



AlixPartners



DAVIES

# 'Just in time' to 'just be patient'

Exploring issues in the  
global supply chain

September 7, 2022



# SUPPLY CHAIN DISRUPTION

# Above average 2021 volume growth

- The largest 30 container ports in the world handled just over 450mn TEU in 2021, an increase of over 6.8% over 2020
- Only 3 ports posted a decline in volumes last year, compared to 15 ports in 2020
- Nine ports logged double digit throughput
- Chinese ports now handle nearly half (47%) of the top 30 throughput

**Top 30 Ports in 2021 (including estimates) - Source Alphaliner**  
Ranked by total throughput in teu millions, with previous year's rank in brackets

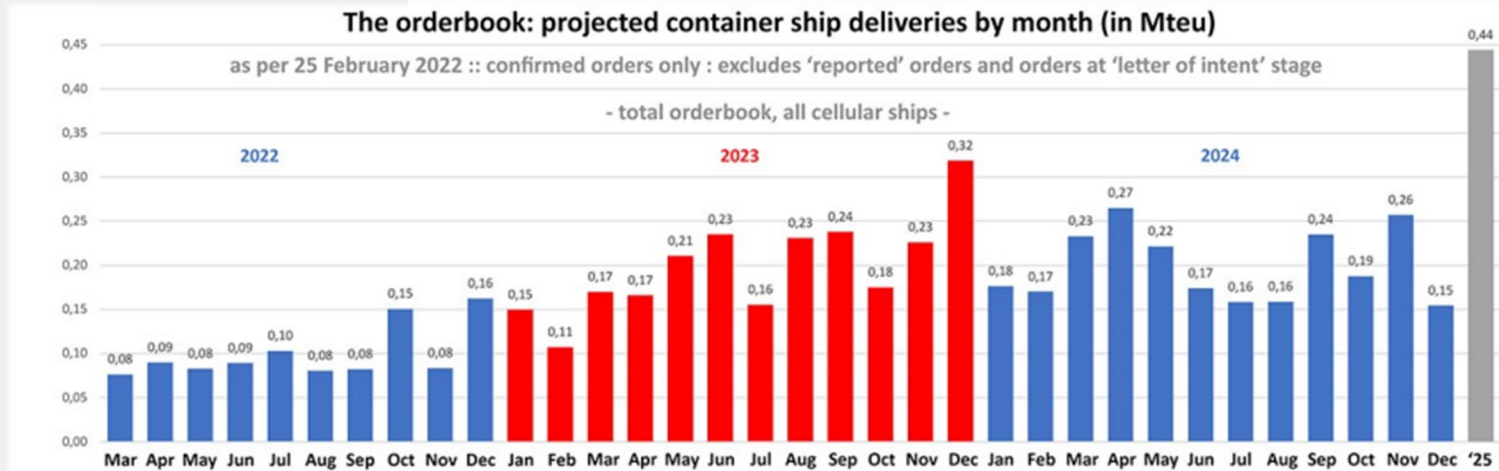
Rank	Port Name	Country	2021	2020	2019	Growth 21/20%	Growth 20/19%
1 (1)	Shanghai	China	47,025,000	43,501,400	43,303,000	8.1%	0.5%
2 (2)	Singapore	Singapore	37,467,700	36,870,940	37,195,636	1.6%	-0.9%
3 (3)	Ningbo-Zhoushan	China	31,080,000	28,734,300	27,535,000	8.2%	4.4%
4 (4)	Shenzhen	China	28,760,000	26,553,000	25,771,700	8.3%	3.0%
5 (5)	Guangzhou-Nansha	China	24,180,000	23,191,500	23,236,200	4.3%	-0.2%
6 (6)	Qingdao	China	23,700,000	22,004,700	21,010,000	7.7%	4.7%
7 (7)	Busan	S Korea	22,690,258	21,823,995	21,992,000	4.0%	-0.8%
8 (8)	Tianjin	China	20,260,000	18,356,100	17,300,700	10.4%	6.1%
9 (10)	Los Angeles/Long Beach	US	20,061,978	17,326,718	16,969,666	15.8%	2.1%
10 (9)	Hong Kong	China	17,788,000	17,326,720	18,303,000	2.7%	-5.3%
11 (11)	Rotterdam*	Netherlands	15,300,000	14,349,446	14,810,804	6.6%	-0.03%
12 (12)	Dubai/Jebel Ali	UAE	13,700,000	13,484,600	14,111,000	1.6%	-4.4%
13 (13)	Port Kelang*	Malaysia	13,700,000	13,244,414	13,580,717	3.4%	-2.5%
14 (15)	Xiamen	China	12,030,000	11,410,000	11,122,180	5.4%	2.6%
15 (14)	Antwerp	Belgium	12,020,245	12,031,467	11,860,204	-0.1%	1.4%
16 (16)	Tanjung Pelepas*	Malaysia	11,200,000	9,846,106	9,077,485	13.8%	8.5%
17 (17)	Kaohsiung	Taiwan	9,864,447	9,621,672	10,428,634	2.5%	-7.7%
18 (20)	New York / Newark	US	8,985,927	7,585,825	7,471,131	18.5%	0.02%
19 (18)	Hamburg*	Germany	8,720,000	8,577,647	9,282,012	1.7%	-7.6%
20 (21)	Laem Chabang	Thailand	8,523,342	7,546,491	7,980,560	12.9%	-5.4%
21 (19)	Ho Chi Minh City*	Vietnam	7,950,000	7,864,100	6,848,360	1.1%	0.15
22 (23)	Colombo	Sri Lanka	7,249,358	6,854,763	7,228,337	5.8%	-5.2%
23 (24)	Tangier Med	Morocco	7,173,870	5,771,221	4,801,710	24.3%	20.2%
24 (22)	Jakarta	Indonesia	6,750,302	6,205,301	6,802,200	8.8%	-8.8%
25 (26)	Mundra	India	6,665,159	5,656,594	4,732,699	17.8%	19.5%
26 (36)	Nhava Sheva	India	5,631,948	4,474,884	5,100,889	25.9%	-12.3%
27 (28)	Valencia incl Sagunto	Spain	5,614,454	5,428,311	5,439,827	3.4%	-0.2%
28 (35)	Savannah	US	5,613,164	4,682,253	4,599,169	19.9%	1.8%
29 (27)	Piraeus	Greece	5,320,000	5,437,000	5,648,000	-2.2%	-3.7%
30 (25)	Yingkou	China	5,220,000	5,663,100	5,480,000	-7.8%	3.3%

