



Container Shipping Industry: 2020 – 2021 supply and demand review

Final Report

Prepared by



EUROPEAN COMMISSION

Directorate-General for Competition

E-mail: comp-publications@ec.europa.eu

European Commission

B-1049 Brussels

**Container Shipping Industry:
2020 - 2021
supply and demand review**

Final Report

***Europe Direct is a service to help you find answers
to your questions about the European Union.***

Freephone number (*):

00 800 6 7 8 9 10 11

(*)The information given is free, as are most calls (though some operators, phone boxes or hotels may charge you).

LEGAL NOTICE

The information and views set out in this report are those of the author(s) and do not necessarily reflect the official opinion of the Commission. The Commission does not guarantee the accuracy of the data included in this study. Neither the Commission nor any person acting on the Commission's behalf may be held responsible for the use which may be made of the information contained therein.

More information on the European Union: https://european-union.europa.eu/index_en

Luxembourg: Publications Office of the European Union, 2023

Catalogue number: KD-04-23-946-EN-N

ISBN: 978-92-68-07791-7

DOI: 10.2763/03120

© European Union, 2023

Reproduction is authorised provided the source is acknowledged.

The reproduction of the artistic material contained therein is prohibited.

Authors:



MDS Transmodal Ltd

- Antonella Teodoro
- Mike Garratt

September, 2023

Table of Contents

1.	Scope	5
2.	Introduction.....	7
3.	Demand	10
3.1	Estimated loaded TEU	10
3.2	Comparison with Container Trade Statistics (CTS) data	12
4.	Supply	15
5.	Assessment of the level of concentration in the container shipping industry	27
5.1	Market shares	29
5.2	Consortia Market Concentration Index (CMCI).....	45
6.	Conclusion.....	53
	Appendix A: Description of the World Cargo Database.....	56
	Appendix B: Description of the Containership Databank.....	57
	Appendix C: Description of Consortia & Alliances	58
	Database.....	58
	Appendix D: Modified Herfindahl–Hirschman Index	59
	(HHI) 59	
	Appendix E: Countries/country areas within regions and maritime regions	61
	Appendix G: Spanish and French ports	67
	Abstract	68

1. Scope

On 24 March 2020, based on the results of the evaluation carried out in 2018-2019, the European Commission (EC) decided to extend the Consortia Block Exemption Regulation (CBER), Commission Regulation 906/2009, until 25 April 2024, without modification.

In view of its due expiry date in 2024, the Commission has initiated a new evaluation of the CBER, covering its performance since it was last extended in 2020. In the framework of this new evaluation of the CBER, MDS Transmodal (MDST) has been commissioned by the EC to analyse the trends characterising the competition in the container shipping industry since 2020. MDST has also been commissioned to provide the most relevant data (in excel files) underpinning the analyses, covering the period 2019Q1-2021Q4 to allow the EC to also consider the most recent pre-pandemic year.

More specifically, MDST has been commissioned to examine the following aspects of the industry:

- **Demand**
 - a. Estimated loaded TEU: analysis of the estimated level of cargo traded in containers (measured in TEU) moved between the EU countries and the rest of the world split into world regions (excluding intra-regional flows) during the period 2020Q1-2021Q4;
 - b. Comparison with Container Trade Statistics (CTS) data: analysis of how the volumes of cargo moved to/from the whole of North Europe & Mediterranean area estimated by MDST compare to the volumes reported by CTS during the period 2020-2021. CTS data is recorded by container lines when cargo is shipped at the origin country while MDST data generally reports data at the time of discharge at the destination country, which is why these data can only be directly compared at the world region level.
- **Supply**
 - c. Scheduled capacity: analysis on if/how shipping lines (whether members of alliances or not) have changed the level of scheduled capacity serving the EU countries during the period 2020Q1-2021Q4;
 - d. Actual deployment: analysis as to whether, and to what extent, the level of capacity scheduled to be deployed has actually been offered during the period 2020Q1-2021Q4.
- **Assessment of the level of concentration in the container shipping industry**
 - e. Market shares: analysis of the combined market shares by consortium and alliance; this analysis aims to identify the consortia and alliances which offer to the market a combined capacity that exceeds 30% of total capacity at the trade corridor level. For completeness, the excel files supporting this section also show the market capacity shares of those shipping lines forming the consortia and alliances as well as the market capacity shares of shipping lines operating outside consortia/alliances; Note: the market capacity shares are calculated based on the capacity scheduled¹ to be deployed by the shipping lines; 'combined market share' refers to the sum of the consortium members' market shares - given that a shipping line can be a member of more than one consortium, the sum of the combined market capacity shares on a trade route can be more

¹ Measured by each distinct service, multiplying the average size of the ships employed and the service frequency.

than 100% (as the market capacity share of the shipping line member of different consortia is considered as many times as the number of consortia in which it operates).

- f. Consortia Market Concentration Index (CMCI): analysis of the level of concentration in the container shipping industry and whether/how this has changed during the period 2020Q1-2021Q4. For completeness, the excel files supporting this section show the components underpinning the CMI, namely:
 - i. total number of services and number of services operated by shipping lines that are part of a consortium/alliance;
 - ii. total number of shipping lines and number of shipping lines that are part of a consortium/alliance;
 - iii. quarterly scheduled capacity (TEU) and quarterly scheduled capacity operated by consortia/alliances (TEU);
 - iv. highest combined consortia/alliances' market share.

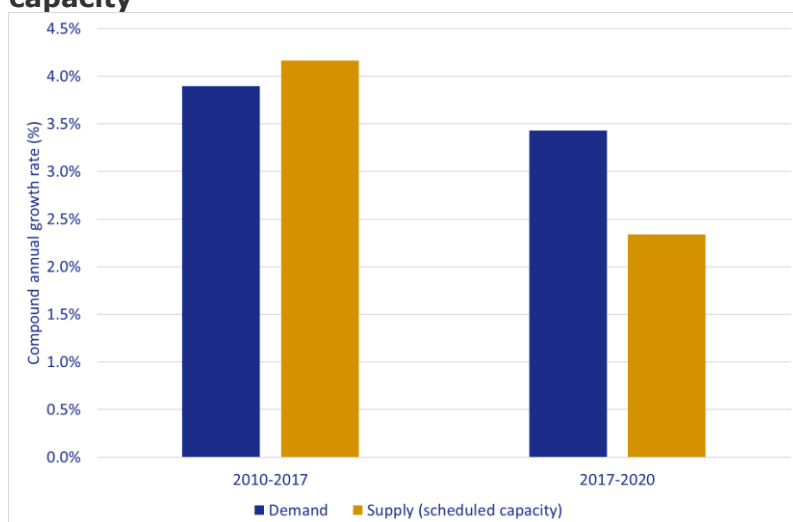
The geographical scope of this study is the EU, with the analyses carried out at the EU country level wherever possible. In order to assist the EC in putting the EU in a wider context and to form a view on whether actions taken by the major shipping lines on non-EU trade lanes might have impacted the EU, we also provide brief analyses at the global scale wherever possible.

2. Introduction

From the second half of 2020 (the period when the lockdown restrictions imposed in order to contain the spread of the Covid19 pandemic started to be eased by the Western economies), shipping companies attempted to accommodate the surge in demand for maritime transport goods, especially on the Far East-North America trade lane. However, shipping lines found themselves constrained by the level of capacity at their disposal and thus prompted to adjust their offers, for instance by reallocating capacity in favour of the transpacific routes, removing calls from their scheduled port rotations and/or skipping calls, reducing the direct connections offered. These adjustments have been possible thanks to the global reach of the major shipping lines. However, if on the one hand this global reach has ensured flexibility, on the other hand, the way in which it has been managed has caused ramifications with local problems where events occurring in one part of the world had spill-over effects on other regions. For instance, and remaining on the issue of the surge in demand on the transpacific, the reallocation of capacity from the Far East – Europe routes to the Far East – North America trade lane has impacted the capacity offered to the European markets, which can plausibly be considered a factor in the increased freight rates observed on Far East – Europe routes. In the following section, we describe our estimate of the capacity moved from the Far East – Europe routes to the Far East – North America trade lane.

Regarding the constraint in the level of capacity available, we believe that it has been caused mainly by the shipping lines’ decisions on capacity deployment made prior to the Covid19 pandemic. The level of growth for supply of deployed container ships outstripped demand during 2010-17 whereas between 2017-2020 the converse occurred, with demand growing at a faster rate than supply (Figure 1). The failure of the lines to invest in capacity to deal with continuing market growth may have in any event led to demand exceeding supply by 2021.

Figure 1. Global container transport demand vs. liner service deployed capacity



Source: MDS Transmodal, World Cargo Database and Containership Databank February 2022

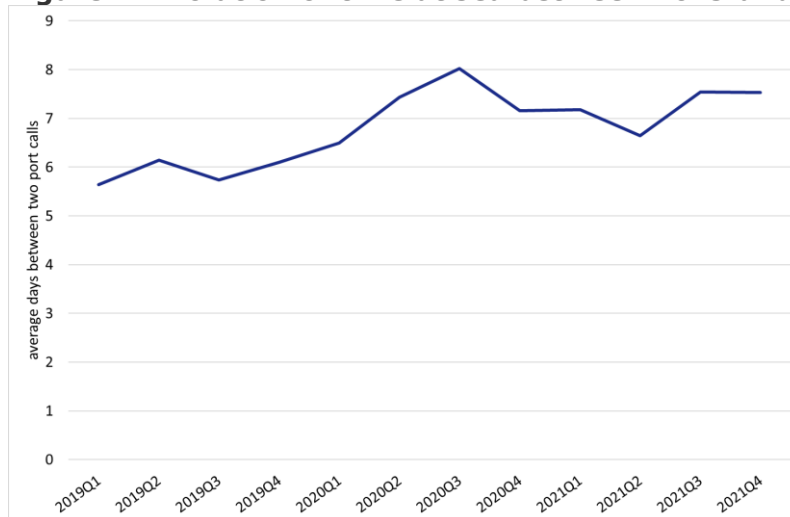
With regard to ‘capacity available’, it is important to explain what determines it.

The capacity of a shipping service depends upon the physical characteristics of the port terminals, inland transport systems and ships employed and the intensity to which they are used. Generally speaking, competition between terminals and inland transport

providers has ensured adequate capacity has been available except under exceptional circumstances; the principal issue over recent years has been the pressure on ports to provide deeper water berths because of the choices made by lines to build much larger ships. The capacity of a shipping service can be adjusted through lines operating at different speeds and by changing the number of ports served. Thus, for example, the typical number of ships employed to maintain a weekly service between the Far East and Northern Europe has increased from 8 in 2008 to 11 or 12 as lines have reduced operating speeds.

The reduction in speed has translated in increase ships’ average time at sea between ports: we estimate that between 2019Q1 and 2021Q4, ships spent 5.7 days at sea between ports in the first quarter of 2019, compared to 7.5 days in the fourth quarter of 2021. The peak value – eight days – was reached in the third quarter of 2020. If a reduction in speed was rational at the time of closure of factories/shops when demand fell, it appears less justifiable when the restrictions for limiting the spread of infection were lifted and there was a need to increase capacity, readily affordable as much higher freight rates could compensate for the higher bunker costs that would arise.

Figure 2. Evolution of time at sea between 2019 and 2021



Source: MDS Transmodal on AIS (Automatic Identification System) data

Without denying the significance of the strain on port and inland logistics capacity and the Covid19 related labour shortages, we believe, therefore, that the disruption witnessed in the containership industry, especially during the period 2020-2021, cannot be considered to have been caused by the Covid19 pandemic. We believe, in fact, that the pandemic has exposed the lack of ‘spare’ capacity to deal with shocks to the global network and the dependence of the global economy on a few deep-sea shipping lines and on the alliances they have formed.

In 2020, a fleet of around 5,000 container ships moved approximately 150m loaded TEU around the world, only around 1% lower than in 2019 despite the pandemic. Trade was supported through governments’ fiscal strategies adopted by the Western economies. Of the 150m TEU, circa 110m were ‘deep-sea’ (moving between continents) in 2020, of which more than 85% were moved by just 9 shipping lines, themselves organised into 3 global alliances and with other inter-company agreements in place to manage capacity.

In the following sections of this report, we present our assessments on the development of demand for containerised goods followed by our analyses on the capacity offered by the shipping lines and on the level of concentration in the shipping industry.

3. Demand

Based on our World Cargo Database (a brief description of which is shown in Appendix A), in this section we describe the latest trends in the level of cargo estimated to have been moved globally as well as between the EU market and the rest of the world; for completeness, in our analyses for the EU market we look at the EU including and excluding the UK (section 3.1).

In section 3.2 we present our analysis on how the volumes of cargo moved to/from the whole of North Europe & Mediterranean area estimated by MDST compare with the volumes reported by CTS.

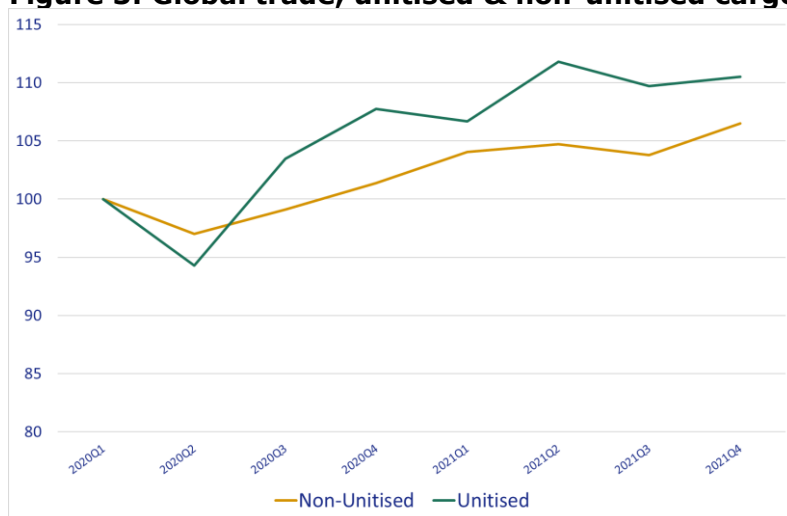
The excel files provided to the EU for this section are:

- 1.A Trade data 2019Q1-2021Q4
- 1.B MDST vs CTS 2019Q1-2021Q4

3.1 Estimated loaded TEU

Measured on the basis of when goods are received at the importing country, global trade in 2021Q4 continued its post pandemic recovery. Compared to 2020Q1, total tonnages in 2021Q4 grew by more than 7% while unitisable traffic² (including regional and overland international freight) measured in tonnes and maritime TEU grew at higher rates of 10.5% and circa 20% respectively. (Figures 3 and 4).

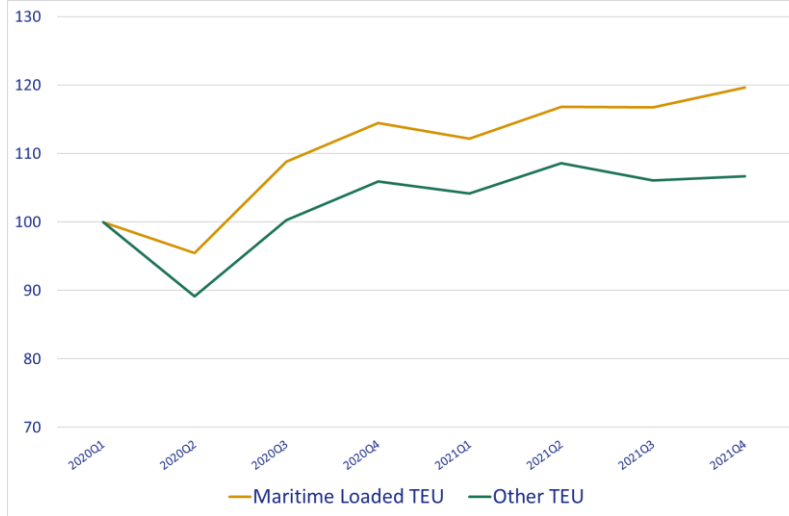
Figure 3: Global trade, unitised & non-unitised cargo, Index 2020Q1=100



Source: MDS Transmodal, World Cargo Database September 2022

² Based on the mix of commodities and assuming consistent rates of unitisation over time.

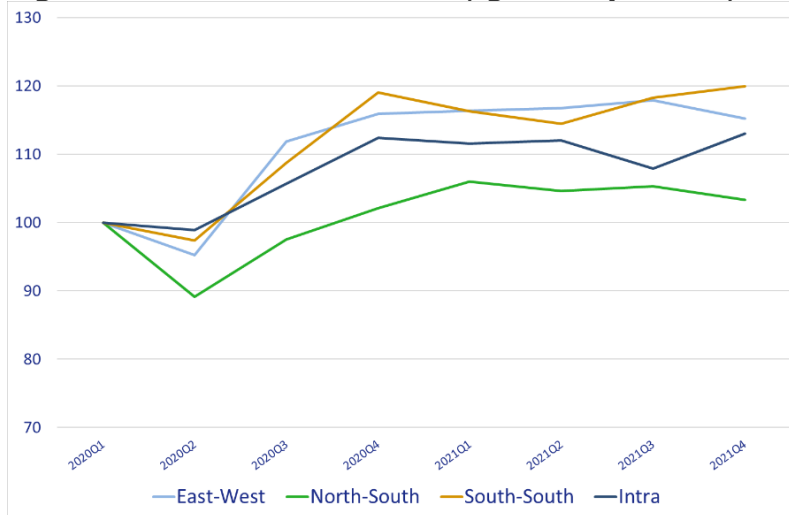
Figure 4: Global trade, Maritime & Other TEU, Index 2020Q1=100



Source: MDS Transmodal, World Cargo Database September 2022

In 2021Q4, the global volume of potential unitisable international cargo increased by circa 20% compared to 2020Q1. Despite the contraction estimated between 2021Q3 and 2021Q4, cargo moved on the east-west routes is estimated to have grown by more than 15% since 2020Q1, showing that inter-continental markets have been growing despite the disruption characterising the global supply chain.

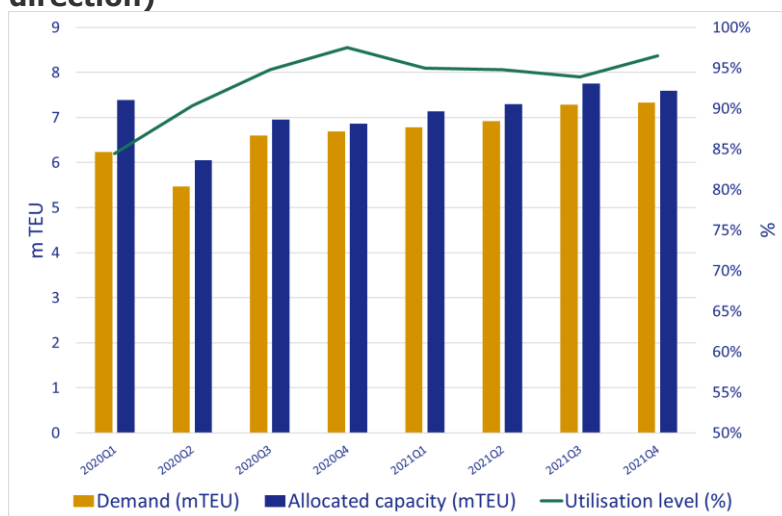
Figure 5: Maritime Loaded TEU, global by routes, Index 2020Q1=100



Source: MDS Transmodal, World Cargo Database September 2022

It is important to notice that the percentage changes estimated for demand have not been accompanied by changes of the same magnitude on the supply side, which translates into high utilisation levels especially at the busiest point in the liner service market, i.e. the Suez Canal as illustrated in the following chart (Figure 6).

Figure 6: Demand, Supply & Utilisation, Services through Suez (headhaul direction)



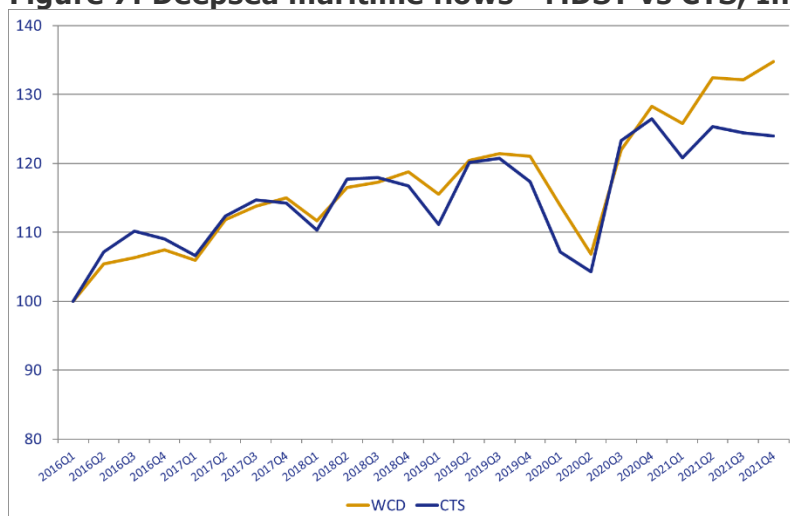
Source: MDS Transmodal, Container Business Model September 2022

3.2 Comparison with Container Trade Statistics (CTS) data

In our MDST World Cargo Database (WCD) we generally record the volumes as reported by the importing countries whereas CTS records the volumes at the time of cargo being shipped by its (shipping lines) members.

The two datasets track each other closely up to 2020Q4 but then deviate. WCD describes actual trade from Customs data. The gap between the two datasets expanded during 2021 which could be due to the reaction to much higher freight rates, falling reliability and lack of capacity, leading to some minor bulk flows switching from to conventional shipping to non-liner tonnage and to overland (rail) routes³.

³ Overland intermodal rail freight via the Trans-Siberian railway from the Far East to Europe more than doubled between 2019 and 2021.

Figure 7: Deepsea maritime flows - MDST vs CTS, Index 2016Q1=100


Source: MDS Transmodal, World Cargo Database September 2022 and CTS

Focusing our attention at the European level, we observe (as described in Table 1), the imports ratio between WCD and CTS data grows in 2021 strongly, which implies that CTS members have been capturing a smaller proportion of the market, and that more has moved by rail, new shipper-based services and there has been some reversion to conventional shipping.

Table 1: European imports by exporting world region (excluding intra-regional flows), estimated loaded TEU MDST vs CTS

	CTS			MDST			MDST/CTS		
	2019	2020	2021	2019	2020	2021	2019	2020	2021
Australasia & Oceania	196,920	185,451	188,136	207,121	192,127	218,788	105%	104%	116%
Far East	16,672,453	15,768,536	17,068,801	17,535,306	16,815,775	19,292,001	105%	107%	113%
Indian Sub Cont & Middle East	2,884,796	2,738,802	3,253,425	2,839,228	2,729,945	3,226,341	98%	100%	99%
North America	3,016,429	2,652,315	2,685,655	2,927,515	2,720,011	2,897,469	97%	103%	108%
South & Central America	2,035,806	2,110,452	2,207,436	1,756,317	1,735,522	1,780,061	86%	82%	81%
Sub Saharan Africa	839,948	828,165	879,777	788,396	760,811	810,875	94%	92%	92%
Grand Total	25,646,352	24,283,721	26,283,230	26,053,882	24,954,191	28,225,535	102%	103%	107%

Source: MDS Transmodal, World Cargo Database September 2022

In the case of exports (Table 2), the fact that the ratio is under 100 implies that CTS members may be carrying more bulk backloads than is estimated by WCD because of very low backhaul rates for some bulk cargo (e.g., scrap steel). However, two-way volumes are entirely dictated by volumes in the import direction.

It is important to note that Eurostat's port data is not comparable because although one can examine total loaded TEU imported from non-European origins and regard internal EU transshipments as not relevant, unfortunately some transshipment takes place at non-EU ports such as Port Said and Tangier Med, for which full data is not available. Some containers recorded as having an immediate origin in Egypt or Morocco in Eurostat will actually have true origin in the Far East. Many of the containers recorded as intra-European are, in effect, containers with a deep-sea origin.

