

Global Shippers Forum/ MDS Transmodal

Container Shipping Market

Quarterly Review

2021: Quarter 4

Reporting data published in March 2022



GSF/MDST Container Shipping Market Quarterly Review

MDS Transmodal overview

In association with Global Shippers Forum, MDS Transmodal produces a quarterly review of the trends and performance of the global container shipping market for four main reasons:

1. We have over nearly 40 years been developing a wide range of databases that describe global liner shipping; on the fleet and its deployment, on demand, performance, costs and revenues. Over the last 15 years we have brought these together using standard coding systems so that the industry could be readily described and modelled, largely to support our consultancy work. We felt it was time to now share these resources with a wider market so that decision making can be based on sound evidence.
2. Over the last 13 years, since the decision that was made by the EU to effectively bring an end to the conference system, the liner shipping sector, its suppliers and clients have been in flux as the size of ships, performance and levels of integration and consolidation have changed radically while its market has grown remorselessly. The need for sound regulation and informed investment has never been greater and is attracting the concern of global authorities such as OECD, UNCTAD and trade associations such as GSF, CLECAT and FEPORT.
3. The urgency for the liner shipping sector, its suppliers and clients to address the issue of climate change. The process whereby sustainable solutions are agreed upon and invested in will be complex and require a collaborative approach if global connectivity and prosperity are to be maintained.
4. Global Shippers Forum represents an ideal partner for our initiative because of its reach and membership. However, GSF will have its own perspectives and arguments which MDST will remain independent of. MDST's commentary will be limited to noting statistical change (comments in blue) while GSF will focus on the implications for its members (comments in brown).

GSF/MDST Container Shipping Market Quarterly Review

GSF Overview

The Global Shippers' Forum represents the interests of importers and exporters as cargo owners in international supply chains. As such global shippers are the customers of the container shipping industry. The trends and performance of the container shipping market are crucial to the interests of shippers around the world who are reliant upon services for the safe, timely, cost-effective and sustainable movement of unitised world trade.

GSF's partnership with MDS Transmodal arose from a common interest in understanding better this fast-changing market and how it is responding to the multiple factors shaping its future. GSF's focus is on five key measures that monitor the outputs of the sector:

1. **Competitiveness:** is the regulatory environment and the ownership structure contributing to an open and responsive market where the benefits of scale are experienced fairly by customers?
2. **Capacity:** how is the availability and utilisation of shipping capacity responding to the external factors given the market structure and the legal permissions granted to competing entities to co-ordinate sailings and services?
3. **Costs:** how are the underlying and incidental costs of the industry affecting advertised spot rates and the high levels of surcharging experienced by customers?
4. **Service performance:** is the predictability, reliability and connectivity of services providing an offer that shippers can depend on in their supply chain planning and forecasting and in the commitments they make to their customers?
5. **Carbon emissions:** how is the response of the shipping industry to climate change affecting the greenhouse gas emissions attributable to the cargo that it carries?

The distinctive feature of these indicators is that they assess the market from a shipper's (customer's) perspective and offer a description based on experience of service rather than advertised performance. Over time these data will build into comprehensive and authoritative evidence bank to support our representations and advocacy. in support of global shippers

As well as Quarter-on-Quarter fluctuations, MDST's extensive data holdings also permit longer term trends to be observed. These will be presented to provide context for short-term changes and to assess the overall direction of the industry.

The GSF/MDST Container Shipping Market Review Indicators

1 Trade Volumes

- 1.1 Total trade, global
- 1.2 World Cargo Database (MDST) compared with Container Trades Statistics (CTS)
- 1.3 Unitised trade, global
- 1.4 Maritime Loaded TEU, routes

2 Shipping Capacity

- 2.1 Deployed capacity, global
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- 2.3 Changes in number of direct connections, global
- 2.4 Deployed capacity, routes

3 Capacity Utilisation

- 3.1 Utilisation through Suez & Far East - North Europe & Med

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Glossary

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Global Shippers' Dashboard

Quarter 4 2021

KPI	Indicator	Status & Overview
1	Trade volumes	In the busiest 'peak season' on record, global trade, as recorded by landed imports, reached record levels, but with all growth in the quarter being carried by non-liner trade carriers, and including Asia –Europe rail services and air cargo services.
2	Shipping capacity	Available capacity has been increased by existing ships making more frequent 'shuttle' voyages between port pairs, at the expense of longer, loop sailings which offered more port calls and more direct services between different regional markets.
3	Capacity utilisation	Utilization rates remained at historically high levels of about 90 per cent, implying most container ships were effectively full, on most trades.
4	Carrier costs & revenues	Unit operating costs (including fuel) stabilized at about 40% above Q1 2019 levels in Q4 2021 but unit revenues continued to grow, reaching nearly three times their level at the start of the Covid pandemic.
5	Market competitiveness	New analysis shows that the average market share of shipping lines operating in consortia with lines in different alliances has reached 42%.
6	Port connectivity	Chinese ports, served more frequently by ships switched to Transpacific 'shuttle' services, show improved connectivity, whilst ports on traditional 'loop' services show a decline due to switching of vessels to busier and more profitable trades.
7	Service performance	Predictability of ships' arrival day and time in port declined markedly in Q4, with over half of ships that actually called at the ports arriving within expected time windows. The number of port calls missed altogether remained at historically high levels with about 15% of scheduled calls missed.
8	Carbon dioxide emissions	CO2 emissions per TEU dropped sharply during the early stages of the Covid-19 pandemic and have since stabilized at a new level about 5% lower than pre-Covid levels despite the frenetic activity in the market.

Status colour code:

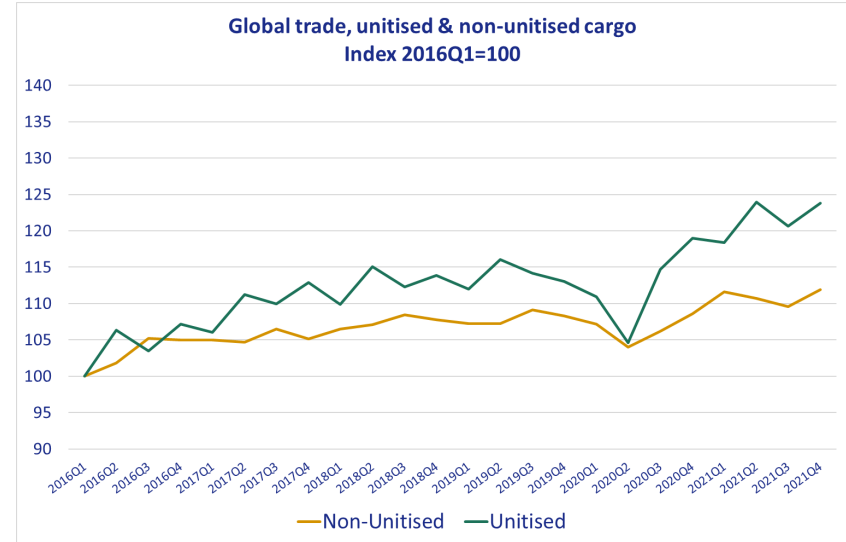
Red = adverse development or trend (from shippers' perspective); **Amber** = neutral or concerning trend (from shippers' perspective)

Green = improving development or trend (from shippers' perspective)

1. Trade Volumes

1.1 Total trade, global (mTonnes)

	2021Q4	Year To Date (YTD)	Previous Quarter (PQ)	Previous Year (PY)
Agricultural	205	809	1.5%	-2.9%
Metals	13	49	6.0%	13.8%
Oils & fats	24	93	-2.6%	-3.4%
Chemicals	172	681	2.4%	4.3%
Ores	508	2,019	0.5%	-2.0%
Forest products	108	445	1.8%	1.8%
Energy:				
- Coal	330	1,260	-1.4%	11.5%
- Oil & gas	1,106	4,443	2.8%	3.9%
Other	451	1,767	5.5%	4.0%
Total Non-Unitised	2,917	11,566	2.1%	3.0%
Unitised	639	2,513	2.6%	4.0%
TOTAL Tonnes	3,556	14,079	2.2%	3.2%



Note: Unitisable traffic is estimated on the basis of long run ratios of unitization based on country x country x commodity flows and the scale of traffic available and explains long-run trends in unit load volumes derived from other sources.

