

Q4 2021

Ocean Freight Rate Tracker

Ti

PLOTTING AN UNCERTAIN COURSE

In a period of intense volatility, shippers, shipping lines, ports, freight forwarders and other players in the market are urgently attempting to assess the outlook for sea freight rates in 2022 and beyond. Indeed, congestion and rates have now become such a pressing political problem that governments around the world are coming under pressure to intervene although, as they are finding out, devising solutions to fix dysfunctional maritime supply chains are far from straight forward. In this paper, I set out some of the key issues which are presently having an impact on the operational capabilities of the shipping and logistics industry; the service levels which carriers and logistics operators are able to provide and the rates that they charge.

These issues are wide-ranging, some impacting on capacity within the industry, others on the underlying volumes of containers being shipped. The relation and interaction between these two factors obviously have a profound impact on freight rates, resulting, as we have seen this year (2022), in sky high prices and enormous profits for shipping lines¹.

FACTORS AFFECTING SUPPLY AND DEMAND

To understand why maritime supply chains have misfired so badly over the past few months it is necessary to analyse why supply and demand has become imbalanced. Doing so provides clues to the development of the industry and, specifically, the future trajectory of shipping rates.

Upstream Manufacturing

Since the beginning of the Covid crisis, production has been disrupted by a variety of different factors. Government lockdowns led to the suspension or reduction of production at many manufacturing locations across Asia. Although China was badly affected at the outset, disruption has been on-going across the region over the past 18 months including in Vietnam where a large proportion of factories are only recently coming back on-line. In addition, in the past month (November 2021), a shortage of coal has forced the Chinese authorities to implement rolling power cuts to limit electricity usage, and this has resulted in a drop in output by up to 20%. Less well known has been the difficulty which many emerging market exporters have faced in accessing trade finance, critical to the functioning of many global supply chains. The International Chamber of Commerce has estimated that an additional US\$1.9 to US\$5 trillion is needed to return to 2019 trade finance supply levels².

This challenging manufacturing environment has been exacerbated by 'lumpy' demand from Western customers, struggling to understand their own markets. This has resulted in a stop-start pattern to both orders and fulfilment, wreaking havoc with inventory management and, most egregiously, with the capacity planning of shipping lines.

Upstream Ports and Shipping

- Labour issues/Covid

In China, a zero tolerance approach to Covid has resulted in many port operations being halted through lack of workers. This has caused significant congestion on landside as containers stack up waiting to be loaded and many ships at anchor outside key ports such as Ningbo and Yantian.

- Weather events

Meteorological events have also impacted on the market in the past months. A typhoon in September forced the closure of Ningbo and Shanghai ports, adding to the backlog. Congestion 'cascaded' down to smaller, secondary ports causing to disruption right across the region.

- Shipping capacity

Shipping lines can exercise a certain amount of control over the capacity which is deployed on key lanes, both in terms of reduction and augmentation. They can, for example, speed up or slow down ships and re-allocate capacity from less profitable trades to the main shipping lanes such as transpacific eastbound or Asia-Europe. At the beginning of the crisis shipping lines were 'blanking' sailings (i.e. suspending certain departures and 'rolling' freight to the next) whilst more recently they have been cancelling calls at smaller ports to expedite transit times to main ports such as Los Angeles/Long Beach or Rotterdam.

Controlling capacity is obviously a key lever to influence rates. However, during this period of unprecedented demand for space what they have not been able to do is to release pressure on rates by bringing on capacity in the form of new-builds – this can take two years or more. So, whilst shipping lines have benefited from short term peak in rates, their customer service has collapsed, not least by missing schedules. This will have longer term implications for relationships once the market has returned to normal.

- Container shortages

When shipping lines started reducing the number of sailings as economic output crashed during the first months of lockdown, the volume of empty containers being returned to Asia from North America and Europe also dropped. In an attempt to encourage customers to empty and return their containers faster shipping lines increased their 'detention and demurrage' charges. However, this has only partly helped the situation. Many ships have been encouraged to leave port as quickly as possible to return to Asia to collect more full containers, leaving empties behind. Container manufacturing in China is now in full swing but for the time being prices are still high and supply constrained.

