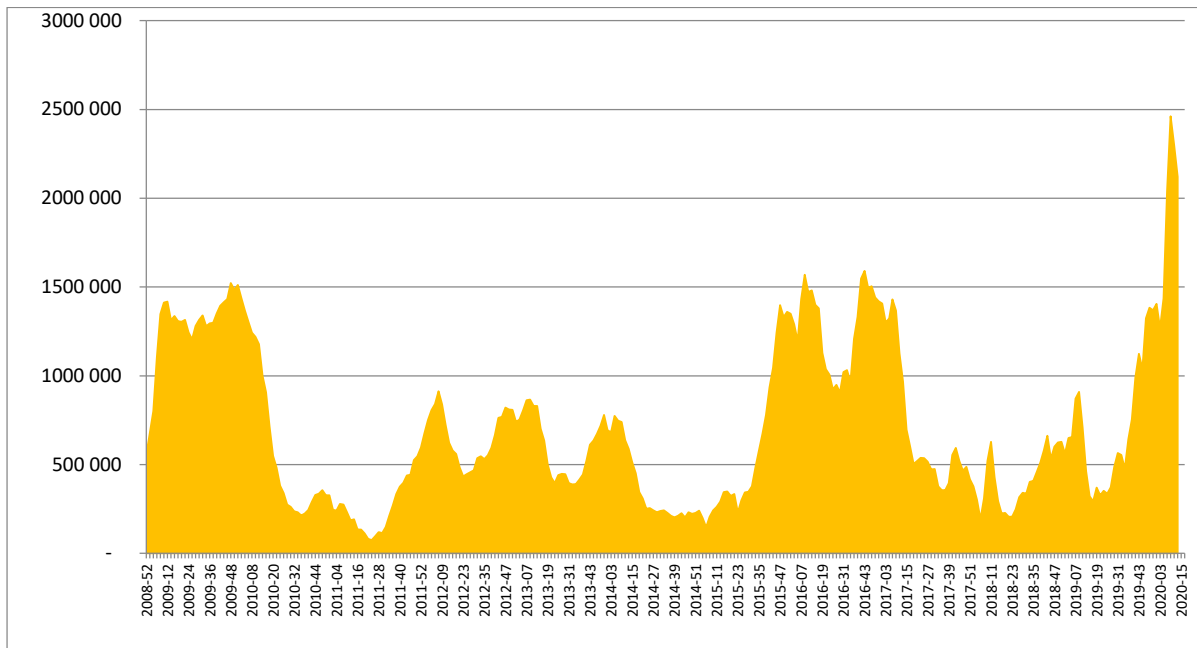
NAWC: North America West Coast; NAEC = North America East Coast. Source: International Transport Forum, Sea Intelligence

Figure 3: Monthly blank sailings on Asia-North Europe and Asia-Mediterranean routes, January 2012-March 2020



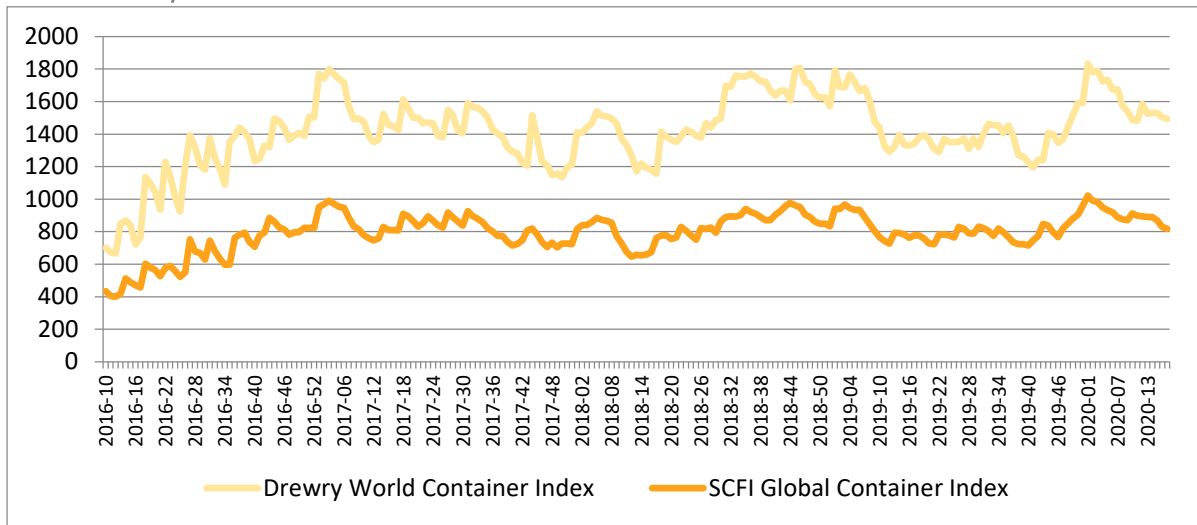
Source: International Transport Forum, Sea Intelligence