(\*change based on 2021 estimates. The Alphaliner rankings include estimates for ports which have not reported their full-year figures and rankings could change)

source: Alphaliner Weekly Newsletter 2022-08

# New capacity not coming soon enough

source: Alphaliner Weekly Newsletter 2022-09



- Based on today's order book both 2023 and 2024 will see a record delivery figure of around 2.40 Mteu. More than double what is expected in 2022.
- For a fleet of 25 Mteu 2022 growth of 1.10 Mteu is essentially a zero growth replenishment rate.
- Newbuilding deliveries will only slightly alleviate the pain caused by supply chain problems such as port congestion and equipment shortages.
- There will not be sufficient newbuilds to compensate for the capacity shortfalls caused by the system inefficiencies currently plaguing the industry.

# Lead Times are Reducing

**Fig. 1 Ocean Delivery Times Hit 12-Month Lows**

Cargo Ready Date to Destination Port Departure, to 8/15/22

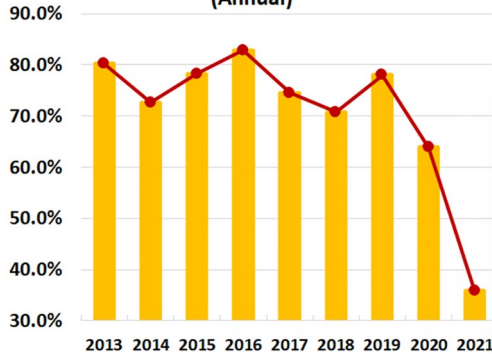


Sources: Flexport Research

- Transit time on TPEB has moved from 40 days in 2019 to a peak of 108 days in 2022.
- Flexport OTI calculates the total transit from the time when cargo is ready at the factory to the time which it is picked up at its final port of destination.

# Schedule reliability is all but gone

Fig. B1: Global Schedule Reliability (Annual)

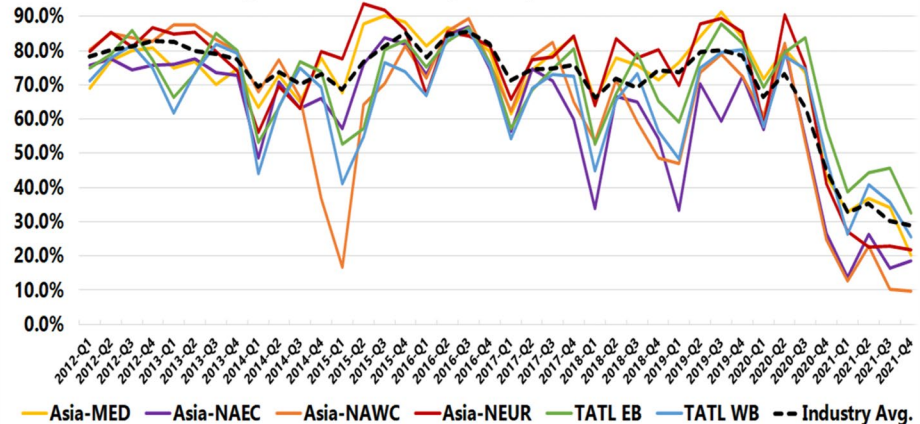


Operational data surrounding the 2015 congestion problem on the US West Coast shows that a reversal to normal reliability and vessels will take 8-9 months if recovery was to start now.