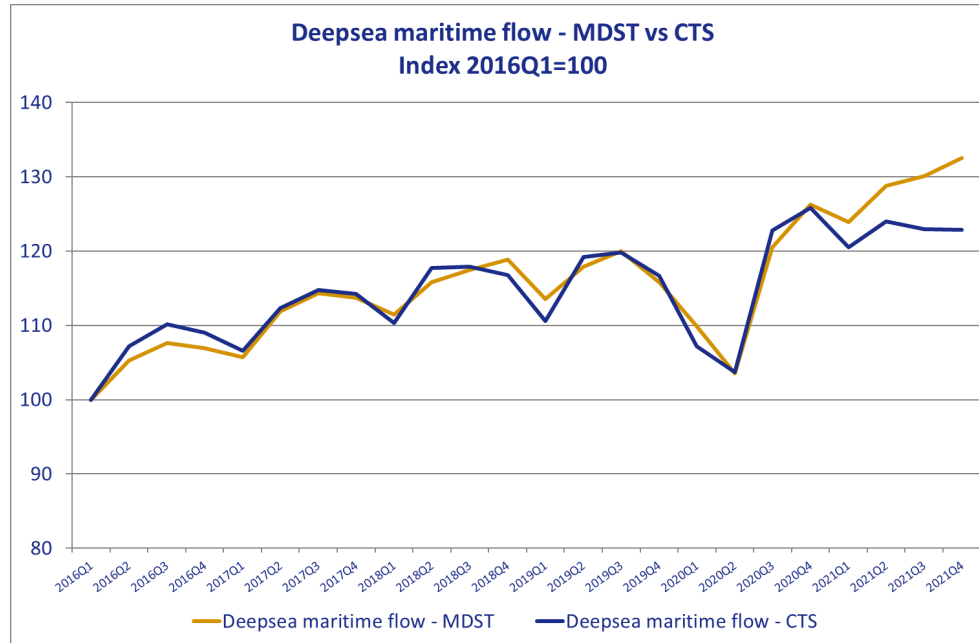
Source: MDS Transmodal, World Cargo Database February 2022

Conclusions & Commentary

- Measured on the basis of when goods are received at the importing country, global trade in 2021Q4 continued its post pandemic recovery. Compared to 2020Q4, total tonnages grew by 3.2% and by 2.2% over the previous quarter.
- Unitisable traffic for 2021Q4 grew at a marginally higher rate of 4.0% year on year basis and was up by 2.6% on the previous quarter (including regional and overland international freight). Some of this trade appears, however to have diverted to non-unitised modes or non-liner shipping as a consequence of rising freight rates and falling reliability (see following graphs).

1. Trade Volumes

1.2 World Cargo Database (MDST) compared with Container Trades Statistics (CTS)



Source: MDS Transmodal, World Cargo Database February 2022 & Container Trades Statistics

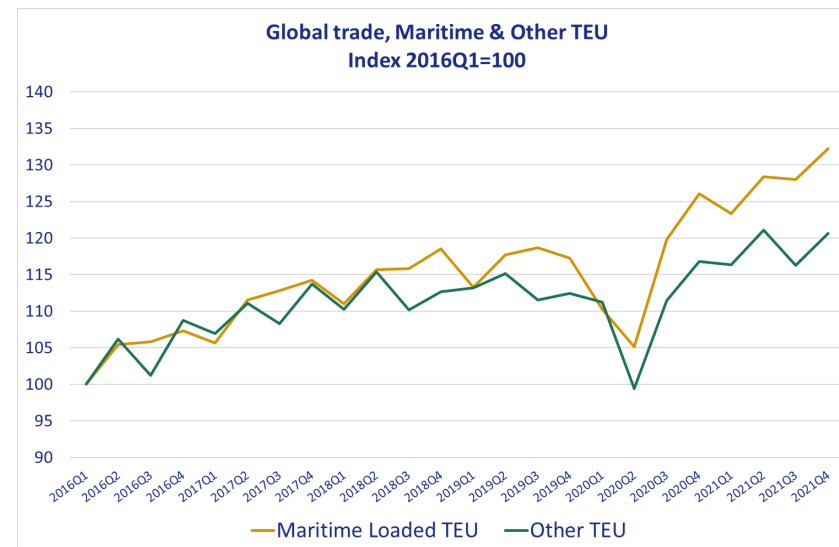
Conclusions & Commentary

- WCD (generally recorded at time of import) and CTS (recorded when cargo shipped by data supplied by the lines) track each other closely to 2020Q4 but then deviate. WCD describes actual trade from Customs data
- The gap between the two schedules expanded during 2021.
- Explanations will include a 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) routes
- From Q1 2021, the graph records the divergence between total cargo landed (gold line) and cargo lifted by container shipping services (blue line) the difference being the cargoes reaching destination by services other than deep-sea liner shipping.
- 'Non-liner-tonnage' also includes ships chartered by shippers. Air freight capacity also recovered over this period.

1. Trade Volumes

1.3 Unitised trade, global (mTEU)

	2021Q4	YTD	PQ	PY
Maritime containers	43	165	3.3%	4.9%
'- of which deep-sea (inter-continental)	31	122	2.0%	5.0%
'- of which short-sea (intra-regional)	11	43	7.2%	4.8%
Other (overland & ro-ro)	36	142	3.8%	3.3%
Total TEU	79	307	3.5%	4.2%



Source: MDS Transmodal, World Cargo Database February 2022

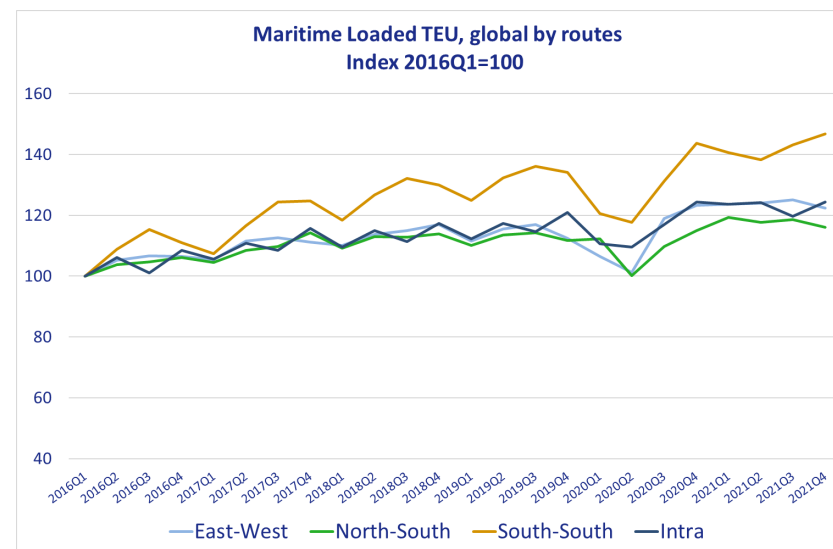
Conclusions & Commentary

- In 2021Q4 the volume of potential unitisable international cargo increased by 3.5% compared to 2021Q3 and by 4.2% compared to 2020Q4. Short-sea markets grew more strongly than in recent quarters at 4.8% on a year on year basis. Deep-sea growth was 5%, year on year.
- Underlying inter-continental markets therefore continue to grow despite the disruptions characterising the global supply chain.