WHAT CONTRIBUTES TO ‘SURGE’ PRICING?

In some respects what we have seen over the last few months is analogous to the ‘surge’ pricing used by mobility-as-a-service provider, Uber, to maximise profits at peak times. However, there are some key differences. Uber’s algorithm is designed not only to make profits but to re-balance the market. ‘Riders’ (passengers) have the flexibility to choose other modes (such as buses) if the price is too high but also the higher rates being charged attract more ‘rides’ into the area. This eventually results in ‘stasis’.

The differences to the shipping industry are obvious. Shippers have very limited short term options – perhaps air and rail in some situations, but most have no option but to wait for spare capacity to become available. It is also much more difficult for shipping lines to deploy more capacity. They can (and have been) allocating ships from secondary trade lanes to transpacific for example (to the detriment of developing countries’ economies) but when demand out-stripped this new capacity there has been nothing more they can do. New ship builds which have been commissioned will not come to market until 2023 when the market conditions are likely to be very different.

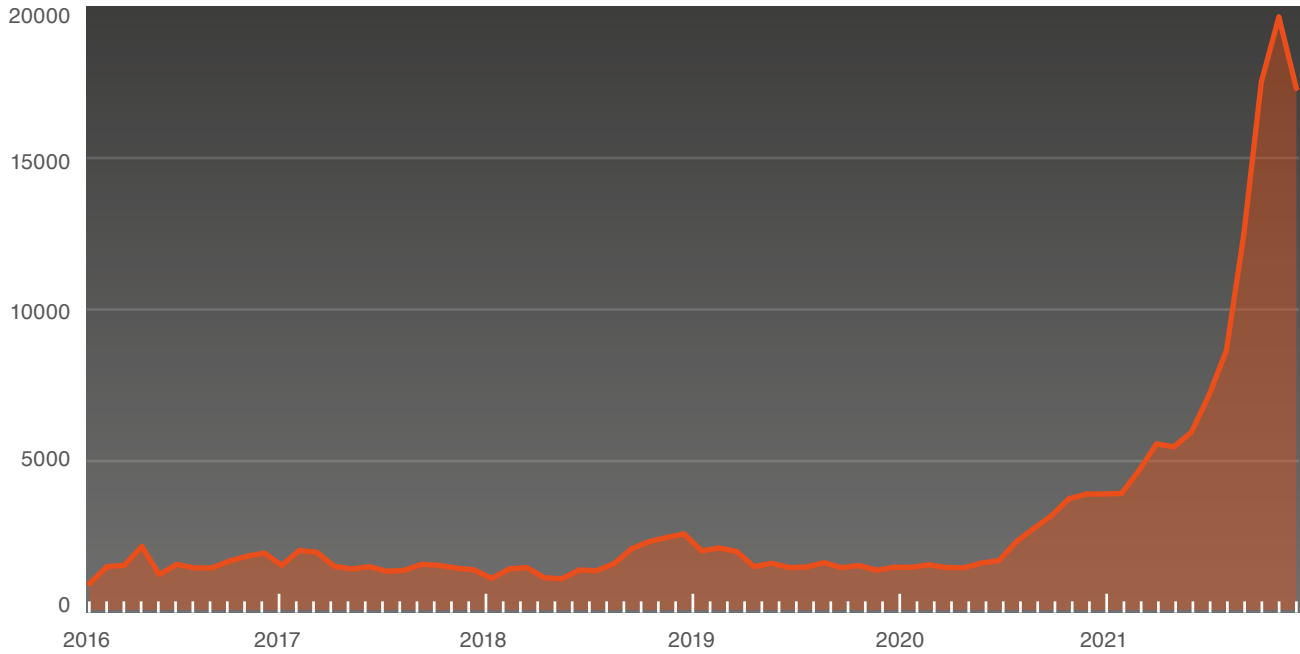
However, the analogy is not completely without value. During the peak, prices have surged, but are likely to return to long term historic rates once this period of instability is over. According to Freightos, between January 2016 and May 2020, transpacific rates were on average \$1546 per FEU. In June 2020 they started to rise, topping out at just under \$20,000 per FEU in September 2021 before drifting off this peak.