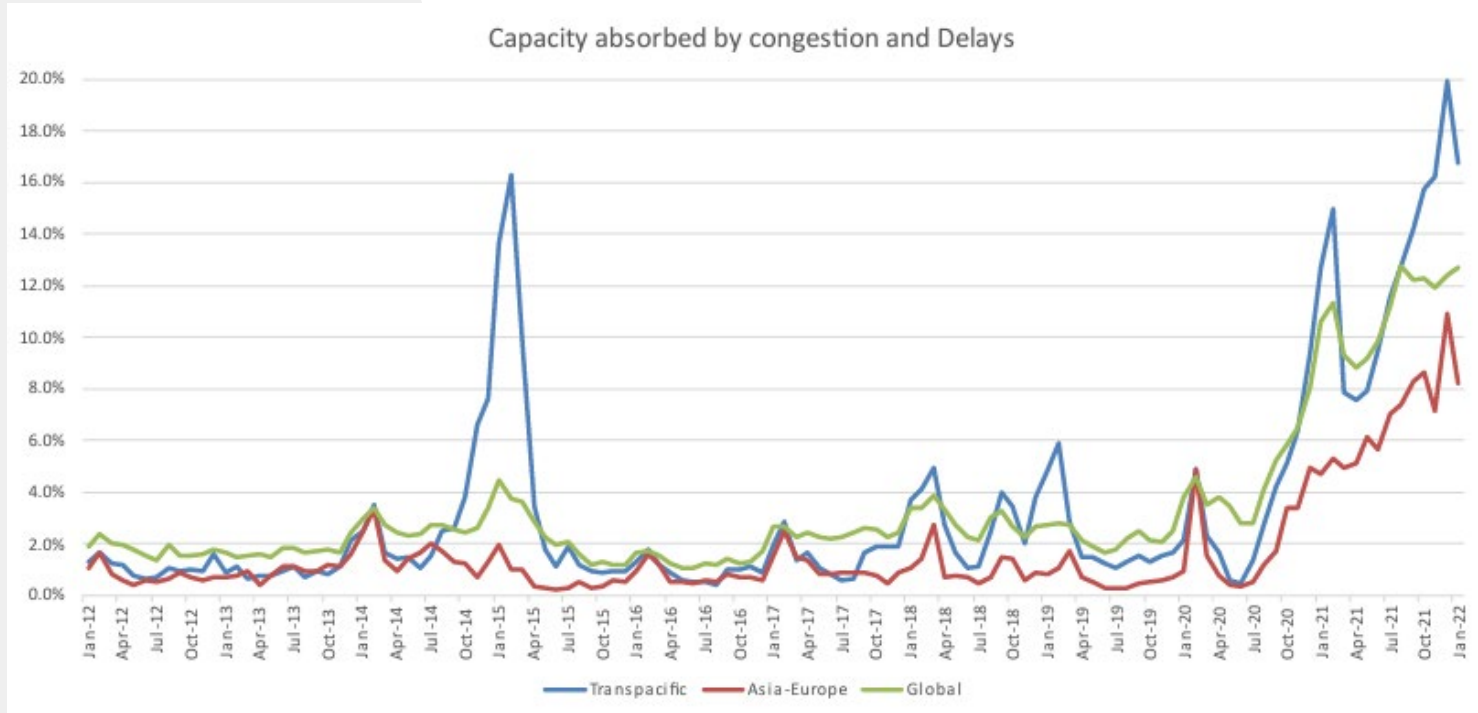
- Global schedule reliability fell to the lowest level ever recorded in 2021
- TPEB was the worst performer with a reliability of 8% on-time in Q4 2021
- No carrier had a global reliability of greater than 50% in 2021
- Port congestion is likely to continue to impact schedule reliability in 2022 and no recovery is in sight

source: Sea-Intelligence Sunday Spotlight Issue 550; Issue 549

Fig. B9: Trade Lane Quarterly Performance



# Congestion and vessel delays are soaking up supply

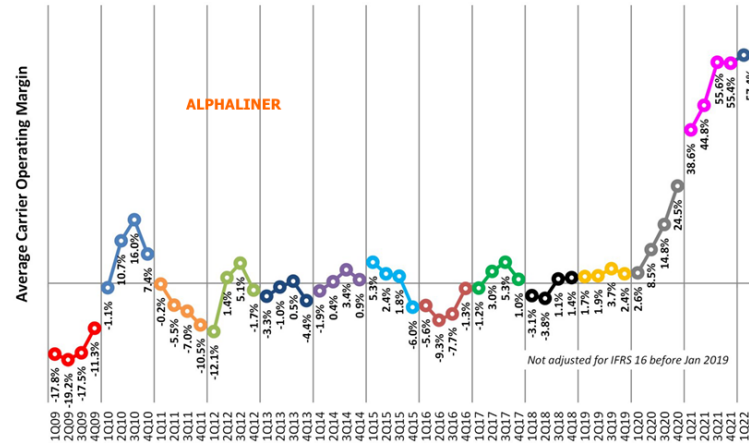


# Record Earnings Across the Board



- Every carrier had a record year in 2021 and most have predicted equal if not, better performance in 2022.
- Carriers will continue to reinvest profits but new order book occupies only 25% of industry profits expected in 2021 & 2022.
- Some carriers saw EBIT increase by over 800% in 2021.