Table 2: European exports by importing world region (excluding intra-regional flows), estimated loaded TEU MDST vs CTS

	CTS			MDST			MDST/CTS		
	2019	2020	2021	2019	2020	2021	2019	2020	2021
Australasia & Oceania	723,122	699,463	754,190	629,654	649,195	681,198	87%	93%	90%
Far East	8,173,171	8,209,681	7,750,954	7,218,034	7,206,921	7,180,436	88%	88%	93%
Indian Sub Cont & Middle East	4,056,014	3,795,248	3,712,151	3,785,023	3,765,235	3,768,223	93%	99%	102%
North America	5,113,801	5,010,905	5,627,820	4,630,075	4,491,364	5,331,020	91%	90%	95%
South & Central America	1,890,173	1,791,057	2,110,862	1,677,285	1,620,560	1,876,359	89%	90%	89%
Sub Saharan Africa	2,174,378	2,058,254	2,216,409	2,046,236	2,045,772	2,211,137	94%	99%	100%
Grand Total	22,130,659	21,564,608	22,172,386	19,986,307	19,779,048	21,048,375	90%	92%	95%

Source: MDS Transmodal, World Cargo Database September 2022

4. Supply

Based on our Containership Databank (a brief description of this database is shown in Appendix B), in this section we describe the latest trends in the level of capacity scheduled to be offered by the shipping lines both at the global level as well as for the EU market (section 4.1). For completeness, the excel files supporting this section also include data for the UK.

In order to estimate the discrepancy between the capacity scheduled to be offered and the capacity actually offered, in section 4.2 we present our analysis on skipped calls and how we estimate they have affected the capacity actually offered.

The excel files provided to the EC for this section are:

- 2.A Scheduled capacity by trade lane, country & EU 2019Q1-2021Q4
- 2.B % of occurrence 2019Q1-2021Q4

4.1 Scheduled capacity

In 2021Q4, global scheduled capacity⁴ rose by 7.2% compared to 2020Q1 (Table 3). The major factors driving this increase were: 1. Different usage of ships (i.e. vessels used more intensively); 2. The reallocation strategy put in place by the major shipping lines whereby ships have been allocated onto shorter routes serving only two world regions (i.e. 'shuttles') instead of services serving multiple markets (e.g. North America – Far East – Gulf & Indian Sub-Continent – North Europe & Mediterranean – North America). In rescheduling their networks, shipping lines seem to have surrendered one of the advantages of serving several regions on the same service, which is having a constant high level of utilisation throughout the voyage for the ships deployed on these services: ships can be reloading with cargo to destinations still to be reached while unloading from ports already visited. This reconfiguration might have been a contributing factor to the surge in freight rates, i.e. shipping lines charging for, from their perspective, less profitable services. The replacement of longer routes with shorter routes might have also been a factor driving the issue of the build-up of empty containers faced by various ports around the world.

In order to quantify the level of capacity affected by the redeployment, we have compared the annual changes in capacity available at the region level. As shown in the last but one column in Table 3, our finding is that, on average, the capacity available at the region level has increased by a lower rate than the rate estimated for the overall deployment, namely by 1.6% as compared to the 7.2% estimated overall.

In the last column of Table 3, we also show the capacity offered by new entrants⁵: in 2021Q4 we estimate that it equated to only 0.37m TEU (0.7% of total supply).

⁴ Measured by each distinct service, multiplying the average size of the ships employed and the service frequency.

⁵ For this analysis, we consider 'new entrant' an operator that has started operation in 2020Q1 or after.

Table 3: Scheduled deployed capacity, global

	Ship size (TEU)	All carriers				New entrants
		2020Q1	2021Q4	% change 2021Q4 vs 2020Q1	Average capacity per region, 2021Q4 vs 2020Q1	2021Q4
Deployed capacity (mTEU)	<5,000	27.86	28.95	3.9%	-2.2%	0.36
	5,000-7,499	6.05	5.92	-2.1%	4.2%	0.01
	7,500-9,999	6.11	6.09	-0.4%	0.6%	
	10,000-12,499	1.94	2.81	45.1%	22.7%	
	12,500-14,999	4.14	4.58	10.8%	4.5%	
	15,000+	3.34	4.62	38.4%	2.0%	
Total deployed capacity (mTEU)		49.43	52.97	7.2%	1.6%	0.37
No of vessels	<5,000	3,368	3,536	5.0%		62
	5,000-7,499	499	481	-3.6%		1
	7,500-9,999	478	475	-0.6%		
	10,000-12,499	136	171	25.7%		
	12,500-14,999	227	248	9.3%		
	15,000+	153	216	41.2%		
Total No of vessels		4,861	5,127	5.5%		63

Source: MDS Transmodal, Containership Databank February 2022

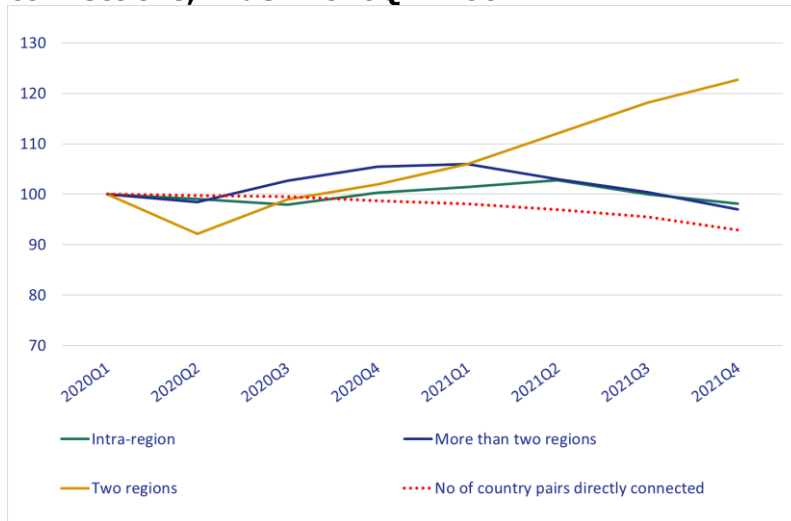
Examining in more detail the way in which shipping lines have been adjusting their networks and have been shifting the level of capacity offered from services serving more than two regions in favour of services serving only two regions, we find that the number of country pairs with direct connections - this is the number of countries that can be reached directly (i.e. without transshipment) via container shipping from another country - has decreased. Our findings are summarised in Table 4 and Figure 8.

Table 4: Scheduled deployed capacity by market

	2021Q4	2020Q1	% change 2021Q4 vs 2020Q1	% of 2021Q4	% of 2020Q1	share 2021Q4 minus share 2020Q1 (% points)
Overall total	52.97	49.43	7.2%			
Major three E/W trade lanes	18.15	14.78	22.8%	34.3%	29.9%	4.4
<i>Two regions</i>	5.84	3.44	69.6%	11.0%	7.0%	4.1
Far East - N America routes	9.47	6.90	37.2%	17.9%	14.0%	3.9
<i>More than two regions</i>	3.63	3.46	5.0%	6.9%	7.0%	-0.1
Far East - Europe routes	6.34	5.91	7.3%	12.0%	12.0%	0.0
<i>Two regions</i>	3.32	2.29	45.4%	6.3%	4.6%	1.6
<i>More than two regions</i>	3.02	3.62	-16.7%	5.7%	7.3%	-1.6
Europe - N America routes	3.23	2.91	11.0%	6.1%	5.9%	0.2
<i>Two regions</i>	1.41	1.39	2.0%	2.7%	2.8%	-0.1
<i>More than two regions</i>	1.81	1.52	19.2%	3.4%	3.1%	0.3
Other routes	34.82	34.66	0.5%	65.7%	70.1%	-4.4
<i>Intra</i>	21.88	22.30	-1.9%	41.3%	45.1%	-3.8
<i>Two regions</i>	12.25	11.50	6.6%	23.1%	23.3%	-0.1
<i>More than two regions</i>	0.69	0.86	-19.6%	1.3%	1.7%	-0.4

Source: MDS Transmodal, Containership Databank February 2022

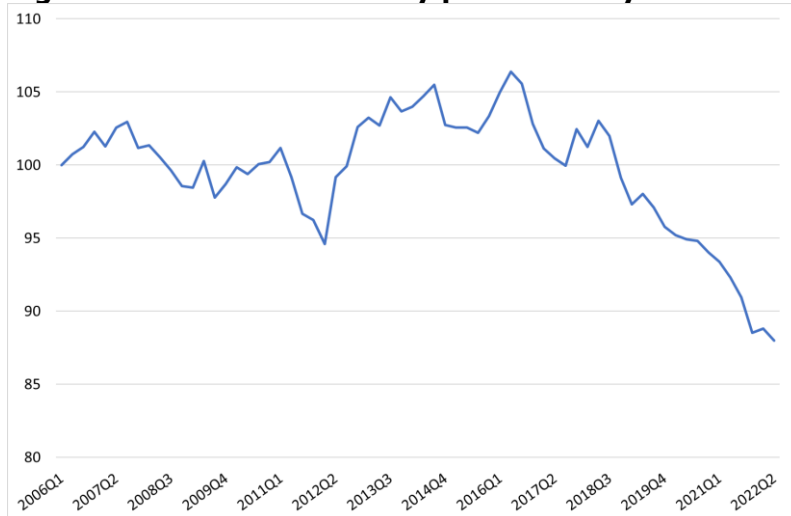
Figure 8: Scheduled deployed capacity by regions served & number of direct connections, Index 2020Q1=100



Source: MDS Transmodal, Containership Databank February 2022

It is important to notice that the decline in direct connectivity is a phenomenon that was starting to emerge well before the start of the Covid 19 pandemic (Figure 9).

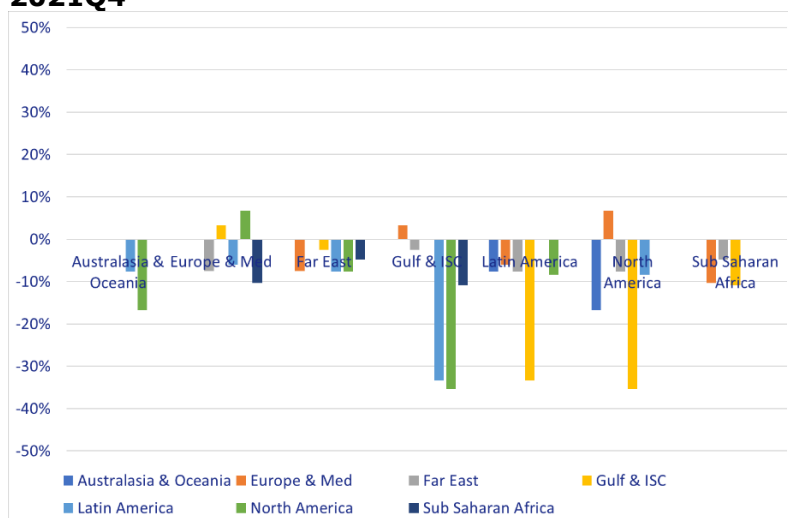
Figure 9: Number of country pairs directly connected, Index 2006Q1=100



Source: MDS Transmodal, Containership Databank August 2022

Excluding intra-regional services, the number of countries directly connected has declined by almost 6% in 2021Q4 compared to 2020Q1 with the capacity lost due to this reduction accounting for more than 3% of the total capacity scheduled in 2020Q1. Different world regions have been affected variously by this reduction, with the North European & Mediterranean countries estimated to have experienced a reduction of circa 5% in terms of number of countries affected (Figure 10 and Table 5).

Figure 10: Changes in number of direct connections, global, 2020Q1 vs 2021Q4



Source: MDS Transmodal, Containership Databank February 2022

Table 5: % changes in the number of direct connections by world region (excluding intra-regional services), 2020Q1 vs 2021Q4

	Australasia & Oceania	Europe & Med	Far East	Gulf & ISC	Latin America	North America	Sub Saharan Africa	Grand Total
Australasia & Oceania		0.0%	0.0%	0.0%	-7.7%	-16.7%	0.0%	-2.1%
Europe & Med	0.0%		-7.5%	3.2%	-6.1%	6.7%	-10.3%	-4.8%
Far East	0.0%	-7.5%		-2.1%	-7.7%	-7.7%	-4.8%	-4.8%
Gulf & ISC	0.0%	3.2%	-2.1%		-33.4%	-35.3%	-10.8%	-4.6%
Latin America	-7.7%	-6.1%	-7.7%	-33.4%		-8.4%	0.0%	-7.4%
North America	-16.7%	6.7%	-7.7%	-35.3%	-8.4%		0.0%	-7.0%
Sub Saharan Africa	0.0%	-10.3%	-4.8%	-10.8%	0.0%	0.0%		-8.6%
Grand Total	-2.1%	-4.8%	-4.8%	-4.6%	-7.4%	-7.0%	-8.6%	-5.7%

Source: MDS Transmodal, Containership Databank February 2022

In terms of capacity, we estimate that the net effect of the contraction in direct connections (i.e. taking into account the introduction of new direct connections) in 2021Q4 as compared to 2020Q1 equated to a reduction of some 1.2% on the global level (excluding intra-regional services) and 1.6% on the Far East - North Europe & Mediterranean trade lane. It is important to notice that both these percentages have been gradually increasing since the beginning of 2020 when they are estimated to have been 0.1% and 0.3% respectively; this suggests a gradual removal of connections from the scheduled rotations offered by the shipping lines.

The following table (Table 6) shows the capacity scheduled to be offered to the EU as a whole and to the individual EU countries, including the UK, during the period 2020Q1-2021Q4. Analysing the trends, it emerges that, after a contraction witnessed in 2020Q2 and 2020Q3, capacity scheduled to be offered to the EU market as a whole has been increasing, with the percentage change between 2020Q1 and 2021Q4 equating to 6%, which is not significantly different from the growth estimated for the global market (including intra-regional services or short-sea markets) during the same period, equating to 7.2%, but well below the 14.6% growth rate estimated for the deep-sea markets (i.e. excluding the intra-regional services), which emphasises that the capacity deployed on the European market has grown at a lower rate than other deep-sea routes. Analysing the scheduled capacity at the EU country level, we observe that various countries have seen a contraction in the capacity scheduled to be offered to their ports, with the most significant reduction observed for the Netherlands, which is estimated to

have seen a reduction of almost 11%, suggesting a contraction in the share of capacity offered to this country from 54% in 2020Q1 to 46% in 2021Q4. France and the UK have also experienced a contraction during the period analysed. By contrast, Spain and Malta are estimated to have seen a significant increase in the level of capacity scheduled to be offered by the shipping lines. It is important to notice, however, that the growth for Spain is mainly driven by an increase of capacity offered to Algeciras, which, as for Malta, is a transshipment hub. This implies that an increasing proportion of containers are being delivered into the European market by transshipment.

Table 6: Scheduled quarterly capacity (mTEU), ranked by 2021Q4

EU area / EU country & UK	2020Q1	2020Q2	2020Q3	2020Q4	2021Q1	2021Q2	2021Q3	2021Q4	2021Q4 vs 2020Q1	share of EU + UK		2021Q4 minus 2020Q1
										2020Q1	2021Q4	
EU + UK	11.33	10.57	10.91	11.32	11.47	11.60	11.79	12.01	6.0%			
EU	11.33	10.57	10.91	11.32	11.47	11.59	11.78	11.99	5.8%			
Germany	5.90	5.44	5.60	5.60	5.71	5.82	5.92	5.96	0.9%	52%	50%	-2.51
Netherlands	6.15	5.12	5.36	5.48	5.59	5.68	5.65	5.48	-10.9%	54%	46%	-8.67
Spain	4.78	4.70	4.70	5.11	4.69	5.05	5.30	5.24	9.6%	42%	44%	1.43
Belgium	5.01	4.77	5.00	5.11	5.22	5.33	5.10	5.11	1.9%	44%	43%	-1.72
United Kingdom	5.24	4.68	4.96	5.30	5.31	4.97	4.85	4.70	-10.2%	46%	39%	-7.08
France	4.73	4.72	4.48	4.50	4.56	4.35	4.11	3.89	-17.8%	42%	32%	-9.40
Italy	3.25	3.03	3.12	3.12	3.07	3.17	3.16	3.13	-3.8%	29%	26%	-2.66
Greece	1.77	1.73	1.93	2.06	2.10	2.11	2.27	2.00	12.6%	16%	17%	0.97
Portugal	0.98	0.96	1.15	1.13	1.12	1.07	1.12	1.33	35.9%	9%	11%	2.43
Malta	0.85	0.74	0.92	0.93	1.10	0.87	0.91	1.16	35.5%	8%	10%	2.10
Poland	0.56	0.52	0.52	0.52	0.53	0.52	0.62	0.62	11.0%	5%	5%	0.23
Croatia	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.29	3.8%	2%	2%	-0.05
Slovenia	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.29	3.8%	2%	2%	-0.05
Sweden	0.26	0.25	0.27	0.28	0.28	0.28	0.28	0.28	9.3%	2%	2%	0.07
Denmark	0.27	0.26	0.28	0.29	0.29	0.28	0.28	0.28	5.5%	2%	2%	-0.01
Romania	0.21	0.21	0.12	0.12	0.13	0.13	0.13	0.13	-41.1%	2%	1%	-0.83
Lithuania	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.10		0%	1%	0.87
Irish Republic	0.03	0.03	0.07	0.07	0.07	0.07	0.07	0.07	123.3%	0%	1%	0.32
Overall global	49.43	47.64	49.01	50.34	51.38	52.58	52.87	52.97	7.2%			
Deepsea services only	27.14	25.55	27.17	27.97	28.77	29.65	30.56	31.10	14.6%			

Source: MDS Transmodal, Containership Databank February 2022

In the following table (Table 7) we break down the capacity scheduled to serve the EU+UK market by trade lane and by alliance, focusing on 2021Q4 vs 2020Q1. Unsurprisingly, as illustrated in the table, the most important trade lanes for the EU are: EU+UK - Far East, EU+UK - Gulf & ISC - Far East, EU+UK - North America, which together account for circa 58% of the total capacity calling at the EU+UK market. However, between 2020Q1 and 2021Q4 we observe that while the level of capacity on EU+UK - North America has increased only by 1%, the other two trade lanes have seen significant changes: EU+UK - Far East up by circa 45% and EU+UK - Gulf & ISC - Far East down by more than 20%, reinforcing the results indicated above regarding shipping lines shortening their routes, so that more routes operate as shuttles. Looking at the alliances operating in these regions, we observe that 2M remains the major player but with a lower market share, down from 46.5% in 2020Q1 to 44.8% in 2021Q4. By contrast, Ocean Alliance has increased its share from 27.8% to 29.1% during the same period.

Table 7: Scheduled quarterly capacity (mTEU) by regions scheduled to be served by alliance – EU+UK trade lanes

Regions scheduled to be served	Alliance	2020Q1	2021Q4	% change 2021Q4 vs 2020Q1	share of total		2021Q4 minus 2020Q1 (% points)
					2020Q1	2021Q4	
EU+UK - Far East	OCEAN ALLIANCE	934,614	1,381,532	47.8%	8.3%	11.5%	3.3
	2M ALLIANCE	799,773	948,549	18.6%	7.1%	7.9%	0.8
	THE ALLIANCE	551,685	925,588	67.8%	4.9%	7.7%	2.8
	Others		67,865		0.0%	0.6%	0.6
EU+UK - Far East Total		2,286,072	3,323,535	45.4%	20.2%	27.7%	7.5
EU+UK - Gulf & ISC - Far East	2M ALLIANCE	1,059,387	1,195,466	12.8%	9.4%	10.0%	0.6
	OCEAN ALLIANCE	1,198,262	902,740	-24.7%	10.6%	7.5%	-3.1
	THE ALLIANCE	604,516	174,720	-71.1%	5.3%	1.5%	-3.9
	Others		6,075		0.0%	0.1%	0.1
EU+UK - Gulf & ISC - Far East Total		2,862,165	2,279,002	-20.4%	25.3%	19.0%	-6.3
EU+UK - North America	2M ALLIANCE	502,072	443,649	-11.6%	4.4%	3.7%	-0.7
	THE ALLIANCE	427,297	420,787	-1.5%	3.8%	3.5%	-0.3
	OCEAN ALLIANCE	268,272	311,922	16.3%	2.4%	2.6%	0.2
	Others	178,885	215,764	20.6%	1.6%	1.8%	0.2
EU+UK - North America Total		1,376,525	1,392,122	1.1%	12.2%	11.6%	-0.6
EU+UK - Sub Saharan Africa	2M ALLIANCE	604,011	667,881	10.6%	5.3%	5.6%	0.2
	OCEAN ALLIANCE	218,108	226,850	4.0%	1.9%	1.9%	0.0
	Others	199,088	160,300	-19.5%	1.8%	1.3%	-0.4
	THE ALLIANCE	101,698	112,809	10.9%	0.9%	0.9%	0.0
EU+UK - Sub Saharan Africa Total		1,122,904	1,167,840	4.0%	9.9%	9.7%	-0.2
EU+UK - Gulf & ISC	2M ALLIANCE	661,386	562,563	-14.9%	5.8%	4.7%	-1.2
	THE ALLIANCE	210,409	280,093	33.1%	1.9%	2.3%	0.5
	OCEAN ALLIANCE	252,187	235,825	-6.5%	2.2%	2.0%	-0.3
	Others	27,964	18,915	-32.4%	0.2%	0.2%	-0.1
EU+UK - Gulf & ISC Total		1,151,946	1,097,396	-4.7%	10.2%	9.1%	-1.0
EU+UK - Latin America	2M ALLIANCE	598,203	553,293	-7.5%	5.3%	4.6%	-0.7
	OCEAN ALLIANCE	148,542	166,206	11.9%	1.3%	1.4%	0.1
	THE ALLIANCE	174,990	141,288	-19.3%	1.5%	1.2%	-0.4
	Others	67,080	60,313	-10.1%	0.6%	0.5%	-0.1
EU+UK - Latin America Total		988,815	921,100	-6.8%	8.7%	7.7%	-1.1
EU+UK - North America - Latin America	2M ALLIANCE	438,581	521,730	19.0%	3.9%	4.3%	0.5
	THE ALLIANCE	182,350	213,230	16.9%	1.6%	1.8%	0.2
	OCEAN ALLIANCE	72,589	74,588	2.8%	0.6%	0.6%	0.0
	Others	45,083	11,831	-73.8%	0.4%	0.1%	-0.3
EU+UK - North America - Latin America Total		738,603	821,379	11.2%	6.5%	6.8%	0.3
EU+UK - Far East - North America	OCEAN ALLIANCE		145,331		0.0%	1.2%	1.2
	THE ALLIANCE	116,471	115,275	-1.0%	1.0%	1.0%	-0.1
	2M ALLIANCE	163,125		-100.0%	1.4%	0.0%	-1.4
	Others	14,130		-100.0%	0.1%	0.0%	-0.1
EU+UK - Far East - North America Total		293,727	260,606	-11.3%	2.6%	2.2%	-0.4
EU+UK - Gulf & ISC - North America - Latin America	2M ALLIANCE	106,503	215,008	101.9%	0.9%	1.8%	0.8
EU+UK - Gulf & ISC - North America - Latin America Total		106,503	215,008	101.9%	0.9%	1.8%	0.8
EU+UK - Gulf & ISC - North America	2M ALLIANCE	81,215	193,948	138.8%	0.7%	1.6%	0.9
	Others	1,547		-100.0%	0.0%	0.0%	0.0
EU+UK - Gulf & ISC - North America Total		82,762	193,948	134.3%	0.7%	1.6%	0.9
EU+UK - Gulf & ISC - Far East - North America	THE ALLIANCE		182,237		0.0%	1.5%	1.5
	2M ALLIANCE	176,196		-100.0%	1.6%	0.0%	-1.6
EU+UK - Gulf & ISC - Far East - North America Total		176,196	182,237	3.4%	1.6%	1.5%	0.0
EU+UK - Gulf & ISC - Far East - Australasia & Oceania - Sub Saharan Africa	2M ALLIANCE	74,001	73,968	0.0%	0.7%	0.6%	0.0
	OCEAN ALLIANCE	39,867	42,714	7.1%	0.4%	0.4%	0.0
EU+UK - Gulf & ISC - Far East - Australasia & Oceania - Sub Saharan Africa Total		113,868	116,682	2.5%	1.0%	1.0%	0.0
EU+UK - Gulf & ISC - Sub Saharan Africa	Others	12,410	18,915	52.4%	0.1%	0.2%	0.0
EU+UK - Gulf & ISC - Sub Saharan Africa Total		12,410	18,915	52.4%	0.1%	0.2%	0.0
EU+UK - Australasia & Oceania - North America - Latin America	OCEAN ALLIANCE	14,857	13,583	-8.6%	0.1%	0.1%	0.0
	Others		2,031		0.0%	0.0%	0.0
EU+UK - Australasia & Oceania - North America - Latin America Total		14,857	15,614	5.1%	0.1%	0.1%	0.0
EU+UK - Latin America - Sub Saharan Africa	Others		5,278		0.0%	0.0%	0.0
EU+UK - Latin America - Sub Saharan Africa Total			5,278		0.0%	0.0%	0.0
EU+UK - Gulf & ISC - Far East - North America - Sub Saharan Africa	Others		1,547		0.0%	0.0%	0.0
EU+UK - Gulf & ISC - Far East - North America - Sub Saharan Africa Total			1,547		0.0%	0.0%	0.0
Grand Total		11,327,352	12,012,208	6.0%	100.0%	100.0%	0.0

	2020Q1	2021Q4	% change 2021Q4 vs 2020Q1	share of total		2021Q4 minus 2020Q1 (% points)
				2020Q1	2021Q4	
OCEAN ALLIANCE	3,147,298	3,501,291	11.2%	27.8%	29.1%	1.4
2M ALLIANCE	5,264,453	5,376,055	2.1%	46.5%	44.8%	-1.7
THE ALLIANCE	2,369,415	2,566,028	8.3%	20.9%	21.4%	0.4
Others	546,186	568,834	4.1%	4.8%	4.7%	-0.1
Grand Total	11,327,352	12,012,208	6.0%	100.0%	100.0%	0.0

Source: MDS Transmodal, Containership Databank February 2022

Extending the analysis of the changes in capacity occurring between 2020Q1 and 2021Q4 to all trade lanes, the following table (Table 8) shows that on a global level the trade lane to have experienced the most significant increase is Far East – North America, up by almost 70% during this period; the level of capacity on the trade lane accounted for 11% in 2021Q4 (up from 7% in 2020Q1) when we look at the overall global capacity

and for almost 19% in 2021Q4 (up from 12.7% in 2020Q1) when we consider deep-sea services only.

