



DEMAND, SUPPLY AND COMPETITIVENESS IN THE GLOBAL CONTAINER SHIPPING INDUSTRY

Host & Moderator:

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Presenters:

MIKE GARRATT Chairman, MDS Transmodal Ltd

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Demand, supply and competitiveness in the global container shipping industry

Maritime London Webinar
London 9th June 2021



Global Shippers Forum/MDS Transmodal Container Shipping Market Quarterly Review

Review triggered by:

- Absence of an independent collation of key performance indicators in the liner trades
- Consolidation in the liner trades and the potential cost impacts of rising bunker costs and carbon taxes
- The particular issue of the European Commission renewing the Consortium Block Exemption Regulation in 2020, but for only 4 years.

Now in its third quarter the Review finds itself:

- Monitoring the unprecedented rise in freight rates as shipping line performance falls
- Seeking to establish the means of measuring the liner trade sector to better inform all the relevant actors in the market (lines, regulators, shippers, ports etc.)

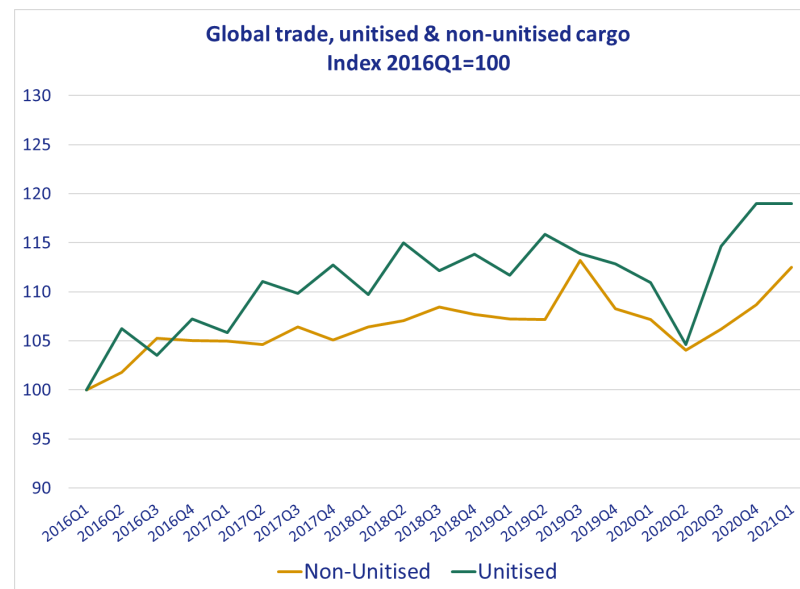
Key Performance Indicators

1. Demand (estimated TEU by geography)
2. Supply (deployed capacity by corridor)
3. Utilization (load factors)
4. Costs, revenues and profitability (per unit moved)
5. Competitiveness (independent actors by market)
6. Connectivity (how well does liner shipping connect the global economy)
7. Performance (reliability, consistency and % planned port calls achieved)
8. Carbon per TEU

Trade Volumes

Total trade, global (mTonnes)

	2021Q1	Year To Date (YTD)	Previous Quarter (PQ)	Previous Year (PY)
Agricultural	206	206	-2.5%	8.8%
Metals	12	12	3.3%	6.8%
Oils & fats	25	25	0.8%	6.3%
Chemicals	171	171	3.4%	6.5%
Ores	501	501	-3.1%	6.2%
Forest products	120	120	13.3%	21.2%
Energy:				
- Coal	302	302	2.2%	-6.0%
- Oil & gas	1,166	1,166	9.5%	6.4%
Other	426	426	-1.7%	2.0%
Total Non-Unitised	2,928	2,928	3.5%	5.0%
Unitised	614	614	0.0%	7.2%
TOTAL Tonnes	3,543	3,543	2.9%	5.4%



Source: MDS Transmodal, Cargo Database May 2021

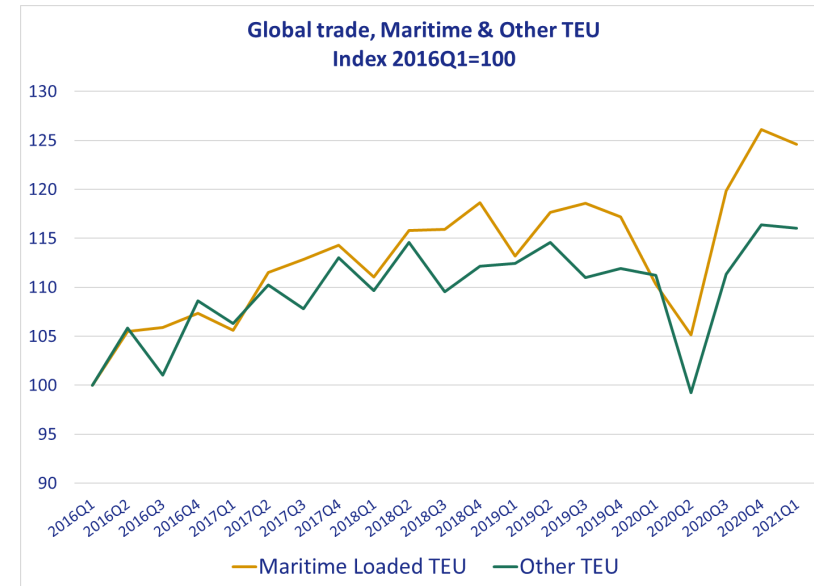
Conclusions & Commentary

- Measured when received at the importing country, global unitised trade in 2021Q1 remained substantially stable compared to the previous quarter whereas we estimate an increase of more than 7% compared to 2020Q1.
- Taken together with all bulk and semi-bulk traffic, global trade in 2021Q1 was circa 3% up on 2020Q4 and more than 5% up on 2020Q1 with the major growth in percentage terms being experienced by forest products.
- Global flows of unitised goods seem to have levelled-off in Q1 2021, contrary to the market narrative that growth seen in 2020 had continued. The impact of the Chinese New Year and further Lockdowns in Europe could be responsible.

