B. SHIPPING COMPANIES, EARNINGS AND REVENUES AND OPERATIONS DURING AND BEYOND THE PANDEMIC CRISIS

1. Impact of the pandemic on freight rates and earnings

This section describes the impact of the COVID-19 pandemic and relevant developments in maritime freight markets, namely containerized trade, dry bulk and tankers, during the first half of 2020. With the coronavirus taking a toll on the global economy and seaborne trade in early 2020, freight rates in shipping were strongly affected and continued to be determined by the way supply capacity was handled. This was the case of the container ships segment, which practised blank sailing and applied other capacity-management measures to adapt supply capacity to reduced demand for seaborne trade and allow freight rates to remain strong. Tanker freight rates were also affected not

Box 2.3 Promoting diversity and inclusion in the maritime sector

On 27 January 2020, the Women's International Shipping and Trading Association and IMO signed a memorandum of understanding under which they agreed to enhance technical cooperation activities in the maritime field to build opportunities for diversity and inclusion, professional development and skill competency.

In particular, the parties agreed to the following:

- To look for opportunities to partner on maritime issues, which could include organizing workshops or speaking on panels at annual conferences or other events held by the parties, with a focus on panel diversity.
- To promote greater engagement for women in maritime occupations, among their members, the broader ocean business community, ocean stakeholders and the public.
- To develop and participate in relevant training, workshops, among other business related to their areas of mutual interest.
- To support the implementation of IMO Assembly resolution 1147(31) of 4 December 2019 on preserving the legacy of the world maritime theme for 2019 and achieving a barrier-free working environment for women in the maritime sector.

UNCTAD has also been collaborating with the Association and is currently discussing further collaboration in terms data collection and dedicated capacity-building activities.

Sources: See also: www.imo.org/en/OurWork/TechnicalCooperation/Pages/WomenInMaritime.aspx#; Women's International Shipping and Trading Association, 2020.

only by repercussions of the lockdowns relating to the pandemic, but also by geopolitical events, oil price fluctuations and the increased use of vessels for storage floating, which led to a rise in freight rates, mainly in March–April 2020. Dry bulk freight rates, pulled down by an oversupplied market, were further affected by the shock of negative demand, namely from China, owing to the outbreak of the coronavirus disease.

Container freight rates and earnings: Strong freight rates despite abrupt drop in seaborne trade

The container segment of the shipping industry was already struggling with an oversupplied market and slow demand growth before the pandemic, which had kept the level of container freight rates generally low over the past few years. As the pandemic brought economies to a halt and took a toll on trade, this industry segment experienced a major setback. The start of 2020 had witnessed some recovery in demand and freight rates before the pandemic but with the outbreak of the pandemic, prospects for demand not only decreased, but fleet development was affected as well. With lockdowns having come into force in March 2020, reducing demand for containerized goods, shipping companies engaged in strategies to manage supply capacity and reduce costs to cope and to keep freight rates from falling.

As shown in table 2.9, 2020 began with better freight rates compared with average rates in 2019 for most routes, driven mainly by the surcharge applied by carriers to compensate for higher bunker costs and reduced supply capacity due to scrubber retrofits in compliance with IMO 2020 sulphur cap regulations. With the spread of the coronavirus pandemic in early 2020, which led to a sudden drop in demand for seaborne transport, carriers applied strategies such as increased blank sailing and idling of vessels, and re-routing (MDS Transmodal, 2020) as a way of adjusting supply to low demand (see also chapter 1). This allowed freight rates to remain stable at a time of lower demand for ocean shipping. Although blank sailings, accompanied by low oil bunker prices, helped shipping lines to manage supply capacity and reduce costs, blank sailings still cost carriers about 40 per cent of the operating cost of a vessel (Drewry, 2020a) and have an impact on revenue due to capacity withdrawals.

From the perspective of shippers, these strategies meant severe space limitations to transport goods and delays in delivery dates, which had an impact on supply chains and the proper functioning of ports.

With regard to idling, 11 per cent of the container fleet was estimated to be idle during the first half of 2020. The vessel types showing a higher proportion of idle fleet – between 7 and 9 per cent – included containers, tankers and car carriers (Clarksons Research, 2020c). Those showing the highest increases in the idle fleet compared with January 2020 were car carriers – which more than tripled – liquefied natural gas carriers and liquefied petroleum gas carriers.

With regard to the charter market, declining demand and an increase in idling and blank sailings applied by carriers to reduce supply it after capacity had a negative impact on all segments of container charter rates, particularly the larger vessels within that segment. The ConTex charter rate decreased to an average of 368 points during the first six months of 2020, compared with an annual average of 407 points in 2019 (figure 2.6). However, rates did not reach the low level witnessed in 2016, when earnings for most segments fell beneath operating costs due to an oversupplied market. Some improvements were witnessed in July 2020, as the volume of activity picked up slightly, namely with regard to large and medium-sized vessels. It remains unclear whether these improvements will persist.