1. Trade Volumes

1.4 Maritime Loaded TEU, routes (mTEU)

	2021Q4	YTD	PQ	PY
East-West	22.4	87.5	1.1%	4.3%
North-South	3.3	13.0	1.1%	5.9%
South-South	5.6	20.8	5.9%	7.3%
Intra	11.5	43.9	7.4%	5.0%
Grand Total	42.7	165.2	3.3%	4.9%



Source: MDS Transmodal, World Cargo Database February 2022

Conclusions & Commentary

- On a year on year basis and by comparison with the previous quarter, in 2021Q4 all maritime experienced growth, with the recovery most focussed on South-South routes, which had hitherto been growing more weakly.

2. Capacity

2.1 Deployed capacity*, global

	Ship size (TEU)	All carriers				New entrants
		2021Q4	PQ	PY	Average capacity per region, 2021Q4 vs 2020Q4	2021Q4
Deployed capacity (mTEU)	<5,000	29.2	0.1%	4.1%	-4.7%	0.10
	5,000-7,499	5.9	0.2%	1.4%	0.9%	
	7,500-9,999	6.1	-2.1%	-1.7%	0.5%	
	10,000-12,499	2.8	0.9%	24.0%	10.6%	
	12,500-14,999	4.6	1.3%	9.4%	11.1%	
	15,000+	4.6	2.6%	15.4%	4.5%	
Total deployed capacity (mTEU)		53.2	0.2%	5.3%	-0.5%	0.10
No of vessels	<5,000	3,603	1.6%	6.6%		19
	5,000-7,499	481	-1.2%	2.1%		
	7,500-9,999	475	-0.4%	-0.2%		
	10,000-12,499	171	-0.6%	17.1%		
	12,500-14,999	248	1.6%	5.5%		
	15,000+	216	3.8%	15.5%		
Total No of vessels		5,194	1.1%	6.1%		19

* Note: analysis carried out on individual IMOs.

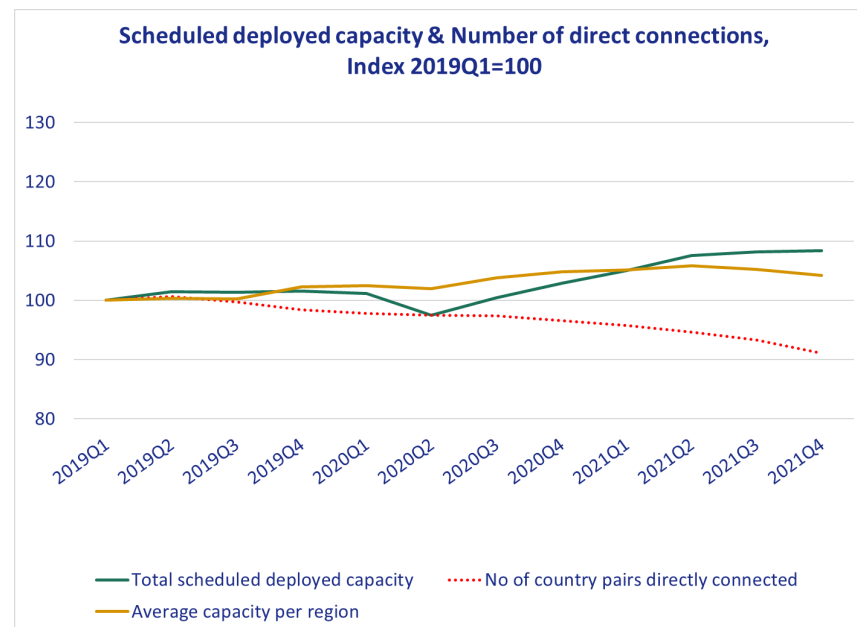
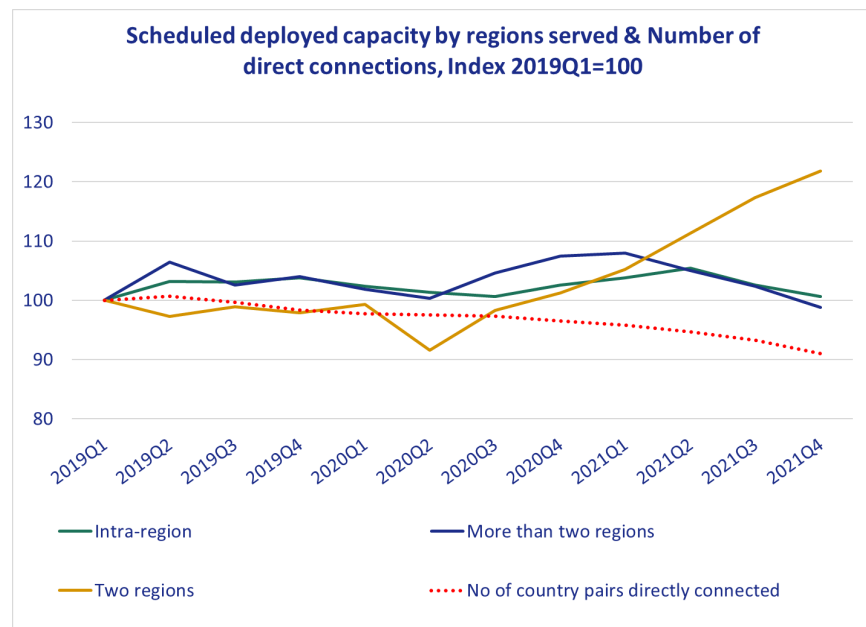
Source: MDS Transmodal, Containership Databank February 2022

Conclusions & Commentary

- In 2021Q4, scheduled deployed capacity rose by 5.3% compared to 2020Q4. The increase has been mainly driven by different usage of ships rather than the introduction of new ships.
- This was partly through the continuation of the policy of the lines to redeploy some ships onto shorter routes serving only two world regions (i.e. 'shuttles') instead of services serving multiple markets (e.g. NA – FE – ME – Europe – NA).
- To take this into account we therefore also now compare annual changes in capacity available between regions, which can be seen to have fallen marginally (last but one column).
- The last column shows the level of capacity offered by new entrants; in 2021Q4 we estimate that to equate to only 0.10m TEU (0.2% of total supply).