Trade Volumes

Unitised trade, global (mTEU)

	2021Q1	YTD	PQ	PY
Maritime containers	40	40	-1.2%	13.0%
'- of which deep-sea (inter-continental)	30	30	-1.0%	13.9%
'- of which short-sea (intra-regional)	11	11	-1.7%	10.5%
Other (overland & ro-ro)	35	35	-0.3%	4.3%
Total TEU	75	75	-0.8%	8.8%



Source: MDS Transmodal, World Cargo Database May 2021

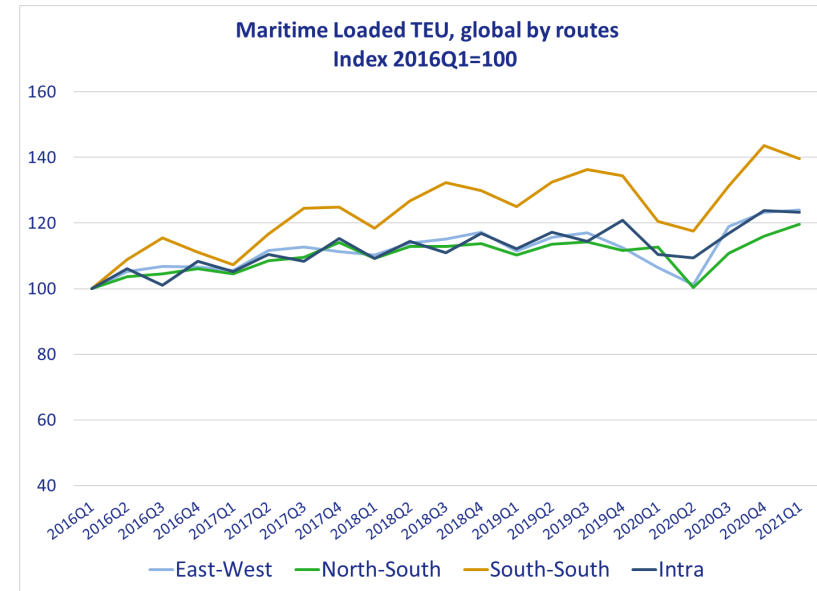
Conclusions & Commentary

- Total maritime TEU in 2021Q1 contracted by less than 1% compared to 2020Q4 and it was up by almost 9% over 2020Q1, with volume moved on deepsea routes growing at a faster rate than shortsea traffic - reflecting the higher elasticity of deep-sea traffic to consumer cash availability.
- Global maritime container traffic declined slightly over Q1 2021, confirming a reduction in demand at the end of 2020.
- To date, maritime containerised traffic has grown by 13% over the period of the global pandemic.

Trade Volumes

Maritime Loaded TEU, routes (mTEU)

	2021Q1	YTD	PQ	PY
East-West	21.4	21.4	-0.7%	15.1%
North-South	3.2	3.2	1.9%	5.2%
South-South	5.0	5.0	-3.9%	14.7%
Intra	10.7	10.7	-1.7%	10.5%
Grand Total	40.2	40.2	-1.2%	13.0%



Source: MDS Transmodal, Cargo Database May 2021

Conclusions & Commentary

- With the exception of cargo moved on the North-South routes, in 2021Q1 we estimate a contraction compared to 2020Q4
- On a year-on-year comparison, in 2021Q1 we estimate strong growth with East-West routes continuing to lead growth (mainly exports from the Far East).
- The levelling-off of demand was experienced on all routes, except North-South trades.

Capacity

Deployed capacity, global

	Service average ship size (TEU)	2021Q1	PQ	PY
Deployed capacity (mTEU)	<5,000	28.9	2.9%	2.6%
	5,000-7,499	5.5	0.0%	-8.1%
	7,500-9,999	6.4	3.2%	7.2%
	10,000-12,499	2.9	-0.6%	31.0%
	12,500-14,999	3.7	-4.7%	-0.9%
	15,000+	3.9	5.4%	16.0%
Total deployed capacity (mTEU)		51.4	2.0%	3.8%
No of vessels	<5,000	3,487	2.0%	0.8%
	5,000-7,499	450	4.4%	-7.0%
	7,500-9,999	501	2.7%	7.7%
	10,000-12,499	184	-0.5%	12.9%
	12,500-14,999	228	-6.2%	7.5%
	15,000+	183	5.2%	16.6%
Total No of vessels		5,033	1.9%	1.9%

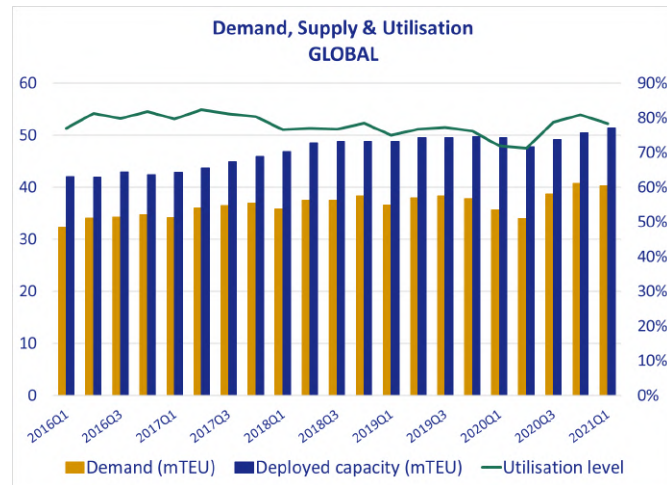
Source: MDS Transmodal, Containership Databank May 2021

Conclusions & Commentary

- Global deployed capacity in 2021Q1 was a little under 4% higher than in 2020Q1, as compared with c. 14% growth in deep-sea demand; the number of vessels deployed has increased by less than 2% with the major increase being reported for the largest vessels.
- The capacity deployed to service the 13% increased demand for containerised traffic over last 12 months grew by just 3.8% over the same period, and was provided by larger vessels, with the global fleet increasing by just 1.9%..
- These data measure scheduled capacity. Actual capacity available to shippers will have been lower due to delayed rotations as vessels awaited access to severely congested ports.

