

## Supply Chain Pain

**The Pandemic and its after effects have roiled not just shipping but ports and logistics chains and an end to the disruption depends on landside, as well as maritime factors.**

To understand the disruption facing the container shipping markets at present, it's insufficient to simply focus on the vessels themselves. MSI's latest estimates for containerised trade growth in 2021 were 6%, above fleet growth of 4.5%. A 1.5 percentage point differential between supply and demand is scarcely enough to justify charter rates for an old-design Panamax vessel hitting six figures.

Instead, the combination of port congestion, container shortages and wider supply chain disruption has driven supply/demand imbalances to the extent that MSI estimates the gap between effective demand and available supply to have been north of 15% in the past year.

In order to understand the prospects of the container market, then, a fuller view of the situation at ports and in the supply chain more generally is critical. We'd broadly break the problem down into three elements;

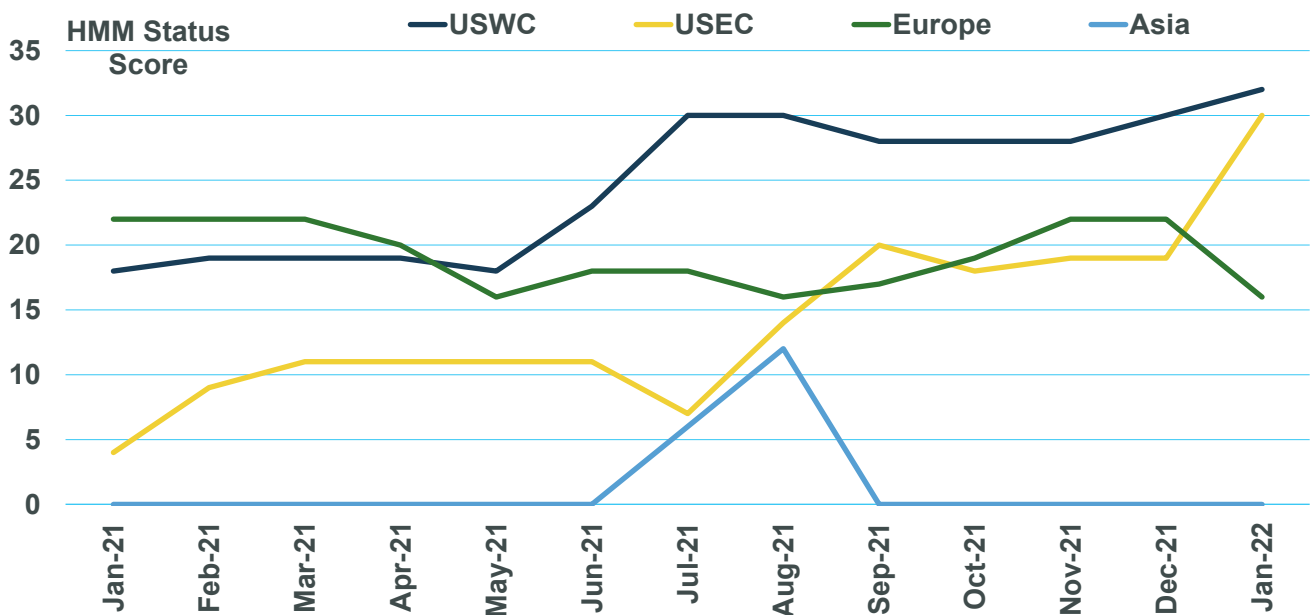
the onward intermodal connections, the terminal itself, and then the shipping considerations. Other issues such as imbalances of container boxes were also relevant at the start of the supply chain crisis, but these issues are now less acute.

We believe these problems will ultimately dictate how the supply chain crisis is resolved, and consequently how long it will take for first the freight and then the charter markets to normalise. In short, until the landside issues are resolved, we don't believe there will be a let up in the pressures on the containership market which are hurting shippers and proving so lucrative for liner companies and their tonnage providers alike.