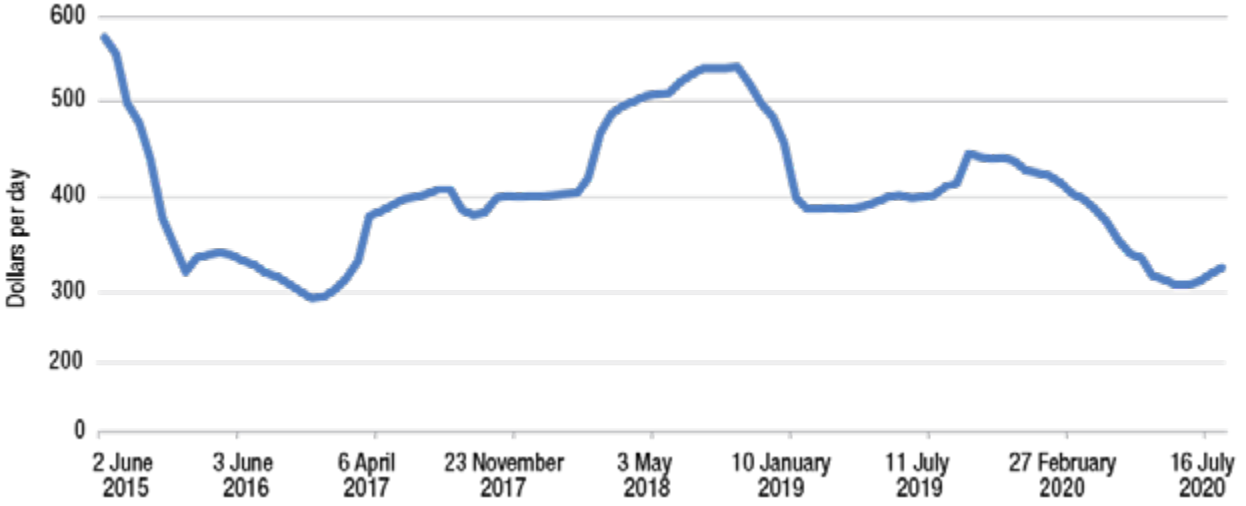
During the third quarter of 2020 container ships continued extending capacity-reduction programmes,

Table 2.9 Container freight market rates, 2010–2020

Freight market	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020 (average January–April)	January 2020	February 2020	March 2020	April 2020	2019 (April January–April)	Percentage change
Trans-Pacific	(Dollars per 40-foot equivalent unit)																
Shanghai–United States West Coast	2 308	1 667	2 287	2 033	1 970	1 506	1 272	1 485	1 736	1 525	1 521	1 572	1 395	1 509	1 608	1 711	-11.10
Percentage change	68.22	-27.77	37.19	-11.11	-3.1	-23.6	-15.5	16.7	16.9	-12.2							
Shanghai– United States East Coast	3 499	3 008	3 416	3 290	3 720	3 182	2 094	2 457	2 806	2 634	2 775.5	2 898	2 714	2 784	2 706	2 807.25	-1.13
Percentage change	47.82	-14.03	13.56	-3.69	13.07	-14.5	-34.2	17.3	14.2	-6.1							
Far East–Europe	(Dollars per 20-foot equivalent unit)																
Shanghai–Northern Europe	1 789	881	1 353	1 084	1 161	629	690	876	822	760	85.5	1 040	829	805	740	814.5	4.79
Percentage change	28.24	-50.75	53.58	-19.88	7.10	-45.8	9.7	27.0	-6.2	-7.5							
Shanghai–Mediterranean	1 739	973	1 336	1 151	1 253	739	684	817	797	811	976.75	1 181	979	898	849	841.5	16.07
Percentage change	24.48	-44.05	37.31	-13.85	8.9	-41,0	-7.4	19.4	-2.4	1.8							
North–South	(Dollars per 20-foot equivalent unit)																
Shanghai–South America (Santos)	2 236	1 483	1 771	1 380	1 103	455	1 647	2 679	1 703	1 673	1 551	2 069	1 714	1 426	995	1 387	11.82
Percentage change	-7.95	-33.68	19.4	-22.08	-20.1	-58.7	262.0	62.7	-36.4	-1.8							
Shanghai–Australia/New Zealand (Melbourne)	1 189	772	925	818	678	492	526	677	827	596	884.75	944	868	815	912	441	100.62
Percentage change	-20.73	-35.07	19.82	-11.6	-17.1	-27.4	6.9	28.7	22.2	-27.9							
Shanghai–West Africa (Lagos)	2 305	1 908	2 092	1 927	1 838	1 449	1 181	1 770	1 920	2 474	2 857.75	2 856	2 930	2 891	2 754	2 603.5	9.77
Percentage change	2.58	-17.22	9.64	-7.89	-4.6	-21.2	-18.5	49.9	8.5	28.9							
Shanghai–South Africa (Durban)	1 481	991	1047	805	760	693	584	1 155	888	802	986.5	1 120	1 032	969	825	753.75	30.88
Percentage change	-0.94	-33.09	5.65	-23.11	-5.6	-8.8	-15.7	97.8	-23.1	-9.7							
Intra-Asian	(Dollars per 20-foot equivalent unit)																
Shanghai–South-East Asia (Singapore)	318	210	256	231	233	187	70	148	146	138	193.25	189	187	201	196	149.75	29.05
Percentage change		-33.96	21.90	-9.77	0.9	-19.7	-62.6	111.4	-1.4	-5.5							
Shanghai–East Japan	316	337	345	346	273	146	185	215	223	233	239.75	241	236	240	242	228.5	4.92
Percentage change		6.65	2.37	0.29	-21.1	-46.5	26.7	16.2	3.7	4.5							
Shanghai–West Japan								215	223	229	227	226	221	227	234	227.5	-0.22
Percentage change								..	3.7	2.7							
Shanghai–Republic of Korea	193	198	183	197	187	160	104	141	163	128	119	120	118	118	120	144.25	-17.50
Percentage change		2.59	-7.6	7.65	-5.1	-14.4	-35.0	35.6	15.6	-215							
Shanghai–Mediterranean Gulf/Red Sea	922	838	981	771	820	525	399	618	463	735	983.25	1 161	1 034	997	741	704.25	39.62
Percentage change		-9.11	17.06	-21.41	6.4	-36.0	-24.0	54.9	-25.1	58.7							