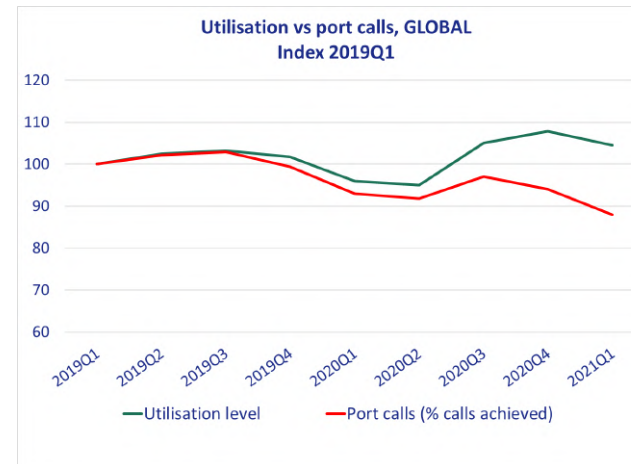
Capacity

Deployed capacity, routes (mTEU)



	2021Q1	PQ	PY
East-West	21	3%	7%
North-South	4	1%	-3%
South-South	3	5%	10%
Intra	22	1%	2%
Grand Total	51	2%	4%

Source: MDS Transmodal, World Cargo Database & Containership Databank November 2020

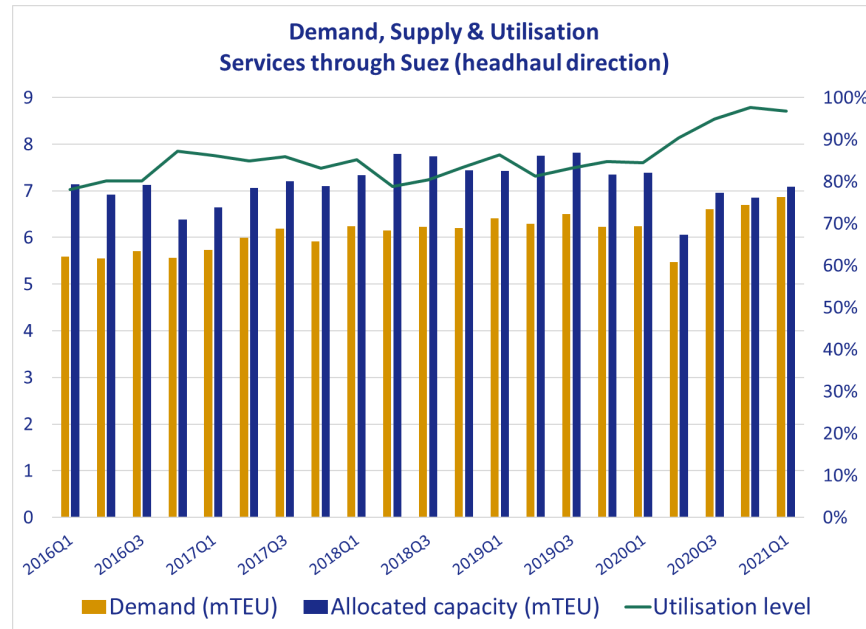


Conclusions & Commentary

- Overall capacity on EW routes in 2021Q1 was up by 7% on 2020Q1 while demand was up by almost 14%. As compared with 2020Q4, capacity was up by 3% while demand contracted marginally (down by c. 1%).
- Globally, utilisation level contracted marginally compared to the previous three months, however it remained higher than 2020Q1.
- Despite a reduction in utilisation level, we observe a further reduction in the proportion of anticipated port calls - as we shall see, reliability and punctuality also declining further.
- Utilisation of global deployed capacity fell back to levels last achieved in Q3 2020 (~75%) but vessels were still effectively full and fewer scheduled port calls were made, resulting in frequent 'rolled cargoes'.