### US contagion is spreading east

Chart 1 provides a gauge of the intermodal situation across regions. The data was compiled by codifying the regular 'traffic light' operational status updates

**Chart 1: HMM Assessment of Intermodal Links**



published by Korean liner Hyundai Merchant Marine for a sample of four ports per region (with a red status allocated as three points, an amber status as one point and green as zero).

As it shows, whilst in Europe there is evidence of the situation stabilising, in North America the message is more one of deterioration, with issues on the West Coast now being replicated on East Coast ports as well.

This picture of strain in North America is broadly borne out by data from the trucking industry, which shows that road freight costs have increased significantly over the course of the pandemic. Chart 2 shows MSI's trucking cost indices for Europe and the US (sourced from della. eu and the Cass Linehaul Index respectively).

More hearteningly, data from both Europe and the US show that these freight costs have reached a peak and, at least currently, are falling backwards. This trend is also reflected by anecdotal evidence. US road freight volumes are in temporary abeyance after the holiday rush, whilst EU truck driver vacancies, tracked by online jobsite Indeed.com, have peaked and are declining in most countries.

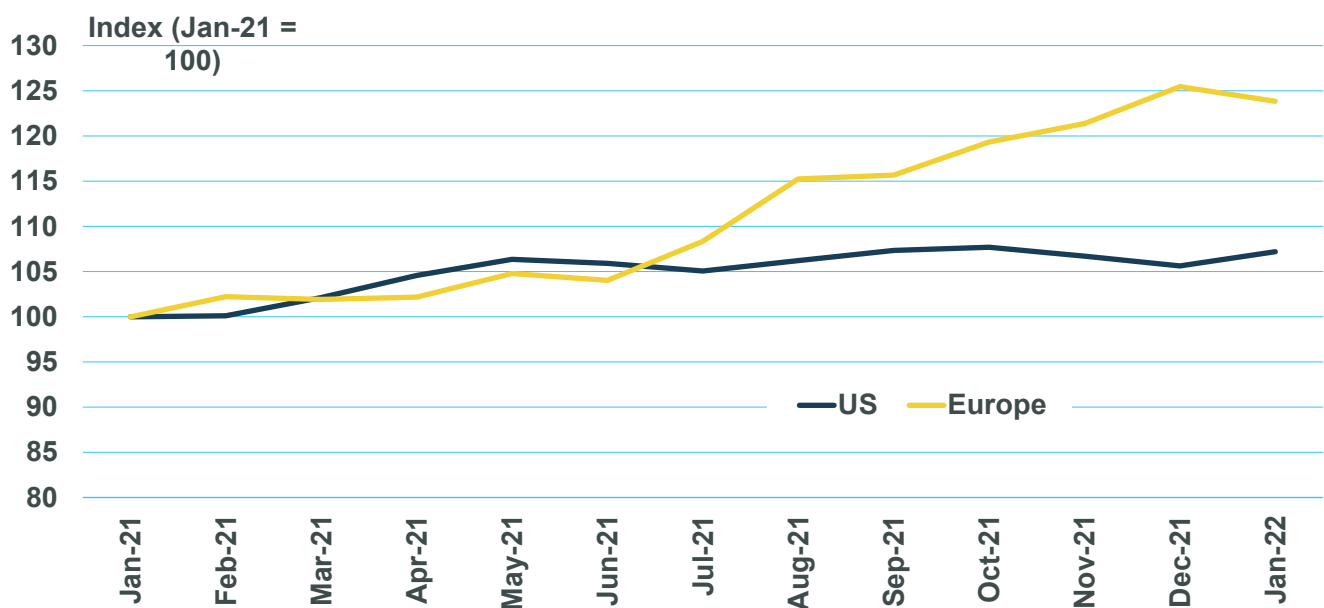
## Equipment failures

The shortfall in drivers is matched by a shortfall in trucks themselves, with used truck prices in the US, reported by JD Power, to have reached an all-time high in November 2021, although prices came off somewhat in December.