Source: Shanghai containerized freight index; Shanghai Shipping Exchange; and data from Clarksons Research, *Container Intelligence Monthly*, various issues.

Figure 2.6 **New ConTex index, 2015–2020**
(Index base: October 2007 – 1,000 points)



Source: UNCTAD calculations, based on data from the New ConTex index produced by the Hamburg Shipbrokers Association (www.vhss.de).

Notes: The New ConTex index is based on assessments of current day charter rates of six selected container ship types, which are representative of their size categories: Types 1,100 TEUs and 1,700 TEUs (charter period of one year); Types 2,500, 2,700, 3,500 and 4,250 TEUs (charter period of two years).

although demand was picking up, keeping freight rates on the rise. This may be a signal that shipping lines are expecting a slow recovery from the effects of the crisis caused by the pandemic. However, the persisting application of reduced capacity measures appears to be causing severe problems. For example, carriers are offering sailings with delays of two to three weeks, and containers (empty and filled) are building up at ports because sailings are not taking place as scheduled. Filled containers are arriving at ports booked for a particular sailing but have to wait for a longer period of time until the arrival of the next vessel, resulting in port delays (Hellenic Shipping News Worldwide, 2020d).

The situation is exacerbated when vessels are being given only a limited window at ports due to labour shortages (as is the case in India, where the pandemic was still spreading in July 2020).

Another example is empty containers piling up in ports. Ports in the United Kingdom, for example, reported being overwhelmed with empty containers stacking up and causing congestion in limited port storage yards (Hellenic Shipping News Worldwide, 2020d) (See also Box 2.6).

Tankers freight rates and earnings: Sharp freight rate fluctuations and surge in demand for tankers to be used as floating storage

Lockdowns induced by the pandemic, geopolitical events and oil price fluctuations had an impact on developments in the oil tanker freight market, maintaining freight rates high during the first quarter of 2020. During this period, the freight rates market experienced highly volatile trends, despite a weak market balance due to an oversupplied fleet market and low demand.

In March and April 2020, tanker rates rose sharply, as demand for these vessels increased, despite global demand for crude oil and petroleum products falling dramatically due to the pandemic (see chapter 1). This is explained by the hiring of many vessels as floating storage, following the lack of agreement within the Organization of the Petroleum Exporting Countries and its wider group regarding further production cuts that had led to a temporary increase in output from Saudi Arabia at a time when there was no such need on the consumption side (see chapter 1). The oil market was in a state of super contango where front-month prices were much lower than they would be in future months, making the storage of oil for future sales profitable. Traders rushed to charter large tankers for floating storage so they could sell the oil at higher prices later, thus reducing the availability of vessels in the market and triggering a sharp rise in tanker rates.

As shown in table 2.10, time-charter equivalent earnings also picked up in all tanker segments during March and April 2020, with huge peaks in the very large crude carrier segment. A case in point is the Arabian Gulf–Japan single voyage route. This route saw a surge from an average 48 Worldscale points in February to an average 137 Worldscale points in March and 174 Worldscale points in April 2020. This worked out to an average daily time-charter equivalent of $124,000 in March and $170,900 in April, spiking by almost 10 times compared with average earnings in February 2020.

Table 2.10 Crude oil and product tanker spot rates and time-charter equivalent earnings
(Worldscale and dollars per day)