2. Capacity

2.2 Deployed capacity by markets served, global



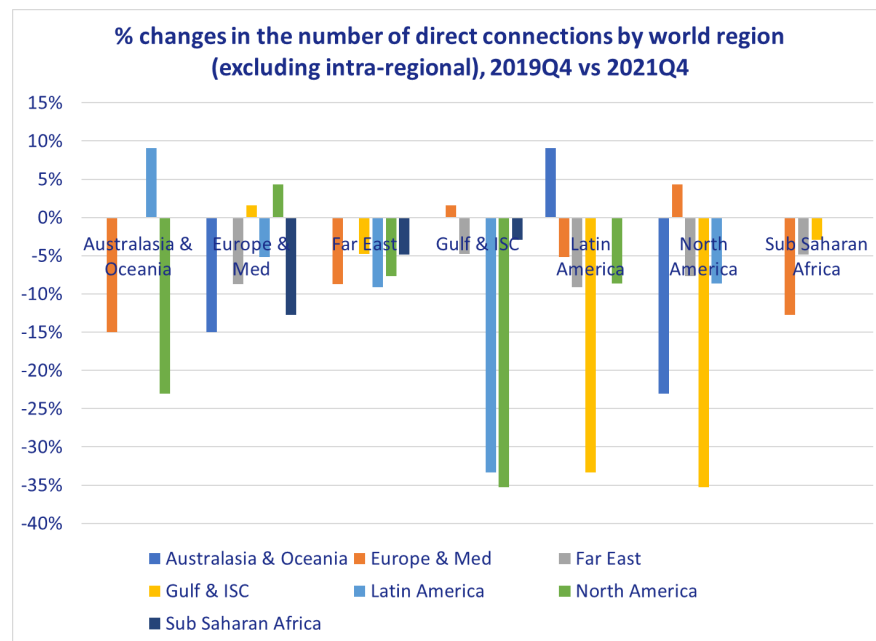
Source: MDS Transmodal, Containership Databank February 2022

Conclusions & Commentary

- Since 2020Q3, shipping lines have been adjusting their networks, shifting capacity from services serving more than two regions in favor of services serving only two regions.
- Taking into account this reallocation of the ships, we estimate that the annual change that actually occurred in scheduled capacity in 2021Q4 equates to a fall of 0.5% as compared with a 5.0% growth in deep-sea maritime demand.
- In adjusting their networks, lines have been cutting calls increasing number of county pairs without direct connections.
- Available capacity has been increased by existing ships making more frequent 'shuttle' voyages between port pairs over the period, at the expense of longer, loop sailings offering more port calls. This has resulted in a reduction in deployed capacity available to shippers, reducing the opportunity to move cargoes on a predictable basis.

2. Capacity

2.3 Changes in number of direct connections, global



Note: for this the analysis, we have excluded intra-regional services

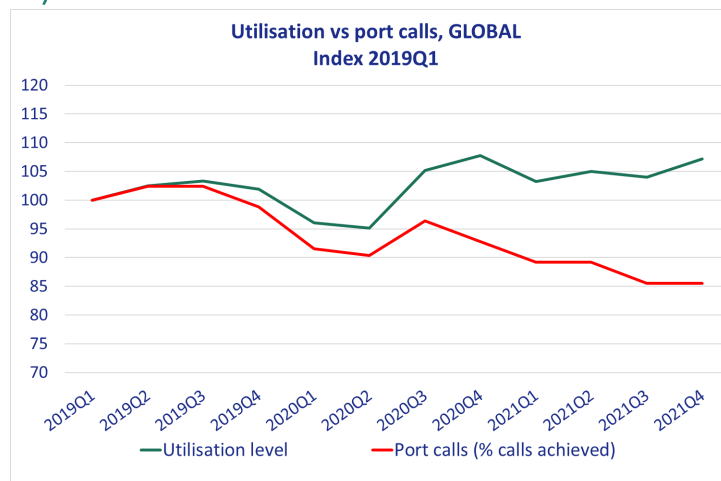
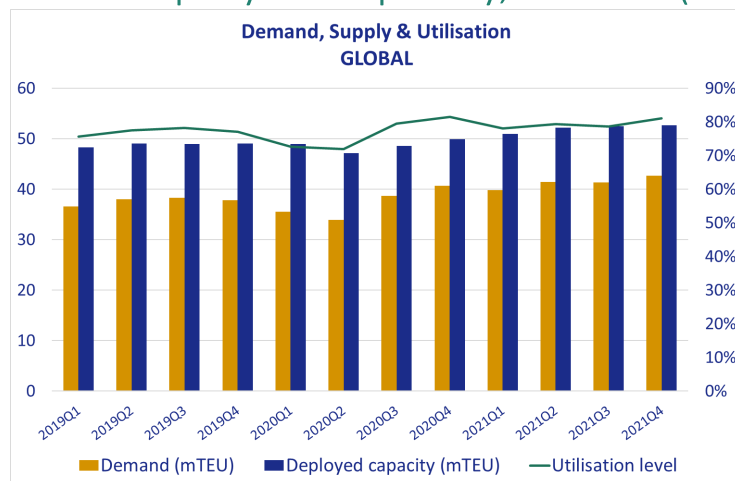
Source: MDS Transmodal, Containership Databank February 2022

Conclusions & Commentary

- The number of countries directly connected has declined by circa 6.2% in 2021Q4 compared to 2019Q4; the capacity lost due to this reduction accounted for to circa 3% of the total capacity scheduled in 2019Q4.
- Different world regions have been affected differently by this reduction, with for example North American countries estimated to have lost more than 35% of their direct connections to Gulf & ISC, equating to almost 14% of the capacity offered in 2019Q4 between these two world regions.
- This new indicator shows the extent to which direct services between regional markets have been reduced over the past two years. These will have been replaced by connecting services requiring transshipment at hub ports, adding delay and cost.

2. Capacity

2.4 Deployed capacity, routes (mTEU)



	2021Q4	PQ	PY
East-West	23.5	1.6%	13.1%
North-South	4.0	-1.4%	-0.4%
South-South	3.6	6.4%	12.8%
Intra	22.1	-1.9%	-1.9%
Grand Total	53.2	0.2%	5.3%