Utilisation

Utilisation through Suez

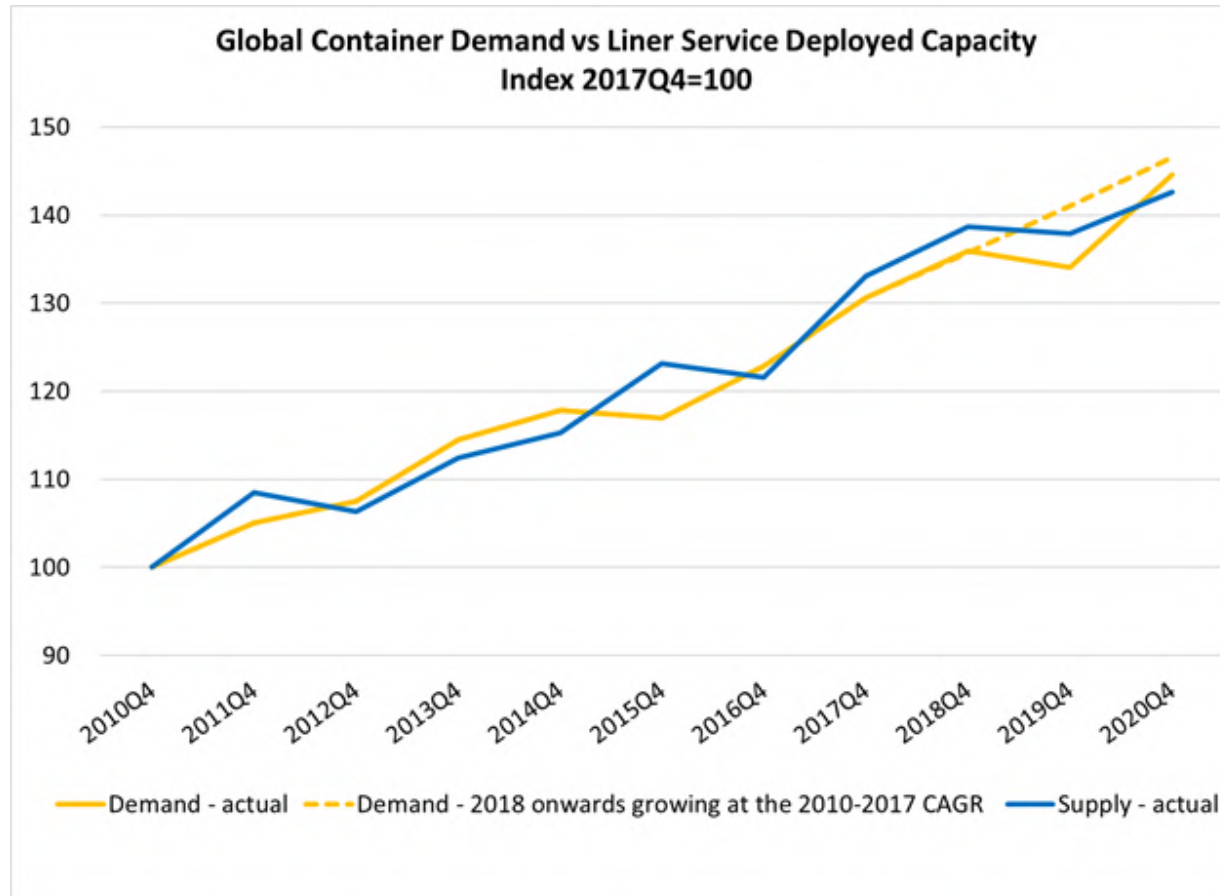


Source: MDS Transmodal, Container Business Model May21

Conclusions & Commentary

- After reaching its highest level in 2020Q4, utilisation level for the services passing through the Suez Canal is estimated to have seen a contraction of one percentage point compared to the previous quarter; however it remains well above the levels observed in the first part of 2020.
- Utilization rates on headhaul services through the Suez Canal reduced slightly in Q1 2021 but services remained effectively full.
- These data are not materially affected by the closure of the Suez Canal following the grounding of Ever Given between 23 and 30 March.

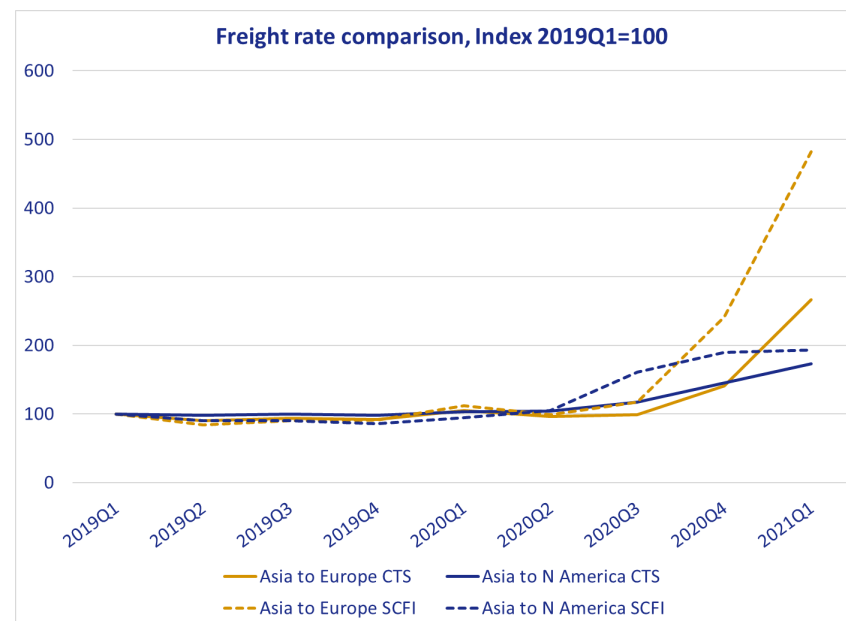
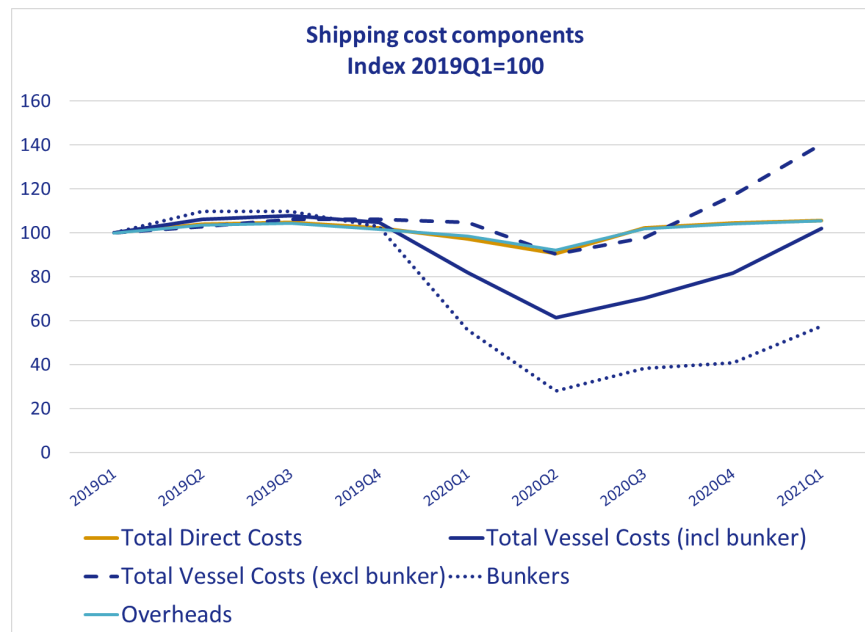
Longer term trend in supply and demand



Source: MDS Transmodal, Container Business Model May21

Costs & Revenues (Index 2019Q1=100)