			2020						2019
			2020	January	February	March	April	May	June	December
Crude oil tankers										
Very large crude carriers	Arabian Gulf–Japan	Worldscale	100	48	137	174	66	57	105
		Dollars per day	63 500	16 500	124 000	170 900	51 700	38 800	87 800
		Change in earnings (percentage)	-28	-74	652	38	-70	-25	
	Arabian Gulf–China	Worldscale	94	44	125	159	60	52	109
		Dollars per day	70 000	18 300	128 200	176 000	53 800	40 600	83 400
		Change in earnings (percentage)	-16	-74	601	37	-69	-25	
	Arabian Gulf–north-western Europe	Worldscale	127	33	127	104	38	106	61
		Dollars per day	63 200	20 900	205 600	169 200	169 400	167 000	66 100
		Change in earnings (percentage)	-4	-67	884	-18	0	-1	
Suezmax crude tankers	West Africa–north-western Europe	Worldscale	136	82	126	146	82	49	
		Dollars per day	54 800	26 400	59 700	77 400	37 600	14 400	57 800
		Change in earnings (percentage)	-5,19	-51,82	126,14	29,65	-51,42	-61,70	
	West Africa–Caribbean/east coast of North America	Worldscale	103	79	121	141	78	54	
		Dollars per day	35 900	24 800	59 600	76 800	36 200	18 200	41 500
		Change in earnings (percentage)	-13	-31	140	29	-53	-50	
	Black Sea–Mediterranean	Worldscale	147	90	134	151	86	54	
		Dollars per day	62 900	24 700	65 700	82 700	33 400	6 200	61 200
		Change in earnings (percentage)		-60,73	165,99	25,88	-59,61	-81,44	
Aframax crude tankers	Mediterranean–Mediterranean	Worldscale	149	81	143	157	107	63	193
		Dollars per day	34 200	5 700	42 000	50 800	26 500	3 400	55 400
		Change in earnings (percentage)	-38	-83	637	21	-48	-87	
	North-western Europe–North-western Europe	Worldscale	147	118	136	170	109	74	209
		Dollars per day	41 500	25 200	42 900	69 100	28 300	2 200	83 200
		Change in earnings (percentage)	-50	-39	70	61	-59	-92	
	Caribbean–east coast of North America	Worldscale	324	169	161	155	122	68	225
		Dollars per day	91 600	36 900	39 700	41 300	28 000	5 300	53 800
		Change in earnings (percentage)	70	-60	8	4	-32	-81	
	South-East Asia–east coast of Australia	Worldscale	151	99	121	156	132	73	178
		Dollars per day	30 100	15 000	31 000	50 500	39 400	12 900	44 300
		Change in earnings (percentage)	-32	-50	107	63	-22	-67	
Product tankers									
Medium-range tankers 1	Baltic–United Kingdom or continental Europe	Worldscale	190	195	187	247	160	103	205
		Dollars per day	18 400	21 400	22 800	36 400	19 300	6 900	22 300
		Change in earnings (percentage)	-17	16	7	60	-47	-64	
Medium-range tankers 2	United States Gulf-north-western Europe	Worldscale	161	97	120	150	108	76	122
		Dollars per day	16 100	5 200	13 600	22 100	13 000	5 200	10 700
		Change in earnings (percentage)	50	-68	162	63	-41	-60	
Long-range tankers 1	Arabian Gulf-Japan	Worldscale	127	100	153	304	254	82	157
		Dollars per day	12 300	9 900	28 600	70 400	56 700	10 800	23 000
		Change in earnings (percentage)	-47	-20	189	146	-19	-81	
Long-range tankers 2	Arabian Gulf-Japan	Worldscale	121	93	155	319	263	87	156
		Dollars per day	15 800	11 600	40 400	102 200	81 400	17 000	31 600
		Change in earnings (percentage)	-50	-27	248	153	-20	-79	

Source: UNCTAD calculations, based on *Drewry Shipping Insight*, various issues.

As noted in table 2.10, the product tanker market also witnessed a surge in earnings supported by increased floating storage demand, particularly for large vessels. However, after peaking in March–April, freight rates and vessel earnings in both segments declined sharply in May, as about a third of total vessels locked in floating storage returned to active trade, inflating supply. The tonnage locked in floating storage dropped from about 45 million dwt at the end of April to 30 million dwt at the end of May (Drewry, 2020b). The number of very large crude carriers storing crude oil dropped sharply from 83 vessels to 56 vessels over this period. This, nevertheless, remains a historically high number.

Tanker rates in the crude oil and product tankers market continued to decrease in June 2020, although many countries were easing up the lockdowns measures. Demand for oil remained significantly lower in the second quarter of 2020 compared with 2019. At the same time, continued cuts in output by the Organization of the Petroleum Exporting Countries and its wider group led to a return of vessels locked in floating storage, increasing supply capacity.

With regard to the outlook, freight rates might remain low, as the tanker market fundamentals appear highly uncertain. Recession projections in the global economy would obviously reduce the demand for oil and oil products. Oil price development and geopolitics will also have an impact. Consequently, tanker supply will remain high for some time. The management of vessel order books and recycling will therefore be crucial to improve market imbalances and reduce freight volatility.

Dry bulk freight rates and earnings: Weakened fundamentals due to the COVID-19 pandemic and increased freight rate volatility

During the first six months of 2020, the market for dry bulk freight rates continued to be shaped by imbalances in supply and demand, which was aggravated by the impact of the pandemic and resulted in high fluctuations, namely among larger vessels during this period. As discussed earlier, overcapacity was already affecting the dry bulk market, as supply growth had been outstripping demand for many years. This was further exacerbated by the negative demand shock caused by the pandemic, which added downward pressure on shipping freight rates.