Table 8: Scheduled quarterly capacity (mTEU) by regions scheduled to be served – all trade lanes

Regions scheduled to be served	2020Q1	2021Q4	% change 2021Q4 vs 2020Q1	Overall global			Deepsea services only		
				share of total		2021Q4 minus 2020Q1 (% points)	share of total		2021Q4 minus 2020Q1 (% points)
				2020Q1	2021Q4		2020Q1	2021Q4	
Far East	12,787,472	12,066,588	-5.6%	25.9%	22.8%	-3.1			
Far East - North America	3,442,965	5,838,114	69.6%	7.0%	11.0%	4.1	12.7%	18.8%	6.1
Europe & Med	5,510,976	5,584,470	1.3%	11.1%	10.5%	-0.6			
Gulf & ISC - Far East	3,424,472	3,543,974	3.5%	6.9%	6.7%	-0.2	12.6%	11.4%	-1.2
Europe & Med - Far East	2,286,072	3,323,535	45.4%	4.6%	6.3%	1.6	8.4%	10.7%	2.3
Europe & Med - Gulf & ISC - Far East	3,041,045	2,459,008	-19.1%	6.2%	4.6%	-1.5	11.2%	7.9%	-3.3
Far East - North America - Latin America	2,170,278	2,391,131	10.2%	4.4%	4.5%	0.1	8.0%	7.7%	-0.3
Gulf & ISC	2,052,678	2,024,768	-1.4%	4.2%	3.8%	-0.3			
North America - Latin America	1,786,661	1,663,366	-6.9%	3.6%	3.1%	-0.5	6.6%	5.3%	-1.2
Far East - Australasia & Oceania	1,356,078	1,654,781	22.0%	2.7%	3.1%	0.4	5.0%	5.3%	0.3
Europe & Med - North America	1,386,592	1,414,630	2.0%	2.8%	2.7%	-0.1	5.1%	4.5%	-0.6
Europe & Med - Gulf & ISC	1,157,092	1,205,470	4.2%	2.3%	2.3%	-0.1	4.3%	3.9%	-0.4
Europe & Med - Sub Saharan Africa	1,142,817	1,178,010	3.1%	2.3%	2.2%	-0.1	4.2%	3.8%	-0.4
Latin America	1,036,466	1,160,826	12.0%	2.1%	2.2%	0.1			
Europe & Med - Latin America	988,815	921,100	-6.8%	2.0%	1.7%	-0.3	3.6%	3.0%	-0.7
Europe & Med - North America - Latin America	738,603	821,379	11.2%	1.5%	1.6%	0.1	2.7%	2.6%	-0.1
Far East - Sub Saharan Africa	717,201	775,262	8.1%	1.5%	1.5%	0.0	2.6%	2.5%	-0.1
Gulf & ISC - Far East - North America	686,845	752,472	9.6%	1.4%	1.4%	0.0	2.5%	2.4%	-0.1
Far East - Latin America	296,816	601,144	102.5%	0.6%	1.1%	0.5	1.1%	1.9%	0.8
Gulf & ISC - Sub Saharan Africa	501,343	555,561	10.8%	1.0%	1.0%	0.0	1.8%	1.8%	-0.1
Sub Saharan Africa	372,649	476,344	27.8%	0.8%	0.9%	0.1			
Gulf & ISC - Far East - Sub Saharan Africa	527,603	474,292	-10.1%	1.1%	0.9%	-0.2	1.9%	1.5%	-0.4
North America	322,462	317,303	-1.6%	0.7%	0.6%	-0.1			
Europe & Med - Gulf & ISC - North America	191,738	317,115	65.4%	0.4%	0.6%	0.2	0.7%	1.0%	0.3
Europe & Med - Far East - North America	293,727	260,606	-11.3%	0.6%	0.5%	-0.1	1.1%	0.8%	-0.2
Australasia & Oceania	214,611	246,564	14.9%	0.4%	0.5%	0.0			
Europe & Med - Gulf & ISC - North America - Latin America	106,503	215,008	101.9%	0.2%	0.4%	0.2	0.4%	0.7%	0.3
Europe & Med - Gulf & ISC - Far East - North America	176,196	182,237	3.4%	0.4%	0.3%	0.0	0.6%	0.6%	-0.1
Far East - Australasia & Oceania - Latin America	120,634	120,340	-0.2%	0.2%	0.2%	0.0	0.4%	0.4%	-0.1
Europe & Med - Gulf & ISC - Far East - Australasia & Oceania - Sub Saharan Africa	113,868	116,682	2.5%	0.2%	0.2%	0.0	0.4%	0.4%	0.0
Australasia & Oceania - North America	71,193	64,964	-8.7%	0.1%	0.1%	0.0	0.3%	0.2%	-0.1
Gulf & ISC - North America	0	58,460		0.0%	0.1%	0.1	0.0%	0.2%	0.2
Australasia & Oceania - North America - Latin America	45,469	44,735	-1.6%	0.1%	0.1%	0.0	0.2%	0.1%	0.0
Far East - Australasia & Oceania - North America	36,995	41,106	11.1%	0.1%	0.1%	0.0	0.1%	0.1%	0.0
North America - Latin America - Sub Saharan Africa	31,873	34,291	7.6%	0.1%	0.1%	0.0	0.1%	0.1%	0.0
Latin America - Sub Saharan Africa	42,826	21,047	-50.9%	0.1%	0.0%	0.0	0.2%	0.1%	-0.1
Europe & Med - Gulf & ISC - Sub Saharan Africa	12,410	18,915	52.4%	0.0%	0.0%	0.0	0.0%	0.1%	0.0
Europe & Med - Australasia & Oceania - North America - Latin America	14,857	15,614	5.1%	0.0%	0.0%	0.0	0.1%	0.1%	0.0
North America - Sub Saharan Africa	10,828	10,828	0.0%	0.0%	0.0%	0.0	0.0%	0.0%	0.0
Europe & Med - Gulf & ISC - Far East - North America - Sub Saharan Africa	0	1,547		0.0%	0.0%	0.0	0.0%	0.0%	0.0
Europe & Med - Latin America - Sub Saharan Africa	0	1,320		0.0%	0.0%	0.0	0.0%	0.0%	0.0
Gulf & ISC - Far East - North America - Latin America	92,337	0	-100.0%	0.2%	0.0%	-0.2	0.3%	0.0%	-0.3
Far East - Latin America - Sub Saharan Africa	124,680	0	-100.0%	0.3%	0.0%	-0.3	0.5%	0.0%	-0.5
Overall global	49,434,745	52,974,907	7.2%	100.0%	100.0%	0.0			
Deepsea services only	27,137,432	31,098,043	14.6%	54.9%	58.7%	3.8	100.0%	100.0%	0.0

Source: MDS Transmodal, Containership Databank February 2022

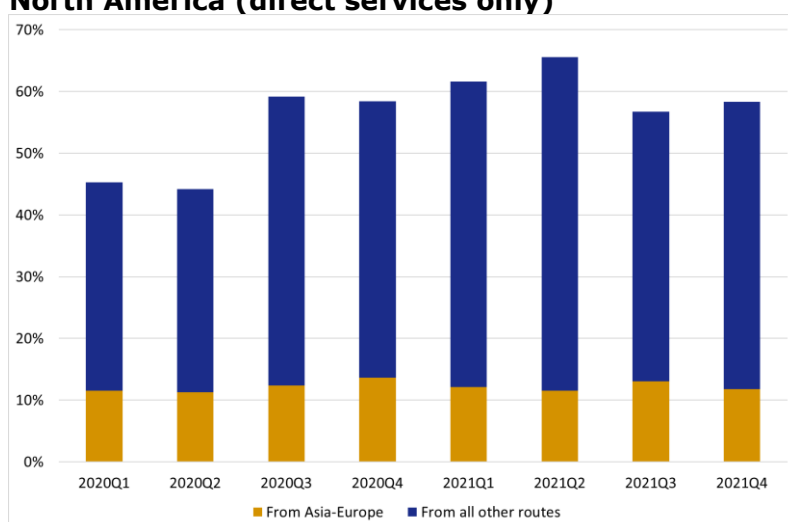
Examining the capacity allocated⁶ to the Far East – North America route in more detail, we observe that a significant percentage of capacity on this trade lane has been reallocated from the Far East – North Europe & Mediterranean trade lane. Conversely, we do not see a significant reallocation from Far East – North America to Far East – North Europe & Mediterranean. The findings of our calculations are illustrated in the following tables and figures (Tables 9 and 10, Figures 11 and 12).

⁶ 'Capacity allocated' is to be read as capacity scheduled to be deployed.

Table 9: Changes in allocated capacity, year-on-year comparison, Far East – North America

	Total FE-NA direct	of which new/inactive/unknown	% of total	of which from FE-Europe routes	% of total	of which already on FE-NA direct	% of total	of which from all other routes	% of total
2020Q1	3,453,924	104,745	3.0%	397,555	11.5%	1,888,601	54.7%	1,063,023	30.8%
2020Q2	2,744,491	30,897	1.1%	308,874	11.3%	1,532,511	55.8%	872,210	31.8%
2020Q3	3,540,966	179,895	5.1%	439,526	12.4%	1,445,705	40.8%	1,475,839	41.7%
2020Q4	3,681,174	300,482	8.2%	502,176	13.6%	1,530,675	41.6%	1,347,841	36.6%
2021Q1	4,106,383	366,115	8.9%	497,678	12.1%	1,576,228	38.4%	1,666,363	40.6%
2021Q2	4,914,222	804,986	16.4%	565,522	11.5%	1,689,788	34.4%	1,853,926	37.7%
2021Q3	5,391,528	518,492	9.6%	703,015	13.0%	2,333,174	43.3%	1,836,847	34.1%
2021Q4	5,849,072	493,254	8.4%	691,802	11.8%	2,437,287	41.7%	2,226,730	38.1%

Source: MDS Transmodal, Containership Databank February 2022

Figure 11: Changes in allocated capacity, year-on-year comparison, Far East – North America (direct services only)


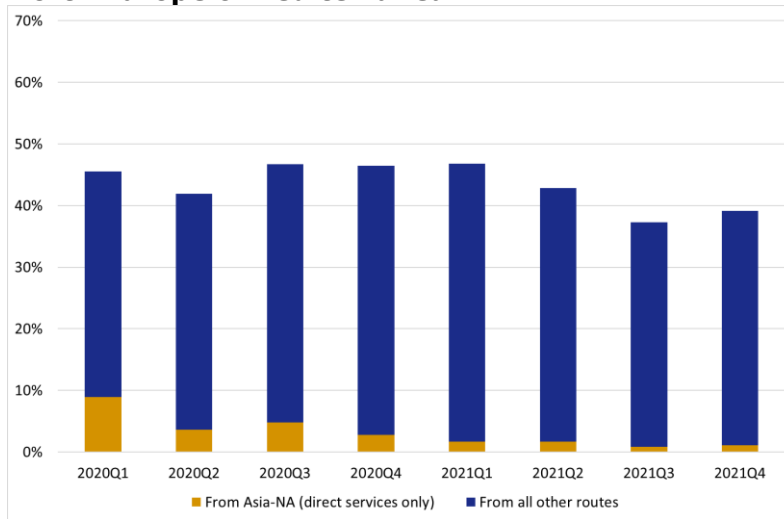
Source: MDS Transmodal, Containership Databank February 2022

Table 10: Changes in allocated capacity, year-on-year comparison, Far East – North Europe & Mediterranean

	Total FE-Europe all routes	of which new/inactive/unknown	% of total	of which from FE-NA direct route	% of total	of which already on FE-Europe routes	% of total	of which from all other routes	% of total
2020Q1	5,923,390	728,829	12.3%	529,218	8.9%	3,223,387	54.4%	1,441,957	24.3%
2020Q2	5,284,059	322,095	6.1%	189,840	3.6%	3,070,601	58.1%	1,701,523	32.2%
2020Q3	5,695,141	635,120	11.2%	272,882	4.8%	3,035,882	53.3%	1,751,257	30.8%
2020Q4	5,916,143	838,282	14.2%	163,962	2.8%	3,166,273	53.5%	1,747,626	29.5%
2021Q1	5,886,357	751,783	12.8%	98,999	1.7%	3,129,810	53.2%	1,905,765	32.4%
2021Q2	6,018,281	1,106,643	18.4%	101,818	1.7%	3,441,088	57.2%	1,368,731	22.7%
2021Q3	6,259,756	815,006	13.0%	54,548	0.9%	3,924,026	62.7%	1,466,176	23.4%
2021Q4	6,356,097	714,898	11.2%	70,362	1.1%	3,868,311	60.9%	1,702,527	26.8%

Source: MDS Transmodal, Containership Databank February 2022

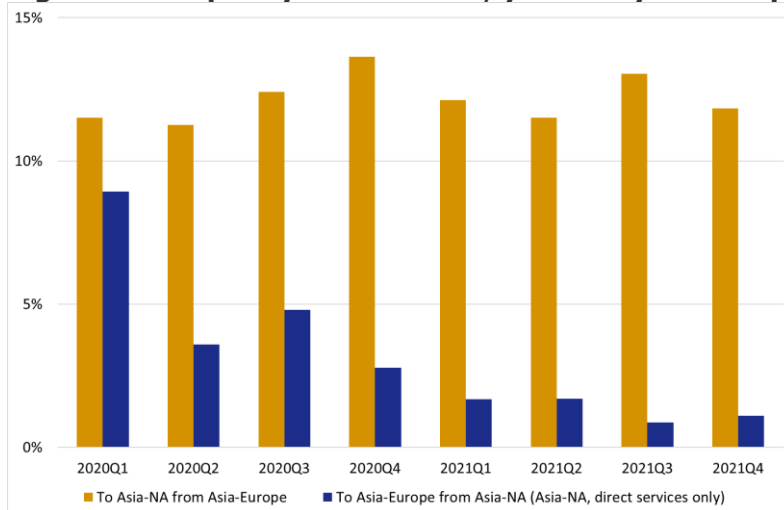
Figure 12: Changes in allocated capacity, year-on-year comparison, Far East – North Europe & Mediterranean



Source: MDS Transmodal, Containership Databank February 2022

Carriers reacted to the demand surge on the Far East-North America trade lane by shifting capacity to this route from other routes including the Far East-Europe trade lane. As a result, a net shift of capacity from Far East-Europe to the Far East-North America intensified since the second quarter of 2020 (Figure 13), which contributed to a reduction of capacity offered on the Asia-Europe routes and that might have been a contributing factor to the increase in freight rates on these routes. If on the one hand the reallocation of capacity has allowed efficiency in serving markets with higher demand, on the other hand it has created situations in which local problems translated into global problems - in particular port congestion experienced mainly by the North American ports.

Figure 13: Capacity reallocation, year-on-year comparison

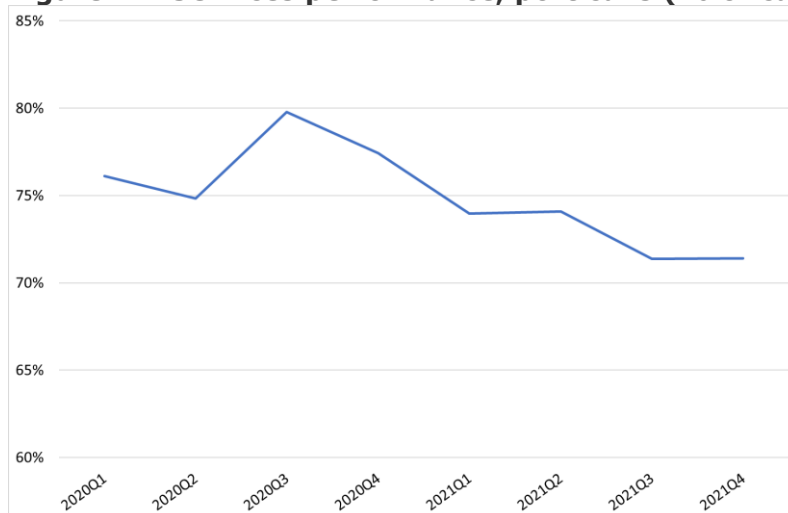


Source: MDS Transmodal, Containership Databank February 2022

4.2 Actual deployment

Comparing the level of capacity scheduled to be deployed with the actual deployment⁷, we observe that between 2020Q1 and 2021Q4, the percentage of calls made compared to the scheduled calls have been decreasing (Figure 14). As illustrated in the chart, the number of actual port calls (as the share of scheduled calls) has been declining since the second quarter of 2020 with the share of actual calls per scheduled calls reaching a level of 71% in the fourth quarter of 2021.

Figure 14: Services performance, port calls (% of calls achieved), Global

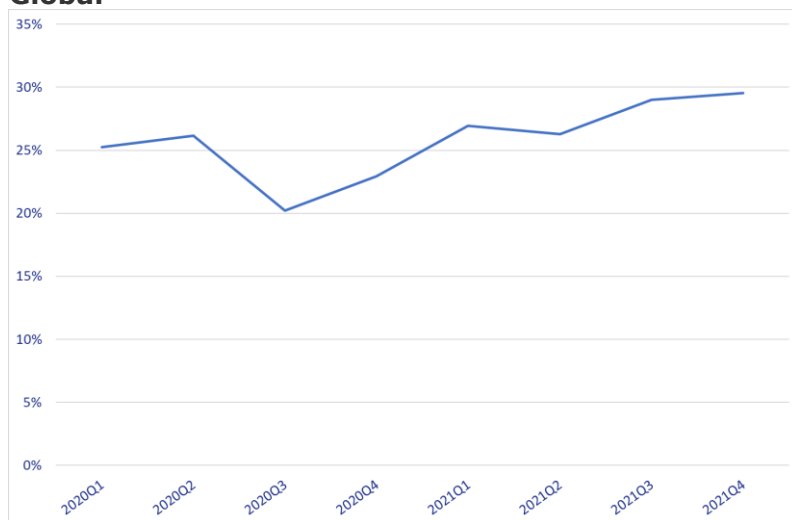


Source: MDS Transmodal, Containership Databank February 2022 & AIS data

The impacts that skipped calls can have on a given port/country varies depending on the service affected by the port cancellation, i.e. depending on the capacity scheduled to be offered at a given port/country that did not materialise. Focusing on the services actually offered (i.e. leaving aside the services completely cancelled), the following chart (Figure 15) shows the percentage of capacity affected by the skipped calls. As the chart illustrates, the deterioration in the number of calls actually made translates into a deterioration in the level of capacity offered, with the level of capacity affected by skipped calls increasing from some 25% in 2020Q1 to approximately 30% in 2021Q4, meaning that in 2021Q4 30% of the capacity expected to be offered was either cancelled or not offered at the time it was expected. Taking all ports together, noting that although overall corridor capacity will have fallen less, the impact on individual ports and the shippers they support may be severe.

⁷ For this analysis, we have focused our attention on liner services scheduled to deploy ships with average capacity of at least 3,000 TEU; vessels of this size are considered the most relevant ones to assess the capacity offered on the global trade lanes. In this context a scheduled call on a weekly service can generally be expected 13 times per quarter at each port served.

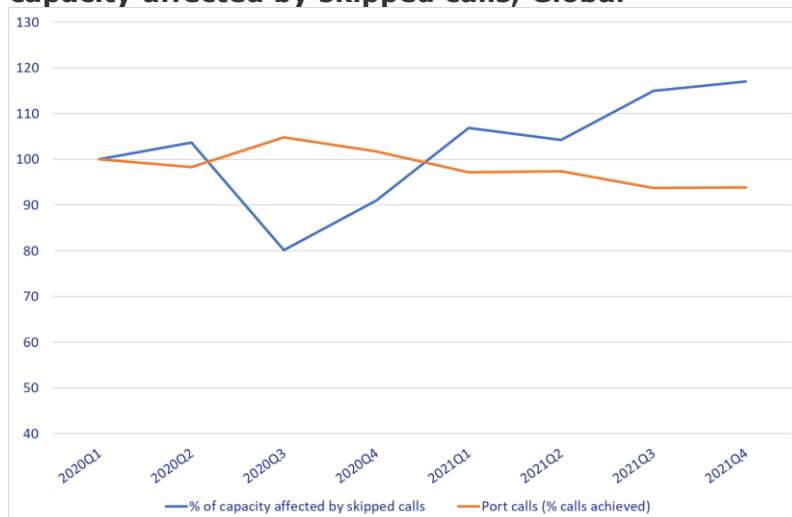
Figure 15: Services performance, % of capacity affected by skipped calls, Global



Source: MDS Transmodal, Containership Databank February 2022 & AIS data

The following chart (Figure 16) illustrates both the percentage of calls actually made and the impact that skipped calls have on the level of capacity offered; the two performance indicators are shown as an index with 2020Q1=100. The graph emphasises the rate of increase in what de-facto can be called 'lost capacity' due to skipped calls at the port level.

Figure 16: Services performance, port calls (% of calls achieved) and % of capacity affected by skipped calls, Global



Source: MDS Transmodal, Containership Databank February 2022 & AIS data

The following table (Table 11) shows the percentage of calls actually made for each region connected with the EU, showing a deterioration for all the services except for those offered on the EU - Sub Saharan Africa trade lane. It is noticeable that amongst the routes to have seen the biggest deteriorations are those covering more than two regions, suggesting that shipping lines have been readjusting their schedules. In other terms, shipping lines seem to have been implementing changes in their service patterns, either due to a higher surge in demand in some world regions than others and/or due to port congestion, before formalising the changes in their new network, with the main

factor underpinning the misalignment being the constraint in the amount of deployable capacity available to meet the surge in demand.