Main carriers: Average core EBIT margin by quarter





# Demand is dropping

Fig. A1: TEU demand growth year-on-year

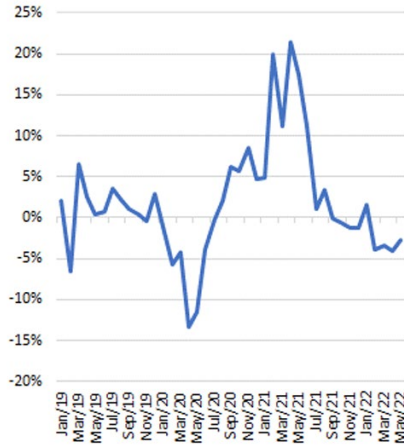


Fig. A2: Annualized TEU demand growth compared to same month in 2019

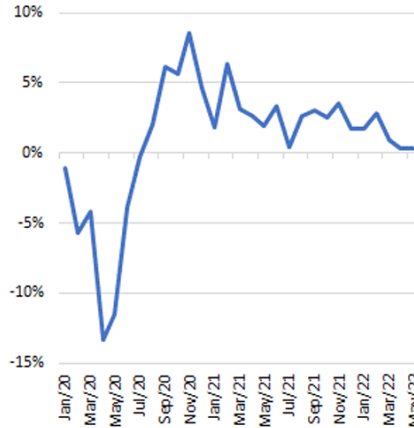
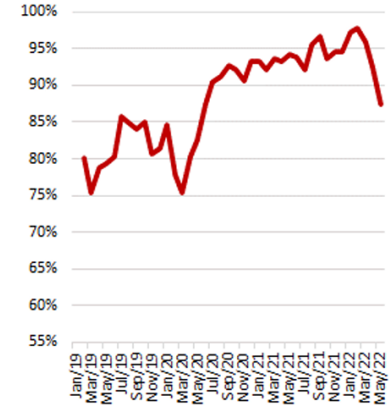
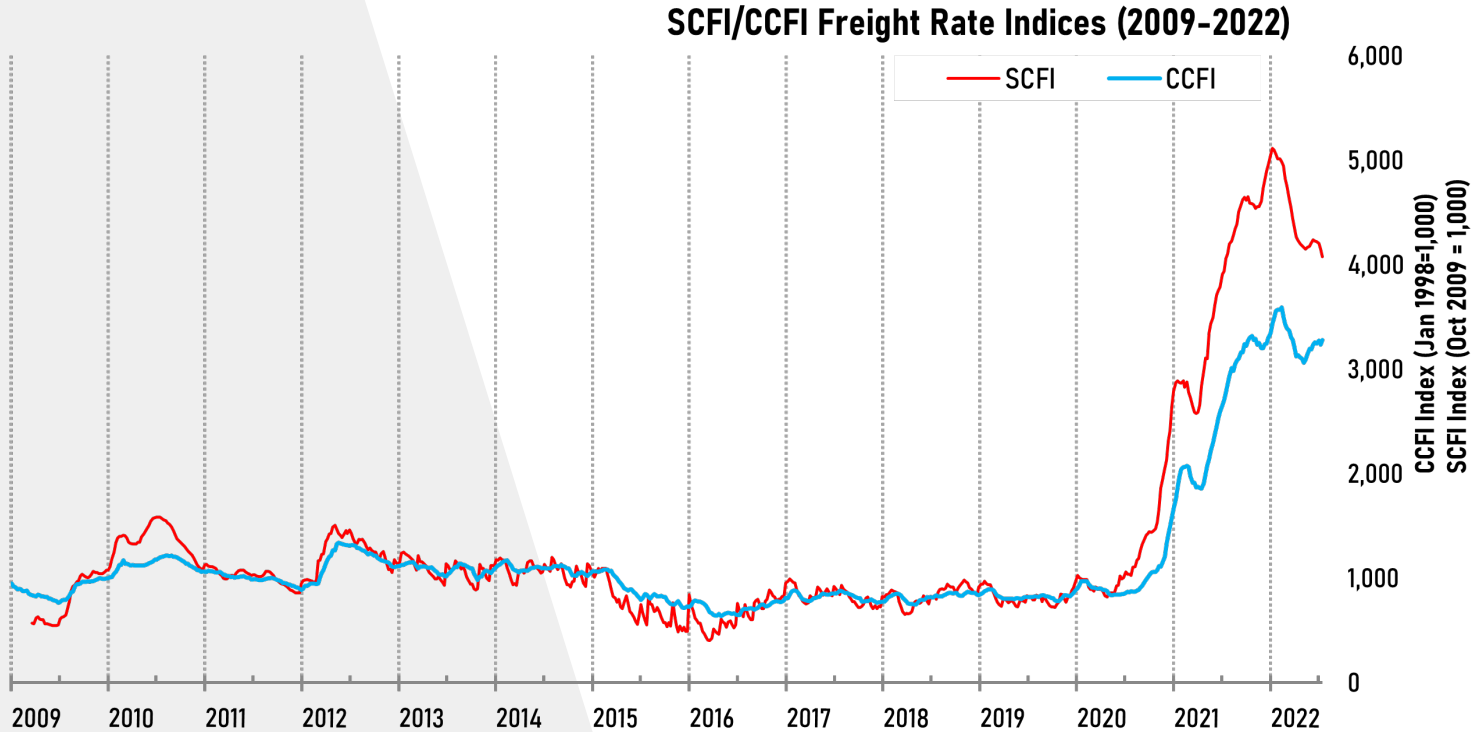


Fig. A3: Transpacific nominal capacity utilisation 2 month rolling avg.



- This implies that capacity is finally beginning to open up – which is good news for shippers.