Truck OEMs are also struggling with equipment and labour shortages, although most trucking analysts believe that by the second half of 2022 new deliveries and lower volumes will lead truck pricing to normalise. The shortage of trucks has been compounded by a shortage of truck chassis on which the container sits. This has been a slow-building problem in the US trucking industry that was exacerbated by the Trump tariffs of 25% and then brought to boiling point by the anti-dumping duties which were imposed on Chinese manufacturer CIMC in Q2 2021.

Prior to this legislation IHSMarkit estimated that CIMC represented 85% of the US chassis market, so a 200% anti-dumping levy on CIMC has had a meaningful impact on them although other manufacturers have had limited ability to increase production. Ironically, efforts to increase chassis production have also been

**Chart 2: Trucking Costs in Europe and the US**



undermined by the supply chain crisis, as lead times for imported parts such as air tanks have ballooned from one to six months. We do believe that a wave of additional chassis capacity will hit the market in Q3/Q4 of 2022, which will prove another step towards de-bottlenecking supply chains.

### Scarce storage

Another element contributing to the supply chain crisis has been a shortage of storage capacity, both at the ports but also a lack of warehousing capacity and container storage inland. There are limited sources of quality data on warehousing, but the Logistics Manager Index for Warehouse Utilisation remains at elevated levels but has actually come off somewhat since the middle of 2021, as shown in Chart 3 (a reading above 50 implies expanding utilisation of warehouse capacity).

The LMI also tracks the logistics industry’s perception of available transportation capacity more broadly; as it shows, when the pandemic took hold in 2020 transportation capacity plummeted, but has since remained stable and actually increased over Q4. Whilst the trucking industry continues to contend with high volumes, and structural challenges around

the ongoing recruitment of truck drivers persist, this represents another piece of evidence suggesting that the road freight industry’s contribution to the supply chain crisis may be diminishing.

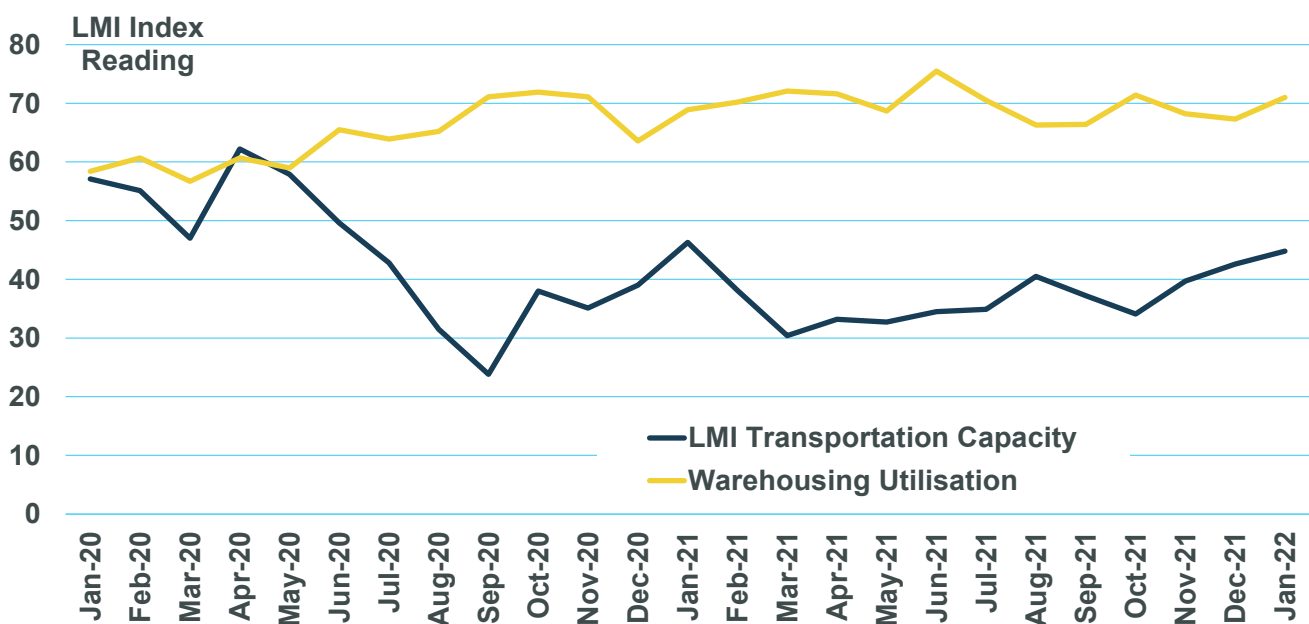
Coupled with new deliveries of both trucks and chassis reaching meaningful levels in H2 of this year, we believe that by the end of 2022 the inland pressure on the supply chain – from shortages of trucks, chassis, drivers and storage space – will reduce.