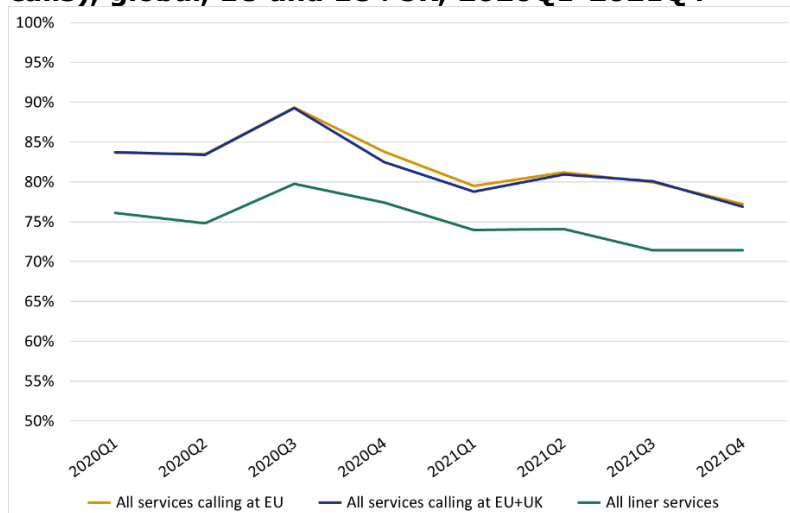
Table 11: % of occurrence, all services calling at EU & EU+UK, 2020Q1-2021Q4

	2020Q1	2020Q2	2020Q3	2020Q4	2021Q1	2021Q2	2021Q3	2021Q4	2021Q4 minus 2020Q1 (% points)
EU - Far East	81%	75%	89%	77%	85%	80%	80%	72%	-9.3
EU - Far East - North America	85%	90%	96%	87%	73%	87%	79%	66%	-18.3
EU - Gulf & ISC	87%	69%	86%	90%	78%	80%	77%	75%	-11.4
EU - Gulf & ISC - Far East	79%	75%	88%	81%	86%	82%	80%	77%	-1.5
EU - Gulf & ISC - Far East - Australasia & Oceania - Sub Saharan Africa	77%	85%	85%	75%	76%	65%	63%	48%	-29.2
EU - Gulf & ISC - Far East - North America	100%	74%	92%	87%	73%	77%	73%	65%	-34.6
EU - Gulf & ISC - North America	100%	81%	92%	94%	88%	100%	100%	86%	-14.4
EU - Gulf & ISC - North America - Latin America	77%	100%	100%	62%	51%	44%	48%	64%	-12.8
EU - Latin America	86%	92%	91%	81%	85%	90%	88%	85%	-1.0
EU - North America	84%	89%	90%	83%	80%	82%	78%	79%	-5.7
EU - North America - Latin America	85%	92%	89%	87%	79%	80%	83%	79%	-5.9
EU - Sub Saharan Africa	77%	74%	85%	80%	76%	83%	81%	83%	6.0
Mean average									
All services calling at EU	84%	83%	89%	84%	80%	81%	80%	77%	-6.5
All services calling at EU+UK	84%	83%	89%	82%	79%	81%	80%	77%	-6.8
All liner services	76%	75%	80%	77%	74%	74%	71%	71%	-4.7
Index 2020Q1=100									
All services calling at EU	100	100	107	100	95	97	96	92	
All services calling at EU+UK	100	100	107	99	94	97	96	92	
All liner services	100	98	105	102	97	97	94	94	

Source: MDS Transmodal, Containership Databank February 2022 & AIS data

The following figure (Figure 17) shows that the deterioration in port calls affecting the EU countries has followed a similar path to the deterioration estimated at the global level, with the performance for the EU, in absolute terms, being not as low as it has been for the industry as a whole.

Figure 17: Occurrence of port calls (port calls actually made/scheduled port calls), global, EU and EU+UK, 2020Q1-2021Q4



Source: MDS Transmodal, Containership Databank February 2022 & AIS data

5. Assessment of the level of concentration in the container shipping industry

The competitive landscape in which the shipping industry operates has changed since 2006 through the emergence of global alliances used by the major shipping lines as vehicles to share information and resources accompanied by the transformation of consortia as a tool for alliances. On the latter point, we estimate that in 2006 around 12% of containership capacity was operated by consortia formed by members of alliances; in 2021 the percentage increased to 42%; a significant role is being played by consortia consisting of members of different alliances, which can be considered “bridges” between alliances (Figure 18 and Table 12).

Box 1: Global alliances & consortia

Global alliances are cooperation agreements on a global scale between shipping lines whereas consortia refer to cooperation that focuses on single maritime services and single trade corridors - global alliances can be considered as bundles of consortia.

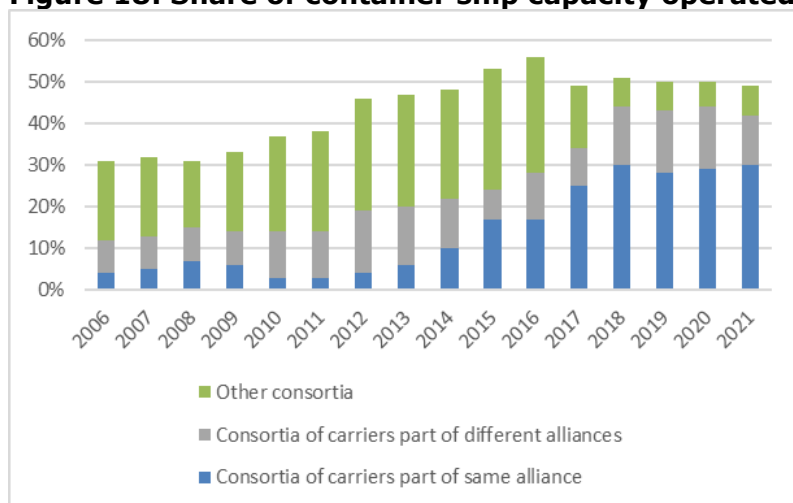
Lists of consortia signed up to by the shipping lines are not publicly available. We believe, however, that different shipping lines operating different vessels deployed on the same service can be de-facto considered as part of a consortium, with each combination of carriers listed as a separate consortium (as each of these combinations would require a separate agreement amongst the parties involved).

In order to identify such agreements (for which we do not take into account slot agreements), we have used our Consortia & Alliances Database (brief description provided in Appendix C).

The changes indicated above are not necessarily to be considered cause and effect of each other, i.e. in theory, the formation of a consortium does not require the existence of an alliance and vice versa.

Membership of consortia, especially those constituted by shipping lines that are members of different alliances, will provide competitive advantage through knowledge transfer between lines that can be used to better coordinate the adjustment of network capacity and repositioning of ships between trade lanes. It is important to note that the increase in the share of capacity offered by consortia with shipping lines members of alliances has been affected by the various Mergers & Acquisitions amongst the shipping lines with the most significant ones occurring after 2014; amongst others:

- CSAV merged into Hapag-Lloyd (2015)
- CSCL merged into COSCO (2016)
- NOL acquired by CMA-CGM (2017)
- UASC merged into Hapag-Lloyd (2017)
- Hamburg-Sud acquired by Maersk (2018)
- MOL, NYK and K-Line merged into ONE (2018)
- OOCL acquired by COSCO (2018)

Figure 18: Share of container ship capacity operated via consortia


Source: Merk and Teodoro (2022) <https://link.springer.com/article/10.1057/s41278-022-00225-x>

Table 12: Links between top 10 carriers via consortia in 2021

		2M	Ocean Alliance				THE Alliance					Total
		Maersk	MSC	CMA CGM	COSCO	Evergreen	Hapag Lloyd	HMM	ONE	Yang Ming	ZIM	
2M	Maersk		2	4	3		4		4		2	19
	MSC	2		1	2		4	1	3		1	14
Ocean Alliance	CMA CGM	4	1		10	5	8		2	1	2	33
	COSCO	3	2	10		12	6		10	5	3	51
	Evergreen			5	12		3	1	5	3	2	31
THE Alliance	Hapag Lloyd	4	4	8	6	3		5	11	6	1	48
	HMM		1			1	5		6	4		17
	ONE	4	3	2	10	5	11	6		7	3	51
	Yang Ming			1	5	3	6	4	7			26
	ZIM	2	1	2	3	2	1		3			14
Total		19	14	33	51	31	48	17	51	26	14	

Source: Merk and Teodoro (2022) <https://link.springer.com/article/10.1057/s41278-022-00225-x>

The two most frequently used indicators to assess industry concentration are: the four firm concentration ratio (CR4), calculated as the sum of the four companies with the largest market share, and the Herfindahl–Hirschman Index (HHI), calculated by squaring the market share of each competing company in an industry and then summing the resulting numbers.

When used to estimate the level of concentration in the container shipping industry, however, these indicators show a significant limitation, which is that of not taking into account the reality of consortia, alliances and the interlinkages among them - increasingly significant in this industry.

Alternative indicators aiming to address this gap have been recently proposed in a study⁸ conducted by Olaf Merk (OECD/ITF) and Antonella Teodoro (MDS Transmodal); namely:

1. Market share of consortia and independent operators
2. Share of consortia exceeding combined market share thresholds
3. Consortia Market Concentration Index (CMCI)

⁸ <https://link.springer.com/article/10.1057/s41278-022-00225-x>

4. Modified Herfindahl–Hirschman Index (HHI) to take account of common ownership (in Appendix D, we briefly describe this indicator and the main findings for two European trade corridors)
5. Interlinkages between carriers.

Based on that study and interrogating our Consortia & Alliances Database, in the following sections we present our assessment of the concentration in the shipping industry. For this evaluation, we have focused our attention on the market shares based on scheduled capacity (section 5.1) and on the Consortia Market Concentration Index (CMCI) (section 5.2).

The excel files provided to the EU for this section are:

- 3.A CMCI 2019Q1-2021Q4
- 3.B Combined market shares based on scheduled capacity 2019Q1-2021Q4
- 3.C CMCI & combined market shares 2019Q1-2021Q4

In Appendix E, Appendix F and Appendix G we specify the list of countries/country areas included in the regions and maritime regions, the list of trade corridors analysed, and the way the Spanish ports and the French ports have been split between Northern EU ports and Mediterranean EU ports.

5.1 Market shares

For each trade corridor (as listed in Appendix F) and for each shipping line active in that trade corridor, we have calculated the market share based on the capacity scheduled to be offered. For any given corridor, we can have:

- shipping lines offering their services alone – we define these shipping lines as **independents**: in this case, the market share for each independent shipping line equates to the capacity it offers divided by the total capacity offered on that corridor;
- shipping lines offering their services with other shipping lines - we define these shipping lines as **consortia**⁹: in this case, we have combined market shares, which equate to the sum of the individual market shares of the shipping line members of that consortia. Given that the same shipping line can be part of more than one consortium in a given corridor, there could be cases in which the sum of the combined market shares exceeds 100% (i.e. the market share of that shipping line is counted more than once). For completeness, in our tables and excel files provided to the EC, for each consortium we show both the combined market shares as well as the market shares of the members of that consortium.

NOTE: there could be trade corridors in which a shipping line offers one or more services as an independent line and one or more services as part of a consortium (or as part of more than one consortium). Although we believe that, in these cases, that shipping line should not be considered as a pure independent line, we show it (and its market share) twice: as an independent line and as part of a consortium – this is in order to provide to the EC as much information as possible. The market share of such a carrier (either as an independent carrier or as a consortium member) is calculated based on the whole capacity scheduled to be deployed on the trade by that carrier (i.e., the capacity of a carrier is entirely attributed to that carrier each time that carrier is accounted for).

⁹ Slot agreements are not considered

Box 2: Market shares based on capacity offered rather than cargo moved

We calculate market shares based on the scheduled capacity offered by the shipping lines and not on the volume of cargo moved by the shipping lines.

We acknowledge that in the European Union legislation for the Consortia Block Exemption Regulation (CBER), the market shares refer to the volumes carried by the shipping lines rather than the capacity they offer; however, in an environment in which shipping lines are strongly linked with each other via consortia agreements, it is plausible to assume that shipping lines define the level of capacity to bring to a given service on the basis of the volumes they need (or expect) to carry. In other terms, we can reasonably assume that the agreements on supply reflect the split in demand carried by the member of the consortia and, therefore, supply can be used as a good proxy to assess market shares, and in turn, the level of concentration in the industry.

In the following parts of this section, we present our estimated market shares based on scheduled capacity looking at consortia and alliances¹⁰ and looking at the EU (including the UK) as a whole. We also present our results for the Far East - North America trade lane.

¹⁰ The services operated by shipping lines that are members of an alliance are considered offered by the whole alliance regardless of being operated by one or more of the alliance's members.

The supporting excel files provided to the EC, also show the results for the:

- EU (excluding the UK) as a whole
- Northern EU countries (including the UK)
- Northern EU countries (excluding the UK)
- Mediterranean EU countries
- Each EU country

Trade corridor: EU (with UK) - Australasia & Oceania

The EU (with UK) - Australasia & Oceania trade corridor is substantially served by CMA-CGM and MSC with Marfret only accounting for circa 2% of the total capacity offered to this route. The two major shipping lines, part of two different alliances, offer joint services to this market with their market shares estimated to have remained substantially stable during the period 2020Q1-2021Q4. The results of our analysis are shown in the following tables.

Table 13.A: Trade corridor: EU (with UK) - Australasia & Oceania (by consortia)

Combined market shares, shipping line/consortium 30%+	Shipping line/Consortium	Shipping line	2020Q1	2020Q2	2020Q3	2020Q4	2021Q1	2021Q2	2021Q3	2021Q4
Yes	CMA-CGM	CMA-CGM	43%	48%						
	CMA-CGM_Marfret	CMA-CGM			42%	42%	42%	46%	50%	43%
		Marfret			2%	2%	2%	2%	2%	2%
	CMA-CGM_MSC	CMA-CGM	43%	48%	42%	42%	42%	46%	50%	43%
		MSC	57%	52%	56%	56%	56%	52%	48%	56%

Source: MDS Transmodal, Consortia & Alliances Database May 2022

Table 13.B: Trade corridor: EU (with UK) - Australasia & Oceania (by alliances)

Combined market shares, shipping line/alliance 30%+	Alliance	Shipping line	2020Q1	2020Q2	2020Q3	2020Q4	2021Q1	2021Q2	2021Q3	2021Q4
No	Others	Marfret			2%	2%	2%	2%	2%	2%
Yes	2M ALLIANCE	MSC	57%	52%	56%	56%	56%	52%	48%	56%
	OCEAN ALLIANCE	CMA-CGM	43%	48%	42%	42%	42%	46%	50%	43%

Source: MDS Transmodal, Consortia & Alliances Database May 2022

Trade corridor: EU (with UK) - Far East

On the EU (with UK) - Far East trade corridor, we identify 16 active shipping lines in 2021Q4, up from 9 in 2020Q1 with the major operators organised in consortia amongst members of the same alliances but also amongst members of different alliances. In 2021Q4, we identify 4 consortia with their combined market shares exceeding the 30% threshold, one more compared to 2020Q1. It is important to notice that the combined market share estimated for Maersk and MSC has seen a contraction from circa 40% estimated in 2020Q1 to some 36% in 2021Q4. Interestingly, during this period Maersk and MSC have started to offer joint services on the Far East – North America (direct services only), with their combined market share equating to some 26% in 2021Q4.

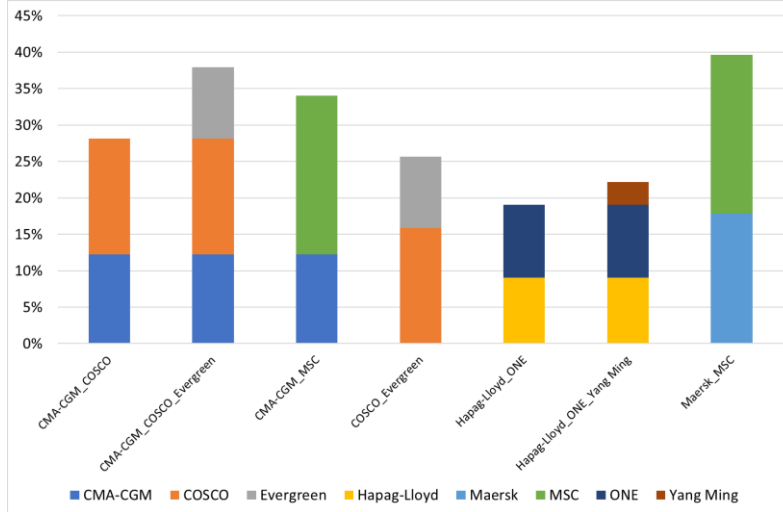
The percentage of capacity offered by shipping lines operating alone is estimated to equate to circa 1.1% in 2021Q4, up from some 0.2% in 2020Q1. The results of our analysis are shown in the following tables and charts.

Table 14.A: Trade corridor: EU (with UK) - Far East (by consortia)

Combined market shares, shipping line/consortium 30%+	Shipping line/Consortium	Shipping line	2020 Q1	2020 Q2	2020 Q3	2020 Q4	2021 Q1	2021 Q2	2021 Q3	2021 Q4
No	Bahri	Bahri						0%	0%	0%
	China United Lines	China United Lines							0%	0%
	CMA-CGM	CMA-CGM	12%	15%	14%	14%	14%	14%	14%	14%
	CMA-CGM_COSCO	CMA-CGM	12%			14%	14%	14%		
		COSCO	16%			16%	16%	16%		
	COSCO	COSCO	16%	17%	16%	16%	16%	16%	17%	17%
	COSCO_Evergreen	COSCO	16%	17%	16%	16%	16%	16%	17%	17%
		Evergreen	10%	11%	10%	9%	9%	9%	9%	10%
	Evergreen	Evergreen	10%	11%	10%	9%	9%	9%	9%	10%
	Hapag-Lloyd	Hapag-Lloyd	9%							
	Hapag-Lloyd_HMM_ONE	Hapag-Lloyd		8%	8%	8%	8%	8%	7%	7%
		HMM		1%	4%	6%	6%	6%	7%	7%
		ONE		10%	8%	8%	9%	9%	8%	8%
	Hapag-Lloyd_HMM_ONE_Yang Ming	Hapag-Lloyd			8%	8%				
		HMM			4%	6%				
		ONE			8%	8%				
		Yang Ming			2%	1%				
	Hapag-Lloyd_HMM_Yang Ming	Hapag-Lloyd			8%					7%
		HMM			4%					7%
		Yang Ming			2%					1%
	Hapag-Lloyd_ONE	Hapag-Lloyd	9%	8%	8%		8%	8%	7%	7%
		ONE	10%	10%	8%		9%	9%	8%	8%
	Hapag-Lloyd_ONE_Yang Ming	Hapag-Lloyd	9%	8%			8%			
		ONE	10%	10%			9%			
		Yang Ming	3%	3%			1%			
	HMM_ONE	HMM								7%
		ONE								8%
	Maersk	Maersk			18%	18%	18%	17%	16%	16%
	MSC	MSC	22%	17%	19%	19%	19%	20%	20%	20%
	ONE	ONE	10%	10%	8%	8%	9%	9%	8%	8%
	ONE_Yang Ming	ONE		10%	8%	8%	9%	9%	8%	8%
		Yang Ming		3%	2%	1%	1%	1%	1%	1%
	Rickmers Linie	Rickmers Linie	0%	0%						
	Schoeller	Schoeller						0%	0%	0%
	Sea Lead Shipping	Sea Lead Shipping								0%
	CMA-CGM_Evergreen	CMA-CGM		15%						
		Evergreen		11%						
	DKT Allseas	DKT Allseas						0%	0%	0%
	DCGFM	DCGFM								0%
	Rif Line	Rif Line								0%
Yes	CMA-CGM_COSCO	CMA-CGM		15%	14%				14%	14%
		COSCO		17%	16%				17%	17%
	CMA-CGM_COSCO_Evergreen	CMA-CGM	12%		14%	14%	14%	14%	14%	14%
		COSCO	16%		16%	16%	16%	16%	17%	17%
		Evergreen	10%		10%	9%	9%	9%	9%	10%
	CMA-CGM_MSC	CMA-CGM	12%	15%	14%	14%	14%	14%	14%	14%
		MSC	22%	17%	19%	19%	19%	20%	20%	20%
	Maersk_MSC	Maersk	18%	19%	18%	18%	18%	17%	16%	16%
		MSC	22%	17%	19%	19%	19%	20%	20%	20%

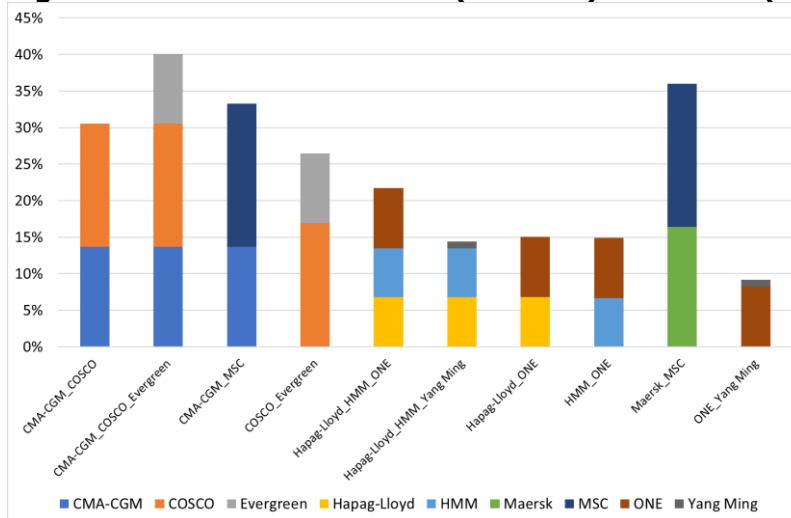
Source: MDS Transmodal, Consortia & Alliances Database May 2022

Figure 19: Trade corridor: EU (with UK) – Far East (by consortia), 2020Q1



Source: MDS Transmodal, Consortia & Alliances Database May 2022

Figure 20: Trade corridor: EU (with UK) - Far East (by consortia), 2021Q4



Source: MDS Transmodal, Consortia & Alliances Database May 2022

Unsurprisingly, considering the results derived from our analysis on the consortia active on this trade corridor, the major alliances on the EU (with UK) - Far East routes are 2M and Ocean Alliances with their combined market shares always above the 30% threshold during the period 2020Q1-2021Q4.

Table 14.B: Trade corridor: EU (with UK) - Far East (by alliances)

Combined market shares, shipping line/alliance 30%+	Alliance	Shipping line	2020Q1	2020Q2	2020Q3	2020Q4	2021Q1	2021Q2	2021Q3	2021Q4
No	Others	Bahri						0%	0%	0%
		China United Lines							0%	0%
		Rickmers Linie	0%	0%						
		Schoeller						0%	0%	0%
		Sea Lead Shipping								0%
		DKT Allseas						0%	0%	0%
		DCGFM								0%
		Rif Line								0%
	THE ALLIANCE	Hapag-Lloyd	9%	8%	8%	8%	8%	8%	7%	7%
		HMM		1%	4%	6%	6%	6%	7%	7%
		ONE	10%	10%	8%	8%	9%	9%	8%	8%
		Yang Ming	3%	3%	2%	1%	1%	1%	1%	1%
Yes	2M ALLIANCE	Maersk	18%	19%	18%	18%	18%	17%	16%	16%
		MSC	22%	17%	19%	19%	19%	20%	20%	20%
	OCEAN ALLIANCE	CMA-CGM	12%	15%	14%	14%	14%	14%	14%	14%
		COSCO	16%	17%	16%	16%	16%	16%	17%	17%
		Evergreen	10%	11%	10%	9%	9%	9%	9%	10%

Source: MDS Transmodal, Consortia & Alliances Database May 2022

Trade corridor: EU (with UK) - Gulf & ISC

On the EU (with UK) - Gulf & ISC trade corridor, we identify 11 active shipping lines in 2021Q4, down from 12 active in 2020Q1. On this trade corridor, in 2021Q4 the independent lines accounted for 0.2% of the total capacity offered, down marginally from the 0.3% estimated for 2020Q1. The number of consortia active on these routes is also estimated to have seen a contraction: from 11 in 2020Q1 to 8 in 2021Q4, with those above the 30% threshold down from 6 to 2 during the same period mainly due to a loss in market share for COSCO and Evergreen. However, the number of consortia with a combined market share now exceeding 50% is up to 2; MSC is active in both with an estimated market share of 37%. The results of our analysis are shown in the following tables and charts.