Costs & revenue, Global



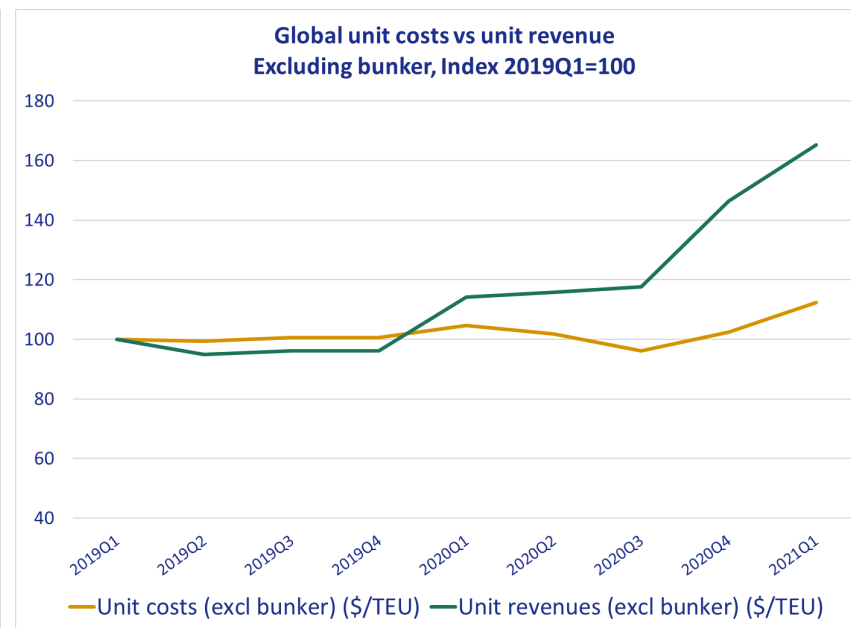
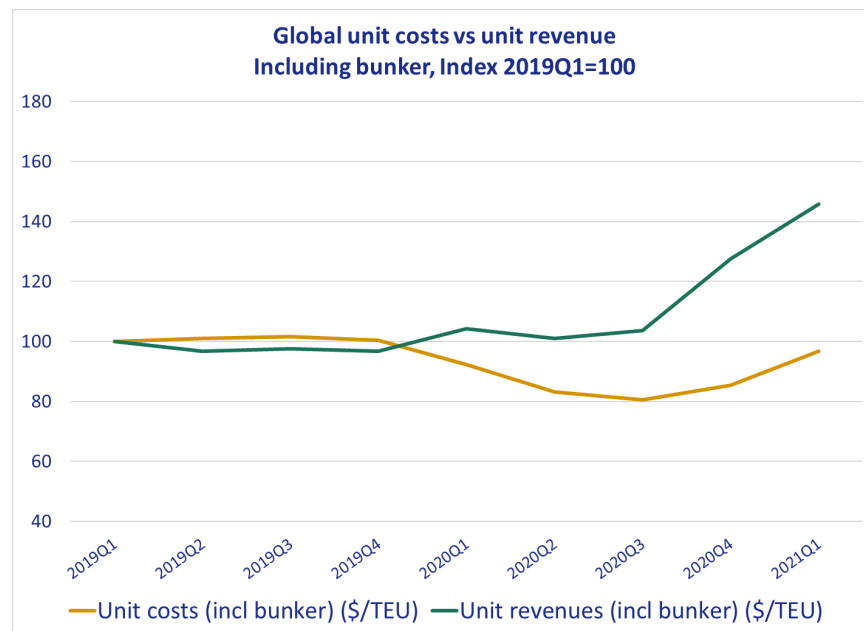
Source: Costs: MDS Transmodal, Container Business Model November 2020; freight rates: MDS Transmodal elaboration on various sources

Conclusions & Commentary

- Overall shipping costs marginally increased in 2021Q1 mainly due to the increase in charter rates.
- Both mean revenues and spot rates increased substantially on the Asia to Europe routes with capacity available to serve these markets still tight; increases of a lower magnitude can be observed on the Asia to North America trade lane.
- Total vessel costs rose slightly in Q1 2021 to return to pre-Pandemic levels but Asia – Europe spot freight rates are 5 times higher than they were in Q2 2020. This is despite lower demand (Charts 1.2 & 1.3) and vessels being less full (Charts 2.2 & 3.1)
- The behaviour of spot rates over this period is inconsistent with supply and demand fundamentals and demonstrates an unresponsive market.

Costs & Revenues (Index 2019Q1=100)

Unit costs & unit revenue, Global



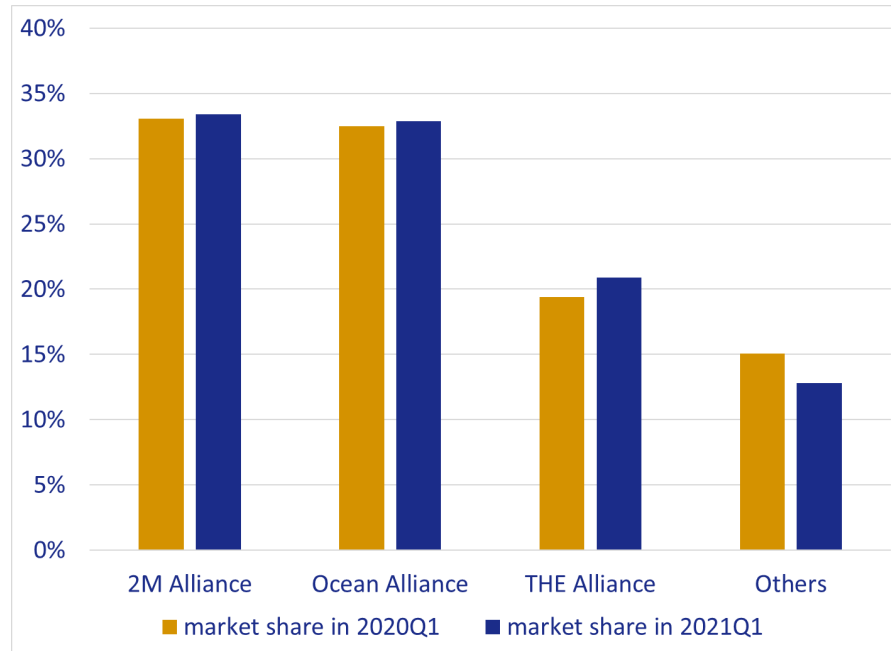
Source: MDS Transmodal, Container Business Model May21

Conclusions & Commentary

- Global unit costs are estimated to have increased in 2021Q1 mainly because of an increase in charter rates.
- The gap between costs and revenues is estimated to have grown further in 2021Q1 with the difference widening when bunker cost is excluded.
- On average, shipping lines earned 1.5 times more revenue per container moved in Q1 2021 than they did in Q1 2020, for the same costs of operation.
- Such high operating margins and higher charter rates would be expected to stimulate the deployment of new capacity either through new entrants to the market or through orders for new vessels.