It is not unreasonable to suggest that a return to \$1500 at some point is on the cards (the ‘stasis’ indicated above), given that this seemed to be the natural level for several years during a period of stability created by the consolidation of the shipping market and the development of the three main ‘alliances’.

But how quickly will rates drop? This is a question which is very much at the forefront of shippers’ minds. As we have seen there are multiple variables which impact on supply and demand. It should be noted that whilst shipping lines have the power to prevent shipping rates from falling below a threshold by blanking sailings, slow steaming, scrapping and deploying capacity to other lanes, they have less control on the upward cycling of rates (although of course there has been considerably less management pressure to prevent rates rising!).

TRANSPACIFIC EASTBOUND RATES (\$)

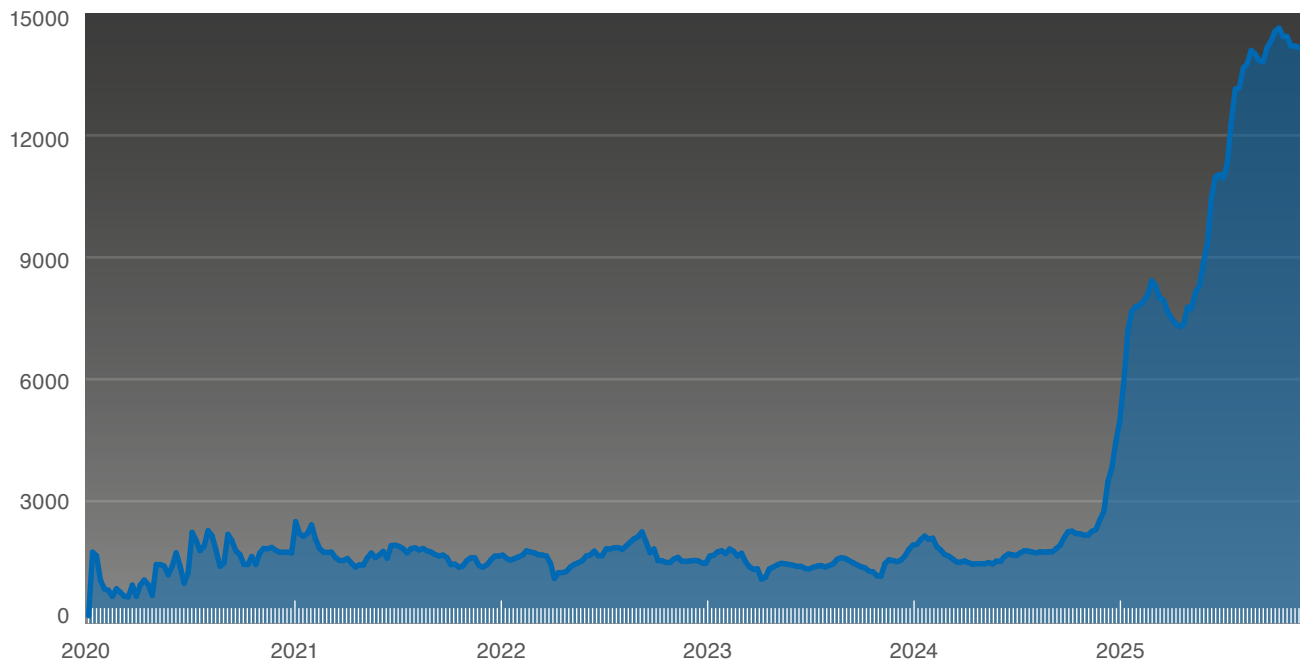
SOURCE: FREIGHTOS



If we look at Asia to Europe rates we see a similar, although not identical picture. According to Freightos, rates started a steep climb later than in the US – around October/November 2020. From January 2016 to this point, rates were on average \$1569 per FEU, what we might call the ‘stasis’. Europe has been behind the US in terms of economic recovery which would no doubt explain this variance.

ASIA TO EUROPE RATES (\$)

SOURCE: FREIGHTOS



NOT JUST PLAYING CATCH UP...