Figure 4: Idled ship capacity in TEUs, Week 1/2009-Week 15/2020



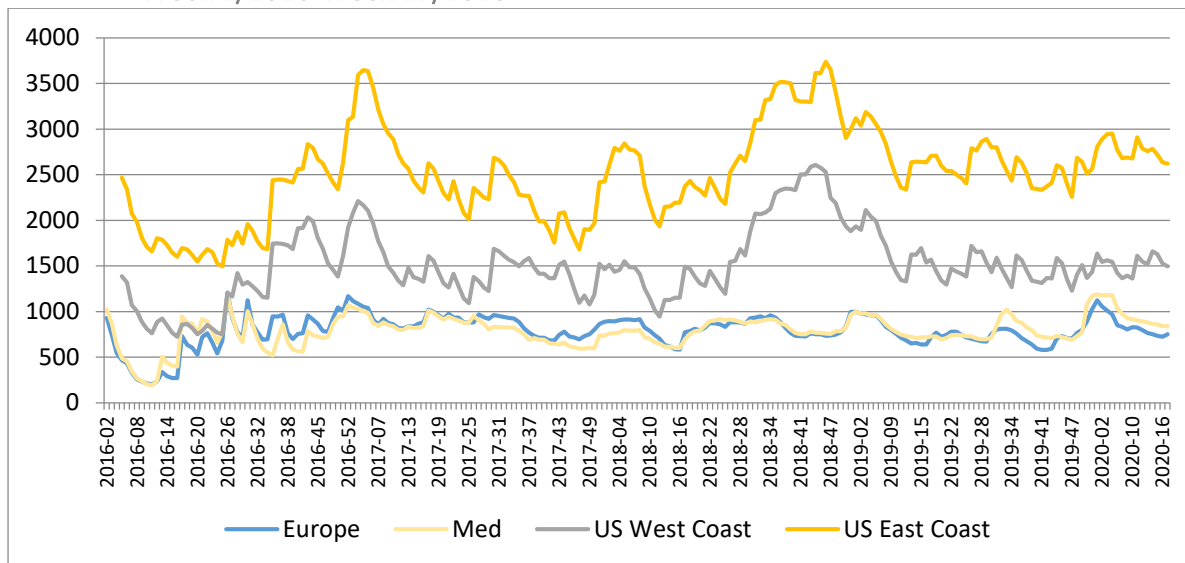
Source: International Transport Forum, Alphaliner

Figure 5: Development of global containerised ocean freight rate indices, Week 10/2016-Week 17/2020



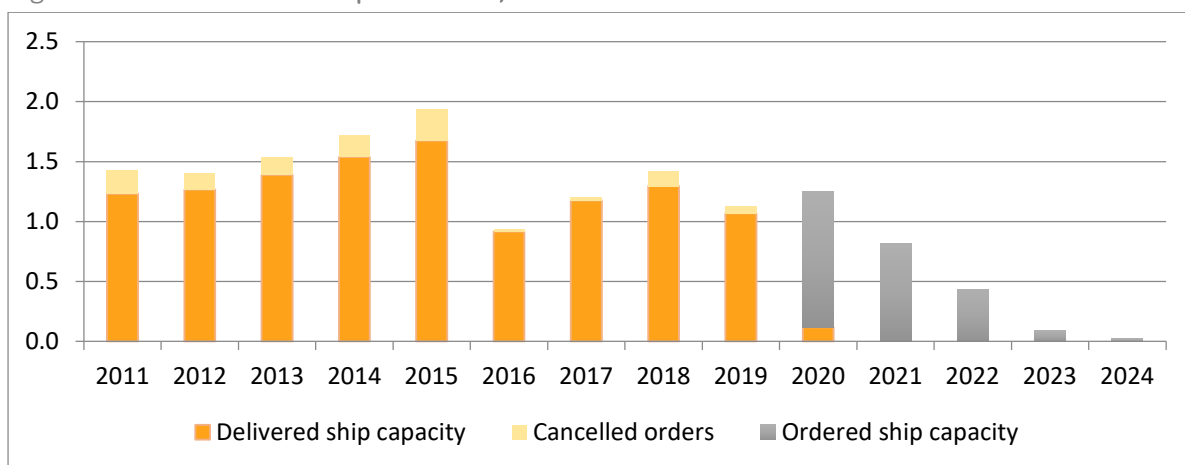
Source: International Transport Forum, Drewry, Shanghai Shipping Exchange