Competitiveness

Market shares based on capacity deployed on deep-sea routes, 2020Q1 vs 2021Q1



Source: MDS Transmodal, Containership Databank May 2021

Conclusions & Commentary

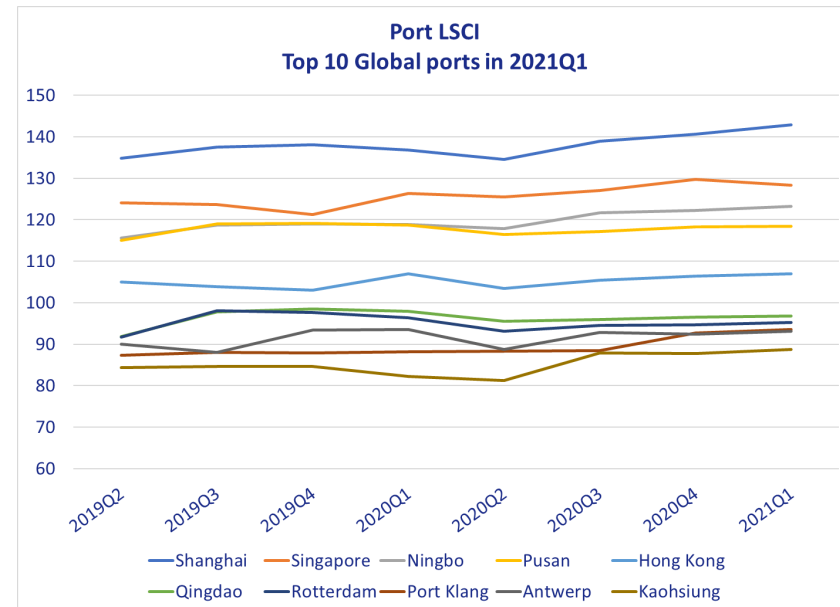
- Each of the three alliances has seen an increase in market share between 2020Q1 and 2021Q1 with 'Others' now offering c. 13% of the total capacity deployed on the deep-sea trade lanes (down by more than 2 percentage points compared to 2020Q1)
- The alliance exhibiting the largest increase in market share is THE Alliance, with the improvement in its market position being driven by the introduction in April 2020 of HMM into the alliance; HMM is mainly active on the transpacific trade lane where it deployed 30% of its capacity on offer in 2021Q1.
- The market shares of the three Alliances has grown over the course of the global Pandemic to the detriment of non-Alliance members. Global shippers have even less choice than a year ago.

Port Connectivity (MDST/UNCTAD LSCI)

Top 10 container ports, global

Liner Shipping Connectivity Index, Hong Kong 2006Q1=100

	2021Q1	PQ	PY
Shanghai	143.0	2.3	6.1
Singapore	128.4	-1.3	2.0
Ningbo	123.3	1.1	4.4
Pusan	118.4	0.1	-0.3
Hong Kong	107.0	0.5	0.0
Qingdao	96.8	0.3	-1.2
Rotterdam	95.2	0.6	-1.2
Port Klang	93.5	0.9	5.3
Antwerp	93.1	0.7	-0.5
Kaohsiung	88.7	1.1	6.4



Source: MDS Transmodal, Containership Databank February 2021 (www.portlsci.com)

Conclusions & Commentary

- Compared to 2020Q4, Singapore is the only container port to have seen a contraction in its LSCI in 2021Q1, mainly due to the reduction in the number of services calling at the port.
- The improvement in the LSCI for the Asian ports compared to 2020Q1 is influenced by the fact that they were not in full operation during the first quarter of 2020; comparing their performances to 2019Q1 we observe an even larger improvement, which is due to the deployment of larger vessels.

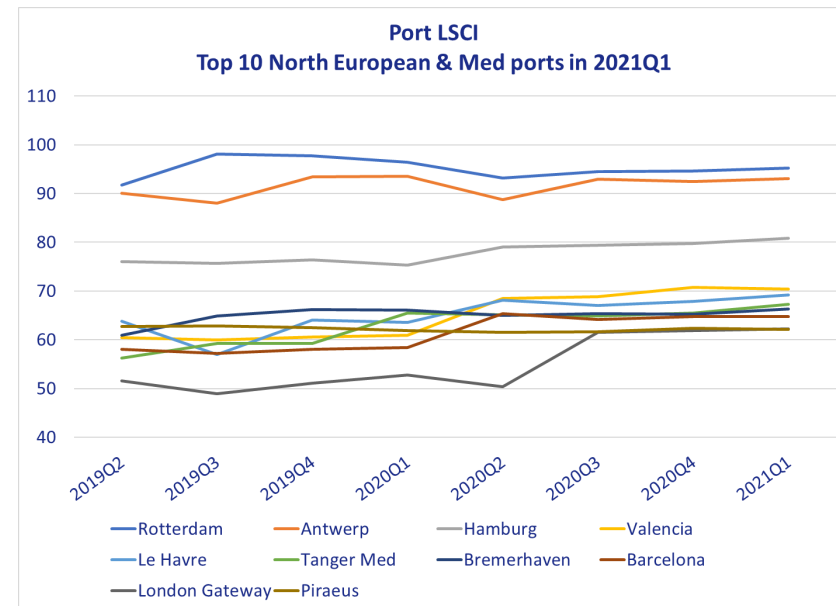
Port Connectivity (MDST/UNCTAD LSCI)