At the beginning of 2020, dry bulk shipping industry freight rates and earnings were severely affected, namely the Capesize market. This was mainly due to the combination of a drop in seasonal dry bulk demand and the outbreak of the coronavirus disease in China, which imports the majority of globally shipped dry bulk cargo volumes, including iron ore, coal, and major grains and oilseeds. The outbreak of the pandemic in early 2020 disrupted industrial activities in China, which resulted in reduced demand for dry bulk vessels, particularly for Capesize vessels that carry industrial raw materials to China. At the same time, low exports of iron and ores out of Brazil (see chapter 1) added pressure to dry bulk volumes, further exacerbating freight rate volatility and leading to unprecedented low and negative levels in Capsize market freight rates. The Baltic Exchange Capesize index became negative in February and March, dropping to -243 and -221 points because of a sudden massive drop in globally shipped dry bulk cargo volumes due to the shutdown in China (figure 2.7). In June 2020, the index increased to high levels of 2,267 points boosted by a higher demand for iron ore in China following the easing of the COVID-19-related restrictions.

Although freight rates for smaller vessel sizes did not experience such a decline, they remained highly volatile and very low. Demand for Panamax and Supramax vessels, mainly used for global shipping of grain and oil seeds, was higher, as trade volumes remained relatively stronger (see chapter 1).

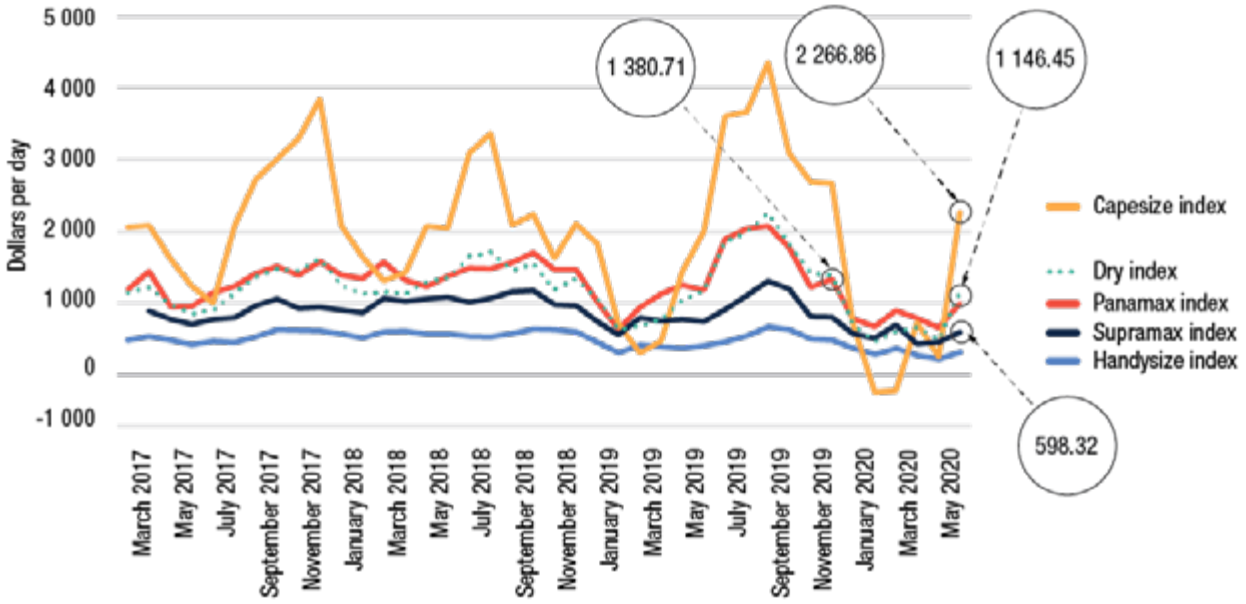
Time-charter rates across all segments were also affected by the pandemic that weakened market fundamentals, already plagued by an oversupply of vessels. In June 2020, the average of one-year time-charter rates for Capesize bulk carriers was $11,050 per day, $9,785 per day for Panamax bulk carriers, $8,513 per day for Handysize bulk carriers and $8,150 per day for Supramax bulk carriers (figure 2.8).

Sector recovery will depend on global economic growth. However, with the prospect of global recession and uncertainties concerning the impact of the pandemic across developed and developing economies, the development of freight rates remains uncertain. A key feature is development in China, which would be the biggest driver for the recovery of the dry bulk industry. At the same time, overcapacity remains a threat to industry market fundamentals and an increase in the market arising from additional supply could offset any growth in demand.

2. Government-backed financial support for the shipping industry in times of pandemic: The case of the container segment

With the abrupt and significant drop in seaborne trade and uncertainties about the future caused by the pandemic, the financial viability of the container segment of the shipping industry was at risk, having already been confronted with freight rates volatility and low profits for more than a decade. Financial support by Governments to ensure the proper functioning of maritime transport services became a global necessity. Unlike the airline industry, such financial assistance was not a common practice in the shipping industry, except in Asia (namely East-Asian and South-Asian countries such as China, the Republic of Korea, Singapore and Taiwan Province of China) where the sector could rely on bailout funds or financial relief from Governments (Drewry, 2020b).