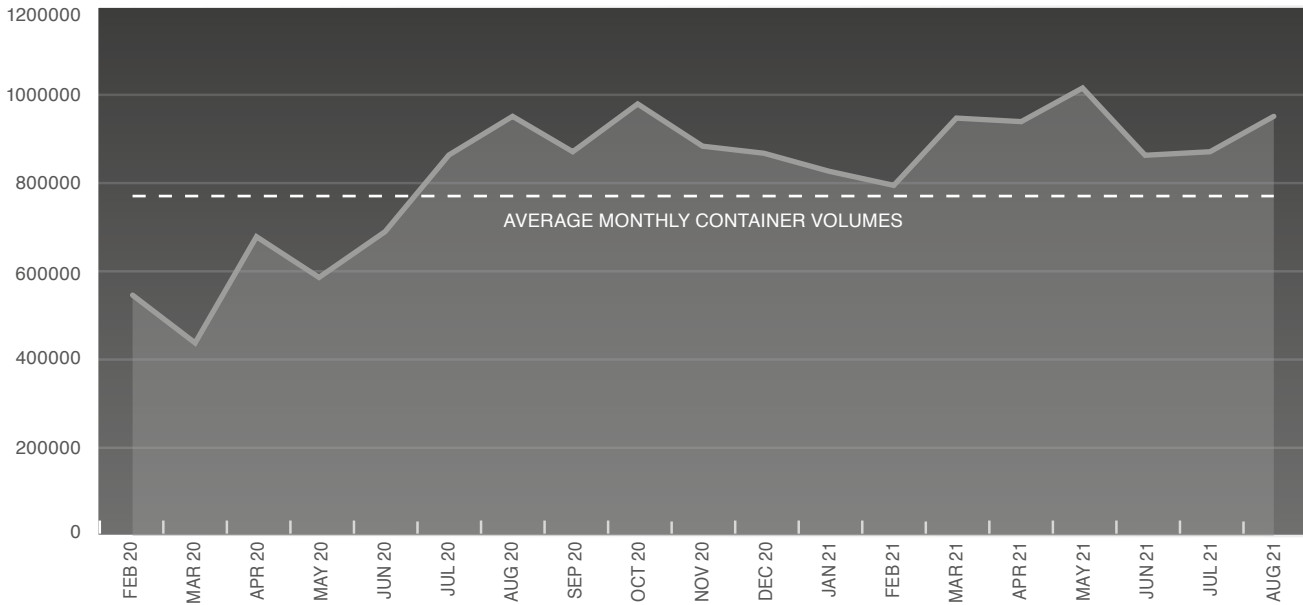
Part of the problem for the industry is that freight volumes have not just been consistently high, but highly volatile – what’s called the bull whip effect. That is, even small adjustments to consumer behaviour downstream result in the distortion of orders throughout the supply chain. The stimulus packages provided by the Biden administration (as well as in most countries around the world) have led to retailers and wholesalers placing orders with Asian manufacturers which could be many times that required by the market. Eventually, some analysts believe that the market could be awash with product – driving down prices in a welcome relief for inflationary pressures. The jury is out on this unexpected consequence.

With capacity largely fixed (it takes time to build ships and new port terminals), operations can quickly be overwhelmed by unexpected and unplanned for volumes. The shipping industry is not alone in this – in the past, many parcels companies have been gridlocked by e-commerce volumes over the holiday period. Shipping lines also have to make a decision as to whether it is worth investing in new capacity, given that the peaks we have seen may be ‘once in a generation’ and that by adding new capacity to their fleets could lock in persistent low rates once the present crisis is over.

The one-off nature of stimulus packages also reduces the visibility of when the market will return to ‘normal’ levels. As the chart shows below, Port of Los Angeles has seen above five year average container volumes (2016-2021) from July 2020 onwards. This means that across the 19 month period since the start of the Covid crisis, the port has handled 736,398 more containers than might have been expected, even with the drop in volumes seen between February 2020 and June 2020. In short, the high port volumes are clearly not (just) about playing catch up for the disruption experienced by Chinese manufacturers in the early days of the crisis. They are as a result of US consumers and businesses having more money to spend on physical assets produced in Asia and specifically in China. A large proportion of this spend results from stimulus packages but consumers also have more money to spend due to an increase of savings during lockdown (the ‘savings rate’ – more on this on the next page).