# Rates are dropping



**AlixPartners**

# The state of the supply chain:

'Just in time' to  
'just be patient'



# AlixPartners Disruption Index



**72%** of CEOs are worried about losing their jobs due to disruption, up from 52% last year.



**94%** of executives say their business models must change within the next three years.



**57%** of executives worry their company is not adapting fast enough to the pace of change.



**Only 3%** of executives say COVID-19 is their number one priority for 2022.

## GLOBAL BUSINESS EXECUTIVES

**3,000**

total

**300**

per industry

**1,000**

North America

**1,000**

APAC

**1,000**

EMEA

## Areas of greatest concern

### 1 SUPPLY CHAIN

**Supply chain woes are just beginning**

**70%** of CEOs are concerned with the impact of supply chain disruptions.

Only **43%** of executives are focused on longer-term solutions.

**77%** of executives feel actions taken to address supply chain are not effective enough.

### 2 WORKFORCE

**CEOs' anxiety skyrockets as radical change comes for their businesses**

**80%** of CEOs fear current labor shortages may be permanent.

**65%** of executives are concerned their company's employees will not have the skills required to succeed in the future.

### 3 DIGITAL

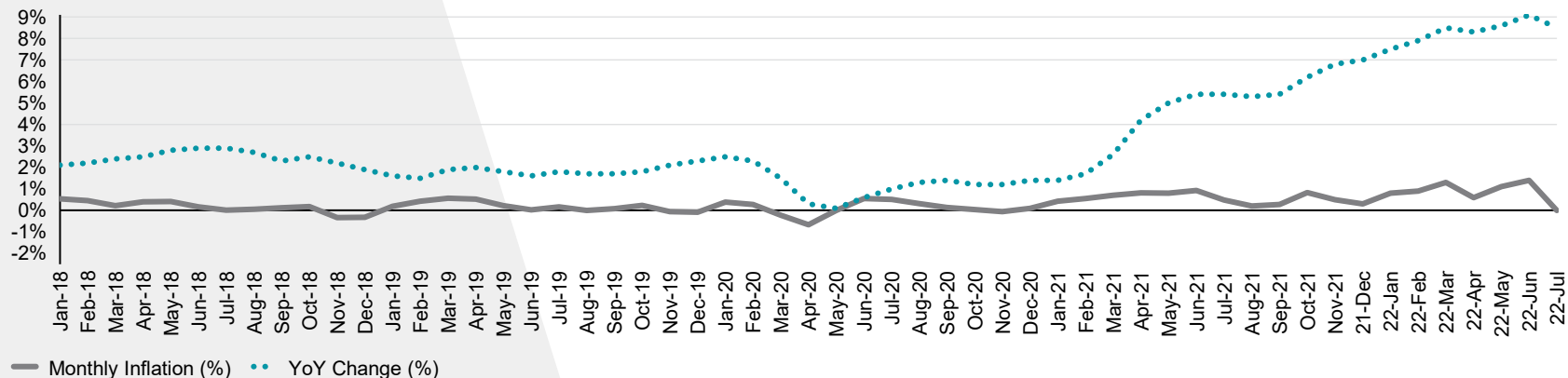
**Executives know they need to digitally excel, but don't know how**

**78%** of CEOs believe that the adoption of digital tools is critical to the survival of their company.

**46%** of executives say their top challenge is poor execution of the technology and tools in which they have invested.

# As inflation hits 40-year high, federal reserve plans rate increases, employers raise wages, and consumers brace for rising costs

U.S.: Monthly inflation rates based on CPI index



## Key trends and facts

- July **ended streak of 19 straight months with CPI increases**, cooling to 8.5% after reaching a 40-year high of 9.1% in June
- **Inflation hit a 40-year high of 8.5% in March**, driven by large increases in food and energy ([Business Insider](#))
- The Federal Reserve anticipates **half-point rate increases in the next 2-3 meetings** to combat the rising inflation ([Reuters](#))
- Gas prices peaked in June and have started to come down ([CNBC](#))
- Payrolls continue to increase, although many workers will see an increase **less than current inflation** ([CNBC](#))

# Mid-2022 is seeing top-movers come off recent peaks but still well above 2020 prices

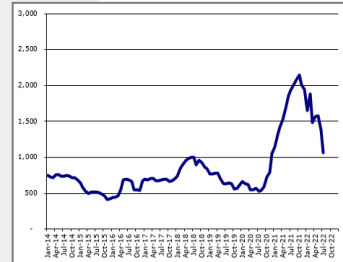
Broad Basket of Inputs at Significant % Increases Still into 2022<sup>1</sup>