Figure 2.7 Baltic Exchange dry index, 2017–2020



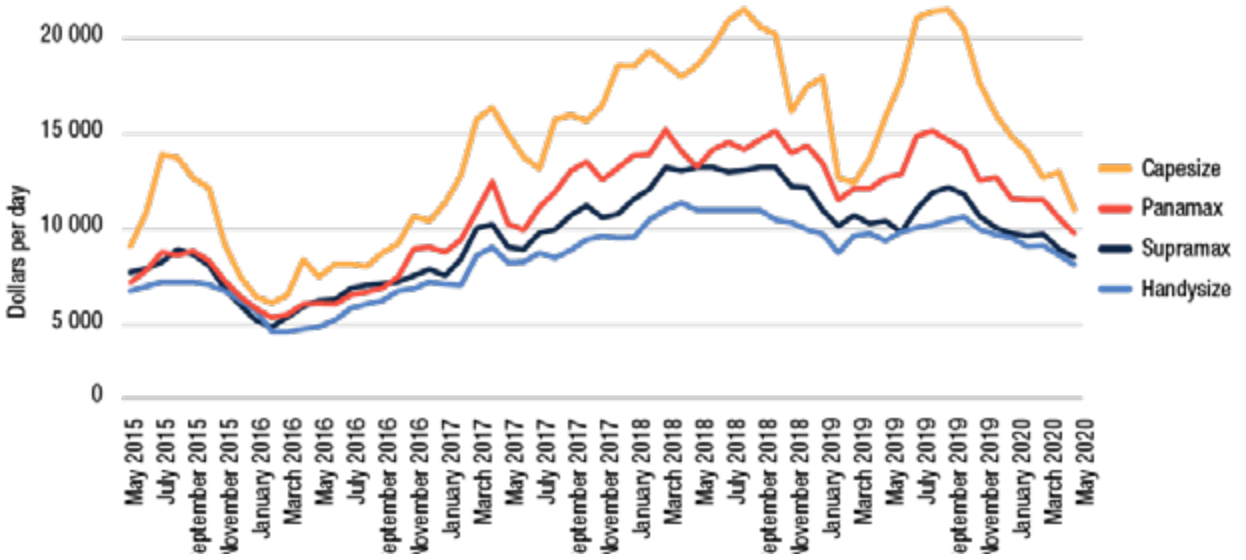
Source: Baltic Exchange; data derived from Clarksons Research, Shipping Intelligence Network Time Series.

Notes: Panamax index: basis – 82,500-dwt vessel from start 2020, 74,000-dwt vessel prior. Handysize index: basis – 38,200-dwt vessel from start 2020, 28,000-dwt vessel prior.

However, government intervention and support are not always well perceived by the industry, as it disrupts its equilibrium and impedes market reform.

Nonetheless, given the pandemic crisis and growing uncertainties on when and how demand will recover, several carriers applied for State-backed financial support in various regions, including Europe. For example, in May 2020, CMA CGM secured $1.14 billion (€1.05 billion) of State-guaranteed syndicated loans from the Government of France (JOC.com, 2020a) to strengthen the company's cash position to confront uncertainties in the global economy resulting from the pandemic. In addition, the Republic of Korea launched a $33 billion rescue fund to protect seven of its mainstay sectors (Hellenic Shipping News Worldwide, 2020e), including the

Figure 2.8 One-year time-charter rates for bulk carriers, 2015–2020
(Dollars per day)



Source: Baltic Exchange; data derived from Clarksons Research, Shipping Intelligence Network Time Series

Note: Long-run historical series.

shipping and shipbuilding sectors, which were allocated about $1 billion[5], of which HMM, formerly known as Hyundai Merchant Marine, received about $400 million (Pulse, 2020).[6] Evergreen and Yang Ming Marine Transport Corporation will receive State-backed loans totalling about $568 million as part of the plan of Taiwan Province of China to alleviate the financial pressure facing the local shipping sector (Lloyd's List, 2020d). Under the plan, the Government has pledged to provide guarantees for at least 80 per cent of the approved loans plus subsidies for interest, which would allow local shipping companies and ports to have access to additional financing. The four above-mentioned carriers are among the world's top 10 deep-sea container shipping lines (figure 2.9).

