

Transport Connectivity on Eurasian transit routes Middle Corridor

Almaty

19-20 October 2022

Unprecedented Global Events – Opportunity Knocks

- Covid-19 in 2020 and Russia-Ukraine conflict in 2022 combined to strangle supply chains from PRC to Europe.
- These events influenced unprecedented levels of price increases and capacity reductions imposed by global shipping lines.
- These adjustments were rapid and created conditions that channeled an opportunity for other modes of transport to capitalize on the lack of available shipping space from seaports in PRC.
- The beneficiary's included existing overland multi-modal routes with the Middle Corridor emerging as a contestable solution especially given the limitations imposed on rail via Belarus and the Russia routes to Europe.
- This scenario could be described as the best opportunity for the Middle Corridor to prove itself as a viable overland route for consistent volume of end-to-end transcontinental transport.

Modal Shares – PRC to Europe (merchandise freight)

Rail movement (loaded)



2018	1.9%
2019	2.1%
2020	3.1%
2021	3.4%

Air Freight movement



2018	97.8%
2019	97.6%
2020	96.6%
2021	96.3%

Shipping movement



2018	0.3%
2019	0.3%
2020	0.3%
2021	0.2%

Source:  eurostat

Modal Frequency – PRC to Europe

Middle Corridor Frequency 1-4 per day



Ocean Transport Frequency 5.35 sailings daily



Northern Corridor Frequency 41.6 block train sets depart



Source: Author interpretations of various industry references

Modal Transit times – PRC to Europe

Middle Corridor transit 22-24 days



Ocean Transport transit 35 -45 days



Northern Corridor Transit time 12-20 days



Source: Author interpretations of various industry references



Hamburg, Germany

Lodz, Poland

Duisburg, Germany

Constanta, Romania

Baku, Azerbaijan

Batumi, Georgia

Quryq, Kazakhstan

Almaty, Kazakhstan

Xingang, China

**Trip Length
22 days**

**Trip Length
42 days**

Legend

- Freight by Rail
- Freight by Sea

Modal Capacity provided – PRC to Europe

Middle Corridor Capacity 75,000 TEU



Ocean Transport Capacity 35 M TEU



Northern Corridor Capacity 1,575,000 TEU

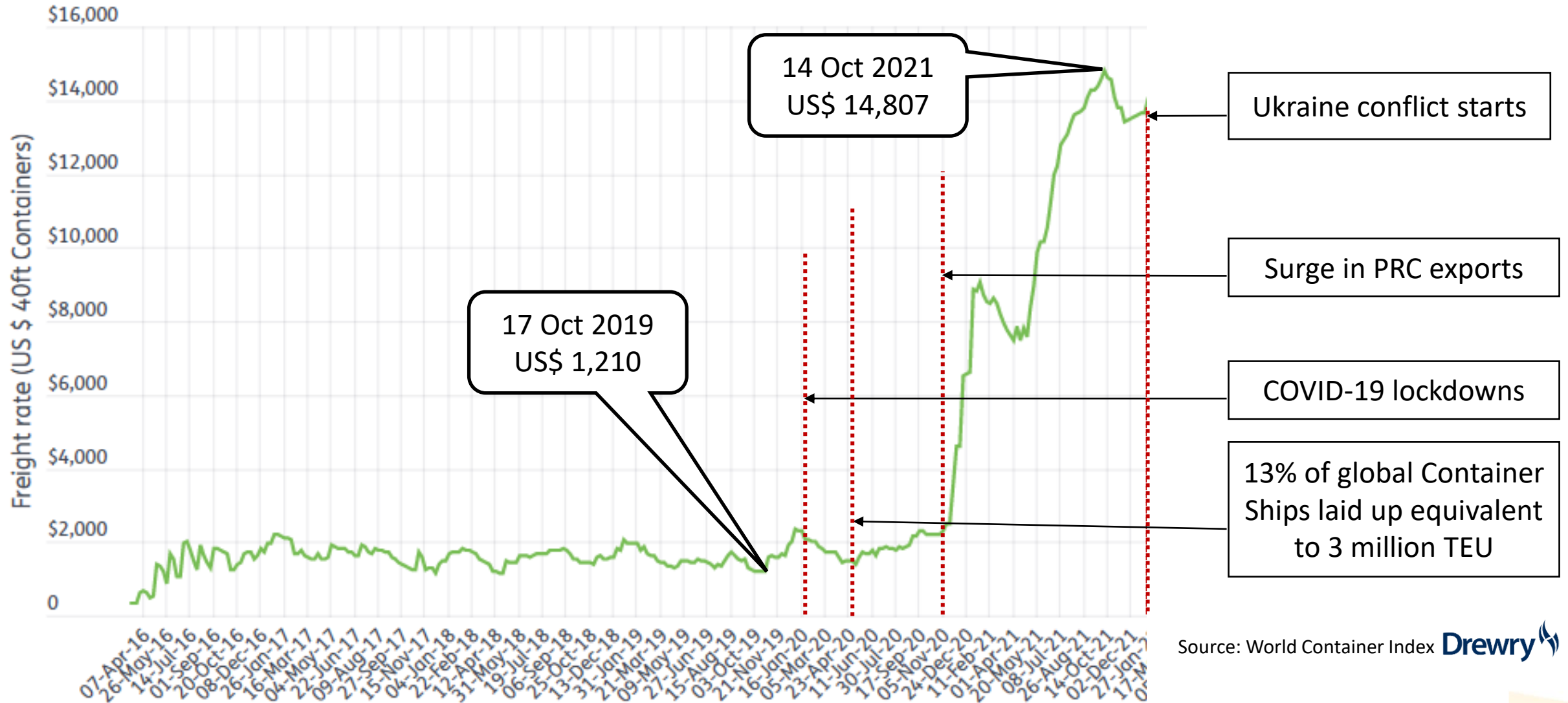


Source: Author interpretations of various industry references

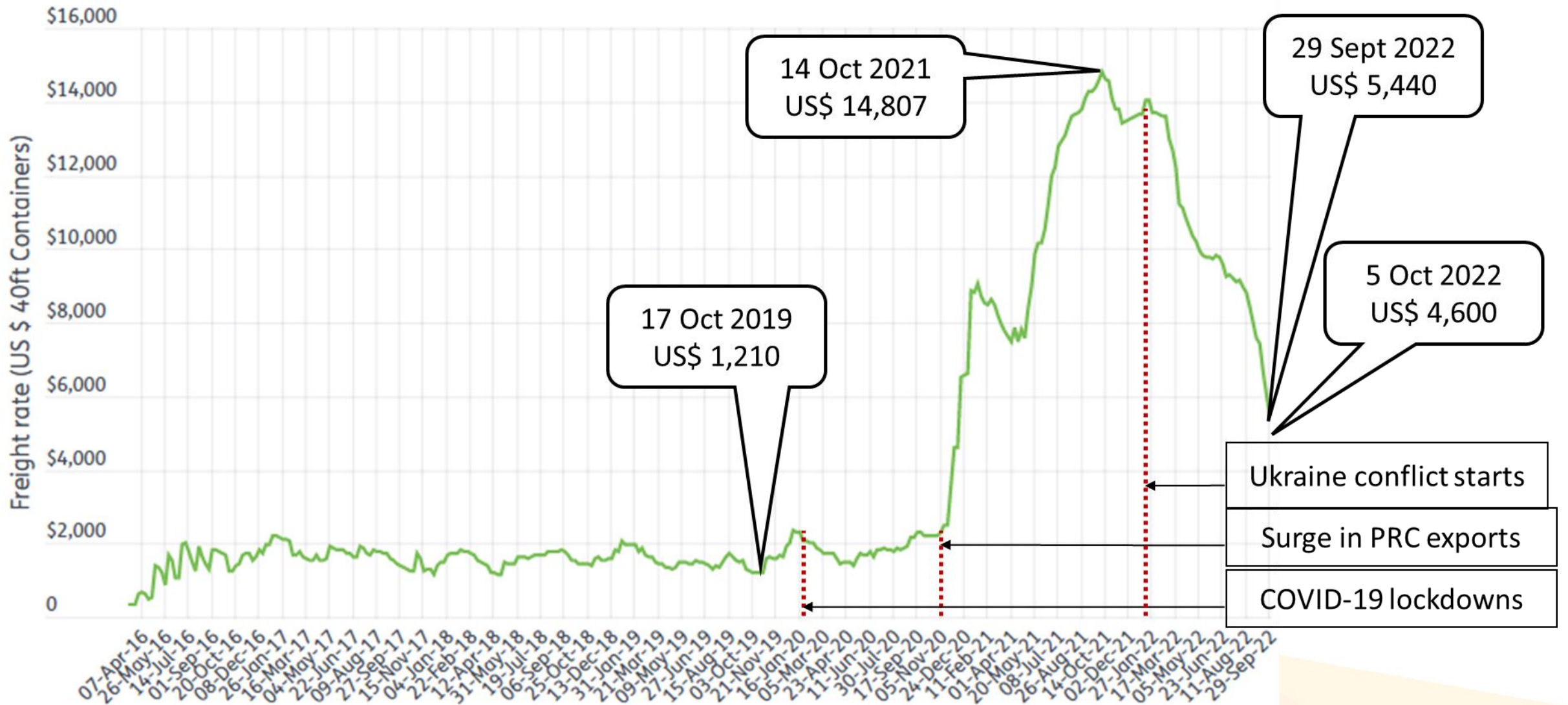
Surge of Freight Switching to Overland rail