### Low flying fruit

It is also worth briefly touching on the air cargo industry, which has acted as a useful relief valve for shipments of high-priority goods such as vaccines and PPE during the pandemic. Overall air cargo capacity has decreased relative to its 2019 levels, with the sharp decline in passenger flights – and associated belly cargo capacity – not offset by the increased freighter capacity as airlines responded by removing the seats from certain passenger planes and repurposing them as freighters.

This dynamic has driven air cargo load factors to multi-year highs of around 60% and air cargo freight rates

**Chart 3: LMI Indices of Warehouse Utilisation and Transportation Capacity**



have increased correspondingly. However, despite this relative capacity constraint and elevated freight rates, we do not perceive the air cargo industry as contributing to the supply side crunch but rather as an emergency release valve from it.

In other words, we don't believe that the non-maritime elements of pressure on the supply chain will endure beyond the end of this year. The key question is whether this alone will be enough to normalise the wider container shipping industry.

Our suspicion is that it will be; in our Base Case analysis, over a million TEU of capacity will be added to the fleet over the course of this year, which will help ease some of the vessel shortages, which coupled with increased vaccination of terminal workers and an unwinding of inland bottlenecks, should also resolve the logjam at ports.

### Right next time?

There is still a lot that can go wrong (or right, if you are a containership owner) in this scenario. Firstly, the problems at US ports are deep-seated and if anything being compounded by new entrants to the

liner market, who are unfamiliar with how terminals operate. Conversations with terminal operators are rife with complaints as to the unprofessionalism of the non-traditional vessel operators.

Secondly, and more significantly, China continues to pursue a zero-COVID policy and given accounts that the Sinovac booster is far less effective against Omicron and a population that has no antibodies against COVID whatsoever, it is hard to see the zero-COVID policy being abandoned soon. This policy brings the likelihood of fresh port shutdowns in response to COVID outbreaks, as took place in Q2 and Q3 2021 in Yantian and Ningbo.

MSI's Base Case forecast of normalising freight and charter markets towards early 2023 would certainly be imperilled should we see further port shutdowns. In our view a repeat of the Yantian 2021 shutdown this year would stretch the disruption into Q2 2023, although from next year onwards the relative impact of shutdowns will diminish as nearly 2.5 Mn TEU of containership capacity is expected to be delivered to the fleet each year over 2023/4 – sufficient buffer to allow the industry to absorb further port closures without driving freight rates back into the stratosphere.

**MSI Foresight is a periodic series of articles on topical areas of interest across the commercial shipping and offshore markets. To find out more about MSI's analytical, consulting and vessel valuation services, please contact Simon Mason at MSI on Tel: +44 (0)20 7940 0070 or email: [simon.mason@msiltd.com](mailto:simon.mason@msiltd.com)**



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