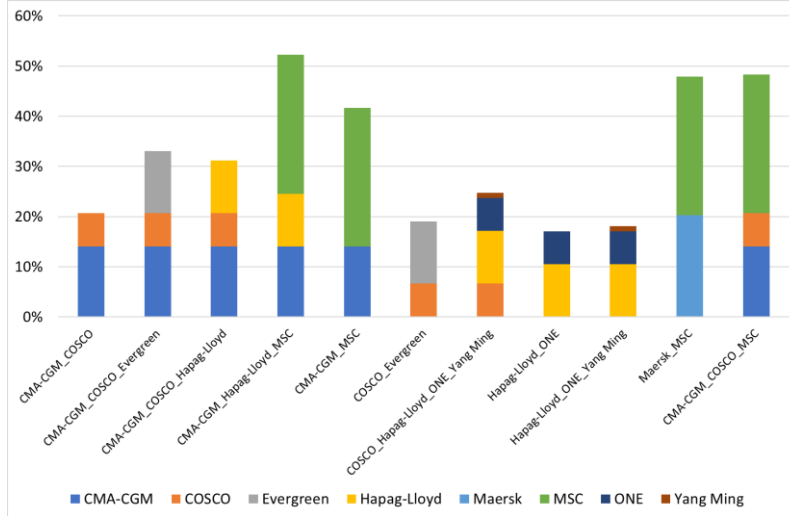
Table 15.A: Trade corridor: EU (with UK) - Gulf & ISC (by consortia)

Combined market shares, shipping line/consortium 30%+	Shipping line/Consortium	Shipping line	2020 Q1	2020 Q2	2020 Q3	2020 Q4	2021 Q1	2021 Q2	2021 Q3	2021 Q4
No	Bahri	Bahri	0%	0%	0%	0%	0%	0%	0%	0%
	CMA-CGM	CMA-CGM	14%	15%	14%	14%	15%	15%	16%	17%
	CMA-CGM_COSCO	CMA-CGM	14%	15%	14%	14%	15%	15%	16%	17%
		COSCO	7%	6%	6%	6%	7%	6%	6%	5%
	CMA-CGM_COSCO_Evergreen	CMA-CGM								17%
		COSCO								5%
		Evergreen								7%
	CMA-CGM_COSCO_Hapag-Lloyd	CMA-CGM				14%			16%	17%
		COSCO				6%			6%	5%
		Hapag-Lloyd				9%			8%	9%
	CMA-CGM_Hapag-Lloyd	CMA-CGM					15%			
		Hapag-Lloyd					9%			
	COSCO_Evergreen	COSCO	7%	6%	6%	6%	7%	6%	6%	
		Evergreen	12%	13%	13%	12%	12%	12%	13%	
	COSCO_Hapag-Lloyd	COSCO					7%			
		Hapag-Lloyd					9%			
	COSCO_Hapag-Lloyd_ONE_Yang Ming	COSCO	7%	6%	6%	6%	7%	6%	6%	5%

Combined market shares, shipping line/consortium 30%+	Shipping line/Consortium	Shipping line	2020 Q1	2020 Q2	2020 Q3	2020 Q4	2021 Q1	2021 Q2	2021 Q3	2021 Q4
		Hapag-Lloyd	11%	11%	10%	9%	9%	9%	8%	9%
		ONE	7%	5%	5%	5%	5%	6%	5%	5%
		Yang Ming	1%	3%	2%	1%	1%	1%	1%	2%
	Evergreen	Evergreen	12%	13%	13%	12%	12%	12%	13%	7%
	Hapag-Lloyd_HMM_ONE	Hapag-Lloyd				9%	9%	9%		
		HMM				4%	5%	3%		
		ONE				5%	5%	6%		
	Hapag-Lloyd_HMM_ONE_Yang Ming	Hapag-Lloyd			10%					
		HMM			3%					
		ONE			5%					
		Yang Ming			2%					
	Hapag-Lloyd_ONE	Hapag-Lloyd	11%	11%	10%		9%	9%	8%	9%
		ONE	7%	5%	5%		5%	6%	5%	5%
	Hapag-Lloyd_ONE_Yang Ming	Hapag-Lloyd	11%	11%						
		ONE	7%	5%						
		Yang Ming	1%	3%						
	IRISL	IRISL	0%	0%	0%					
	Maersk	Maersk	20%	21%	18%	16%	16%	15%	16%	18%
	MSC	MSC	28%	24%	28%					
	ONE_Yang Ming	ONE		5%	5%	5%	5%	6%	5%	5%
		Yang Ming		3%	2%	1%	1%	1%	1%	2%
	Rickmers Linie	Rickmers Linie	0%	0%	0%					
	Schoeller	Schoeller						0%	0%	0%
	CMA-CGM_Evergreen	CMA-CGM		15%						
		Evergreen		13%						
	Messina	Messina	1%	1%	1%	1%	1%	1%	1%	1%
Yes	CMA-CGM_COSCO_Evergreen	CMA-CGM	14%		14%	14%	15%	15%	16%	
		COSCO	7%		6%	6%	7%	6%	6%	
		Evergreen	12%		13%	12%	12%	12%	13%	
	CMA-CGM_COSCO_Hapag-Lloyd	CMA-CGM	14%	15%	14%		15%	15%		
		COSCO	7%	6%	6%		7%	6%		
		Hapag-Lloyd	11%	11%	10%		9%	9%		
	CMA-CGM_Hapag-Lloyd_MSC	CMA-CGM	14%	15%	14%	14%				
		Hapag-Lloyd	11%	11%	10%	9%				
		MSC	28%	24%	28%	31%				
	CMA-CGM_MSC	CMA-CGM	14%	15%	14%	14%	15%	15%	16%	17%
		MSC	28%	24%	28%	31%	30%	32%	33%	37%
	Maersk_MSC	Maersk	20%	21%	18%	16%	16%	15%	16%	18%
		MSC	28%	24%	28%	31%	30%	32%	33%	37%
	MSC	MSC				31%	30%	32%	33%	37%
	CMA-CGM_COSCO_MSC	CMA-CGM	14%							
		COSCO	7%							
		MSC	28%							

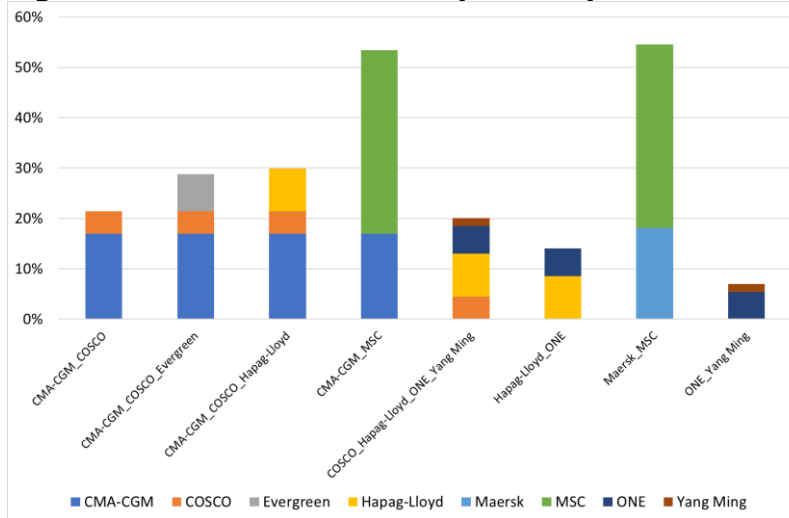
Source: MDS Transmodal, Consortia & Alliances Database May 2022

Figure 21: Trade corridor: EU (with UK) - Gulf & ISC (by consortia), 2020Q1



Source: MDS Transmodal, Consortia & Alliances Database May 2022

Figure 22: Trade corridor: EU (with UK) - Gulf & ISC (by consortia), 2021Q4



Source: MDS Transmodal, Consortia & Alliances Database May 2022

Analysing the market shares by alliances, shows results aligned with those we derived looking at the consortia: 2M and Ocean Alliances are the dominant players on the EU (with UK) - Gulf & ISC trade corridor, with their combined market shares in 2021Q4 equating to circa 55% and 29% respectively (up from 48% and down from 33% estimated in 2020Q1 respectively).

Table 15.B: Trade corridor: EU (with UK) - Gulf & ISC (by alliance)

Combined market shares, shipping line/alliance 30%+	Alliance	Shipping line	2020Q1	2020Q2	2020Q3	2020Q4	2021Q1	2021Q2	2021Q3	2021Q4
No	OCEAN ALLIANCE	CMA-CGM								17%
		COSCO								5%
		Evergreen								7%
	Others	Bahri	0%	0%	0%	0%	0%	0%	0%	0%
		IRISL	0%	0%	0%					
		Rickmers Linie	0%	0%	0%					
		Schoeller						0%	0%	0%
		Messina	1%	1%	1%	1%	1%	1%	1%	1%
	THE ALLIANCE	Hapag-Lloyd	11%	11%	10%	9%	9%	9%	8%	9%
		HMM			3%	4%	5%	3%		
		ONE	7%	5%	5%	5%	5%	6%	5%	5%
		Yang Ming	1%	3%	2%	1%	1%	1%	1%	2%
Yes	2M ALLIANCE	Maersk	20%	21%	18%	16%	16%	15%	16%	18%
		MSC	28%	24%	28%	31%	30%	32%	33%	37%
	OCEAN ALLIANCE	CMA-CGM	14%	15%	14%	14%	15%	15%	16%	
		COSCO	7%	6%	6%	6%	7%	6%	6%	
		Evergreen	12%	13%	13%	12%	12%	12%	13%	

Source: MDS Transmodal, Consortia & Alliances Database May 2022

Trade corridor: EU (with UK) - Latin America

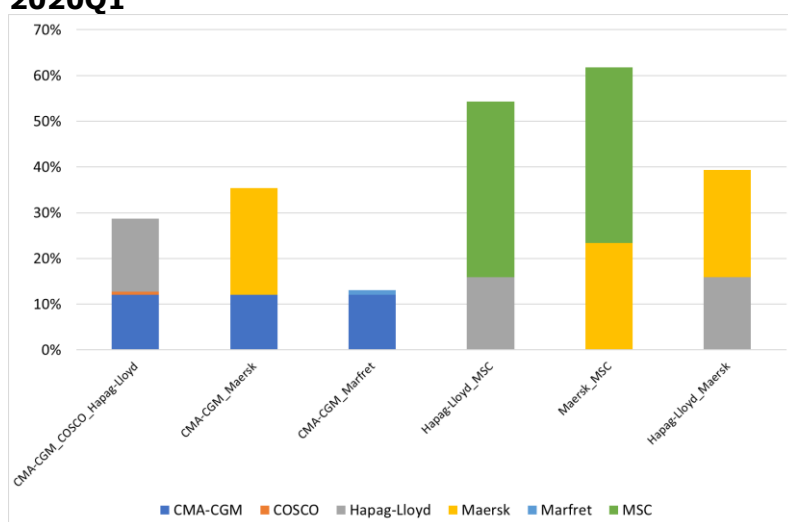
Between 2020Q1 and 2021Q4, we do not see any major changes on EU (with UK) - Latin America trade lane in terms of number of shipping lines active and in terms of market shares. In 2021Q4, we identify 15 active shipping lines, down from 16 in 2020Q1 while the number of consortia has remained stable at 6 – four of which are above the 30% threshold in 2021Q4 as they were in 2020Q1. The results of our analysis are shown in the following tables and charts.

Table 16.A: Trade corridor: EU (with UK) - Latin America (by consortia)

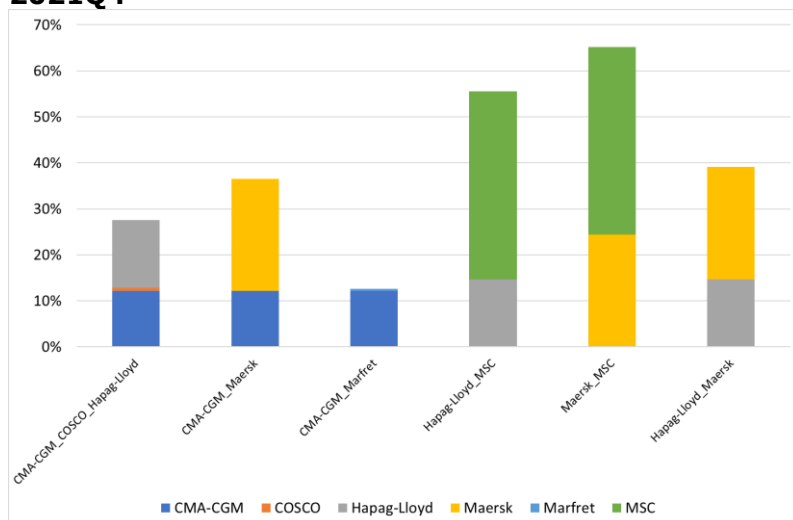
Combined market shares, shipping line/consortium 30%+	Shipping line/Consortium	Shipping line	2020 Q1	2020 Q2	2020 Q3	2020 Q4	2021 Q1	2021 Q2	2021 Q3	2021 Q4
No	CMA-CGM	CMA-CGM	12%	13%	13%	13%	12%	13%	13%	12%
	CMA-CGM_COSCO_Hapag-Lloyd	CMA-CGM	12%	13%	13%	13%	12%	13%	13%	12%
		COSCO	1%	1%	1%	1%	1%	1%	1%	1%
		Hapag-Lloyd	16%	16%	14%	15%	14%	14%	14%	15%
	CMA-CGM_Marfret	CMA-CGM	12%	13%	13%	13%	12%	13%	13%	12%
		Marfret	1%	1%	1%	1%	1%	1%	1%	0%
	Dole	Dole	0%	0%	0%	0%	0%	0%	0%	0%
	Ecuadorian Line	Ecuadorian Line	0%	0%	0%					
	Europe Caribbean Line	Europe Caribbean Line	0%	0%	0%	0%	0%	0%	0%	0%
	Grimaldi Group	Grimaldi Group		0%	0%	0%	0%	0%	0%	0%
	Hapag-Lloyd	Hapag-Lloyd	16%	16%	14%	15%	14%	14%	14%	15%
	Maersk	Maersk	23%	22%	24%	23%	22%	22%	23%	24%
	ONE	ONE	3%	3%	3%	3%	3%	3%	3%	3%
	Melfi Marine	Melfi Marine	1%	1%	1%	1%	1%	0%	0%	0%
	Nirint	Nirint	1%	0%	0%	0%	0%	0%	0%	0%
	Cosiarma	Cosiarma	0%	0%	0%	0%	0%	0%	0%	0%
	Geest	Geest	0%	0%	0%	0%	0%			
	Great White Fleet	Great White Fleet	2%	2%	2%	2%	2%	2%	2%	2%
	Seatrade	Seatrade	0%	0%	1%	0%	0%	1%	1%	1%
Yes	CMA-CGM_Maersk	CMA-CGM	12%	13%	13%	13%	12%	13%	13%	12%
		Maersk	23%	22%	24%	23%	22%	22%	23%	24%
	Hapag-Lloyd_MSC	Hapag-Lloyd	16%	16%	14%	15%	14%	14%	14%	15%
		MSC	38%	39%	39%	39%	42%	42%	42%	41%
	Maersk_MSC	Maersk	23%	22%	24%	23%	22%	22%	23%	24%
		MSC	38%	39%	39%	39%	42%	42%	42%	41%
	MSC	MSC	38%	39%	39%	39%	42%	42%	42%	41%
	Hapag-Lloyd_Maersk	Hapag-Lloyd	16%	16%	14%	15%	14%	14%	14%	15%
		Maersk	23%	22%	24%	23%	22%	22%	23%	24%

Source: MDS Transmodal, Consortia & Alliances Database May 2022

Figure 23: Trade corridor: EU (with UK) - Latin America (by consortia), 2020Q1



Source: MDS Transmodal, Consortia & Alliances Database May 2022

Figure 24: Trade corridor: EU (with UK) - Latin America (by consortia), 2021Q4


Source: MDS Transmodal, Consortia & Alliances Database May 2022

No major changes emerge when we analyse the alliances serving this market, with the dominant player remaining 2M with a combined market share in 2021Q4 equating to 65% (up from 62% in 2020Q1).

Table 16.B: Trade corridor: EU (with UK) - Latin America (by alliances)

Combined market shares, shipping line/alliance 30%+	Alliance	Shipping line	2020Q1	2020Q2	2020Q3	2020Q4	2021Q1	2021Q2	2021Q3	2021Q4	
No	OCEAN ALLIANCE	CMA-CGM	12%	13%	13%	13%	12%	13%	13%	12%	
		COSCO	1%	1%	1%	1%	1%	1%	1%	1%	
	Others	Dole	0%	0%	0%	0%	0%	0%	0%	0%	
		Ecuadorian Line	0%	0%	0%						
		Europe Caribbean Line	0%	0%	0%	0%	0%	0%	0%	0%	
		Grimaldi Group		0%	0%	0%	0%	0%	0%	0%	
		Marfrret	1%	1%	1%	1%	1%	1%	1%	0%	
		Melfi Marine	1%	1%	1%	1%	1%	0%	0%	0%	
	Yes	2M ALLIANCE	Nirint	1%	0%	0%	0%	0%	0%	0%	0%
			Cosiarma	0%	0%	0%	0%	0%	0%	0%	0%
		THE ALLIANCE	Geest	0%	0%	0%	0%	0%			
			Great White Fleet	2%	2%	2%	2%	2%	2%	2%	2%
			Seatrade	0%	0%	1%	0%	0%	1%	1%	1%
			Hapag-Lloyd	16%	16%	14%	15%	14%	14%	14%	15%
ONE			3%	3%	3%	3%	3%	3%	3%	3%	
MSC			38%	39%	39%	39%	42%	42%	42%	41%	

Source: MDS Transmodal, Consortia & Alliances Database May 2022

Trade corridor: EU (with UK) - North America

Analysing the EU (with UK) - North America trade corridor, we identify 16 active shipping lines in 2021Q4 – a stable number of operators compared to 2020Q1. As for the number of consortia, we observe an increase from 12 to 14 during the same period with 4 now exceeding the 30% threshold (as compared to 3 in 2020Q1). During the same period, we also estimate a contraction in the share of capacity offered by independent shipping lines, from 7.3% in 2020Q1 to 6.0% in 2021Q4. The results of our analysis are shown in the following tables and charts.

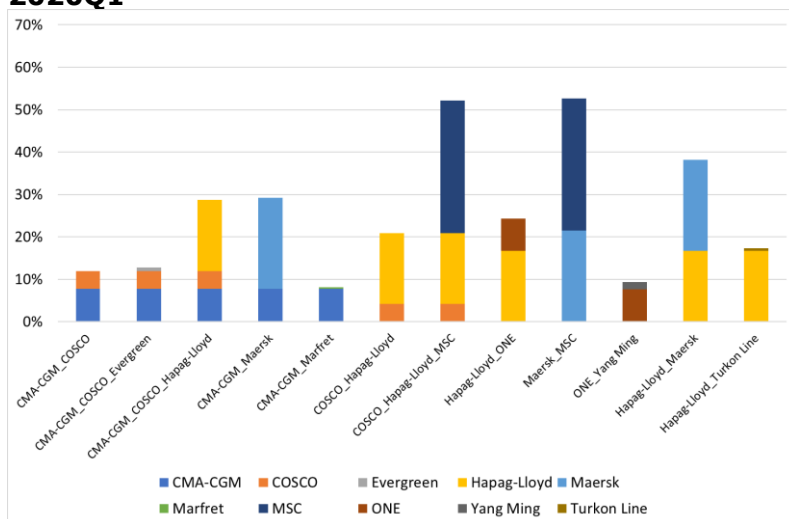
Table 17.A: Trade corridor: EU (with UK) - North America (by consortia)

Combined market shares, shipping line/consortium 30%+	Shipping line/Consortium	Shipping line	2020 Q1	2020 Q2	2020 Q3	2020 Q4	2021 Q1	2021 Q2	2021 Q3	2021 Q4
No	Atlantic Ro-Ro	Atlantic Ro-Ro	0%	0%	0%	0%	0%	0%	0%	0%
	Bahri	Bahri	0%	0%	0%	0%	0%	0%	0%	0%
	CMA-CGM	CMA-CGM	8%	8%						
	CMA-CGM_COSCO	CMA-CGM	8%	8%	7%	7%	7%	8%	8%	7%
		COSCO	4%	5%	5%	5%	5%	6%	10%	10%
	CMA-CGM_COSCO_Evergreen	CMA-CGM	8%	8%	7%	7%	7%	8%	8%	7%
		COSCO	4%	5%	5%	5%	5%	6%	10%	10%
		Evergreen	1%	1%	1%	1%	1%	1%	1%	1%
	CMA-CGM_COSCO_Hapag-Lloyd	CMA-CGM	8%	8%	7%	7%	7%			
		COSCO	4%	5%	5%	5%	5%			
		Hapag-Lloyd	17%	15%	13%	14%	15%			
	CMA-CGM_Maersk	CMA-CGM	8%	8%	7%	7%	7%	8%	8%	7%
		Maersk	21%	19%	18%	17%	18%	16%	15%	14%
	CMA-CGM_Marfret	CMA-CGM	8%	8%	7%	7%	7%	8%	8%	7%
		Marfret	0%	0%	0%	0%	0%	0%	0%	0%
		COSCO							10%	10%
		COSCO_Hapag-Lloyd	4%	5%	5%	5%	5%	6%	10%	10%
		Hapag-Lloyd	17%	15%	13%	14%	15%	18%	17%	18%
	Ecuadorian Line	Ecuadorian Line	0%	0%	0%					
	Grimaldi Group	Grimaldi Group	2%	2%	2%	2%	2%	2%	2%	2%
	Hapag-Lloyd	Hapag-Lloyd	17%	15%	13%	14%	15%	18%	17%	18%
	Hapag-Lloyd_ONE	Hapag-Lloyd	17%	15%		14%			17%	18%
		ONE	8%	13%		12%			12%	11%
	Hapag-Lloyd_ONE_Yang Ming	Hapag-Lloyd				14%	15%			
		ONE				12%	12%			
		Yang Ming				3%	3%			
	Independent	Independent	1%	1%	1%	1%	1%	1%	1%	1%
	Maersk	Maersk	21%	19%	18%	17%	18%	16%	15%	14%
	MSC	MSC		28%				28%	28%	
	ONE	ONE	8%	13%	14%	12%	12%	13%	12%	11%
	ONE_Yang Ming	ONE	8%	13%	14%	12%	12%	13%	12%	11%
		Yang Ming	2%	3%	3%	3%	3%	3%	2%	2%
	Rickmers Linie	Rickmers Linie	1%	0%						
	Splithoff	Splithoff	0%	0%	0%	0%	0%	0%	0%	0%
	Stinnes	Stinnes	0%	0%	0%	0%	0%	0%	0%	0%
	ZIM	ZIM	2%	2%	2%	2%	2%	2%	2%	2%
	Melfi Marine	Melfi Marine	1%	1%	1%	1%	1%	0%	0%	0%
	Nirint	Nirint	0%	0%	0%	0%	0%	0%	0%	0%
	Denmark Government	Denmark Government	0%	0%	1%	1%	1%			
	Turkon Line	Turkon Line			1%					
	Hapag-Lloyd_Turkon Line	Hapag-Lloyd	17%	15%		14%	15%	18%	17%	18%
		Turkon Line	1%	1%		0%	0%	0%	0%	0%
	COSCO_ONE_Yang Ming	COSCO		5%	5%	5%	5%	6%		
		ONE		13%	14%	12%	12%	13%		
		Yang Ming		3%	3%	3%	3%	3%		
	Eimskip_Denmark Government	Denmark Government			1%	1%	1%	0%	0%	0%
		Eimskip			0%	1%	1%	1%	1%	1%
	COSCO_ONE	COSCO							10%	10%
		ONE							12%	11%
Yes	CMA-CGM_COSCO_Hapag-Lloyd	CMA-CGM						8%	8%	7%
		COSCO						6%	10%	10%
		Hapag-Lloyd						18%	17%	18%
	COSCO_Hapag-Lloyd_MSC	COSCO	4%	5%	5%	5%	5%	6%	10%	10%
		Hapag-Lloyd	17%	15%	13%	14%	15%	18%	17%	18%
		MSC	31%	28%	30%	33%	32%	28%	28%	30%
	Hapag-Lloyd_ONE_Yang Ming	Hapag-Lloyd			13%			18%		
		ONE			14%			13%		
		Yang Ming			3%			3%		
	Maersk_MSC	Maersk	21%	19%	18%	17%	18%	16%	15%	14%
		MSC	31%	28%	30%	33%	32%	28%	28%	30%

Combined market shares, shipping line/consortium 30%+	Shipping line/Consortium	Shipping line	2020 Q1	2020 Q2	2020 Q3	2020 Q4	2021 Q1	2021 Q2	2021 Q3	2021 Q4
	MSC	MSC	31%		30%	33%	32%			30%
	Hapag-Lloyd_Maersk	Hapag-Lloyd	17%	15%	13%	14%	15%	18%	17%	18%
		Maersk	21%	19%	18%	17%	18%	16%	15%	14%

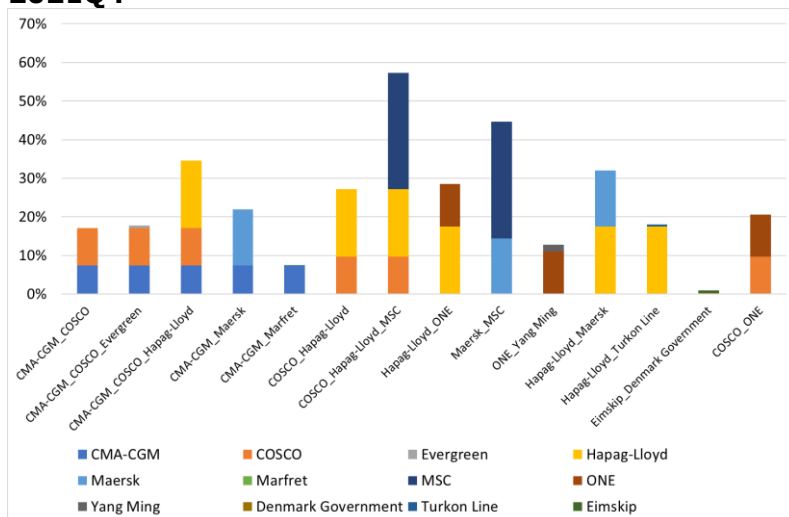
Source: MDS Transmodal, Consortia & Alliances Database May 2022

Figure 25: Trade corridor: EU (with UK) - North America (by consortia), 2020Q1



Source: MDS Transmodal, Consortia & Alliances Database May 2022

Figure 26: Trade corridor: EU (with UK) - North America (by consortia), 2021Q4



Source: MDS Transmodal, Consortia & Alliances Database May 2022

Analysing the market shares looking at the alliances, we observe that 2M remains the major player with the combined market share, however, down from 53% in 2020Q1 to 45% in 2021Q4. By contrast, THE Alliance and Ocean Alliance have both seen their presence increased on this trade corridor, with the combined market shares up from 26% to 30% and from 13% to 18% respectively during this period.