- The surge to switch to overland rail during 2020-21 saw renewed use of rail from PRC to Europe for all Corridors.
- Ukraine conflict in early 2022 resulted in the closure of Ukraine seaports and many shippers avoid using the northern rail corridor through the Russian Federation. This left the Middle Corridor as a remaining alternative to satisfy the surge in freight volume.
- The volume of goods carried on rail from PRC to Europe ballooned from 14 million metric tons in 2019, to 24 million metric tons in 2020.
- Demand for rail resulting from the limited capacity and spike in sea freight prices from \$2,000 per FEU in June 2020 to \$15,000 in 2021.

World Container Index Apr 2016 – Jan 2022



World Container Index Apr 2016 – Oct 2022



Modal Pricing & Logistics Features 2018-2022

FCL-FCL	FROM CHINA to EU - FORTY FOOT CONTAINER (FEU)	Volume handled 2019 est.	2018-2019	2020-2021	2022-2023
MODE / Days	ROUTE		USD/FEU	USD/FEU	USD/FEU
SEA 35-45 days	Main seaports to West EU Ports container routes. Tianjin Port/Qingdao Port/Shanghai Port/Ningbo Port. To; Piraeus Port/Rotterdam Port/Port of Hamburg/Antwerp Port	32m TEU	\$1,500 low \$3,200 high	\$9,000 low \$15,000 high	\$7,500 low \$14,000 high
RAIL 14-16 days	Northern rail corridor (PRC, RUS, EU) Tianjin–Manzhouli–Trans-Siberian Railway–Moscow. To; Duisburg or other EU Main terminal.	400k TEU	\$5,000 low \$7,387 high	\$6,500 low \$9,000 high	\$ N/A \$ N/A
CR Express 13-15 days	From Xi’an to Hamburg (through Horgos or Alataw Pass)	1.49m TEU	\$2,000 low \$3,000 high	\$ 8,000 low \$12,000 high	\$7,000 low \$10,000 high
RAIL/FERRY 21-24 days	Middle Multimodal corridor (PRC, KAZ, Caspian Sea, AZE, GEO, EU). Lianyungang (China) to West EU Terminals	50k TEU	\$6,000 low \$8,000 high	\$7,000 low \$10,000 high	\$ 8,200 low \$12,000 high

Value of Transit Time Savings - VOTT

Value of Container for Sea Transit to be competitive					Oct-22				
					Middle corridor	\$	8,000.00		
Value of Container	\$ 311,868.00				Sea Transit	\$	8,000.00		
Delay Cost	Day 1	Day 2	Day 3	Day 4	Day 5				
	\$ 170.89	\$ 341.68	\$ 512.38	\$ 682.98	\$ 853.50				
Difference	\$ 170.89	\$ 170.79	\$ 170.70	\$ 170.61	\$ 170.51				
Cost per day Comparison - finding optimal shipment output									
					US\$/TEU/day (including delay cost)				
					Sea Transit	\$	1,411.55		
Value of Container	\$ 5,000,000.00				Middle corridor	\$	363.64		
Daily Cost	Day 1	Day 2	Day 3	Day 4	Day 5				
Sea Transit	\$ 109.52	\$ 219.05	\$ 328.57	\$ 438.10	\$ 547.62				
Middle corridor	\$ 363.64	\$ 727.27	\$ 1,090.91	\$ 1,454.55	\$ 1,818.18				

Value of Transit Time Savings - VOTT

Ocean Transit

Delay Cost (20 days)



Freight Cost (Oct -2022)



= \$1,412/FEU/Day



Middle Corridor Transit

Freight Cost (Oct -2022)



= \$364/FEU/Day



Middle Corridor Transit is currently **3.9x** cost advantage per FEU (valued at \$5,000,000)

The Final Words – Pause & Reflect

- Key nodes and freight service providers that make up the Middle Corridor are contemplating renewed investments in their rail networks, rolling stock, terminals, seaports and trans-Caspian shipping assets so as to increase network capacity.
- These investment opportunities are plausible ambitions as set against the assumptions that demand will be maintained at its present levels.
- Sea-freight world is coming back into a balance of supply to demand and perhaps even oversupply as shipping lines again use pricing to capture market share.
- It would be wise for the Middle Corridor freight actors to ‘pause and reflect’ on what has occurred over the last two years. It would be advisable to analyse what volumes have been delivered by their service networks and what new mixture of freight types not seen previously have been carried end to end.

**19th Transport Sector
Coordinating Committee Meeting**
19-20 October 2022 • Almaty, Kazakhstan



Thank you