PORT OF LOS ANGELES MONTHLY CONTAINER VOLUMES

SOURCE: POLA

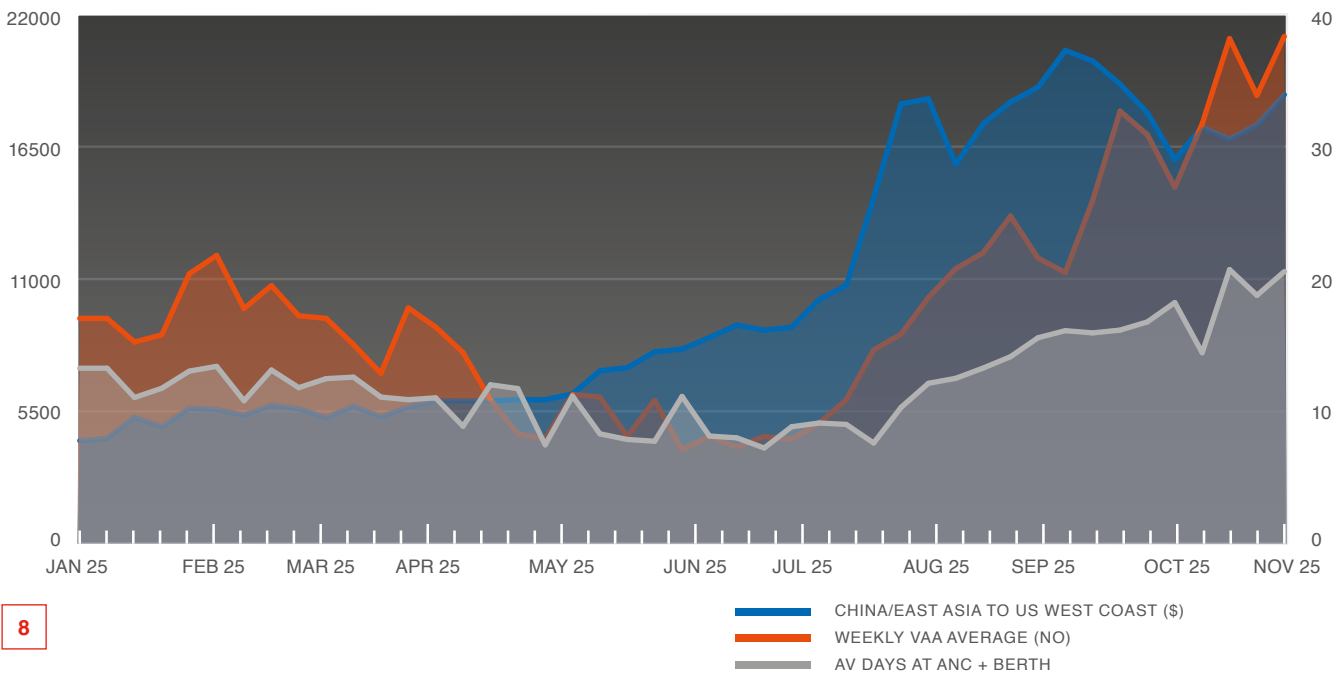


Examining the Port of Los Angeles figures in more detail is insightful. The next chart shows three metrics: Weekly shipping rates, Vessel at Anchor numbers and Average days at Anchorage and Berth. Steep rises in all three metrics are evident from July 2021. There are strong correlations between Rates and Numbers of Vessels at Anchor; Numbers of Vessels at Anchor and Days at Anchor and Berth; as well as Rates and Days at Anchor and Berth. This demonstrates the working of the market, showing the relation between the pressures on capacity manifested in delays to be offloaded, the queues of ships waiting off-shore and the consequent level of rates.