## Steel/Metals

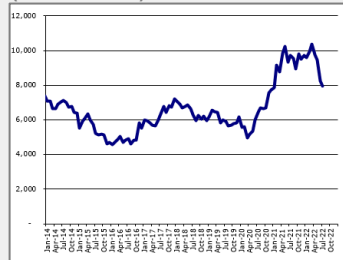
Aluminum (\$/metric ton) **47%**



Steel (\$/metric ton) **64%**



Copper (\$/metric ton) **28%**

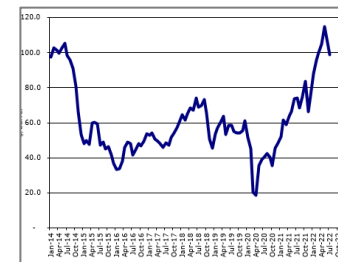


Zinc (\$/metric ton) **50%**

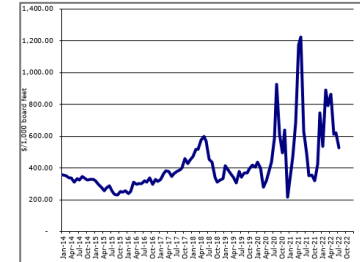


## Chemical/Non-Metallics

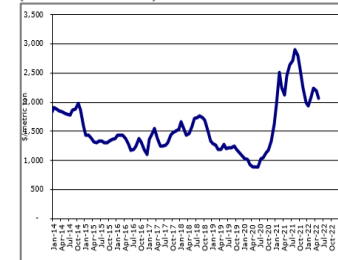
WTI Crude (\$/barrel) **155%**



Lumber (\$/ board foot) **11%**



Polypropylene (\$/ metric ton) **92%**



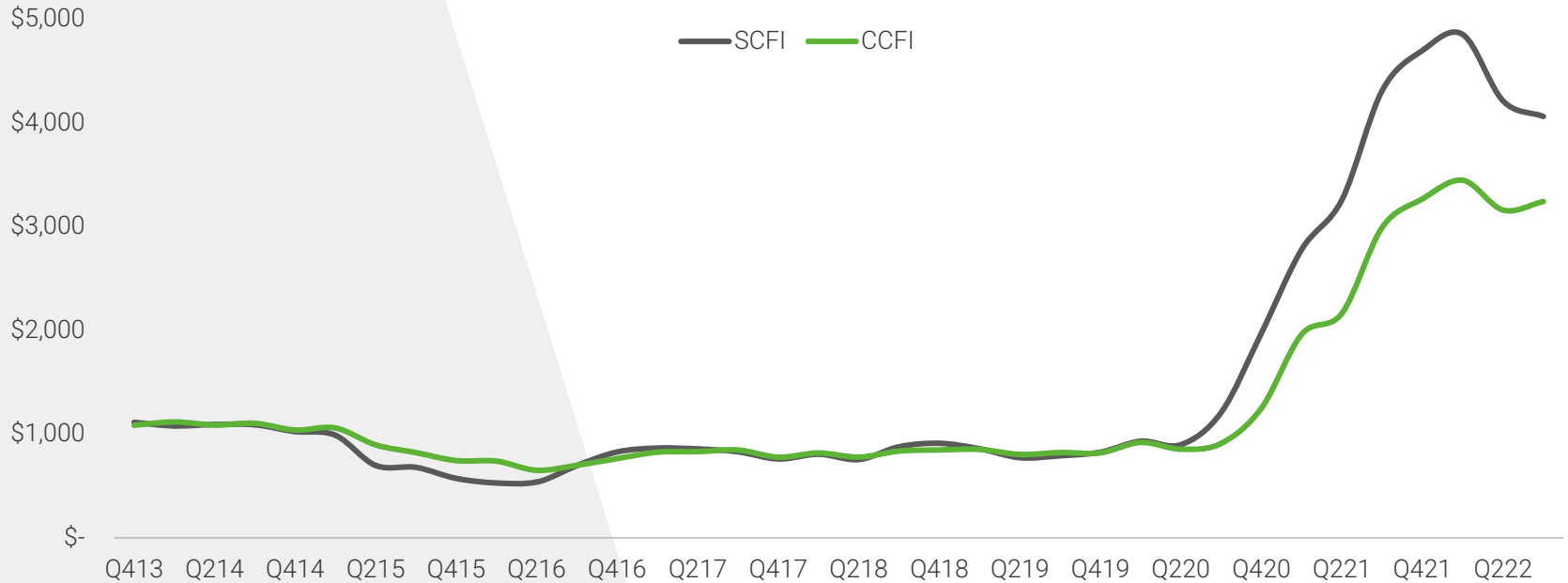
Cotton (\$/lb) **62%**



Sources: 1) AlixPartners Inputs Visibility Tracker Feb 2022 – **Highlighted %** is difference of 2022 YTD vs. 2020 full-year average

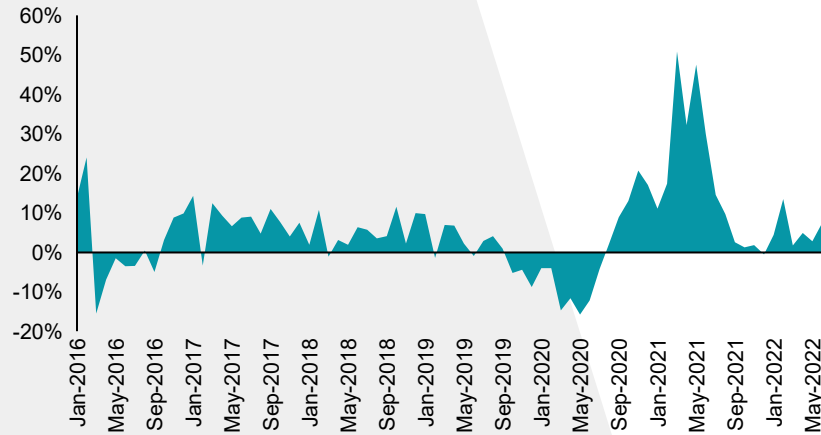
# Increased transportation rates – example: container shipping rates currently at record highs