Table 17.B: Trade corridor: EU (with UK) - North America (by alliances)

Combined market shares, shipping line/alliance 30%+	Alliance	Shipping line	2020Q1	2020Q2	2020Q3	2020Q4	2021Q1	2021Q2	2021Q3	2021Q4
No	OCEAN ALLIANCE	CMA-CGM	8%	8%	7%	7%	7%	8%	8%	7%
		COSCO	4%	5%	5%	5%	5%	6%	10%	10%
		Evergreen	1%	1%	1%	1%	1%	1%	1%	1%
	Others	Atlantic Ro-Ro	0%	0%	0%	0%	0%	0%	0%	0%
		Bahri	0%	0%	0%	0%	0%	0%	0%	0%
		Ecuadorian Line	0%	0%	0%					
		Grimaldi Group	2%	2%	2%	2%	2%	2%	2%	2%
		Independent	1%	1%	1%	1%	1%	1%	1%	1%
		Marfret	0%	0%	0%	0%	0%	0%	0%	0%
		Rickmers Linie	1%	0%						
		Spliethoff	0%	0%	0%	0%	0%	0%	0%	0%
		Stinnes	0%	0%	0%	0%	0%	0%	0%	0%
		ZIM	2%	2%	2%	2%	2%	2%	2%	2%
		Melfi Marine	1%	1%	1%	1%	1%	0%	0%	0%
		Nirint	0%	0%	0%	0%	0%	0%	0%	0%
		Denmark Government	0%	0%	1%	1%	1%	0%	0%	0%
		Turkon Line	1%	1%	1%	0%	0%	0%	0%	0%
		Eimskip			0%	1%	1%	1%	1%	1%
	THE ALLIANCE	Hapag-Lloyd	17%			14%	15%			
		ONE	8%			12%	12%			
		Yang Ming	2%			3%	3%			
Yes	2M ALLIANCE	Maersk	21%	19%	18%	17%	18%	16%	15%	14%
		MSC	31%	28%	30%	33%	32%	28%	28%	30%
	THE ALLIANCE	Hapag-Lloyd		15%	13%			18%	17%	18%
		ONE		13%	14%			13%	12%	11%
		Yang Ming		3%	3%			3%	2%	2%

Source: MDS Transmodal, Consortia & Alliances Database May 2022

Trade corridor: EU (with UK) - Sub Saharan Africa

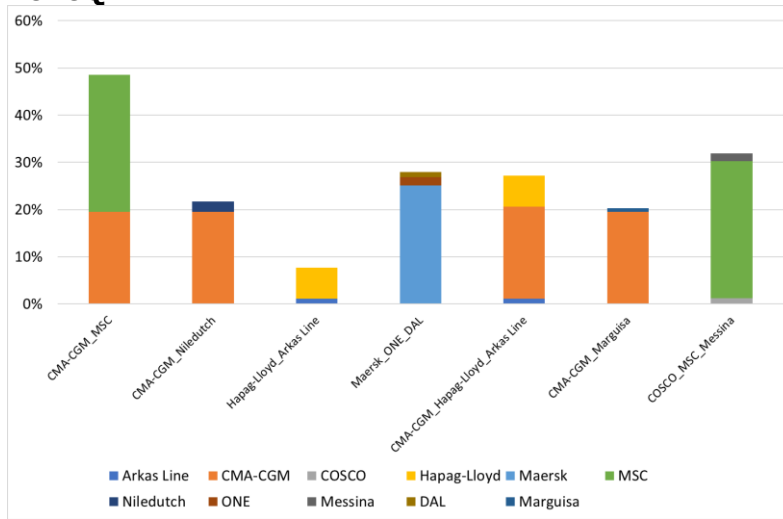
No major changes are observed on the EU (with UK) - Sub Saharan Africa trade lane between 2020Q1 and 2021Q4. The number of active shipping lines, in fact, has remained substantially flat (from 22 in 2020Q1 to 21 in 2021Q4) with the consortia passing from 7 to 6 during the same period. As in 2020Q1, in 2021Q4 we have 2 consortia above the 30% threshold, one consortium between CMA-CGM and MSC (also active and above the 30% threshold in 2020Q1) and one consortium between Maersk, ONE and DAL (active in 2020Q1 but with a combined market share less than 30%). The results of our analysis are shown in the following tables and charts.

Table 18.A: Trade corridor: EU (with UK) - Sub Saharan Africa (by consortia)

Combined market shares, shipping line/consortium 30%+	Shipping line/Consortium	Shipping line	2020 Q1	2020 Q2	2020 Q3	2020 Q4	2021 Q1	2021 Q2	2021 Q3	2021 Q4
No	Africa Express Line	Africa Express Line	1%	1%	1%	1%	1%	1%	1%	1%
	Bahri	Bahri						0%	0%	0%
	BOCS	BOCS	0%	0%	0%	0%	0%	0%	0%	0%
	CMA-CGM	CMA-CGM	19%	18%	22%	22%	20%	19%	20%	19%
	CMA-CGM_Hapag-Lloyd	CMA-CGM				22%		19%	20%	19%
		Hapag-Lloyd				5%		6%	6%	6%
	CMA-CGM_Niledutch	CMA-CGM	19%	18%	22%	22%	20%			
		Niledutch	2%	2%	2%	2%	2%			
	Copenship	Copenship	0%	0%						
	COSCO	COSCO								2%
	Euroafrica	Euroafrica	0%	0%	0%	0%	0%	0%	0%	0%
	Grimaldi Group	Grimaldi Group	3%	4%	4%	4%	4%	4%	4%	4%
	Hapag-Lloyd	Hapag-Lloyd	6%	6%	5%	5%	5%			
	Hapag-Lloyd_Arkas Line	Arkas Line	1%	1%	1%	1%	1%	1%	1%	1%
		Hapag-Lloyd	6%	6%	5%	5%	5%	6%	6%	6%
	Hartmann Asia Line	Hartmann Asia Line	0%	0%						
	MACS	MACS	1%	1%	1%	1%	1%	1%	1%	1%
	Maersk	Maersk	25%	27%	25%	24%	24%	24%	24%	27%
	MSC	MSC	29%			29%				29%
	Universal Africa Lines	Universal Africa Lines	0%	0%	0%	1%	1%	1%	1%	1%
	Messina	Messina	2%	2%	2%	2%	2%	1%	1%	1%
	Maersk_ONE_DAL	Maersk	25%			24%	24%	24%	24%	
		ONE	2%			2%	2%	2%	2%	
		DAL	1%			1%	1%	1%	1%	
	Maersk_ONE	Maersk		27%	25%					
		ONE		2%	1%					
	CMA-CGM_Hapag-Lloyd_Arkas Line	Arkas Line	1%	1%	1%		1%	1%	1%	1%
		CMA-CGM	19%	18%	22%		20%	19%	20%	19%
		Hapag-Lloyd	6%	6%	5%		5%	6%	6%	6%
	Boluda	Boluda	0%	0%	0%	0%	0%	0%	0%	0%
	CMA-CGM_Marguisa	CMA-CGM	19%	18%	22%	22%	20%	19%	20%	19%
		Marguisa	1%	1%	1%	1%	1%	1%	1%	0%
	Naviera DAL	Naviera DAL	0%	0%	0%	0%	0%	0%	0%	0%
	Grupo Sousa	Grupo Sousa	2%	2%	2%	2%	2%	2%	2%	2%
	PSL Navegacao	PSL Navegacao	1%	1%	1%	1%	1%	1%	1%	1%
	Anisfer Line	Anisfer Line						1%	1%	1%
Yes	CMA-CGM_MSC	CMA-CGM	19%	18%	22%	22%	20%	19%	20%	19%
		MSC	29%	30%	30%	29%	31%	34%	32%	29%
	MSC	MSC		30%	30%		31%	34%	32%	
	Maersk_ONE_DAL	Maersk								27%
		ONE								2%
		DAL								1%
	COSCO_MSC_Messina	COSCO	1%	1%	1%	1%	1%			
		MSC	29%	30%	30%	29%	31%			
		Messina	2%	2%	2%	2%	2%			
	COSCO_MSC	COSCO						1%	1%	
		MSC						34%	32%	

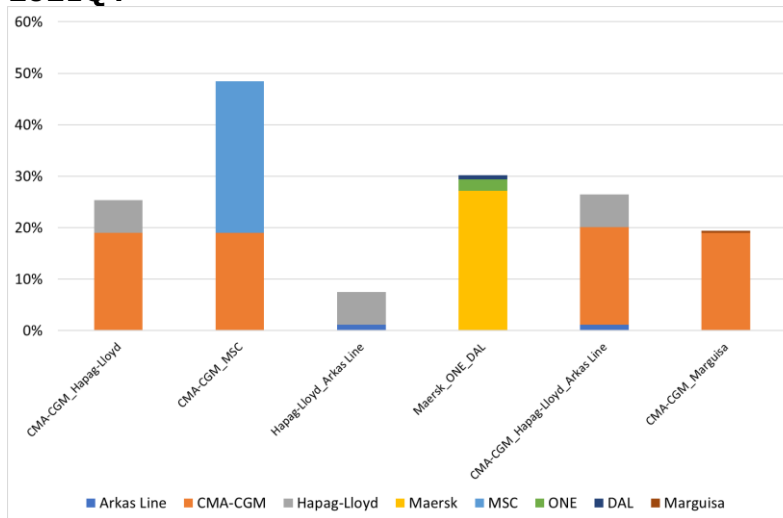
Source: MDS Transmodal, Consortia & Alliances Database May 2022

Figure 27: Trade corridor: EU (with UK) - Sub Saharan Africa (by consortia), 2020Q1



Source: MDS Transmodal, Consortia & Alliances Database May 2022

Figure 28: Trade corridor: EU (with UK) - Sub Saharan Africa (by consortia), 2021Q4



Source: MDS Transmodal, Consortia & Alliances Database May 2022

Looking at the alliances, the major player remains 2M with a combined market share of circa 57% in 2021Q4, up from some 54% in 2020Q1. The total market share for the independent shipping lines has seen a marginal contraction from 10% to 9.6% during the same period.

Table 18.B: Trade corridor: EU (with UK) - Sub Saharan Africa (by alliances)

Combined market shares, shipping line/alliance 30%+	Alliance	Shipping line	2020Q1	2020Q2	2020Q3	2020Q4	2021Q1	2021Q2	2021Q3	2021Q4
No	OCEAN ALLIANCE	CMA-CGM	19%	18%	22%	22%	20%	19%	20%	19%
		COSCO	1%	1%	1%	1%	1%	1%	1%	2%
	Others	Africa Express Line	1%	1%	1%	1%	1%	1%	1%	1%
		Arkas Line	1%	1%	1%	1%	1%	1%	1%	1%
		Bahri						0%	0%	0%
		BOCS	0%	0%	0%	0%	0%	0%	0%	0%
		Copenship	0%	0%						
		Euroafrica	0%	0%	0%	0%	0%	0%	0%	0%
		Grimaldi Group	3%	4%	4%	4%	4%	4%	4%	4%
		Hartmann Asia Line	0%	0%						
		MACS	1%	1%	1%	1%	1%	1%	1%	1%
		Niledutch	2%	2%	2%	2%	2%			
		Universal Africa Lines	0%	0%	0%	1%	1%	1%	1%	1%
		Messina	2%	2%	2%	2%	2%	1%	1%	1%
		DAL	1%			1%	1%	1%	1%	1%
		Boluda	0%	0%	0%	0%	0%	0%	0%	0%
		Marguisa	1%	1%	1%	1%	1%	1%	1%	0%
		Naviera DAL	0%	0%	0%	0%	0%	0%	0%	0%
		Grupo Sousa	2%	2%	2%	2%	2%	2%	2%	2%
		PSL Navegacao	1%	1%	1%	1%	1%	1%	1%	1%
		Anisfer Line						1%	1%	1%
	THE ALLIANCE	Hapag-Lloyd	6%	6%	5%	5%	5%	6%	6%	6%
		ONE	2%	2%	1%	2%	2%	2%	2%	2%
Yes	2M ALLIANCE	Maersk	25%	27%	25%	24%	24%	24%	24%	27%
		MSC	29%	30%	30%	29%	31%	34%	32%	29%

Source: MDS Transmodal, Consortia & Alliances Database May 2022

5.2 Consortia Market Concentration Index (CMCI)

In this section, we present and analyse the Consortia Market Concentration Index (CMCI) and the components underpinning the Indicator at the EU (including the UK) area level and for the same trade corridors analysed in the previous section. For each trade corridor, we indicate the consortium/alliance with the highest combined market share based on scheduled capacity. The excel files provided to the EC also show the CMCI and components at the EU country level, for the Northern EU countries (including and excluding the UK) and for the Mediterranean EU countries.

Box 3: Consortia Market Concentration Index

The Consortia Market Concentration Index (CMCI) is the average of the four components listed below multiplied by 100:

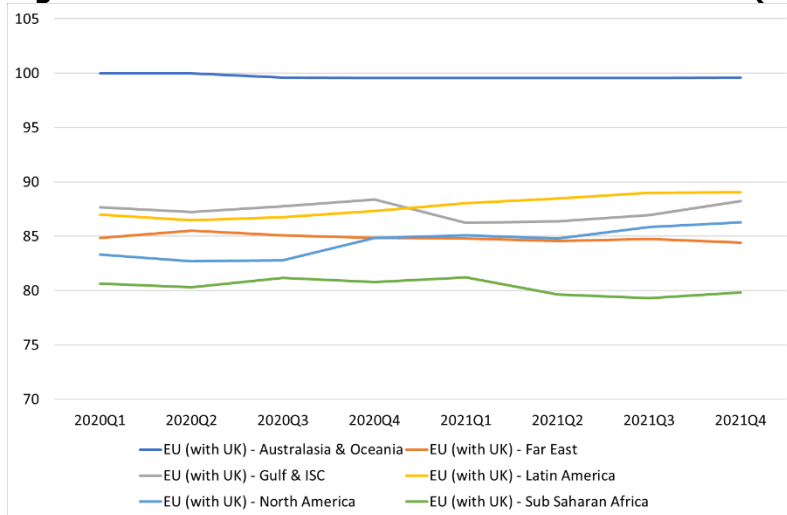
- total number of services and number of services operated by shipping lines that are part of a consortium/alliance;
- total number of shipping lines and number of shipping lines that are part of a consortium/alliance;
- quarterly scheduled capacity (TEU) and quarterly scheduled capacity operated by consortia/alliances (TEU);
- highest combined consortia/alliances market share.

The first two components are weighted on the percentage of scheduled capacity offered – this is to ensure that both number of services and number of shipping lines are considered in light of the capacity offered (e.g. a shipping line offering 1% of the total capacity has a smaller weight than a shipping line offering 10% of the total capacity). The CMCI can have values between 0 and 100, with 0 representing a

market where no consortia operate, and 100 representing a market in which all the services are operated by consortia and where the largest combined consortia market share equals 100%.

As illustrated in the following figure (Figure 29), during the period 2020Q1 and 2021Q4, the level of concentration in the shipping industry, measured based on the CMCI, has remained substantially flat for EU (with UK) - Australasia & Oceania and EU (with UK) - Far East (with their CMCI down by 0.4 points). A contraction of less than one point is also estimated for EU (with UK) - Sub Saharan Africa (down by 0.8 points). For the other three trade corridors (EU (with UK) - Gulf & ISC, EU (with UK) - Latin America and EU (with UK) - North America) we estimate an increase in the level of concentration, with the CMCI for the EU (with UK) - North America up from 83 points in 2020Q1 to 86 points in 2021Q4.

Figure 29: Consortia Market Concentration Index (CMCI) by trade corridor



Source: MDS Transmodal, Consortia & Alliances Database May 2022

In the following sections we present the results in more detail looking at each individual trade corridor.

Trade corridor: EU (with UK) - Australasia & Oceania

Compared to other trade corridors, EU (with UK) - Australasia & Oceania account for a marginal proportion of global capacity. In 2021Q4, we estimate the level of capacity scheduled to be offered on this trade corridor accounted for only 0.2% of the global capacity.

For this trade corridor, we count only 2 liner services – a constant number during the period 2020Q1-2021Q4 – operated by two lines in the first two quarters of 2020 then by three from 2020Q3 to 2021Q4. These shipping lines have been offering their services via consortia: one consortium in 2020Q1 and 2020Q2 then two from 2020Q3. The results of our analyses are summarised in the following table.

Table 19: CMCI and its components for trade corridor EU (with UK) - Australasia & Oceania

	2020Q1	2020Q2	2020Q3	2020Q4	2021Q1	2021Q2	2021Q3	2021Q4
Weighted Consortia Market Concentration Index (CMCI)	100.0	100.0	99.6	99.6	99.6	99.5	99.6	99.6
<i>MAX combined consortia/alliances market share</i>	<i>100%</i>	<i>100%</i>	<i>98%</i>	<i>98%</i>	<i>98%</i>	<i>98%</i>	<i>98%</i>	<i>98%</i>
Total number of services	2	2	2	2	2	2	2	2
Number of services operated by shipping lines that are part of a consortium/alliance	2	2	2	2	2	2	2	2
<i>% of number of services operated by at least one consortium/alliance or their members (weighted to capacity)</i>	<i>100%</i>	<i>100%</i>	<i>100%</i>	<i>100%</i>	<i>100%</i>	<i>100%</i>	<i>100%</i>	<i>100%</i>
Total number of shipping lines	2	2	3	3	3	3	3	3
Number of shipping lines that are part of a consortium/alliance	2	2	3	3	3	3	3	3
<i>% of shipping lines part of a consortium/alliance (weighted to capacity)</i>	<i>100%</i>	<i>100%</i>	<i>100%</i>	<i>100%</i>	<i>100%</i>	<i>100%</i>	<i>100%</i>	<i>100%</i>
Quarterly scheduled capacity (TEU)	128,725	146,403	130,479	130,598	130,765	145,904	148,291	132,296
Quarterly scheduled capacity operated by consortia/alliances (TEU)	128,725	146,403	130,479	130,598	130,765	145,904	148,291	132,296
<i>% of quarterly scheduled capacity operated by consortia/alliances</i>	<i>100%</i>	<i>100%</i>	<i>100%</i>	<i>100%</i>	<i>100%</i>	<i>100%</i>	<i>100%</i>	<i>100%</i>
Overall global capacity (mTEU)	49.43	47.64	49.01	50.34	51.38	52.58	52.87	52.97
Capacity on deepsea services only (mTEU)	27.14	25.55	27.17	27.97	28.77	29.65	30.56	31.10
Quarterly scheduled capacity on this trade corridor / Overall global capacity	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.2%
Quarterly scheduled capacity on this trade corridor / Capacity on deepsea services only	0.5%	0.6%	0.5%	0.5%	0.5%	0.5%	0.5%	0.4%
Quarterly scheduled capacity operated by consortia/alliances on this trade corridor / Overall global capacity	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.2%
Quarterly scheduled capacity operated by consortia/alliances on this trade corridor / Capacity on deepsea services only	0.5%	0.6%	0.5%	0.5%	0.5%	0.5%	0.5%	0.4%

Source: MDS Transmodal, Consortia & Alliances Database May 2022

Trade corridor: EU (with UK) - Far East

The EU (with UK) - Far East is estimated to have attracted circa 11.6% of the global capacity in 2021Q4 – with fluctuations in the region of 1 percentage point since 2020Q1. Excluding the capacity offered on the shortsea markets, the percentage offered to this trade corridor increases to circa 20%, with fluctuations in the region of 1.5 percentage points.

Looking at the shipping lines offering their services on this trade corridor, we estimate that almost the entire offer is provided by the major shipping lines, despite the number of operators increasing from 9 in 2020Q1 to 16 in 2021Q4. This shows that the new entrants only account for small proportion of the capacity offered – both in terms of number of services as well as in terms of deployment.

As shown in the following table (Table 20), ‘% of quarterly scheduled capacity operated by consortia/alliances’ has gone down from 100% in 2020Q1 to 99% in 2021Q4. The maximum combined market share is estimated to have remained stable and in the region of 40%.

The substantial stable conditions in this trade corridor translate into a stable CMCI, estimated to be in the region of 85 points. The results of our analyses are summarised in the following table.