Port of Los Angeles: shipping rates, vessels at anchor and days at berth

APEC RATES V VESSELS AT ANCHORAGE LA

SOURCE: POLA



Analysts rightly point out that the weakening rates in October were in part due to the shut down of many Chinese factories in the Golden Week holiday. There are also the supply problems resulting from electricity rationing which will also take the heat out of the market. Clearly some 'perishable' demand related to the Holiday period will, in economic terms, be lost (i.e. nobody will be buying presents if they are due to arrive in January) – some non-time sensitive demand will be postponed, which will boost rates and volumes in the New Year. However, it may be that if ports can boost their productivity that they will be able to use Q1 2022 to work through backlogs. Even before President Biden's '24/7' plans (getting commitment from port operators to work round the clock to reduce backlogs) the Port of Los Angeles achieved record throughput in September. Still, on November 16, 2021, 34 ships were waiting outside the port (not counting those outside Port of Long Beach) with a combined container capacity of 227,968 TEU.

Using an estimate of \$38,000 for the average value of the contents of each container³ this would mean that \$8,662,784,000 of inventory was being held on board ships at anchor at this time just outside one port.

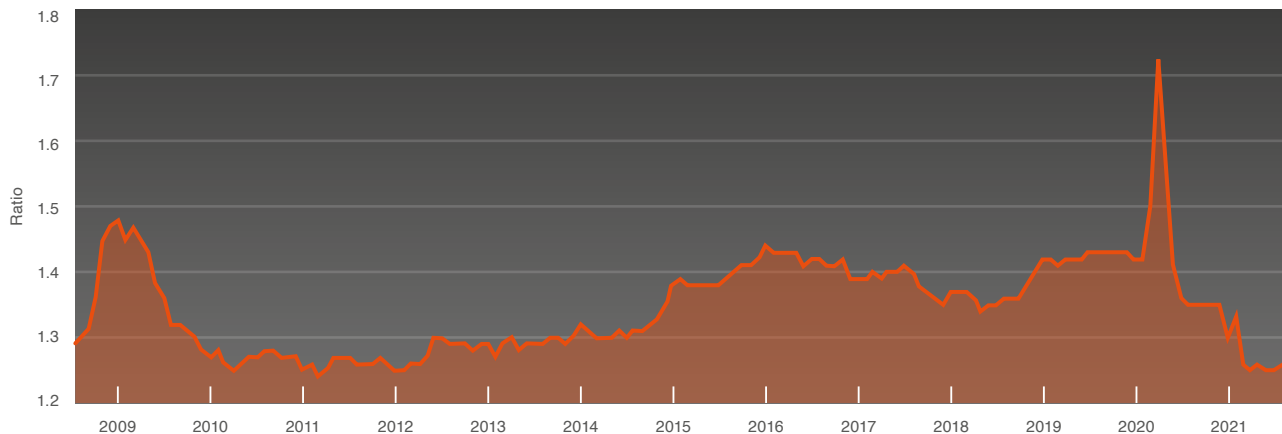
The list of ships at anchor also indicates the wide range of ship size presently being deployed on this route: from less than 2,000 to 14,000 TEU. The largest vessels have been accused of 'clogging the system' by overwhelming operations with a sudden spike in volumes. However, they are far more efficient on a per container basis both in terms of cost and carbon emissions. A little talked about by-product of the crisis is the impact which the use of all the smaller ships on the lane will have on 'net neutral' policies.

Restocking of inventories

One of the most important indicators of future volume growth – if not directly shipping rates – is the inventory to sales ratio. Economic theory suggests that at the end of a recession sales pick up whilst inventory levels are still depleted, leading to a low ratio. This can be seen in the chart below following the Great Recession of 2009. Whilst the situation is different in many respects, both the last recession and the Covid crisis resulted in large stimulus packages boosting consumer spend.

US INVENTORY TO SALES RATIO 2009-21

SOURCE: ST LOUIS FEDERAL RESERVE



The result will be the same. Manufacturers and retailers will replenish stocks to more 'normal' levels leading to increased container volumes which will persist after the usual peak shipping seasons i.e. well into the first half of 2022.

The 'savings rate' is also important to take into account. This measures the amount of money households have available to save as a percentage of their gross disposable income plus pension accumulations. During the lockdowns imposed right across the world, consumers were unable to spend disposable capital on items such as holidays, commuting or eating out, for example. This meant that their savings rose significantly as a proportion of their income. Once economies opened back up again, consumers have once more been enthusiastically spending their money, not least on material goods.