Figure 6: Development of container freight rates on four major shipping routes, Week 1/2016-Week 17/2020



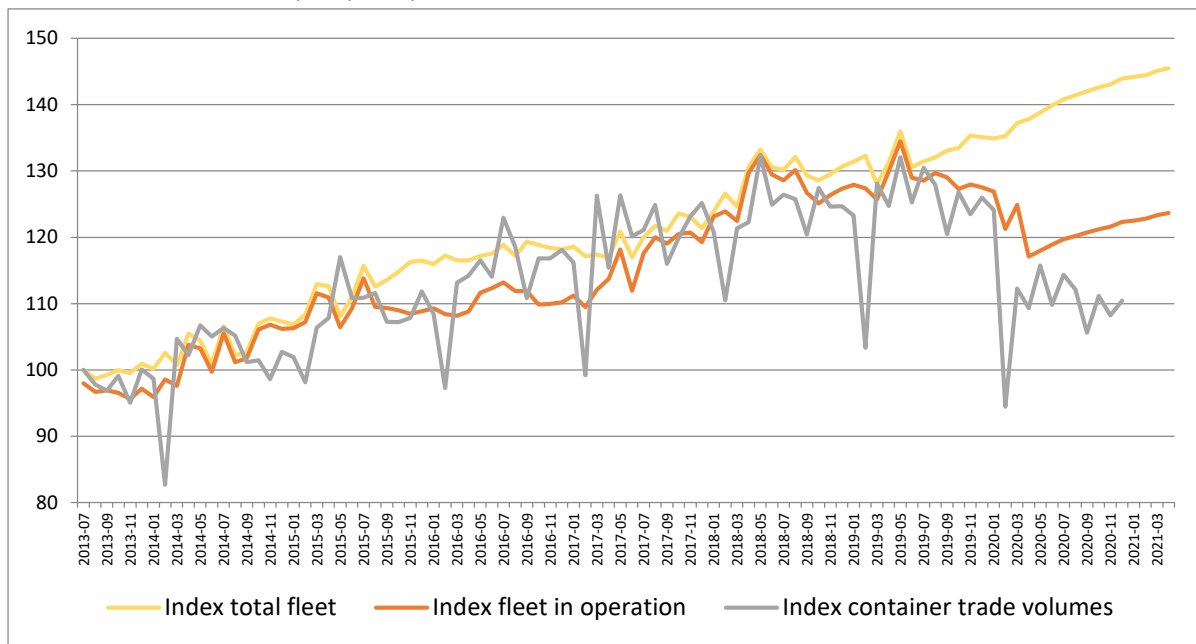
North Europe and Mediterranean are measured in USD/TEU; the US West Coast route is measured in USD/FEU (forty feet equivalent unit). Source: International Transport Forum, Shanghai Shipping Exchange