Top 10 container ports, North Europe & Med

Liner Shipping Connectivity Index, Hong Kong 2006Q1=100

Rotterdam, Netherlands

	2021Q1	PQ	PY
Port LSCI	95	0.6%	-1.3%
Number of services	123	2.5%	-3.1%
Number of port calls	125	4.8%	1.3%
Max ship capacity (TEU)	23,964	0.0%	0.9%
Number of operators	40	-2.4%	0.0%
Deployed annual capacity (mTEU)	27.8	3.2%	-6.7%
Number of direct calls	257	-1.5%	-3.4%



Source: MDS Transmodal, Containership Databank February 2021 (www.portlsci.com)

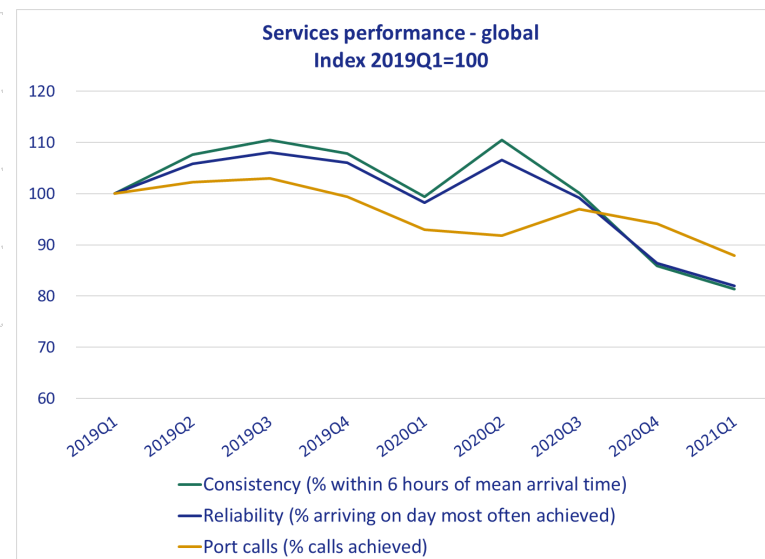
Conclusions & Commentary

- Rotterdam, the port with the highest LSCI amongst the Northern European ports, has seen an increase in its LSCI compared to 2020Q4 mainly driven by the number of port calls. However, the reduced number of services and capacity offered to the port compared to 2020Q1 has resulted in a YoY contraction in the LSCI.
- Drilling down to the regions served by the port of Rotterdam, it is interesting to notice that the reduction in both number of services and level of capacity is concentrated on the deepsea routes, whereas on the shortsea market, we observe an increase, with the links to the UK remaining the most important ones.

Services performance

Consistency, reliability & port calls, global

	2021Q1	YTD	PQ (% points)	PY (% points)
Consistency (% within 6 hours of mean arrival time)	42%	42%	-2.4	-9.3
Reliability (% arriving on day most often achieved)	50%	50%	-2.7	-10.0
Port calls (% calls achieved)	69%	69%	-4.8	-3.9



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

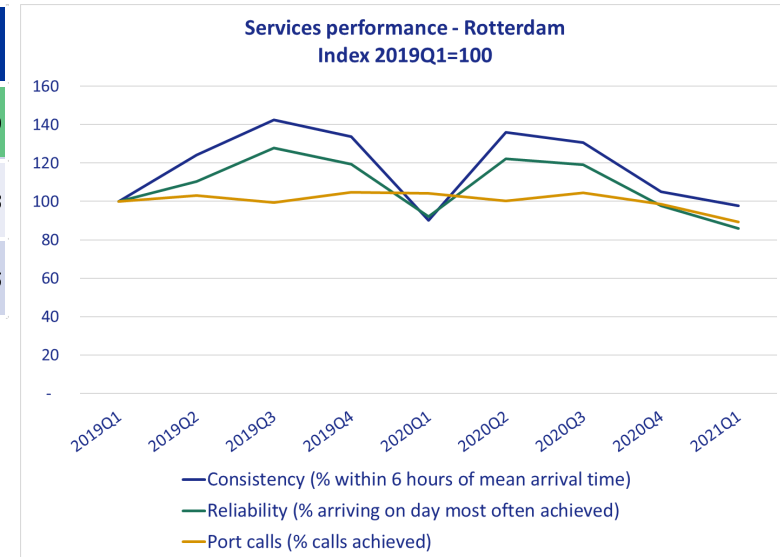
Conclusions & Commentary

- During the first quarter of 2021Q1, we observe a further deterioration in all the performance indicators both compared to the previous three months as well as the same quarter last year
- The apparent improvement in service predictability in Q2 2020 is shown to be an anomaly during the period of reduced demand and blanked sailings during the early days of the global Pandemic.
- Service quality has continued to deteriorate at a rate that emerged during 2019. The benefits of Consortia operations are not being experienced by global shippers, despite record yields being made by carriers.

Services performance

Consistency, reliability & port calls, Rotterdam

	2021Q1	YTD	PQ (% points)	PY (% points)
Consistency (% within 6 hours of mean arrival time)	37%	37%	-2.7	2.9
Reliability (% arriving on day most often achieved)	45%	45%	-6.2	-3.3
Port calls (% calls achieved)	70%	70%	-7.2	-11.6