In Q2 2021, the savings rate in the euro area of Europe was 18.9% compared with a normal rate for the region of 11.5-12.5%. In the UK in Q2 2021 the rate had fallen back to 11.3%, more in line with historic norms. More up to date figures are published in the US which indicates that the rate there has already fallen back to 7.5% in September 2021.

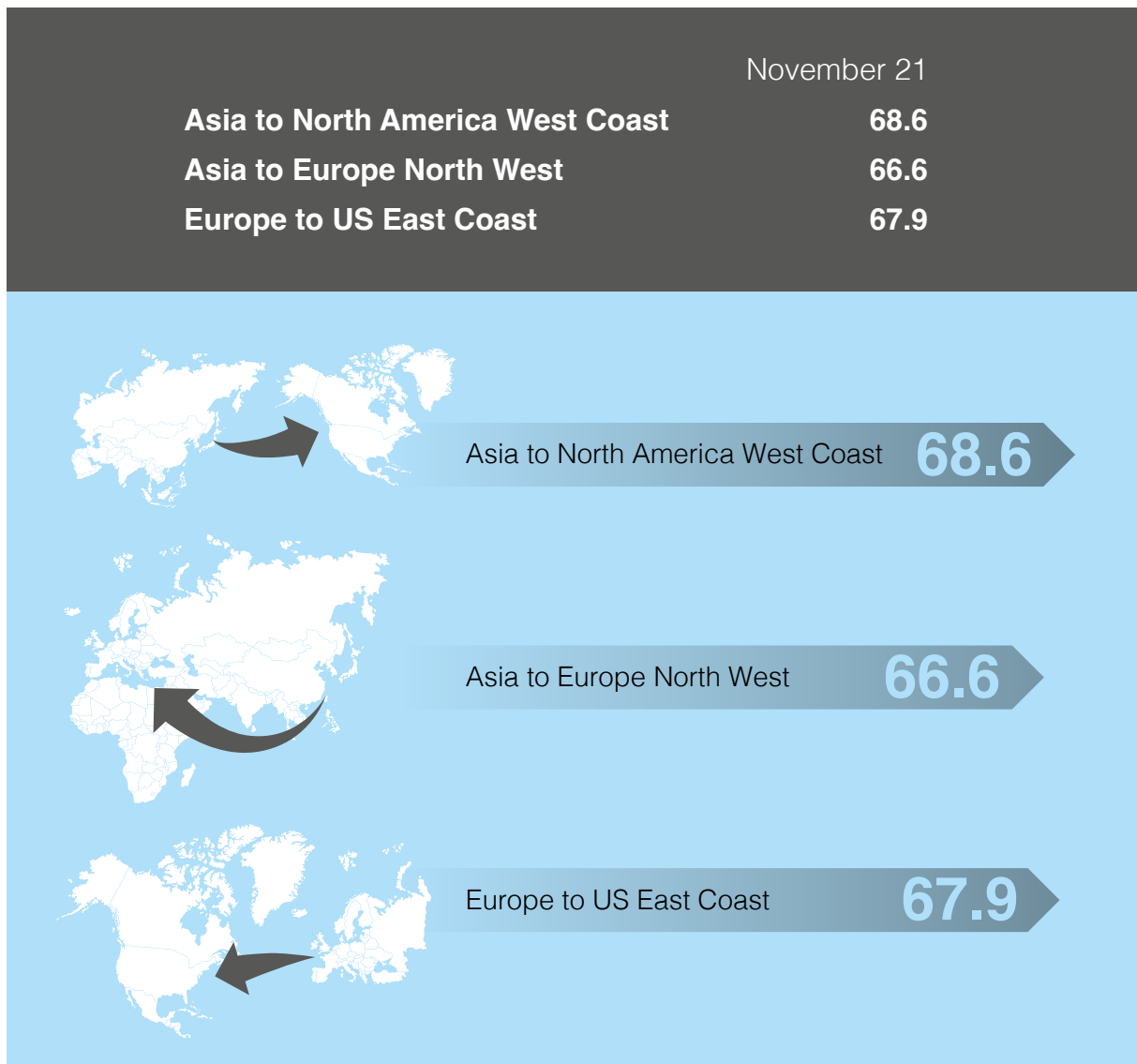
This might suggest that savings will not add much momentum to the import boom in the coming year as a large proportion have already been drawn down. However, other factors such as consumer confidence and credit will also play a role in boosting levels of imports.