SCFI and CCFI Container Freight Rate Indices

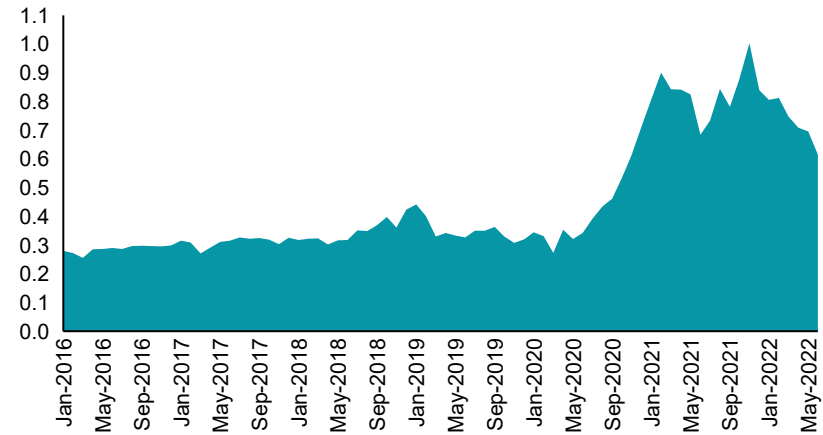


# Congestion leading to lack of the right inventory in the right place, which is leading to increased demand and prices in some areas

## Major US Port Container Throughput (% Yr/Yr)



## Port Congestion Index (Million TEU)<sup>1</sup>



### Macro trends

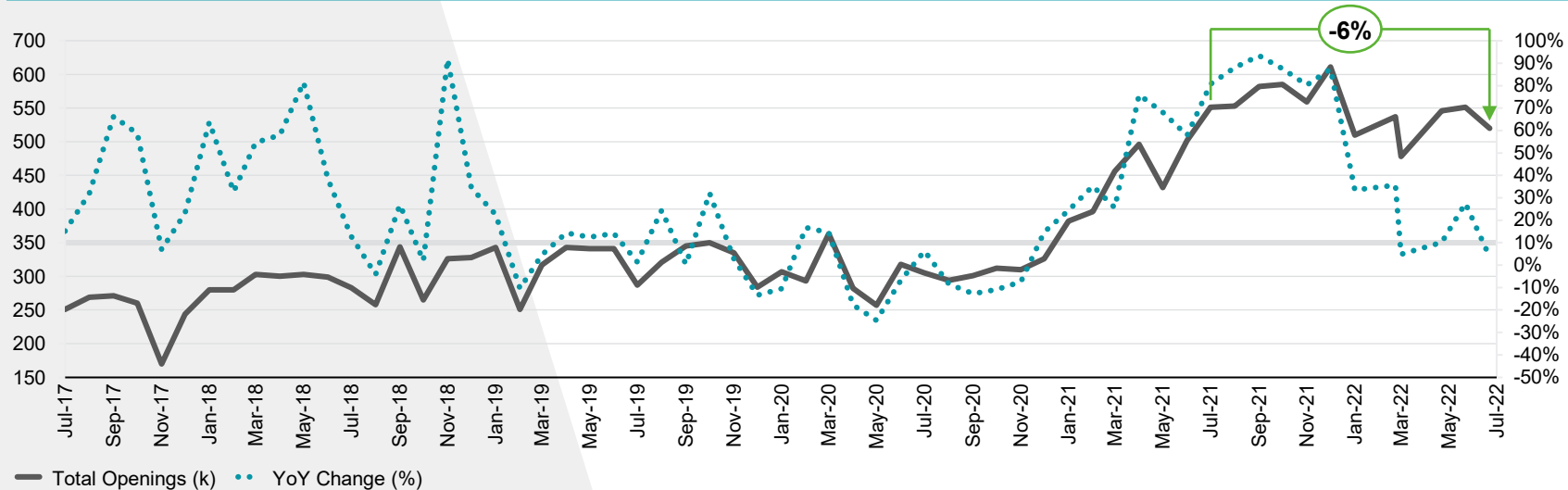
- Recent throughput trends are likely to continue due to strong consumer spending and retailers catching up on and pulling inventory forward
- Although throughput has increased y-o-y, gains have been limited by excessive port congestion
- Approximately 10 to 15% of global container ship capacity is floating at anchor
- Multiple supply chain bottlenecks, in the number of containers that can move inland

1. Port Congestion Index as measured by container ships on West Coast of North America  
Source: Clarksons Maritime Research



# Logistics job openings decreased; up 4% YoY and approximately 60% above pre-pandemic levels; unemployment rate fell to 3.5%

U.S.: Total Transportation, Warehousing, and Utilities Job Openings – Nov. 2021 (Thousands; Seasonal Adj.)