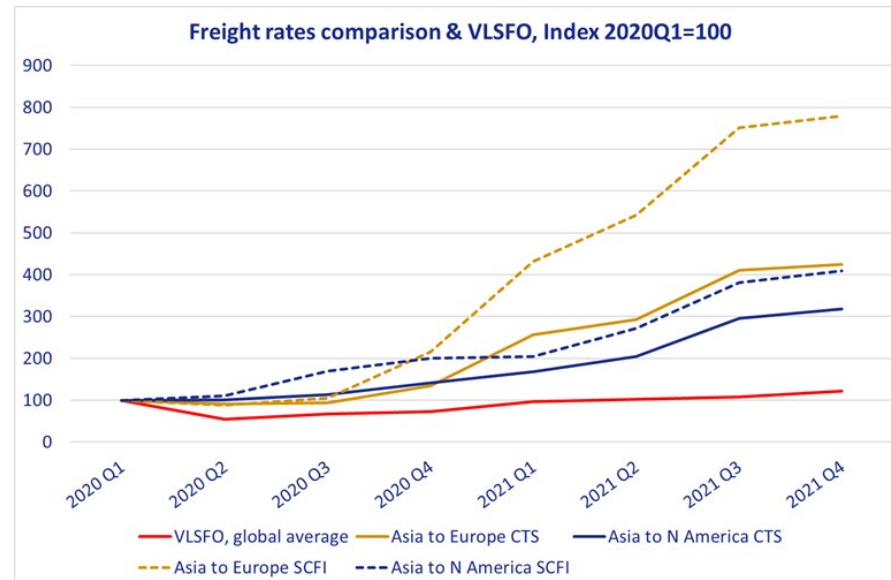
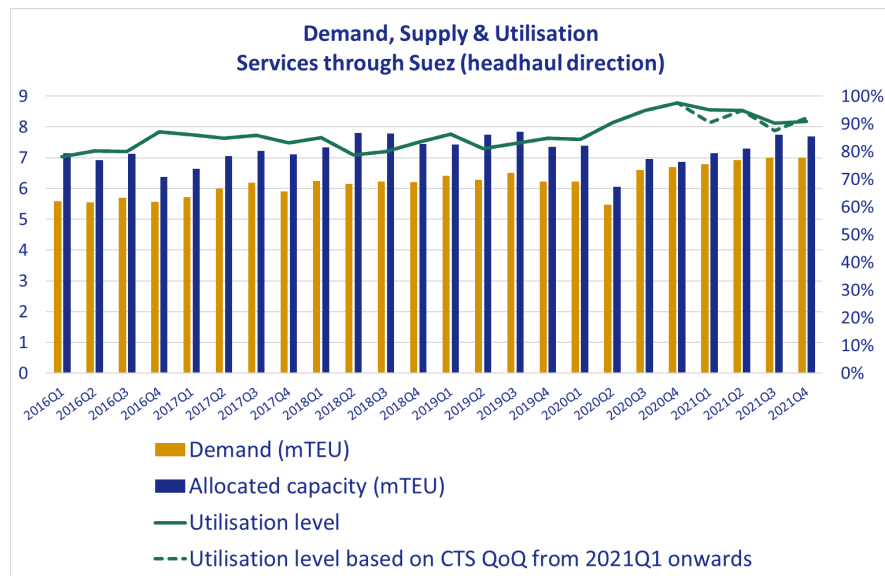
Source: MDS Transmodal, World Cargo Database & Containership Databank February 2022

Conclusions & Commentary

- Capacity scheduled on the EW and SS routes increased much faster than those on other markets.
- The increase in utilisation levels from 2020Q3 has been accompanied by a deterioration in the number of calls actually made – as illustrated in the following sections. Consistency and reliability also deteriorated.
- The number of port calls was maintained in Q4 2021 despite higher utilization levels, but at a historically low level of predictability for shippers. 1 in 7 of all scheduled port calls were missed (or 'skipped')

3. Utilisation

3.1 Utilisation* through Suez & Far East - North Europe & Med



**Note: from 2021Q1, MDST utilisation level shows a ratio between potential demand and scheduled capacity*

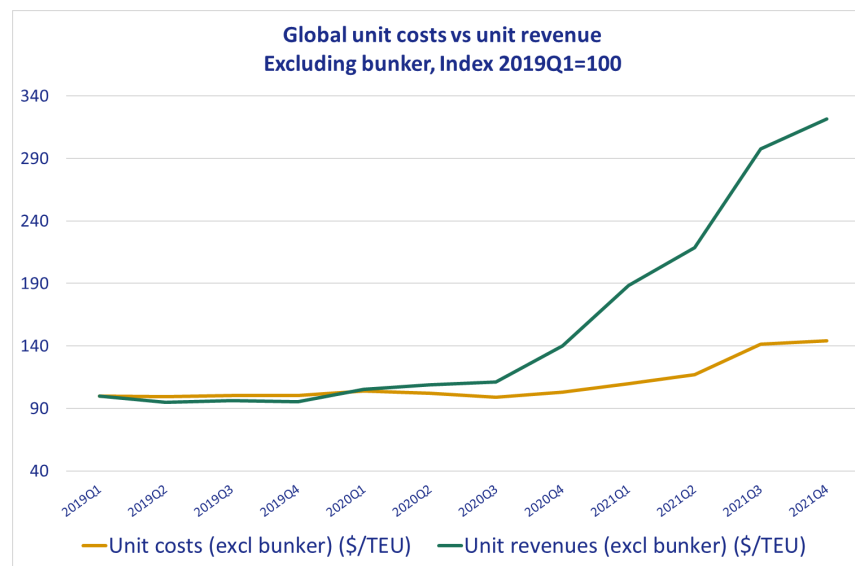
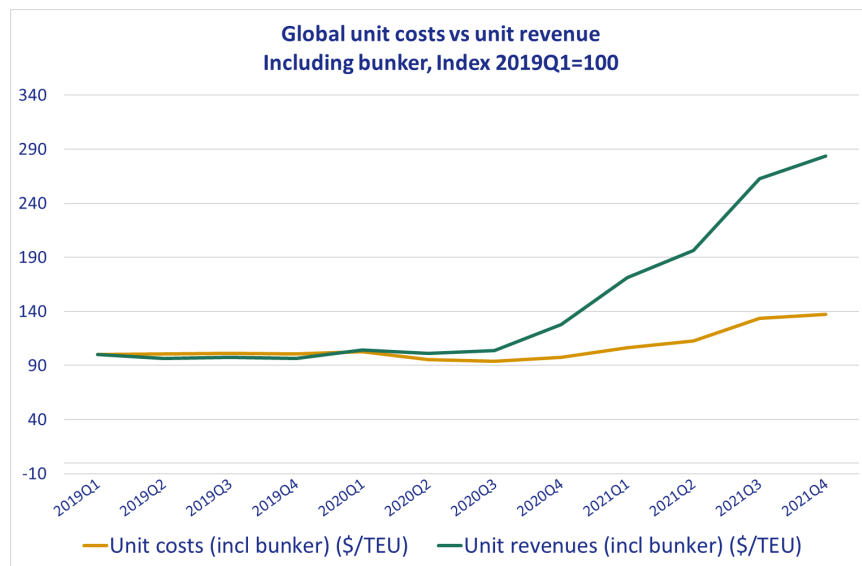
Source: MDS Transmodal, Container Business Model February 2022

Conclusions & Commentary

- Utilisation level measured for the vessels passing through the Suez Canal WB (busiest point for the shipping routes), reached its highest level for several years in 2020Q3, remaining high ever since; rising again in 2021Q4.
- Utilisation level measured on the Far East – Europe trade lane is also estimated to be over 90%.
- With utilisation levels remaining very high, mean unit revenues (based on the price indices reported by CTS) have carried on increasing: on the Far East to Europe routes, we observe an increase of more than 130% in 2021Q4 as compared to same quarter of 2020. Taken alone, spot rate inflation (rates paid where no contract is in place) is higher.
- Utilization rates remained at historically high levels of about 90 per cent, implying most container ships were effectively full, on most trades.