Table 20: CMCI and its components for trade corridor EU (with UK) - Far East

	2020Q1	2020Q2	2020Q3	2020Q4	2021Q1	2021Q2	2021Q3	2021Q4
Weighted Consortia Market Concentration Index (CMCI)	84.8	85.5	85.1	84.9	84.8	84.6	84.7	84.4
<i>MAX combined consortia/alliances market share</i>	40%	42%	40%	39%	39%	39%	40%	40%
Total number of services	30	27	29	29	28	31	33	37
Number of services operated by shipping lines that are part of a consortium/alliance	29	26	29	29	28	28	29	29
<i>% of number of services operated by at least one consortium/alliance or their members (weighted to capacity)</i>	100%	100%	100%	100%	100%	100%	100%	100%
Total number of shipping lines	9	10	9	9	9	12	13	16
Number of shipping lines that are part of a consortium/alliance	8	9	9	9	9	9	9	9
<i>% of shipping lines part of a consortium/alliance (weighted to capacity)</i>	100%	100%	100%	100%	100%	100%	100%	99%
Quarterly scheduled capacity (TEU)	5,732,028	5,093,044	5,504,126	5,723,654	5,693,869	5,825,792	6,067,267	6,163,609
Quarterly scheduled capacity operated by consortia/alliances (TEU)	5,717,898	5,078,914	5,504,126	5,723,654	5,693,869	5,810,395	6,022,198	6,088,121
<i>% of quarterly scheduled capacity operated by consortia/alliances</i>	100%	100%	100%	100%	100%	100%	99%	99%
Overall global capacity (mTEU)	49.43	47.64	49.01	50.34	51.38	52.58	52.87	52.97
Capacity on deepsea services only (mTEU)	27.14	25.55	27.17	27.97	28.77	29.65	30.56	31.10
Quarterly scheduled capacity on this trade corridor / Overall global capacity	11.6%	10.7%	11.2%	11.4%	11.1%	11.1%	11.5%	11.6%
Quarterly scheduled capacity on this trade corridor / Capacity on deepsea services only	21.1%	19.9%	20.3%	20.5%	19.8%	19.6%	19.9%	19.8%
Quarterly scheduled capacity operated by consortia/alliances on this trade corridor / Overall global capacity	11.6%	10.7%	11.2%	11.4%	11.1%	11.1%	11.4%	11.5%
Quarterly scheduled capacity operated by consortia/alliances on this trade corridor / Capacity on deepsea services only	21.1%	19.9%	20.3%	20.5%	19.8%	19.6%	19.7%	19.6%

Source: MDS Transmodal, Consortia & Alliances Database May 2022

Trade corridor: EU (with UK) - Gulf & ISC

For the EU (with UK) - Gulf & ISC trade corridor we estimate a marginal increase in the level of concentration with the CMCI up from 87.7 to 88.2 points, with the increase mainly due to an increase in the maximum combined market share which has risen from 52% in 2020Q1 to 55% in 2021Q4. The share of capacity offered by independent lines remains in the region of 1% of the overall capacity offered on this trade corridor.

It is noticeable that the level of capacity offered on this trade corridor has declined from 9.1% of the global capacity in 2020Q1 to 7.7% in 2021Q4; the reduction is even larger when we exclude intra-regional services, with the share down from 16.6% to 13.2% during the same period. The reduction is aligned with our findings on the contraction in direct connections offered to the Gulf & ISC. The results of our analyses are summarised in the following table.

Table 21: CMCI and its components for trade corridor EU (with UK) - Gulf & ISC

	2020Q1	2020Q2	2020Q3	2020Q4	2021Q1	2021Q2	2021Q3	2021Q4
Weighted Consortia Market Concentration Index (CMCI)	87.7	87.2	87.7	88.4	86.2	86.4	86.9	88.2
<i>MAX combined consortia/alliances market share</i>	52%	51%	53%	54%	46%	47%	49%	55%
Total number of services	35	32	32	31	32	33	32	31
Number of services operated by shipping lines that are part of a consortium/alliance	30	27	27	28	29	29	28	27
<i>% of number of services operated by at least one consortium/alliance or their members (weighted to capacity)</i>	100%	100%	100%	100%	100%	100%	100%	100%
Total number of shipping lines	12	12	13	11	11	12	11	11
Number of shipping lines that are part of a consortium/alliance	8	8	9	9	9	9	8	8
<i>% of shipping lines part of a consortium/alliance (weighted to capacity)</i>	100%	99%	100%	100%	100%	100%	100%	100%
Quarterly scheduled capacity (TEU)	4,505,849	4,162,389	4,312,321	4,453,368	4,576,226	4,529,469	4,334,027	4,104,734
Quarterly scheduled capacity operated by consortia/alliances (TEU)	4,463,929	4,120,468	4,270,400	4,422,011	4,544,869	4,483,591	4,288,149	4,059,282
<i>% of quarterly scheduled capacity operated by consortia/alliances</i>	99%	99%	99%	99%	99%	99%	99%	99%
Overall global capacity (mTEU)	49.43	47.64	49.01	50.34	51.38	52.58	52.87	52.97
Capacity on deepsea services only (mTEU)	27.14	25.55	27.17	27.97	28.77	29.65	30.56	31.10
Quarterly scheduled capacity on this trade corridor / Overall global capacity	9.1%	8.7%	8.8%	8.8%	8.9%	8.6%	8.2%	7.7%
Quarterly scheduled capacity on this trade corridor / Capacity on deepsea services only	16.6%	16.3%	15.9%	15.9%	15.9%	15.3%	14.2%	13.2%
Quarterly scheduled capacity operated by consortia/alliances on this trade corridor / Overall global capacity	9.0%	8.6%	8.7%	8.8%	8.8%	8.5%	8.1%	7.7%
Quarterly scheduled capacity operated by consortia/alliances on this trade corridor / Capacity on deepsea services only	16.4%	16.1%	15.7%	15.8%	15.8%	15.1%	14.0%	13.1%

Source: MDS Transmodal, Consortia & Alliances Database May 2022

Trade corridor: EU (with UK) - Latin America

On the EU (with UK) - Latin America trade corridor, the CMCI has increased from 87 points to 89.1 points between 2020Q1 and 2021Q4. The increase is due to an increase in all the CMCI components, meaning that there are now more shipping lines organised in consortia, offering an increased number of services and, in turn, more capacity. By contrast, the capacity offered by shipping lines outside consortia only is estimated to have accounted for 3.5% in 2021Q4, down from circa 5% in 2020Q1. The results of our analyses are summarised in the following table.

Table 22: CMCI and its components for trade corridor EU (with UK) - Latin America

	2020Q1	2020Q2	2020Q3	2020Q4	2021Q1	2021Q2	2021Q3	2021Q4
Weighted Consortia Market Concentration Index (CMCI)	87.0	86.4	86.8	87.3	88.0	88.5	89.0	89.1
<i>MAX combined consortia/alliances market share</i>	62%	61%	62%	62%	64%	64%	65%	65%
Total number of services	33	34	34	33	34	34	33	33
Number of services operated by shipping lines that are part of a consortium/alliance	23	23	23	23	24	24	24	24
<i>% of number of services operated by at least one consortium/alliance or their members (weighted to capacity)</i>	98%	97%	97%	98%	98%	98%	99%	99%
Total number of shipping lines	16	17	17	16	16	15	15	15
Number of shipping lines that are part of a consortium/alliance	7	7	7	7	7	7	7	7
<i>% of shipping lines part of a consortium/alliance (weighted to capacity)</i>	94%	93%	93%	94%	94%	95%	96%	96%
Quarterly scheduled capacity (TEU)	1,848,778	1,884,778	1,821,149	1,884,117	1,996,550	2,010,109	2,006,868	1,978,379
Quarterly scheduled capacity operated by consortia/alliances (TEU)	1,754,826	1,786,344	1,724,767	1,795,715	1,907,805	1,930,343	1,936,727	1,908,237
<i>% of quarterly scheduled capacity operated by consortia/alliances</i>	95%	95%	95%	95%	96%	96%	97%	96%
Overall global capacity (mTEU)	49.43	47.64	49.01	50.34	51.38	52.58	52.87	52.97
Capacity on deepsea services only (mTEU)	27.14	25.55	27.17	27.97	28.77	29.65	30.56	31.10
Quarterly scheduled capacity on this trade corridor / Overall global capacity	3.7%	4.0%	3.7%	3.7%	3.9%	3.8%	3.8%	3.7%
Quarterly scheduled capacity on this trade corridor / Capacity on deepsea services only	6.8%	7.4%	6.7%	6.7%	6.9%	6.8%	6.6%	6.4%
Quarterly scheduled capacity operated by consortia/alliances on this trade corridor / Overall global capacity	3.5%	3.7%	3.5%	3.6%	3.7%	3.7%	3.7%	3.6%
Quarterly scheduled capacity operated by consortia/alliances on this trade corridor / Capacity on deepsea services only	6.5%	7.0%	6.3%	6.4%	6.6%	6.5%	6.3%	6.1%

Source: MDS Transmodal, Consortia & Alliances Database May 2022

Trade corridor: EU (with UK) - North America

A higher level of concentration is also estimated for the EU (with UK) - North America trade corridor, with the CMCI up 3 points from 83.3 in 2020Q1 to 86.3 in 2021Q4. The increase is driven by an increase in all the CMCI components. The results of our analyses are summarised in the following table.

Table 23: CMCI and its components for trade corridor EU (with UK) - North America

	2020Q1	2020Q2	2020Q3	2020Q4	2021Q1	2021Q2	2021Q3	2021Q4
Weighted Consortia Market Concentration Index (CMCI)	83.3	82.7	82.8	84.8	85.1	84.8	85.9	86.3
<i>MAX combined consortia/alliances market share</i>	53%	49%	48%	52%	52%	51%	55%	57%
Total number of services	47	48	47	47	49	46	46	48
Number of services operated by shipping lines that are part of a consortium/alliance	35	36	35	37	39	37	37	38
<i>% of number of services operated by at least one consortium/alliance or their members (weighted to capacity)</i>	97%	98%	97%	98%	98%	98%	99%	98%
Total number of shipping lines	22	22	22	21	21	21	21	21
Number of shipping lines that are part of a consortium/alliance	10	10	11	12	12	12	12	12
<i>% of shipping lines part of a consortium/alliance (weighted to capacity)</i>	91%	92%	93%	95%	96%	95%	96%	95%
Quarterly scheduled capacity (TEU)	2,789,173	3,012,957	2,938,866	3,144,131	3,225,263	2,870,707	2,986,313	3,082,460
Quarterly scheduled capacity operated by consortia/alliances (TEU)	2,577,006	2,800,790	2,724,906	2,954,751	3,035,883	2,700,128	2,818,874	2,898,332
<i>% of quarterly scheduled capacity operated by consortia/alliances</i>	92%	93%	93%	94%	94%	94%	94%	94%
Overall global capacity (mTEU)	49.43	47.64	49.01	50.34	51.38	52.58	52.87	52.97
Capacity on deepsea services only (mTEU)	27.14	25.55	27.17	27.97	28.77	29.65	30.56	31.10
Quarterly scheduled capacity on this trade corridor / Overall global capacity	5.6%	6.3%	6.0%	6.2%	6.3%	5.5%	5.6%	5.8%
Quarterly scheduled capacity on this trade corridor / Capacity on deepsea services only	10.3%	11.8%	10.8%	11.2%	11.2%	9.7%	9.8%	9.9%
Quarterly scheduled capacity operated by consortia/alliances on this trade corridor / Overall global capacity	5.2%	5.9%	5.6%	5.9%	5.9%	5.1%	5.3%	5.5%
Quarterly scheduled capacity operated by consortia/alliances on this trade corridor / Capacity on deepsea services only	9.5%	11.0%	10.0%	10.6%	10.6%	9.1%	9.2%	9.3%

Source: MDS Transmodal, Consortia & Alliances Database May 2022

Trade corridor: EU (with UK) - Sub Saharan Africa

The level of concentration for the EU (with UK) - Sub Saharan Africa trade corridor is estimated to have been in the region of 80 points, with a contraction of circa one point between 2020Q1 and 2021Q4 suggesting a marginal improvement in the level of competition in this market despite the largest combined market share being estimated to have increased from 54% to 57% during this period. This suggests that there is now a larger number of shipping lines offering their services outside consortia.

It is noticeable that the level of capacity scheduled to be offered on this trade corridor is in the region of 2.5% when we look at the overall global capacity and 4.5% when we exclude the intra-regional services. The results of our analyses are summarised in the following table.

Table 24: CMCI and its components for trade corridor EU (with UK) - Sub Saharan Africa

	2020Q1	2020Q2	2020Q3	2020Q4	2021Q1	2021Q2	2021Q3	2021Q4
Weighted Consortia Market Concentration Index (CMCI)	80.6	80.3	81.2	80.8	81.2	79.6	79.3	79.8
<i>MAX combined consortia/alliances market share</i>	54%	57%	55%	54%	55%	57%	56%	57%
Total number of services	41	41	42	42	43	44	44	46
Number of services operated by shipping lines that are part of a consortium/alliance	23	22	24	24	25	24	24	26
<i>% of number of services operated by at least one consortium/alliance or their members (weighted to capacity)</i>	91%	90%	91%	91%	92%	90%	90%	91%
Total number of shipping lines	23	22	20	21	21	22	22	22
Number of shipping lines that are part of a consortium/alliance	11	10	10	11	11	9	9	9
<i>% of shipping lines part of a consortium/alliance (weighted to capacity)</i>	88%	86%	89%	90%	90%	83%	83%	84%
Quarterly scheduled capacity (TEU)	1,249,182	1,219,870	1,283,388	1,268,813	1,266,045	1,285,398	1,274,992	1,310,263
Quarterly scheduled capacity operated by consortia/alliances (TEU)	1,111,709	1,077,119	1,141,082	1,125,064	1,121,924	1,130,713	1,120,307	1,155,906
<i>% of quarterly scheduled capacity operated by consortia/alliances</i>	89%	88%	89%	89%	89%	88%	88%	88%
Overall global capacity (mTEU)	49.43	47.64	49.01	50.34	51.38	52.58	52.87	52.97
Capacity on deepsea services only (mTEU)	27.14	25.55	27.17	27.97	28.77	29.65	30.56	31.10
Quarterly scheduled capacity on this trade corridor / Overall global capacity	2.5%	2.6%	2.6%	2.5%	2.5%	2.4%	2.4%	2.5%
Quarterly scheduled capacity on this trade corridor / Capacity on deepsea services only	4.6%	4.8%	4.7%	4.5%	4.4%	4.3%	4.2%	4.2%
Quarterly scheduled capacity operated by consortia/alliances on this trade corridor / Overall global capacity	2.2%	2.3%	2.3%	2.2%	2.2%	2.2%	2.1%	2.2%
Quarterly scheduled capacity operated by consortia/alliances on this trade corridor / Capacity on deepsea services only	4.1%	4.2%	4.2%	4.0%	3.9%	3.8%	3.7%	3.7%

Source: MDS Transmodal, Consortia & Alliances Database May 2022

6. Conclusion

Without denying the significance of the strain on port and inland logistics capacity and the Covid19 related labour shortages, our analyses suggest that an important contributing factor to the disruption faced by the global container shipping industry over the period 2020Q1-2021Q4 has been the shortage of available shipping capacity. As described in this report, this shortage is estimated to have been mainly caused by insufficient investment by the major shipping lines.

The lack of capacity has translated into reallocation of services in favour of trade lanes experiencing surges in demand for containerised goods – in particular to the Far East – North America route. The reallocation of capacity has been facilitated by the global reach of the major shipping lines. If on the one hand the global reach has ensured flexibility, on the other hand, the way in which it has been managed has caused the knock-on effects of local problems to be felt globally. Furthermore, the adjustments in the liner services offered by the major shipping lines have impacted the number of direct connections and this has been accompanied by a deterioration in the quality of the services provided - measured in terms of reliability and in terms of skipped calls. These adjustments can also be considered plausible cofactors in the substantial freight rates increases observed during the period analysed in this report.

Although outside the time horizon of this study, we believe that it is important to acknowledge the rapid decline in spot rates since the beginning of 2022, with the Shanghai to North Europe benchmark rate down by 80 in 2022Q4 compared to its peak in 2021Q4 and the benchmark to the Mediterranean following a similar trend and now (2022Q4) down 72% compared to 2021Q4. With various lags, depending on the length of the contracts, contract rates are also expected to follow the downward trajectory.

Analysing other most recent trends, we also observe that the normalisation in freight rates is not accompanied by improvements in direct connectivity or in a decline in the number of skipped calls. Based on our most up-to-date data available at the time of writing this report, the global number of direct connections (including intra-regional routes) in 2022Q4 is estimated to be 7% lower than 2020Q1 and skipped calls in 2022Q3 three percentage points lower than in 2020Q1. The persistence of skipped calls suggests that some more adjustments in the networks offered by the major shipping lines are to be expected. The likelihood of further adjustments in the major shipping lines' strategies is reinforced by the increased interest of the main lines in becoming integrated logistics providers, with this ambition being facilitated by the record-high profits reported in 2020 and 2021. The intensification in vertical integration in the liner shipping industry can increase efficiency thanks to improved communications amongst the actors of the supply chain, however, it can also provide increased market power to the integrated carriers at the expense of non-integrated providers, e.g., tariff discrimination amongst shipping lines applied by a port in which a carrier is a shareholder.

In order to assess whether the industry has returned to the pre-pandemic levels, in the following box we summarise the major changes occurred between 2019Q4 and 2022Q4.

Box 4: 2019Q4 vs 2022Q4

The volume of traffic moved in containers by sea is estimated to have increased by circa 6% in 2022 compared to 2019 while scheduled deployed capacity is estimated to have gone up by approximately 9% between 2019Q4 and 2022Q4. The increase in scheduled capacity has mainly been driven by shortening the routes: capacity allocated on services covering only two regions has increased by some 29% whereas capacity of services covering more than two regions and intra-regional services has gone down by some 5% and 2% respectively; the net result is the 9% increase in capacity.

These reconfigurations of liner networks, focussed more on region-to-region services, has been accompanied by a reduction of direct calls: the number of country pairs directly connected is estimated to have declined by circa 7.5% in 2022Q4 compared to 2019Q4.

Comparing the number of scheduled calls with the calls actually made, we estimate that in 2022Q3 (last quarter for which we have data at the time of this analysis) this has declined by circa 12 points, from 87% in 2019Q3 to 75% in 2022Q3 showing that, despite the improvement in port congestion, there is still a divergence between scheduled and actual port rotations; more ports are being skipped than before COVID19.

On the demand side, it is important to notice that the 7% estimated increase could have been higher had supply not been constrained and freight rates much higher than previous norms. Assuming that the containerisable factors (that is the propensity for a commodity to be moved in container) had not changed since 2019, based on the actual trade movements measured in tonnes reported by the largest National Statistics Offices, our estimate is that containerised flows could have increased by 14% between 2019 and 2022. The lack of capacity has therefore translated into some containerisable cargo (e.g., agricultural products, steel, forest products etc.) being moved by semi-bulk vessels. With freight rates for liner services now declining, it is reasonable to assume that the volumes of cargo that switched to semibulk will return to liner shipping.

Despite the much higher freight rates available, the individual lines appear not to have competed with each other to secure the extra revenue available by increasing capacity through increasing speed (allowing the same number of ships to complete more round trips). We estimate that the extra fuel that would have therefore been consumed would have cost much less than the extra revenue available at these higher freight rates.

Examining the way shipping lines have been offering their services since 2019, we observe that there is an increased proportion offered by only one of the members of the consortia. We estimate that the level of capacity offered for 90% or more by one member of the consortia has increased from less than 1% in 2019 to approximately 6% in 2022. This increase seems to suggest that shipping lines would be able to offer their services without being part of a consortium - if the object is to be able to offer an 'any port to any port' service to their customers, this could be achieved through buying slots on other lines' services at 'market rates' without being part of consortia.

Examining in more detail the proportion of capacity offered by the individual shipping lines and by the consortia, we observe that between 2021 and 2022 the top nine shipping lines (organised in three global alliances) have been increasing the level of capacity offered as individual providers (i.e., outside consortia/alliances agreements).

Looking at the services offered on the Far East – Europe trade lanes, for instance, we estimate that the proportion of capacity offered by the top nine shipping lines operating alone has increased from circa 37% in 2021Q4 to more than 51% in 2022Q4. This increase is driven by the capacity offered by the individual shipping lines increased by some 53% accompanied by the capacity offered in consortia declined by circa 15%. Looking at the consortia compositions, we estimate that although the capacity offered with the members of the same alliances remains higher than the capacity offered with members of other alliances, cross-alliances agreements are growing faster than the intra-alliances agreements.

By contrast, the shipping lines outside the top 9 league, which still account for a marginal proportion of the capacity offered on the Far East – Europe trade lanes, have started offering capacity through consortia.

Notwithstanding the difficulties faced by the shipping industry, shipping lines play an increasingly important role, especially in the context of an evolving and under pressure global market (with pressures coming from changes in the geopolitical equilibria, climate events as well as risks of cyber-attacks) and they can, therefore, increasingly be considered equivalent to utilities companies in transporting an essentially homogenous commodity.

Appendix A: Description of the World Cargo Database

The World Cargo Database (WCD) holds worldwide containerised cargo from 1996 to the present for circa 250 countries and territories which can be grouped into regions and sub regions. The USA and China can also be split into country areas: USA East Coast and West Coast and China Central, China North and China South.

The country-to-country flows can be also grouped into trade lanes, i.e. routes based on clusters of regions, which are connected by the usual service patterns of the majority of shipping services. We provide data for both directions on 27 trade lanes.

The WCD is generated by gathering quarterly trade data (tonnes) from most of the major economies of the world (each EU28 country separately, USA, Canada, China, South Korea, Japan, Taiwan, Norway, Switzerland, South Africa, Hong Kong, Brazil, Argentina, Chile, Indonesia, Australia, Mexico, Philippines, Russia, Turkey, Thailand and India). This covers over 95% of unitised world trade (i.e. to or from one of these countries). For trade between other countries, data from the UN is used, boosting our global coverage of unitised world trade to 99.9%.

The WCD tonnage data is translated into unitised tonnes and then into loaded maritime TEU using various lookup tables based on commodity, volume and the origin and destination countries. For 'backhaul' trades, the propensity of certain commodities to travel in containers is boosted.

The WCD provides data for SITC (Standard International Trade Classification) for 2-digit level with the possibility to drill down to the 5-digit level. Estimated containerised demand is produced for over 3,000 commodities for 250 countries' imports and exports. This information is available in both volume (TEU & Tonnes). The WCD provides quarterly forecasts for any period up to 2040.

Appendix B: Description of the Containership Databank

The Containership Databank contains operational details of the world container carrying fleet and 30 fields of information for every vessel, including operator, service, route, TEU, service frequency, port rotation and much more. The service deployment of individual vessels in the fleet frequently changes.

The Containership Databank, that in its current format has been produced since 2006, is mainly used by MDST for its consultancy services and by UNCTAD to produce (in collaboration with MDST) the Liner Shipping Connectivity Index (LSCI) and by the World Bank to produce the Logistics Performance Index (LPI).

Appendix C: Description of Consortia & Alliances Database

The Consortia & Alliances Database, which is a sub-set of the Containership Databank, has been developed following the steps described below:

- Starting from the MDST Containership Databank that contains the port-to-port service data per ship (with its IMO number), we have grouped the port pairs into trade corridors (e.g., a service calling, among others, at the port of Shanghai and at the port of Rotterdam, has been allocated to the East China Sea-North Europe trade corridor). In order to ensure a sufficient level of detail, this database splits the world into 20 maritime regions, with the combinations amongst them being defined as 'trade corridors'.
- For each vessel deployed on any given service, the Containership Databank indicates the name(s) of the shipping line(s) that operate them. This information has allowed us to identify the services operated by more than one shipping line, and to assume that there is an agreement in place between them. A list of vessel sharing agreements signed by the shipping lines is not publicly available. We believe, however, that shipping lines operating¹¹ different vessels deployed on the same service can be de-facto considered as part of a Vessel Sharing Agreement (VSA).
- For each trade corridor, we have also identified the shipping lines operating in alliances as well as carriers operating independently.

¹¹ Slot agreements are not included.

Appendix D: Modified Herfindahl–Hirschman Index (HHI)¹²

The Herfindahl–Hirschman Index (HHI), frequently used to assess industry concentration, is calculated by summing the square of the market shares of each of the competing company in a given industry.

This indicator, however, has the limitation of not taking into account the reality of consortia, which, based on competition literature terminology, can be regarded as “common ownership” - joint ventures between two or more shipping lines that deploy their vessels to offer a joint service. In order to measure market concentration in the presence of consortia, Merk and Teodoro (2022) suggest a Modified HHI¹³.