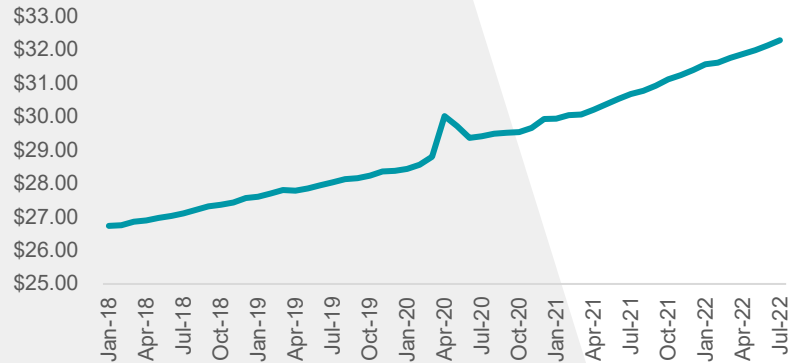


## Key Trends & Facts

- BLS estimated that there were 520k job openings in the warehousing, transportation, and utilities sector in June; though off all-time highs, the sustained number of job openings illustrates continued challenges to find and retain workers
- Amazon could run out of workers for its warehouses by 2024
- Overall labor market continues to tighten with 3.5% unemployment rate

# Wage growth in the United States reached an all time high of 15.31% in April of 2021

Earnings of private sector employees, January 2018 to July 2022



Yearly wage growth compared to previous year January 2021 to June 2022

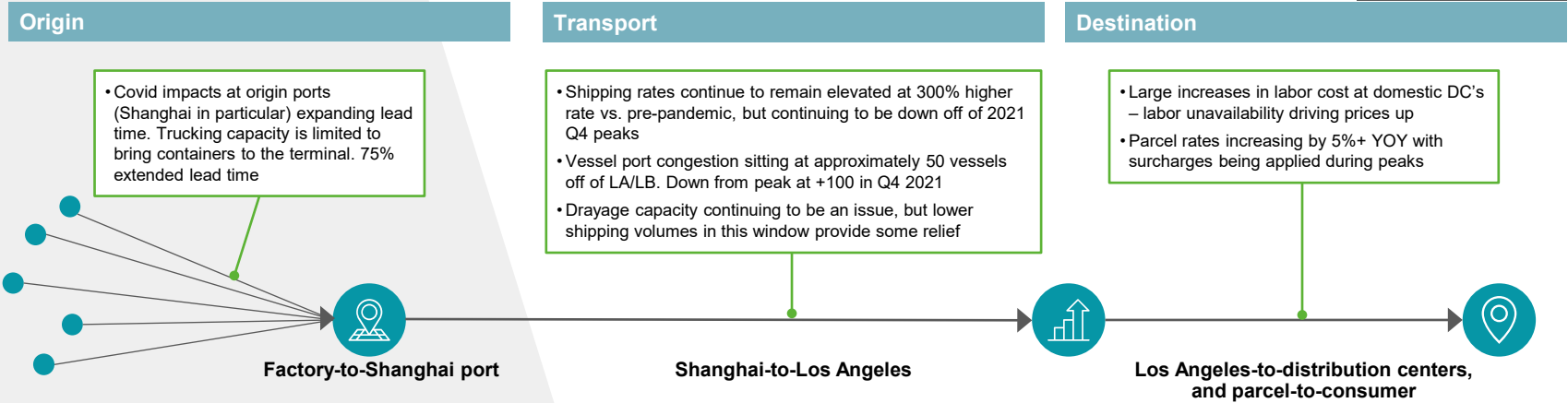


## Key trends and facts

- Nominal (not adjusted for inflation) average hourly earnings increased from **\$30.95** in October 2021 to **\$31.03** in November 2021. However, the real average hourly earnings (considered inflation) decreased to **\$11.13** in November 2021 ([U.S. Bureau of Labor](#))
- Wages in 2021 have grown at the fastest rate in 35 years; average hourly earnings over April-June 2021 rose sharply comparing to previous years; Wage growth rate in the United States averaged **6.16%** from 1960 until 2021, reaching an all time high of **15.31%** in April of 2021 ([Trading Economics](#))
- In the long term, the United States Wages and Salaries Growth is projected to trend around **3.6%** in 2022 and **4.0% in 2023**, according to Trading Economics global macro models ([Trading Economics](#))

# SC Disruption on a pair of shoes: Transit time from China delayed by 74% and cost has increased 68% versus pre-pandemic

June 2022 Update



Time period	Origin port processing	Ocean transit	Destination port processing	Drayage	Destination process and shipping	Total
<b>Transit time pre-pandemic (days)</b>	4 to 6	11 to 14	2 to 5	1 to 2	5 to 9	23 to 39
<b>Transit time current (days)</b>	14 to 20	16 to 24	5 to 10	2 to 8	5 to 10	39 to 69
<b>Cost (pre-pandemic)</b>	Incl.	\$0.31	Incl.	\$0.11	\$7.00	\$7.42
<b>Cost (current)</b>	Incl.	\$1.64	Incl.	\$0.12	\$10.69	\$12.46



Source: AlixPartners experience, Drewry spot rate profiles, Drayage.com, News articles across leading publications

An aerial photograph of a busy port. A large container ship is docked at a pier, with several yellow gantry cranes positioned along the dock. The ship's deck is filled with stacks of colorful shipping containers in shades of red, blue, and white. In the foreground, there are extensive stacks of these containers organized in neat rows. The water is a deep teal color. A semi-transparent white diagonal shape is overlaid on the left side of the image, containing the text 'AlixPartners' at the top and 'Thanks' at the bottom.

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**Thanks**

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