Figure 7: New container ship deliveries, orders and cancellations



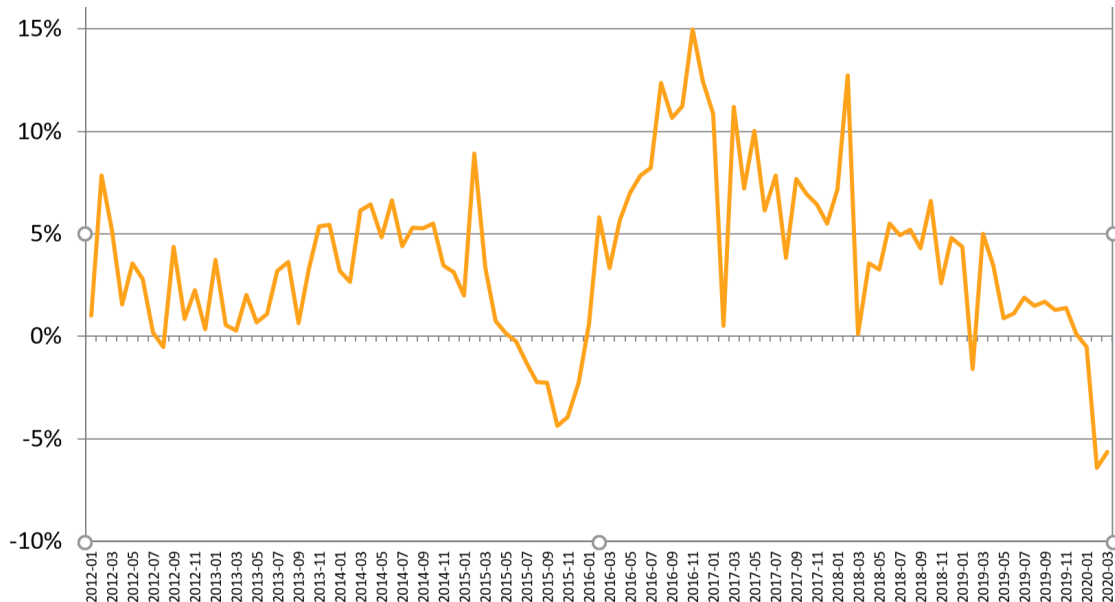
In million TEU capacity. Source: International Transport Forum, IHS

Figure 8: Container ship capacity and container trade demand, 2013-21



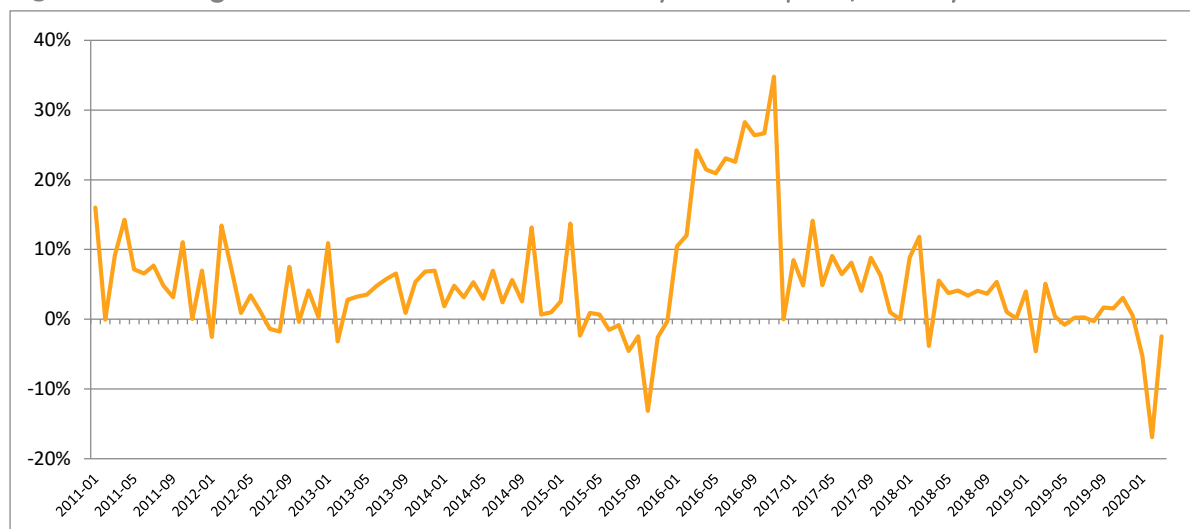
Index = 100 in January for total global container fleet (supply) and global container trade volumes (demand). Index for fleet in operation shows fleet that is active, so total fleet minus idled ship capacity. The fleet indices are based on actual data until March 2020; the container trade volume index is based on actual data until February. The index for total fleet after March 2020 is a fleet-supply estimate based on projections of deliveries of new-builds based on the current order book. The index for fleet in operation after March 2020 is an estimation based on an assumed ship idling rate of 15% until the end of 2020. The index for container trade demand after February 2020 is an estimation based on an assumption of container trade demand contraction of 11% in line with the latest IMF projection of global trade decline of 11% for 2020. Source: International Transport Forum and the maritime data providers IHS, Alphaliner, CTS

Figure 9: Changes in container volumes handled by major ports, January 2012-March 2020