Details on calculation of the MHHI for liner shipping

- No consortia on the trade corridor: no MHHI deltas, so the standard HHI applies.
- In case a consortium competes with individual operators that are not in the consortium: consider the market share of the consortium instead of the operators in the consortium. So a market of operator 1 and consortium of operators 2 and 3, implies $HHI = s_1^2 + s_{cons}^2$.
- When a consortium competes with operators that also participate in the consortium: consider the market share of the consortium and the market share of the operators that operate independently and add a MHHI delta for the operator that operates independently and is in the consortium. For example: operators 1 and 2 both operate 50% of the capacity on a corridor, but operator 1 deploys all its capacity in a consortium in which operator 2 deploys 40% of its capacity; operator 2 operates 60% of its capacity independently (s_2). This gives the following $MHHI = s_{cons}^2 + s_2^2 + (\beta + \beta / ((1 - \beta)^2 + \beta^2)) s_2 s_{cons}$ (where s_{cons} is 70, s_2 is 30 and β is 20/70 as this represents the share of the consortium capacity operated by operator 2).
- When a consortium competes with another consortium that has partly the same consortium members: take the market shares of the two consortia and add a MHHI delta that expresses the overlapping share. For example: services are offered by two consortia: consortia 1 with market share of 60% (equally split by operator 1 and 2) and consortia 2 with market share of 40% (equally split by operator 1 and 3). This gives the following $MHHI = s_{cons,1}^2 + s_{cons,2}^2 + (\beta + \beta / ((1 - \beta)^2 + \beta^2)) s_1 s_{cons,2}$ (where $s_{cons,1}$ is 60, $s_{cons,2}$ is 40, s_1 is 30 (the share of operator 1 operated outside consortium 2) and β is 20/40 as this represents the share of the consortium 2 capacity operated by operator 1).

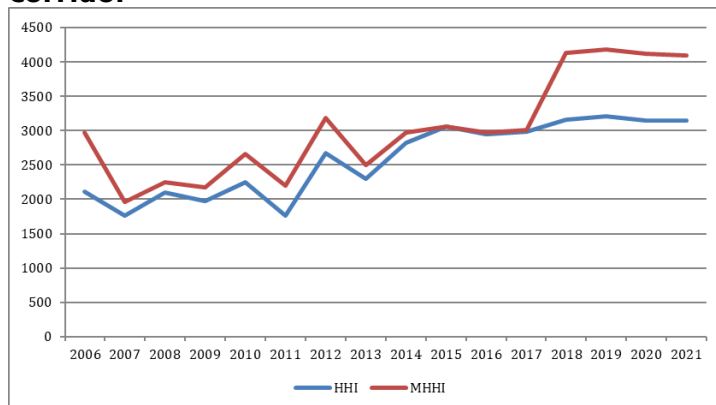
North Europe-South America East Coast corridor

Based on the methodology described above, the scores of the HHI and MHHI for the North Europe-South America East Coast corridor are more or less similar between 2007 and 2017, which indicates that the presence of consortia did not significantly alter industry concentration on this trade corridor. After 2017, a substantial difference between HHI and MHHI appeared, of around 1,000 points, suggesting that the trade corridor has become substantially more concentrated due to consortia operations. Results shown in the following figure.

¹² Source: Merk and Teodoro (2022) <https://link.springer.com/article/10.1057/s41278-022-00225-x>

¹³ Modified HHI follow the work done by Bresnahan and Salop (1986) and O'Brien and Salop (2000)

HHI and Modified HHI on the North Europe-South America East Coast trade corridor

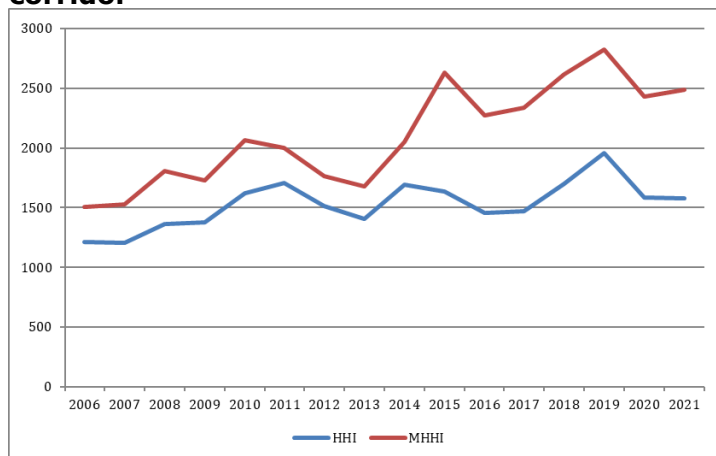


Source: <https://link.springer.com/article/10.1057/s41278-022-00225-x>, Figure 6

North Europe-North America East Coast

On the North Europe-North America East Coast, there has been a difference of approximately 250 points between the HHI and MHHI between 2006–2014; this difference increased significantly after 2014 to around 900 points, due to changes in consortia and the emergence of new bundles of consortia (alliances). The MHHI on this trade corridor has reached the threshold of 2500 points, despite an HHI score of around 1500. Results shown in the following figure.

HHI and Modified HHI on the North Europe-North America East Coast trade corridor



Source: <https://link.springer.com/article/10.1057/s41278-022-00225-x>, Figure 7

Appendix E: Countries/country areas within regions and maritime regions

Region	Maritime Region	Country	Country Area
Australasia & Oceania	Australasia & Oceania	American Samoa	American Samoa
Australasia & Oceania	Australasia & Oceania	Antarctica	Antarctica
Australasia & Oceania	Australasia & Oceania	Australia	Australia
Australasia & Oceania	Australasia & Oceania	Australian Oceania	Australian Oceania
Australasia & Oceania	Australasia & Oceania	Bouvet Island	Bouvet Island
Australasia & Oceania	Australasia & Oceania	Christmas Island	Christmas Island
Australasia & Oceania	Australasia & Oceania	Cocos Islands	Cocos Islands
Australasia & Oceania	Australasia & Oceania	Cook Islands	Cook Islands
Australasia & Oceania	Australasia & Oceania	Fiji	Fiji
Australasia & Oceania	Australasia & Oceania	French Polynesia	French Polynesia
Australasia & Oceania	Australasia & Oceania	French Southern Territories	French Southern Territories
Australasia & Oceania	Australasia & Oceania	Guam	Guam
Australasia & Oceania	Australasia & Oceania	Heard & McDonald Islands	Heard & McDonald Islands
Australasia & Oceania	Australasia & Oceania	Kiribati	Kiribati
Australasia & Oceania	Australasia & Oceania	Marshall Islands	Marshall Islands
Australasia & Oceania	Australasia & Oceania	Micronesia	Micronesia
Australasia & Oceania	Australasia & Oceania	Nauru	Nauru
Australasia & Oceania	Australasia & Oceania	New Caledonia	New Caledonia
Australasia & Oceania	Australasia & Oceania	New Zealand	New Zealand
Australasia & Oceania	Australasia & Oceania	Niue	Niue
Australasia & Oceania	Australasia & Oceania	Norfolk Island	Norfolk Island
Australasia & Oceania	Australasia & Oceania	Northern Mariana Islands	Northern Mariana Islands
Australasia & Oceania	Australasia & Oceania	Palau	Palau
Australasia & Oceania	Australasia & Oceania	Papua New Guinea	Papua New Guinea
Australasia & Oceania	Australasia & Oceania	Pitcairn	Pitcairn
Australasia & Oceania	Australasia & Oceania	Samoa	Samoa
Australasia & Oceania	Australasia & Oceania	Solomon Islands	Solomon Islands
Australasia & Oceania	Australasia & Oceania	Tokelau	Tokelau
Australasia & Oceania	Australasia & Oceania	Tonga	Tonga
Australasia & Oceania	Australasia & Oceania	Tuvalu	Tuvalu
Australasia & Oceania	Australasia & Oceania	Unknown Pacific Islands	Unknown Pacific Islands
Australasia & Oceania	Australasia & Oceania	US Minor Islands	US Minor Islands
Australasia & Oceania	Australasia & Oceania	US Oceania	US Oceania
Australasia & Oceania	Australasia & Oceania	Vanuatu	Vanuatu
Australasia & Oceania	Australasia & Oceania	Wallis & Futuna	Wallis & Futuna
Europe & Med	Mediterranean	Albania	Albania
Europe & Med	Mediterranean	Algeria	Algeria
Europe & Med	Mediterranean	Andorra	Andorra
Europe & Med	Mediterranean	Armenia	Armenia
Europe & Med	Mediterranean	Bosnia & Herzegovina	Bosnia & Herzegovina
Europe & Med	Mediterranean	Bulgaria	Bulgaria
Europe & Med	Mediterranean	Ceuta	Ceuta & Melilla
Europe & Med	Mediterranean	Croatia	Croatia
Europe & Med	Mediterranean	Cyprus	Cyprus
Europe & Med	Mediterranean	Egypt	Egypt
Europe & Med	Mediterranean	FYR Macedonia	FYR Macedonia
Europe & Med	Mediterranean	Georgia	Georgia
Europe & Med	Mediterranean	Gibraltar	Gibraltar
Europe & Med	Mediterranean	Greece	Greece
Europe & Med	Mediterranean	Israel	Israel
Europe & Med	Mediterranean	Italy	Italy
Europe & Med	Mediterranean	Jordan	Jordan
Europe & Med	Mediterranean	Kosovo	Kosovo
Europe & Med	Mediterranean	Lebanon	Lebanon
Europe & Med	Mediterranean	Libya	Libya
Europe & Med	Mediterranean	Malta	Malta
Europe & Med	Mediterranean	Melilla	Melilla
Europe & Med	Mediterranean	Moldova	Moldova
Europe & Med	Mediterranean	Montenegro	Montenegro

Region	Maritime Region	Country	Country Area
Europe & Med	Mediterranean	Morocco	Morocco
Europe & Med	Mediterranean	Romania	Romania
Europe & Med	Mediterranean	San Marino	San Marino
Europe & Med	Mediterranean	Serbia	Serbia
Europe & Med	Mediterranean	Serbia & Montenegro	Serbia & Montenegro
Europe & Med	Mediterranean	Slovenia	Slovenia
Europe & Med	Mediterranean	Spain	Spain
Europe & Med	Mediterranean	State of Palestine	State of Palestine
Europe & Med	Mediterranean	Syria	Syria
Europe & Med	Mediterranean	Tunisia	Tunisia
Europe & Med	Mediterranean	Turkey	Turkey
Europe & Med	Mediterranean	Ukraine	Ukraine
Europe & Med	Mediterranean	Vatican City	Vatican City
Europe & Med	Mediterranean	Western Sahara	Western Sahara
Europe & Med	North Europe	Austria	Austria
Europe & Med	North Europe	Belarus	Belarus
Europe & Med	North Europe	Belgium	Belgium
Europe & Med	North Europe	Czech Republic	Czech Republic
Europe & Med	North Europe	Denmark	Denmark
Europe & Med	North Europe	Estonia	Estonia
Europe & Med	North Europe	Faroe Islands	Faroe Islands
Europe & Med	North Europe	Finland	Finland
Europe & Med	North Europe	France	France
Europe & Med	North Europe	Germany	Germany
Europe & Med	North Europe	Hungary	Hungary
Europe & Med	North Europe	Iceland	Iceland
Europe & Med	North Europe	Irish Republic	Irish Republic
Europe & Med	North Europe	Latvia	Latvia
Europe & Med	North Europe	Liechtenstein	Liechtenstein
Europe & Med	North Europe	Lithuania	Lithuania
Europe & Med	North Europe	Luxembourg	Luxembourg
Europe & Med	North Europe	Netherlands	Netherlands
Europe & Med	North Europe	Norway	Norway
Europe & Med	North Europe	Poland	Poland
Europe & Med	North Europe	Portugal	Portugal
Europe & Med	North Europe	Russia	Russia
Europe & Med	North Europe	Slovakia	Slovakia
Europe & Med	North Europe	Svalbard Archipelago	Svalbard Archipelago
Europe & Med	North Europe	Sweden	Sweden
Europe & Med	North Europe	Switzerland	Switzerland
Europe & Med	North Europe	United Kingdom	United Kingdom
Far East	East China Sea	China	China Central
Far East	North Asia	Japan	Japan
Far East	North Asia	North Korea	North Korea
Far East	North Asia	South Korea	South Korea
Far East	South China Sea	China	China South
Far East	South China Sea	Hong Kong	Hong Kong
Far East	South China Sea	Macau	Macau
Far East	South China Sea	Taiwan	Taiwan
Far East	South East Asia	Brunei	Brunei
Far East	South East Asia	Cambodia	Cambodia
Far East	South East Asia	Indonesia	Indonesia
Far East	South East Asia	Laos	Laos
Far East	South East Asia	Malaysia	Malaysia
Far East	South East Asia	Myanmar	Myanmar
Far East	South East Asia	Philippines	Philippines
Far East	South East Asia	Singapore	Singapore
Far East	South East Asia	Thailand	Thailand
Far East	South East Asia	Timor-Leste	Timor-Leste
Far East	South East Asia	Vietnam	Vietnam
Far East	Yellow Sea	China	China North
Far East	Yellow Sea	Mongolia	Mongolia
Gulf & ISC	Arabian Gulf	Afghanistan	Afghanistan
Gulf & ISC	Arabian Gulf	Azerbaijan	Azerbaijan

Region	Maritime Region	Country	Country Area
Gulf & ISC	Arabian Gulf	Bahrain	Bahrain
Gulf & ISC	Arabian Gulf	Iran	Iran
Gulf & ISC	Arabian Gulf	Iraq	Iraq
Gulf & ISC	Arabian Gulf	Kazakhstan	Kazakhstan
Gulf & ISC	Arabian Gulf	Kuwait	Kuwait
Gulf & ISC	Arabian Gulf	Kyrgyzstan	Kyrgyzstan
Gulf & ISC	Arabian Gulf	Oman	Oman
Gulf & ISC	Arabian Gulf	Qatar	Qatar
Gulf & ISC	Arabian Gulf	Saudi Arabia	Saudi Arabia East
Gulf & ISC	Arabian Gulf	Tajikistan	Tajikistan
Gulf & ISC	Arabian Gulf	Turkmenistan	Turkmenistan
Gulf & ISC	Arabian Gulf	UAE	UAE
Gulf & ISC	Arabian Gulf	Uzbekistan	Uzbekistan
Gulf & ISC	Indian Subcontinent	Bangladesh	Bangladesh
Gulf & ISC	Indian Subcontinent	Bhutan	Bhutan
Gulf & ISC	Indian Subcontinent	India	India
Gulf & ISC	Indian Subcontinent	Maldives	Maldives
Gulf & ISC	Indian Subcontinent	Nepal	Nepal
Gulf & ISC	Indian Subcontinent	Pakistan	Pakistan
Gulf & ISC	Indian Subcontinent	Sri Lanka	Sri Lanka
Gulf & ISC	Red Sea	Djibouti	Djibouti
Gulf & ISC	Red Sea	Eritrea	Eritrea
Gulf & ISC	Red Sea	Ethiopia	Ethiopia
Gulf & ISC	Red Sea	Saudi Arabia	Saudi Arabia West
Gulf & ISC	Red Sea	Sudan	Sudan
Gulf & ISC	Red Sea	Yemen	Yemen
Latin America	Caribbean & Central America	Anguilla	Anguilla
Latin America	Caribbean & Central America	Antigua & Barbuda	Antigua & Barbuda
Latin America	Caribbean & Central America	Aruba	Aruba
Latin America	Caribbean & Central America	Bahamas	Bahamas
Latin America	Caribbean & Central America	Barbados	Barbados
Latin America	Caribbean & Central America	Belize	Belize
Latin America	Caribbean & Central America	British Virgin Islands	British Virgin Islands
Latin America	Caribbean & Central America	Cayman Islands	Cayman Islands
Latin America	Caribbean & Central America	Colombia	Colombia
Latin America	Caribbean & Central America	Costa Rica	Costa Rica
Latin America	Caribbean & Central America	Cuba	Cuba
Latin America	Caribbean & Central America	Curacao	Curacao
Latin America	Caribbean & Central America	Dominica	Dominica
Latin America	Caribbean & Central America	Dominican Republic	Dominican Republic
Latin America	Caribbean & Central America	El Salvador	El Salvador
Latin America	Caribbean & Central America	French Guiana	French Guiana
Latin America	Caribbean & Central America	Grenada	Grenada
Latin America	Caribbean & Central America	Guadeloupe	Guadeloupe
Latin America	Caribbean & Central America	Guatemala	Guatemala
Latin America	Caribbean & Central America	Guyana	Guyana
Latin America	Caribbean & Central America	Haiti	Haiti
Latin America	Caribbean & Central America	Honduras	Honduras
Latin America	Caribbean & Central America	Jamaica	Jamaica
Latin America	Caribbean & Central America	Martinique	Martinique
Latin America	Caribbean & Central America	Montserrat	Montserrat
Latin America	Caribbean & Central America	Nicaragua	Nicaragua
Latin America	Caribbean & Central America	Panama	Panama
Latin America	Caribbean & Central America	Puerto Rico	Puerto Rico
Latin America	Caribbean & Central America	St Kitts & Nevis	St Kitts & Nevis
Latin America	Caribbean & Central America	St Lucia	St Lucia
Latin America	Caribbean & Central America	St Vincent	St Vincent
Latin America	Caribbean & Central America	Suriname	Suriname
Latin America	Caribbean & Central America	Trinidad & Tobago	Trinidad & Tobago
Latin America	Caribbean & Central America	Turks & Caicos	Turks & Caicos
Latin America	Caribbean & Central America	US Virgin Islands	US Virgin Islands
Latin America	Caribbean & Central America	Venezuela	Venezuela
Latin America	South America East Coast	Argentina	Argentina
Latin America	South America East Coast	Brazil	Brazil

Region	Maritime Region	Country	Country Area
Latin America	South America East Coast	Falkland Islands	Falkland Islands
Latin America	South America East Coast	Paraguay	Paraguay
Latin America	South America East Coast	South Georgia & South Sandwich Islands	South Georgia & South Sandwich Islands
Latin America	South America East Coast	Uruguay	Uruguay
Latin America	South America West Coast	Bolivia	Bolivia
Latin America	South America West Coast	Chile	Chile
Latin America	South America West Coast	Ecuador	Ecuador
Latin America	South America West Coast	Peru	Peru
North America	North America East Coast	Bermuda	Bermuda
North America	North America East Coast	Canada	Canada East Coast
North America	North America East Coast	Greenland	Greenland
North America	North America East Coast	Mexico	Mexico East Coast
North America	North America East Coast	Polar Regions	Polar Regions
North America	North America East Coast	St Pierre & Miquelon	St Pierre & Miquelon
North America	North America East Coast	USA	USA East Coast
North America	North America West Coast	Canada	Canada West Coast
North America	North America West Coast	Mexico	Mexico West Coast
North America	North America West Coast	USA	USA West Coast
Sub Saharan Africa	East Africa	British Indian Ocean Territories	British Indian Ocean Territories
Sub Saharan Africa	East Africa	Burundi	Burundi
Sub Saharan Africa	East Africa	Comoros	Comoros
Sub Saharan Africa	East Africa	Kenya	Kenya
Sub Saharan Africa	East Africa	Mauritius	Mauritius
Sub Saharan Africa	East Africa	Mayotte	Mayotte
Sub Saharan Africa	East Africa	Rwanda	Rwanda
Sub Saharan Africa	East Africa	Seychelles	Seychelles
Sub Saharan Africa	East Africa	Somalia	Somalia
Sub Saharan Africa	East Africa	South Sudan	South Sudan
Sub Saharan Africa	East Africa	Tanzania	Tanzania
Sub Saharan Africa	East Africa	Uganda	Uganda
Sub Saharan Africa	South Africa	Botswana	Botswana
Sub Saharan Africa	South Africa	Lesotho	Lesotho
Sub Saharan Africa	South Africa	Madagascar	Madagascar
Sub Saharan Africa	South Africa	Malawi	Malawi
Sub Saharan Africa	South Africa	Mozambique	Mozambique
Sub Saharan Africa	South Africa	Namibia	Namibia
Sub Saharan Africa	South Africa	South Africa	South Africa
Sub Saharan Africa	South Africa	St Helena	St Helena
Sub Saharan Africa	South Africa	Swaziland	Swaziland
Sub Saharan Africa	South Africa	Zambia	Zambia
Sub Saharan Africa	South Africa	Zimbabwe	Zimbabwe
Sub Saharan Africa	West Africa	Angola	Angola
Sub Saharan Africa	West Africa	Benin	Benin
Sub Saharan Africa	West Africa	Burkina Faso	Burkina Faso
Sub Saharan Africa	West Africa	Cabo Verde	Cabo Verde
Sub Saharan Africa	West Africa	Cameroon	Cameroon
Sub Saharan Africa	West Africa	Central African Republic	Central African Republic
Sub Saharan Africa	West Africa	Chad	Chad
Sub Saharan Africa	West Africa	Congo Democratic Republic	Congo Democratic Republic
Sub Saharan Africa	West Africa	Congo Republic	Congo Republic
Sub Saharan Africa	West Africa	Cote d'Ivoire	Cote d'Ivoire
Sub Saharan Africa	West Africa	Equatorial Guinea	Equatorial Guinea
Sub Saharan Africa	West Africa	Gabon	Gabon
Sub Saharan Africa	West Africa	Gambia	Gambia
Sub Saharan Africa	West Africa	Ghana	Ghana
Sub Saharan Africa	West Africa	Guinea	Guinea
Sub Saharan Africa	West Africa	Guinea-Bissau	Guinea-Bissau
Sub Saharan Africa	West Africa	Liberia	Liberia
Sub Saharan Africa	West Africa	Mali	Mali
Sub Saharan Africa	West Africa	Mauritania	Mauritania
Sub Saharan Africa	West Africa	Niger	Niger
Sub Saharan Africa	West Africa	Nigeria	Nigeria
Sub Saharan Africa	West Africa	Sao Tome & Principe	Sao Tome & Principe
Sub Saharan Africa	West Africa	Senegal	Senegal

Region	Maritime Region	Country	Country Area
Sub Saharan Africa	West Africa	Sierra Leone	Sierra Leone
Sub Saharan Africa	West Africa	Togo	Togo

Appendix F: Trade corridors

Region	Maritime Region	Trade corridor number, Region	Trade corridor number, Maritime Region
Australasia & Oceania	Australasia & Oceania	1	1.1
Far East	East China Sea	2	2.1
Far East	North Asia	2	2.2
Far East	South China Sea	2	2.3
Far East	South East Asia	2	2.4
Far East	Yellow Sea	2	2.5
Gulf & ISC	Arabian Gulf	3	3.1
Gulf & ISC	Indian Subcontinent	3	3.2
Gulf & ISC	Red Sea	3	3.3
Latin America	Caribbean & Central America	4	4.1
Latin America	South America East Coast	4	4.2
Latin America	South America West Coast	4	4.3
North America	North America East Coast	5	5.1
North America	North America West Coast	5	5.2
Sub Saharan Africa	East Africa	6	6.1
Sub Saharan Africa	South Africa	6	6.2
Sub Saharan Africa	West Africa	6	6.3

Appendix G: Spanish and French ports

Port code	Port name	Country	Maritime Region
FRFOS	Fos	France	Mediterranean
FRMRS	Marseilles	France	Mediterranean
FRPOV	Port Vendres	France	Mediterranean
FRTLN	Toulon	France	Mediterranean
ESLPA	Las Palmas	Spain	Mediterranean
ESSCT	Santa Cruz de Tenerife	Spain	Mediterranean
ESAGP	Malaga	Spain	Mediterranean
ESALG	Algeciras	Spain	Mediterranean
ESBCN	Barcelona	Spain	Mediterranean
ESCAS	Castellon	Spain	Mediterranean
ESSAG	Sagunto	Spain	Mediterranean
ESTAR	Tarragona	Spain	Mediterranean
ESVLC	Valencia	Spain	Mediterranean

Port code	Port name	Country	Maritime Region
FRDKK	Dunkirk	France	North Europe
FRLEH	Le Havre	France	North Europe
FRLPE	La Pallice	France	North Europe
FRMTX	Montoir	France	North Europe
FRRAD	Radicatel	France	North Europe
FRURO	Rouen	France	North Europe
ESBIO	Bilbao	Spain	North Europe
ESGIJ	Gijon	Spain	North Europe
ESMPG	Marin	Spain	North Europe
ESSDR	Santander	Spain	North Europe
ESVGO	Vigo	Spain	North Europe

Abstract

The Consortia Block Exemption Regulation (CBER) is due to expire in 2024. For context, this study provides analyses of the main trends characterising the container shipping industry between 2020 and 2021 and gives an outlook into 2022. It examines the changes in trade and in the capacity offered by shipping lines as well as their market shares.



other
publications
and subscriptions

<https://europa.eu/!Tc4f4Y>