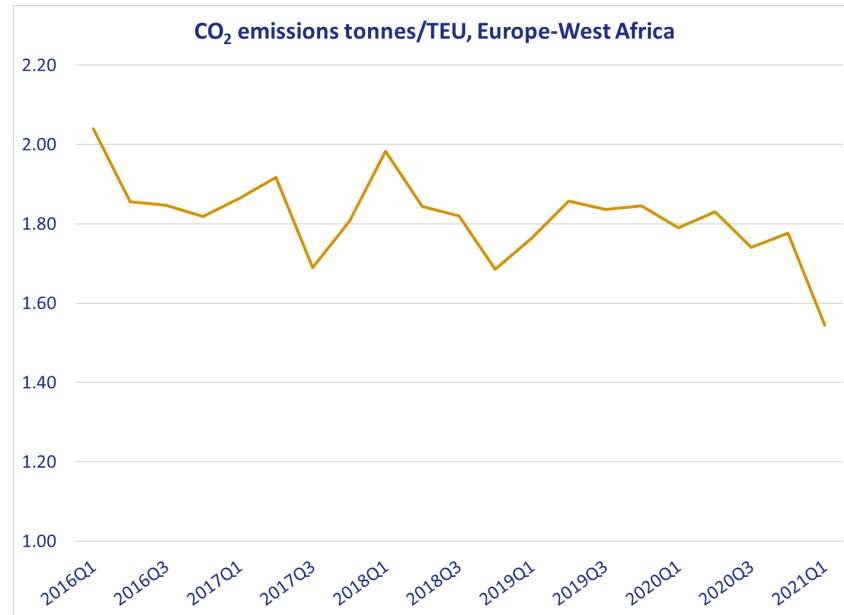
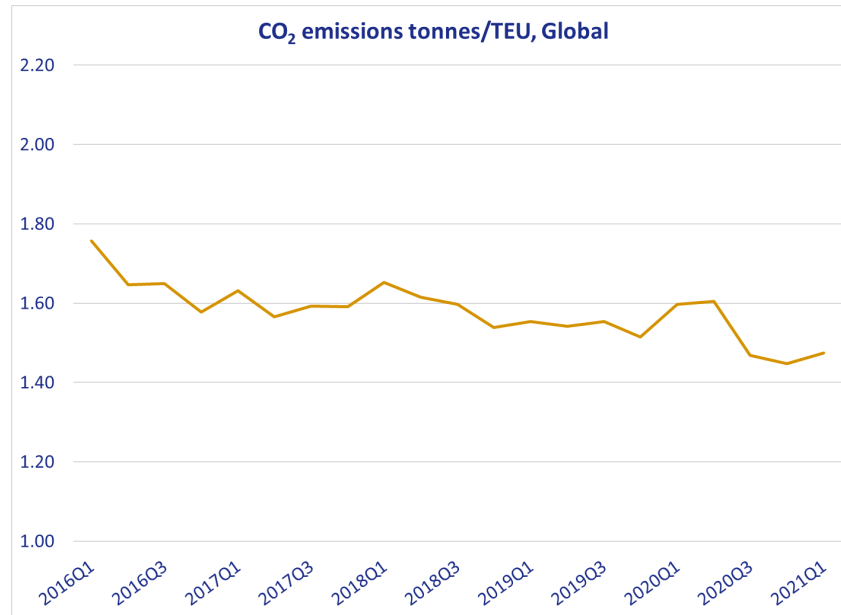
Source: MDS Transmodal based on AIS (Automatic Identification System) data

Conclusions & Commentary

- With the exemption of *consistency*, in 2021Q1 compared to 2020Q1, we observe further deterioration in the service performances both on a quarter-on-quarter comparison as well as on a year-on-year comparison.

Carbon Emission Factors

CO₂ emission tonnes/TEU, global and Europe & Med - West Africa



Source: MDS Transmodal, Container Business Model May21

Conclusions & Commentary

- Emissions per unit of cargo (tonnes/TEU) are estimated to have gone down in 2021Q1 compared to 2020Q1 both on a global level as well as on the Europe-West Africa route; however, while the overall reduction has been driven by demand growing at a faster rate than the estimated CO₂ emissions, on Europe-West Africa the reduction has been driven by an increase in demand accompanied by a contraction in the level of CO₂.
- The largest annual increase (in absolute terms) in the overall CO₂ emission in 2021Q1 has primarily been observed on the transpacific trade lane, where, however, the emissions per unit of cargo is estimated to have been lower than 2020Q1 thanks to the strong increase in demand

Global Shippers' Dashboard

Quarter 1 2021

KPI	Indicator	Status & Overview
1	Trade volumes	The numbers of loaded containers carried by shipping lines fell slightly in Q1 2021 in contrast to the industry narrative of continued growth and exceptional demand. Despite this flattening of demand, global container movements were up 13% on Q1 2020.
2	Shipping capacity	The number of vessels scheduled to service this 13% growth in volumes grew by just 2% over the same period, providing a net 4% increase in capacity. Most of these increases took place in Q1 2021.
3	Capacity utilisation	Utilization rates therefore remained very high although eased slightly globally, but remained close to 100% on head-haul services via Suez.
4	Carrier costs & revenues	Unit revenues continued to grow with shipping lines earning 1.5 times more per TEU carried than they did in Q3 2020. Unit costs grew less than revenues mainly due to higher charter rates and regained levels last seen at the end of 2019. The continued increases in spot rates during Q1 2021 despite flat demand and slightly lower utilization rates are unexplained.
5	Market competitiveness	The market shares of the three Alliances have grown over the course of the past year to the detriment of non-Alliance members. Global shippers have even less choice than a year ago.
6	Port connectivity	The Top 10 best connected ports remain unchanged despite service frequency and destination fluctuations during 2020.
7	Service performance	Service quality has continued to deteriorate at a rate that first emerged during 2019. The apparent improvement in Q2 2020 being an anomaly at a time of much fewer sailings. The benefits of Consortia operations are not being experienced by global shippers, despite record yields being made by carriers.
8	Carbon dioxide emissions	CO ₂ emissions per container showed a slight increase in Q1 2021, possibly reflecting a speeding up of services to regain schedule at times of exceptionally high shipping rates.

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)

Under review...

Governments investigating shipping services in their jurisdiction:

- USA
- China
- Australia
- Singapore
- Vietnam



Contacts & link to the Container Shipping Market Quarterly Review

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The Container Shipping Market Quarterly Review for Quarter 1 2021 may be downloaded from:

[GSF/MDST Global Container Shipping Market Report \(globalshippersforum.com\)](https://globalshippersforum.com/GSF/MDST%20Global%20Container%20Shipping%20Market%20Report)



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THANK YOU