4. Costs & Revenues (Index 2019Q1=100)

4.1 Unit costs & unit revenue, Global



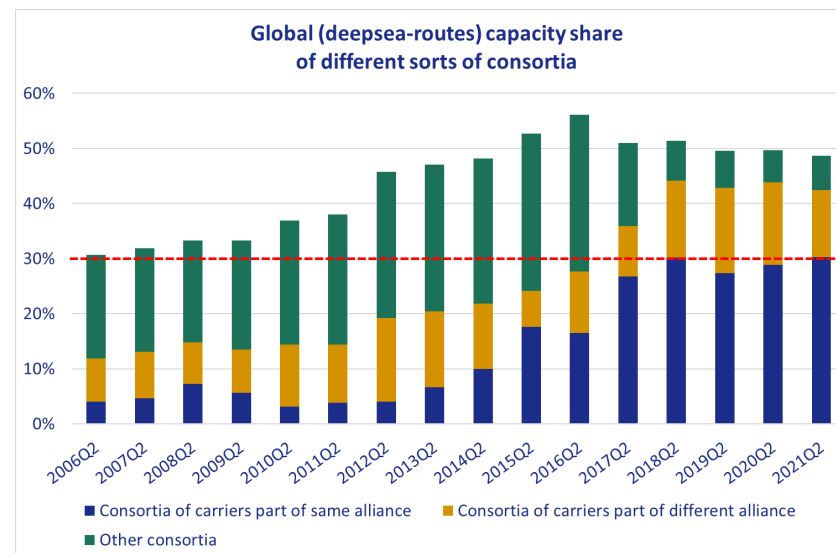
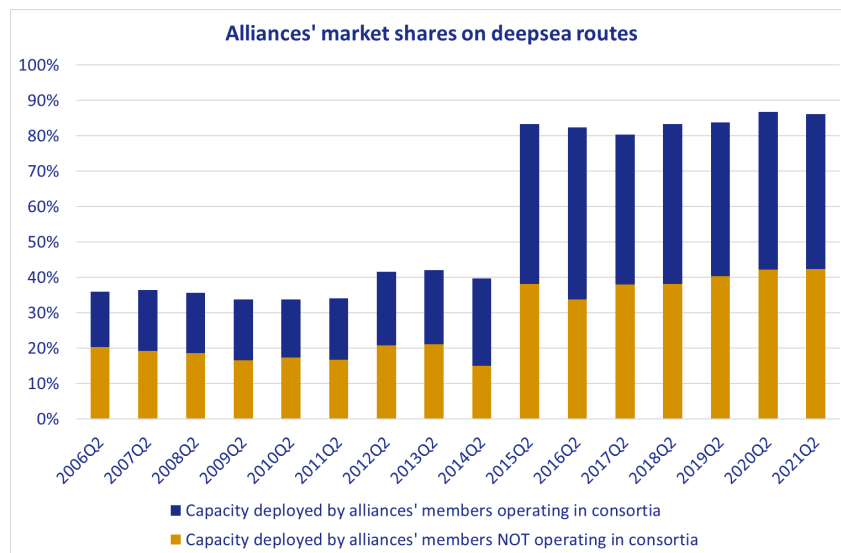
Source: MDS Transmodal, Container Business Model February 2022

Conclusions & Commentary

- With 2019Q1 equal to 100, global unit costs fell during the first half of 2020, as bunker costs declined, and started to increase from 2020Q3.
- 2020Q3 is the quarter where we start observing an increase in the divergence between unit costs and unit revenue, with the gap wider when bunker cost is subtracted from both unit revenues and unit costs. That divergence has increased with every quarter.
- Unit operating costs (including fuel) stabilized at about 40% above Q1 2019 levels in Q4 2021 but unit revenues continued to grow, reaching nearly three times their level at the start of the Covid pandemic.

5. Market Competitiveness (MDST/OECD-ITF)

5.1 Market concentration



Source: Merk & Teodoro (<https://link.springer.com/article/10.1057/s41278-022-00225-x>) based on MDS Transmodal Consortia & Alliances Database May 2021

Analysis based on the global sum of the capacity of each individual service but including alliance members only, classified by (a), those operating services alone and (b), when in consortia (i.e. ships operated by more than one line)

Analysis of only those services operated by consortia, classified by where (a), consortia members are other members of the same alliance, (b), members are of different alliances and (c), members are alliance and non-alliance companies

Conclusions & Commentary

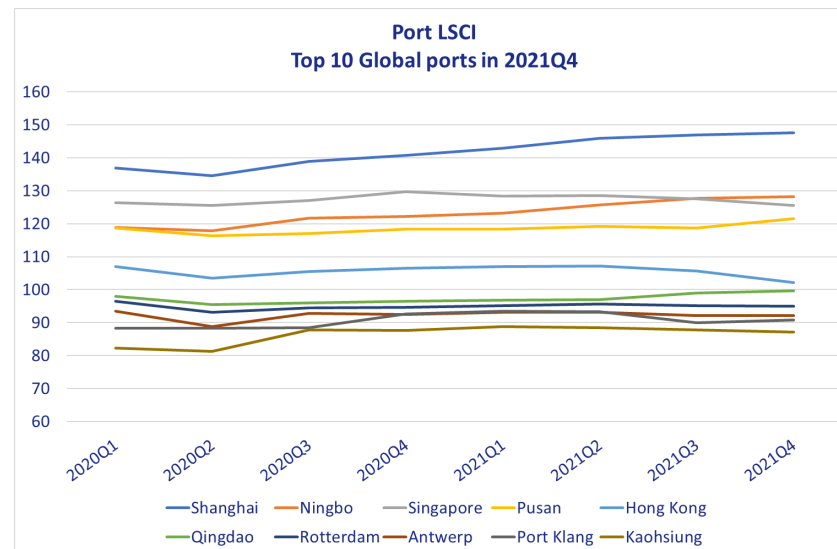
- By mid 2021, some 52% of the capacity of all services (globally) was provided by lines operating alone and 48% by lines operating in consortia. 30% of all capacity is operated by consortia where members are of the same alliance, but this rises to 42% when members of different alliances are included. This proportion has grown from under 30% in 2016; the level of linkages amongst carriers operating in different alliances has been increasing showing that consortia act as 'bridges' between alliances.
- There was little change to 2021Q4; see slide 2.1 above showing minimal extra capacity was supplied by new entrants.

6. Port Connectivity (MDST/UNCTAD LSCI)

6.1 Top 10 container ports, global

Liner Shipping Connectivity Index, Hong Kong 2006Q1=100

	2021Q4	PQ	PY
Shanghai	147.5	0.7	6.8
Ningbo	128.2	0.5	6.0
Singapore	125.5	-2.1	-4.2
Pusan	121.5	2.8	3.2
Hong Kong	102.2	-3.4	-4.2
Qingdao	99.7	0.8	3.2
Rotterdam	95.0	-0.2	0.3
Antwerp	92.1	0.0	-0.3
Port Klang	90.9	0.9	-1.8
Kaohsiung	87.1	-0.7	-0.6



Source: MDS Transmodal, Containership Databank February 2022 (www.portlsci.com)

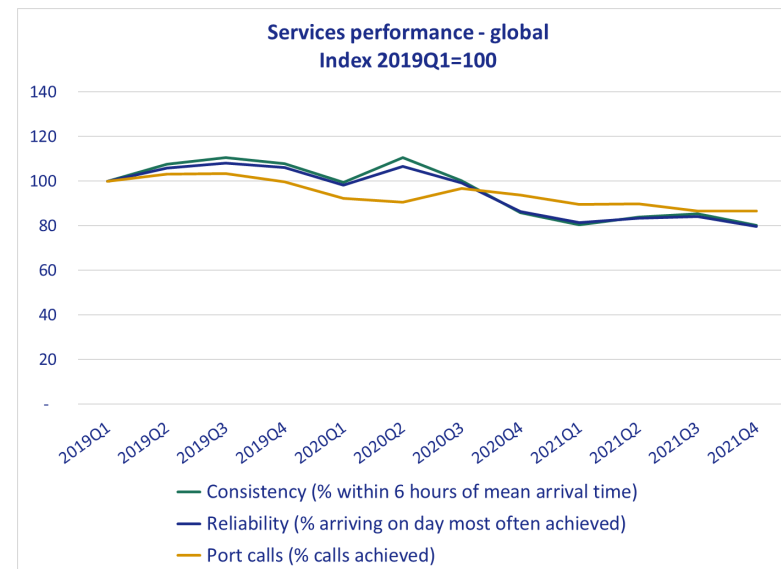
Conclusions & Commentary

- Having generally improved over time, the level of connectivity (a weighted mean of different factors including actual direct connections and vessel capacity) estimated for 2021Q4 began to deteriorate for some ports as the number of direct physical connections began to fall.