TI OCEAN FREIGHT RATES SURVEY

In November 2021, Ti launched a survey to gain the industry's views on the trajectory of rates in the next quarter. 224 industry executives located around the world were asked their expectations for sea freight rates in 3 months' time.

On a scale where 50 = no change, it can be seen from the table below that sea freight rates on all three of the major trade lanes are expected to *increase significantly* in the short term (next three months). The monthly index will track industry's expectations for rates based on real time sentiment.

TI OCEAN RATES SURVEY



Ocean Freight Rate Outlook

	Q4 2021	Q1 2022	Q2 2022	Q3 2022	Q4 2022	2023
Supplier disruption						
Energy shortages (China)	↘	↘	↘	=	=	=
Covid disruption	↘	↘	↘	↘	↘	↘
Trade wars	=	=	=	=	=	=
Trade finance	↘	↘	↘	↘	↘	↘
Production capacity	↗	↗	↗	↗	↗	↗
Consumer / business demand						
Savings drawdown	↗	↗	=	=	=	↘
Interest rates*	=	=	=	↘	↘	↘
Inventory Restocking	↗	↗	↗	=	=	↘
Shipping and logistics						
Labour shortages	↗	↗	↗	=	=	↘
Shipping capacity	=	=	=	=	=	↘
Port capacity / congestion	↗	↗	↗	=	=	↘
Container availability	↗	↗	=	=	=	↘
Intermodal/drayage capacity	↗	↗	↗	=	=	↘
Inland warehouse space	↗	↗	↗	=	=	↘
Bunker costs	=	=	=	↘	↘	↘
Ocean Freight Rates						
	↗	→	→	↘	↘	↘

How should I interpret this chart?

- The chart shows how different factors are expected to affect freight rates over upcoming quarters. It then shows expectations for freight rates themselves.
- The arrows for the sections “Supplier disruption”, “Consumer/ business demand” and “Shipping and logistics” indicate how changes in this factor will affect freight rates in each quarter.
- The arrows in the “Ocean freight rates” section indicate the expected change of freight rates in each period.
- Across all rows the arrows depict change versus the prior quarter.

**If inflation is not transitory, interest rate rises by central banks will slow consumer demand, hence depressing shipping rates.*

Conclusion

Forecasting the trajectory of shipping rates even in the short term is highly problematic. However, in our opinion, it is likely that there will be ‘regression to the mean’ and that pressure on rates is naturally down, rather than up. There have been no big changes to the industry dynamics which suggest that sky high rates will be the new normal. In fact, given the order book for new ships and the chances that this new capacity will be launched onto the market in the middle of a 2023 downturn, shipping lines could face a challenging period: the usual bust after a shipping boom. However, at least (for the shipping industry) if this is the case consolidation in the industry and the alliance structure will create a rates’ floor.

As we have discussed, the return to this norm will be delayed by re-stocking of inventories by North American and European manufacturers and retailers. These are presently at historic lows and their replenishment will act as a ‘parachute’ for rates into Q2 2022. Other positive demand side forces include consumer spend which will hold out until savings have been drawn down and credit limited by interest rate rises.

Complicating this outlook is the inability of suppliers to meet this demand. The situation in China is unpredictable with manufacturers having to cut output due to the energy shortage and a zero tolerance approach to Covid leading to suspension of production in factories and services at ports and airports. This may mean that consumer and business demand in the West goes unmet in the short term and some economic value lost for good. On the other hand this may be a good thing, flattening demand, cooling markets and allowing ports and shipping lines to deal with backlogs. Offset demand would also cushion falling shipping rates further into 2022, meaning that it will be 2023 before historic norms are reached.

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