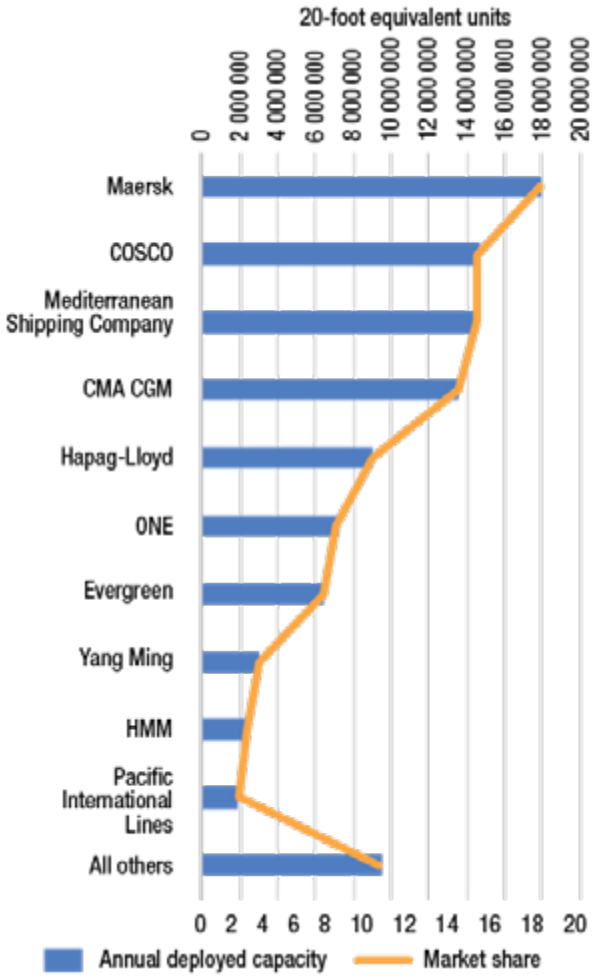
Moreover, in addition to industry involvement in recovery, reliable governmental policies and support for new sustainable business models are fundamental to building the resilience of the sector.

3. Industry prospects in times of pandemic and beyond: Supply discipline and collaboration, accelerated digitalization and prioritization of environmental sustainability

Disciplinary and collaborative approach to the container ship segment in the face of the pandemic

With regard to the measures applied during the pandemic crisis and how the container ship segment of the industry handled the crisis compared with the financial crisis in 2009, the industry has taken a more disciplined and collaborative approach to protect the industry and ensure its long-term recovery and viability. There have been some lessons learned from the downturn in global trade that followed the financial crisis, where competition among carriers to dominate market through scale. Vessels were sailing at freight rates that could barely cover operational costs, resulting in losses in the container segment of the shipping industry of about $20 billion in 2009 (JOC.com, 2020b) and a number of operators going out of business. In the current context of the pandemic, the container ship segment did not look into gaining market share. Instead, it concentrated on maintaining a positive level of freight rates by managing capacity supply in line with demand while reducing costs and ensuring sector viability.

Figure 2.9 **Top 10 deep-sea container shipping lines, ranked by deployed capacity and market share, May 2020**
(20-foot equivalent units and percentage)



Source: UNCTAD calculations, based on data from MDS Transmodal Container Ship Databank, May 2020.

Note: Data refer to fully cellular container ship tonnage and do not include intraregional services.

The effect of the pandemic crisis on container shipping was obvious, reflected by a decreasing demand for seaborne trade and a reduction in fleet deployment. In an effort to address future uncertainty regarding the prospects for demand growth (see box 2.5), carriers may continue exercising flexibility in managing maritime networks and matching supply capacity to demand to support freight cost and rates. It is true that freight rates should be kept at level that ensures the economic viability of the sector. However, if supply-reduction measures applied by shipping lines are sustained for a long period during the recovery in volumes, this may lead to dysfunctionalities in the sector, including ports, undermining performance of shippers and global supply chains.

[5] Other industries include airlines, automotive manufacturing, machinery manufacturing, power generation and telecommunications.

[6] In addition, the State agency Korea [Republic of] Ocean Business Corporation planned to buy 100 billion won worth of subordinated bonds from shippers by accepting the shippers' loan-to-value ratio of up to a maximum of 95 per cent from the current average of 60 to 80 per cent. The agency will also directly buy 100 billion won worth of debts of small- and mid-sized shippers (https://pulsenews.co.kr/view.php?year=2020andno=423920 and www.seatrade-maritime.com/finance-insurance/south-korea-pledges-1bn-support-ailing-shipping-sector).

Box 2.4 Policies to support shipping for a sustainable recovery beyond the pandemic crisis

The global shipping industry will be at the forefront of the recovery as a vital enabler of smooth functioning of international supply chains. As countries turned to consider economic stimulus packages to promote recovery, many of them asked themselves how they could leverage this support to build economies that could drive sustainable economic prosperity. Such a reflection requires going beyond short-term priorities (job creation and boosting economic activity) and thinking about long-term objectives.

Long-term objectives refer to support for growth potential, resilience to future shocks and a sustainable growth trajectory, including decarbonization. An important consideration in this respect is climate-proofing infrastructure investments to avoid future disruption to transport operations. Following this line of thinking, several countries have considered strategic for diverse reasons to include some of these elements in policies related to their maritime transport strategies as part of their recovery plans beyond the pandemic crisis, as follows:

- To avoid having stranded assets (that is, assets that lose economic value well ahead of their anticipated useful life) and investing in declining technology by supporting investment in emerging technologies that can bring simultaneous economic and environmental benefits instead. For example, the British Ports Association proposed a plan to utilize ports and maritime industries to stimulate future growth, which involved a maritime green fund to invest in green equipment and vessels, and a study to identify barriers to increase the uptake of onshore electricity, which could bring financial savings to ports and contribute to reduce air pollution.
- To build resilience to future shocks, for instance by promoting digitalization. This is the case of an initiative launched by the Maritime and Port Authority of Singapore, Singapore Shipping Association and Infocomm Media Development Authority to support maritime companies in digital transformation, which includes support to formulate their digitalization road maps, guide execution and benefit from maritime digital platforms covering port clearances and services, trade documentation, and trade operations and financing.
- To develop new export markets, create domestic value chains, generate jobs and be prepared for a future without fossil fuels. An example of this is the national hydrogen strategy of Germany, aimed at promoting use of this alternative fuel across several industries, including shipping. It offers market incentives to make green hydrogen competitive and investments of at least €9 billion of onshore electricity, which could bring financial savings to ports and contribute to reduce air pollution.