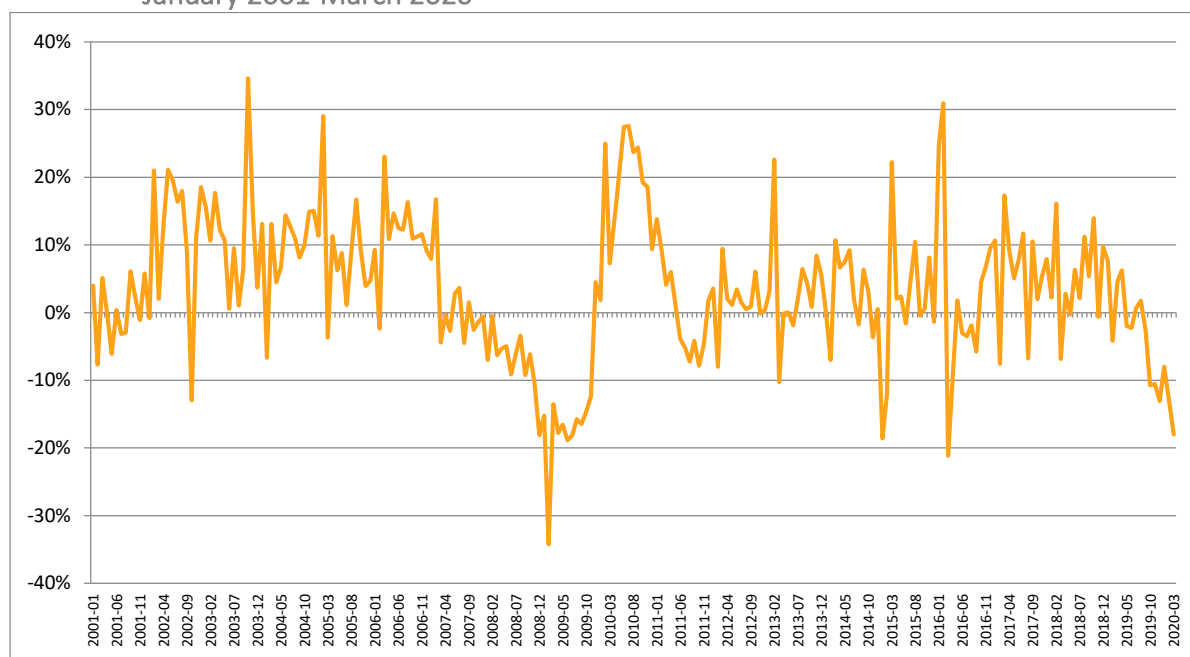
Container ports included are: Shanghai, Ningbo, Hong Kong, Shenzhen, Guangzhou, Qingdao, Tianjin, Dalian, Busan, Singapore, Los Angeles, Long Beach, Vancouver, New York/New Jersey, Houston, Virginia, Savannah, Piraeus, Algeciras, Valencia, Barcelona, Genoa, La Spezia, Port Said East, Rotterdam, Antwerp, Hamburg, Gothenburg, Jawaharlal Nehru Port, Colombo, Melbourne, Sydney. Monthly volumes include March 2020 for most of these ports, with the exception of New York/New Jersey, Algeciras, Hamburg and Melbourne (until February 2020). Source: International Transport Forum, port authorities and terminal operators

Figure 10: Changes in container volumes handled by Chinese ports, January 2011-March 2020



Ports included are: Shanghai, Ningbo, Hong Kong, Shenzhen, Guangzhou, Qingdao, Tianjin, Dalian, Xiamen, Zhanjiang, Zhangzhou, Shantou, Yingkou, Jinzhou, Qinhuangdao, Lianyungang, Zhangjiagang, Yangzhou, Nanjing, Taicang, Nantong, Qian Zhou, Jinjiang, Kao Ming, Beibu, Guangxi Qinzhou. Source: International Transport Forum, port authorities and terminal operators

Figure 11: Changes in container volumes handled by ports on the North America West Coast, January 2001-March 2020



Ports included: Los Angeles, Long Beach, Oakland, Seattle/Tacoma, Vancouver. Source: International Transport Forum, port authorities.

¹ [Sea Intelligence](#)

² [ITF \(2018\): The Impact of Alliances;](#)
[ITF \(2019\): Container Shipping in Europe](#)

³ Ibid.

⁴ [Alphaliner](#)

⁵ [Alix Partners: 2020 Container Shipping Outlook](#)

⁶ [ITF \(2015\): The Impact of Mega-Ships](#)

⁷ [ITF \(2019\): Maritime Subsidies](#)