7. Services performance

7.1 Consistency, reliability & port calls, global

	2021Q4	YTD	PQ (% points)	PY (% points)
Consistency (% within 6 hours of mean arrival time)	42%	43%	-2.7	-3.0
Reliability (% arriving on day most often achieved)	49%	51%	-2.8	-4.2
Port calls (% calls achieved)	71%	73%	0.0	-6.0



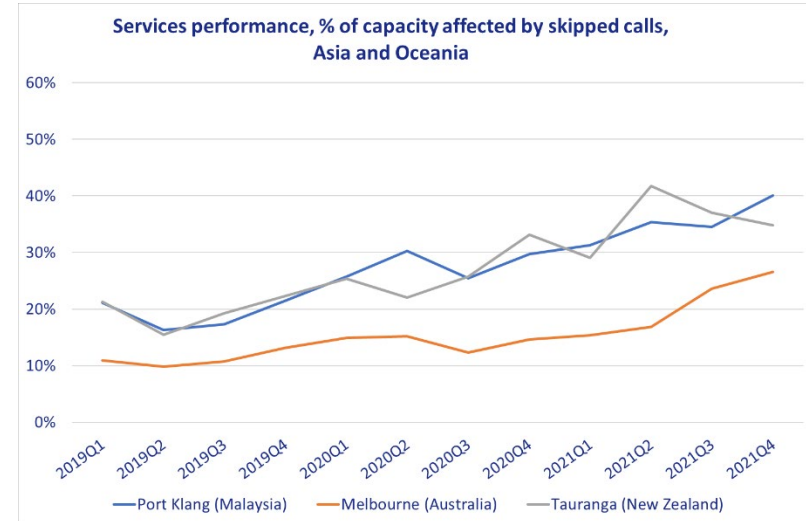
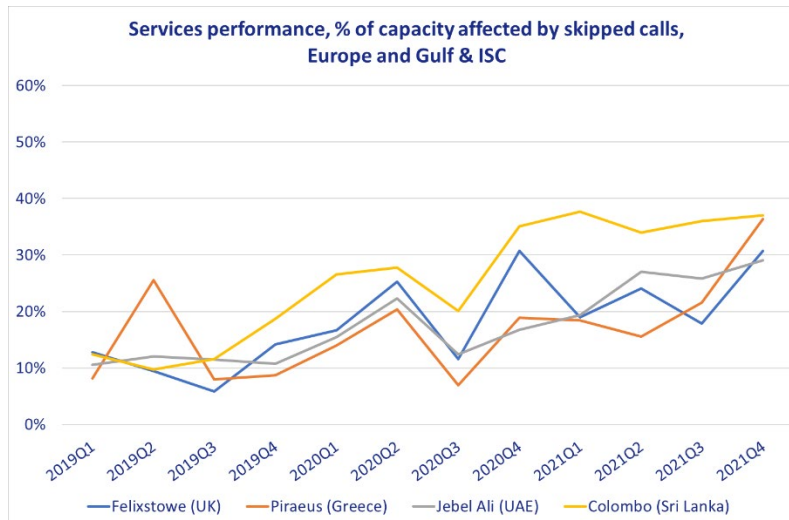
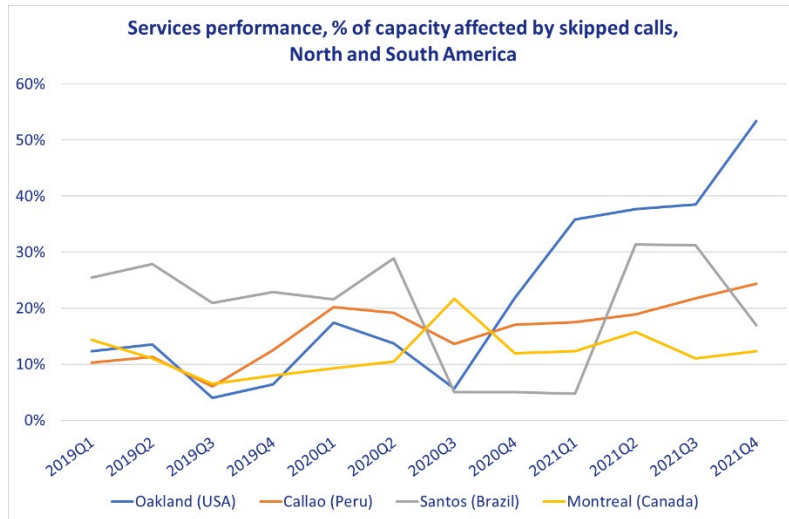
Source: MDS Transmodal based on AIS (Automatic Identification System) data

Conclusions & Commentary

- There was a deterioration in consistency, reliability and in the port calls actually made (by comparison with being scheduled) in 2021Q4.
- On an annual basis, all three indicators have slipped significantly, suggesting that performance in 2021Q4 reflected both an accumulating service quality challenge and an effort by the lines to raise inter-regional capacity at the expense of the number of ports served.
- Predictability of ships' arrival day and time in port declined markedly in Q4, with over half of ships that actually called at the ports arriving within expected time windows. The number of port calls missed altogether remained at historically high levels with about 15% of scheduled calls missed.

7. Services performance

7.2 % of capacity affected by skipped calls, selected ports



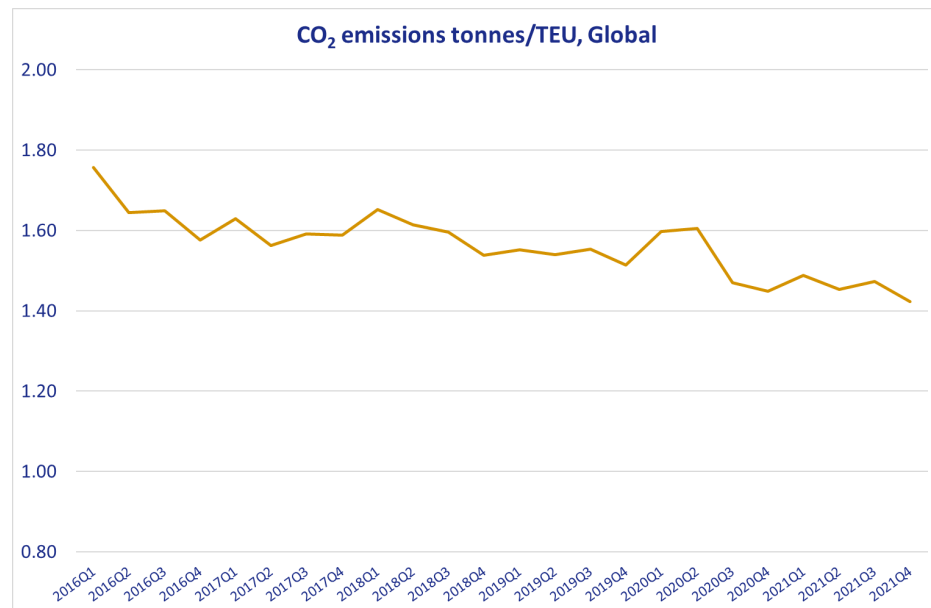
Source: MDS Transmodal based on AIS (Automatic Identification System) data

Conclusions & Commentary

- This new analysis shows the effect of 'skipped' port calls on the shipping capacity lost to shippers, over the past two years.
- The graphs show the percentage of shipping capacity expected to call but was lost through the port call not being made ('skipped').
- This has been caused by ships failing to call at ports as scheduled making their capacity unavailable to shippers at that port.