Sources: Chambers, 2020; Elgie and McNally, 2020; Greenport, 2020; Hammer and Hallegatte, 2020; *Seatrade Maritime News*, 2020b.

Box 2.5 The changing landscape of international production, the COVID-19 pandemic, resilience-building and maritime transport fleet deployment

International production patterns have been changing since the financial crisis of 2008–2009. The slowdown in overall trade and in global value chain trade is linked to a shift in the trade and investment policy environment, which is trending towards greater interventionism, rising protectionism and a shift to regional and bilateral frameworks. Other drivers for changes in the landscape of international production include technological advancements and sustainability trends. UNCTAD analysis suggests that changes are taking place in the degree of fragmentation and length of value chains and in the geographical spread of value added, pointing towards shorter value chains and more concentrated value added.

The COVID-19 crisis brought to the spotlight the exposure of international production to systemic risks, particularly from the perspective of securing continuity of supply. As such, building resilience in the supply chain can translate into diversifying sources of inputs. Thus, the crisis accentuated pre-existing trends related to changes in the length and fragmentation of value chains. Depending on the starting configuration of different industries, possible trajectories that the system of international production could follow include reshoring, diversification, regionalization and replication.

Although it may be too early to fully grasp supply-chain redesign patterns in a post-pandemic recovery scenario, it is inevitable that the shipping industry will be fundamentally affected, regardless of the specific trajectories that different industries follow. For instance, a reshoring trajectory, leading to shorter and less fragmented value chains, could have an impact on deep-sea cargo volumes and the capacity to generate economies of scale through mega-sized vessels, which also provide less flexibility than smaller ships to adapt to sharp fluctuations between supply and demand. On the other hand, a regionalization trajectory, leading to short physical supply chains that are not less fragmented, could increase the attractiveness of short sea networks between countries, opening up opportunities for regional cooperation and cabotage services:

Sources: Sánchez, forthcoming; The Loadstar, 2020a; UNCTAD, 2020a.

Accelerated digitalization and prioritization of environmental sustainability

The current context has accentuated the industry trend towards digitalization. Companies have leveraged digitalization to adapt to the new circumstances,

increasingly favouring online tools to simplify processes and cut costs. For example, in June 2020, the Mediterranean Shipping Company introduced the instant-quote tool to provide easy access to its rates for ocean shipping, to make its customers' supply chain easier to manage and improve end-to-end efficiency (Port Technology, 2020).

Companies have also sought to improve data accessibility and transparency, to adapt to evolving consumer expectations in an environment characterized by supply-chain disruption, remote working and increased engagement through business-to-consumer e-commerce. For instance, in mid-April 2020, Maersk's online application, which features cargo release, the calculation of fees and online payment for immediate release functionalities, registered an 85 per cent increase in transactions as customers started ordering more remotely and sought to track cargo more efficiently (Maersk, 2020a).

The current context has also accelerated the interest for data-driven services to support decision-making and the emergence of new services and business opportunities. For example, Cubex Global is a digital marketplace built on collaborative blockchain principles, which enables the buying and selling of cubic metres of container space, enabling capacity management through a digital platform. The platform promises gains in operational efficiency ranging between 25 and 40 per cent in less than container load state and 100 per cent in full container load state and empties (Khalid and Tariq, 2020). In conclusion, collaborative innovation, accelerated though digital solutions to cope with the impacts of the pandemic and respond to changing consumer needs, is likely to remain in the long term, confirming the need to embark on digital transformation and customer-centric service development.

The long-term goal of shipping decarbonization is linked to the Initial IMO Strategy on reduction of greenhouse gas emissions from ships, which is aimed at cutting annual emissions by at least 50 per cent by 2050 and the carbon intensity of emissions by 40 per cent by 2030 and 70 per cent by 2050, compared with 2008 levels. Maintaining the commitment to reach this goal will require significant resources and investment.

Notwithstanding the impacts of the pandemic, this long-term goal remains a priority for the industry (Shell International, 2020). This is due to the increased awareness that technical progress to improve sustainability of operations can help unlock savings and generate new commercial opportunities and that there is a need to adapt to a changing regulatory environment as a result of the Initial IMO Strategy.

During the first semester of 2020, several companies announced that they were maintaining, and even initiating, investment plans related to developing carbon-neutral fuels and new technologies, and setting new ambitious company targets to reduce carbon-dioxide emission (Maersk, 2020b; S and P Global, 2020).