8. Carbon Emission Factors

8.1 CO₂ emission tonnes/TEU, global



Note: demand from 2021Q1 based on CTS volumes

Source: MDS Transmodal, Container Business Model February 2022

Conclusions & Commentary

- Emissions per unit of cargo (tonnes/TEU) reduced as the twin policies of slower vessel speeds ('slow steaming') and the introduction of larger vessels (VLCCs) continued to take effect. The decreases were most marked on the Far East- North Europe route where these policies had greatest impact.
- Emissions per unit fell in 2021Q4 as port calls were dropped and time between port calls rose, reducing implied speeds.
- New global carbon intensity reduction measures for existing ships will become effective from 2023. This indicator will be used to monitor their effectiveness in reducing shippers' Scope 3 emissions of CO₂ from container shipping.

The indicators explained (1)

- 1.1 Total trade:** Total goods exported and imported by all countries measured in millions of tonnes and distinguished between 'not unitised' and 'unitised'.
- 1.3 Unitised trade:** Cargo moved in units, measured in TEU and distinguished between Maritime containers (loaded containers shipped by sea, excluding RoRo) and Other (RoRo containers by sea, containers and road trailers across land borders).
Unitised maritime trade represents the total demand for container shipping services by cargo owners (shippers).
- 2.1 Deployed capacity:** Capacity offered on container-carrying vessels (containerships) deployed on services as scheduled by the shipping lines (mTEU).
Deployed capacity is the total supply of scheduled container-carrying capacity made available to shippers to meet the demand for unitised freight.
- 3.1 Allocated capacity:** Capacity estimated in the MDST model to calculate the level of utilisation; it represents, effectively, the available TEU capacity modelled on a global basis but taking each string and its precise port calls into account. MDST then allocates this capacity by taking into account the demand (region-to-region) making assumptions on direct services versus transshipment. In effect this is acknowledging the fact of way-port cargoes but at a region-to-region level rather than port-to-port level.
- 3.1 Utilisation:** Ratio of estimated cargo moved on identified routes to capacity allocated to those routes (e.g. services transiting the Suez Canal northbound – busiest location for the global container shipping industry)

Numbers refer to sections in which the term is used

The indicators explained (2)

4.2 Costs & Revenues: Estimated operating costs and estimated revenues measured with and without fuel

5.1 Market competitiveness: this analysis has been carried out using the MDST Consortia & Alliances Database, a subproduct of the MDST Containership Databank, which contains detailed information of the world's container carrying fleet also used by UNCTAD for the Liner Shipping Connectivity Index (LSCI) and by the World Bank for the Logistics Performance Index (LPI). The MDST Consortia & Alliances Database, developed in collaboration with ITF/OECD, is a dataset in which we have grouped the port pairs into trade corridors (e.g. a service calling, amongst other, at the port of Shanghai and at the port of Rotterdam, has been allocated to the East China Sea-North Europe trade corridor) and identified, for each vessel deployed on any given service, the shipping lines that operate them. This information has allowed us to identify the services operated by consortia and their members, by alliances and their members, by independent carriers.

6.1 Port LSCI: Liner Shipping Connectivity Index produced in collaboration with UNCTAD and generated from the following 6 components: number of scheduled ship calls/week in the port; total scheduled container shipping capacity calling at the port; number of regular services calling at the port; number of carriers that provide services to/from the port; maximum average size of the ships deployed by the scheduled service; number of other ports that are connected to the port through direct services (more on www.portlsci.com)
The LSCI is a proxy for the frequency, reliability and direct access to markets experienced by shippers of cargo through each named port and a measure of the quality of service experienced by users of the ports services.

Numbers refer to sections in which the term is used

The indicators explained (3)

7.1 Services' performance indicators: **Consistency** (% within 6 hours of mean arrival time); **Reliability** (% arriving on day most often achieved); **Port calls** (% calls achieved after allowing for blanked sailings and ports skipped).

For shippers, Consistency is a measure of on-time arrival of vessels (will goods become available when they have normally been in the past?); Reliability is a measure of the regularity of service (same day of the week); Port Calls is a measure of whether the vessel arrives at all or the cargo is 'rolled' on to the next service. These are key factors in determining on-time delivery of exports to customers or availability of imports for domestic distribution.

8.1 Carbon Emission factors: Average amount of CO₂ emitted by each loaded container shipped by sea measured for the whole deep-sea shipping industry and selected trade lane (tonnes CO₂ /TEU).

Carbon emissions per cargo unit moved are the required inputs for manufacturers, retailers and other shippers to calculate the contributions that third parties make to the carbon footprint of their products and businesses (Scope 3 emissions). The shipping industry is under public pressure to deliver meaningful reductions in greenhouse gas emissions in the short and medium term. Current proposals target improvements through better ship design and maintenance and more efficient operation. Other actions include Emissions Trading Schemes, carbon taxes and the use of low-carbon fuels. Regardless of the means employed, this measure will track their net effectiveness on the carbon footprint of container shipping as experienced by users of its services.

Numbers refer to sections in which the term is used

More about MDS Transmodal & contacts

MDS Transmodal (MDST, www.mdst.co.uk) is a firm of transport economists based in Chester (UK) which specialises in maritime and all other modes of freight transport. MDST works with senior management in the public and private sectors to provide strategic advice based on quantitative analysis, modelling and sectoral expertise. MDST's approach is based on being:

- Innovative – Constantly developing new ways to analyse strategic issues and opportunities
- Quantitative – Analysis based on best in class maritime databases and models
- Independent – More than 35-year track record of providing objective advice
- Expert – Consultants with an average of 20 years' consultancy experience
- Specialist – Focused on the economics of maritime transport and other freight modes.

MDST data, modelling and industry expertise can be applied to analyse strategic issues and opportunities wherever the client is based in the world. Clients include UNCTAD, the World Bank, the European Commission, government at all levels, ports and terminal operators, developers of distribution parks, financial institutions, global shippers and shipping lines and a wide range of professional services companies.

All of the data presented in tables and graphs can be provided at a more detailed level, e.g. trade data by country pairs as well as individual commodities, capacity and services performances by service and operator, etc.

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More about Global Shippers Forum & contacts

Global Shippers Forum (GSF) is the international business organisation speaking up for exporters and importers as cargo owners in international supply chains and trade procedures. Its members are national and regional shippers' associations representing manufacturing, wholesaling and retailing businesses in over 20 countries across five continents.

Shippers own the goods that others carry, and ultimately pay the costs they incur. GSF works to achieve safe, competitively efficient and environmentally sustainable global trade and logistics on behalf of its members.

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