Rising Maritime Freight Shipping Costs Impacted by Covid-19

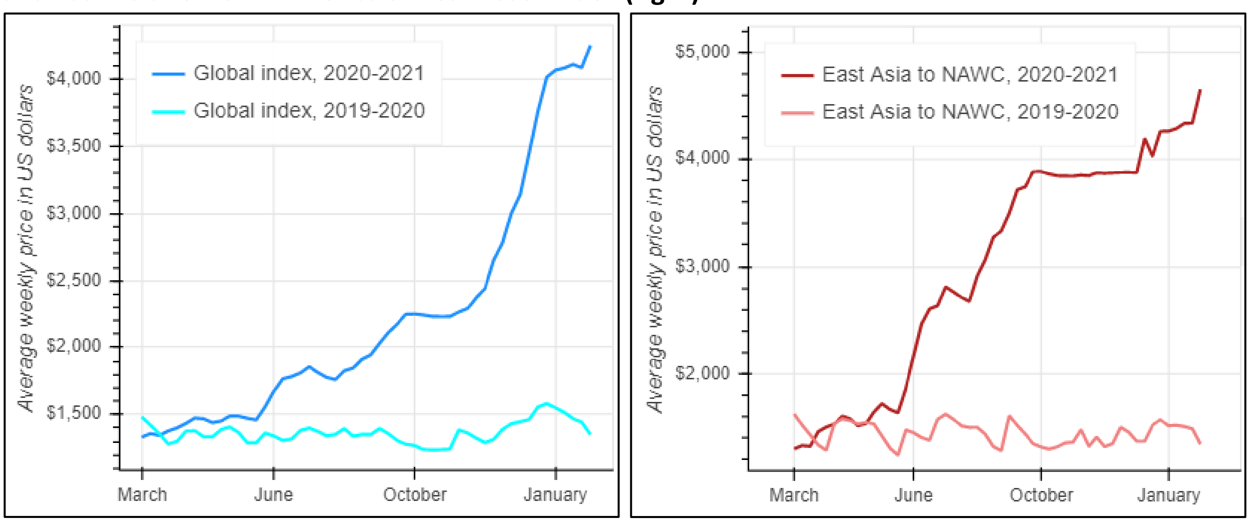
Gregory LaRocca, Office of Industries, Gregory.LaRocca@usitc.gov

Containerized maritime freight shipping costs have roughly tripled in the last year while experiencing significant volatility. The immediate cause is a lack of shipping containers due to pandemic-related transportation inefficiencies that have hit a breaking point. Using freight index data, shipping routes from East Asian nations are experiencing the highest cost increases, though the consequences have been global.

Introduction: In the early days of the Covid-19 pandemic, industry observers raised concerns about the potential disruption of global supply chains. However, broad, immediate disruptions did not happen due to declining demand for most goods and the temporary closing of manufacturing plants. Since November 2020, however, bottlenecks in the global trade system have created shortages that have impacted containerized maritime freight shipping (CMFS) costs and threatened global supply chains. Currently, the maritime transportation routes involving exports from China and other east Asian countries are experiencing the greatest increases in costs. The present effects of the shortages on East Asia's export markets include higher prices for imported goods, longer delivery timelines, and depleted inventories.

CMFS costs have increased over the last year, and the increase has been particularly steep from November 2020 to February 2021. The Freightos Baltic Index's (FBX) global container freight index reports that the global shipping price increased 180 percent year-over-year (YoY) (figure 1). The most affected shipping routes originate in China and other East Asian countries. CMSF costs from East Asia increased on average 220 percent YoY (figure 2), whereas costs to East Asia also increased by an average of 133 percent YoY. While global shipping prices increased significantly, shipping routes that exclude East Asia did not fluctuate as steeply.[1]

Figures 1 and 2: YoY price changes for the Freightos Baltic Index (FBX)'s Global Container Index (left) and East Asia to North America's West Coast Index (right).



Source: Freightos, "Freightos Baltic Index," accessed February 22, 2021.
Note: An interactive version of these figures is available here.

What are the causes? Industry reports have identified a lack of shipping containers as a root cause of the rising CMFS prices. However, this diagnosis may be describing the symptom rather than the underlying causes. The container shortage may be more easily understood as a depletion of container inventory because of pandemic-related inefficiencies. Put plainly, the number of shipping containers leaving East Asia has been exceeding the number of containers returning to East Asia.

[1] For example, CMFS costs from Northern Europe to the North American East Coast rose 7 percent YoY.

The container shortage is attributable, in part, to pandemic-related logistical challenges that hinder container loading and processing. To be sure, rising trade surpluses from major East Asian exporters also contribute to the container shortage. Pandemic-related challenges include adapting to new health regulations, diminished port productivity, decreased in-land transit, idled shipping capacity, and the usage of shipping containers for temporary storage. For instance, the ports of Los Angeles and Long Beach, CA, were shorthanded due to a Covid-19 outbreak that afflicted nearly 700 dockworkers in January 2021.

Downstream Impacts: Maritime trade is the backbone of international goods trade, and high costs are disrupting previously resilient global supply chains. The United Nation's Center for Trade and Development (UNCTAD) estimated that maritime transportation carried 80 percent of all globally traded goods by volume in 2018. Low CMFS costs enable multinational firms to create global supply chains that increase operational efficiencies to meet consumer demand for everyday goods, such as apparel and agricultural goods.

Even if only temporary, higher CMFS costs disrupt global supply chains by raising firms' transportation costs and delaying shipments, which may lead firms to change production decisions. The level of disruption can depend on a few factors, such as whether a firm is a high-volume shipper or whether a firm's margins tolerate higher shipping costs. While small-volume shippers have historically paid higher shipping rates than high-volume shippers, the gulf in shipping prices has widened. News articles have supported the data by suggesting that freight shipping companies have prioritized access to their diminished CMFS supply for clients that are large-volume shippers and charged smaller-volume clients with higher rates. The gulf in shipping prices has reportedly led to some firms that ship in smaller volumes to be squeezed out of international commerce by the higher shipping costs. Freightos data suggest that the average weekly prices consist mostly of higher-volume shipments priced at the low end of the pricing range. For example, during the first week of February 2021, the average weekly container price was $4,334, but prices ranged between $4,122 and $5,823 to transport goods from East Asia to the North American West Coast.

Firms are currently making production and shipping decisions with higher CMFS costs factored in. Some firms are choosing to endure the higher transportation costs. As an example, Peloton, an exercise equipment manufacturer, has reportedly paid 10 times its usual transportation costs to expedite the transportation of its merchandise using air and expedited CMFS. Other firms are opting to reduce production volumes due to the high transportation costs. The Financial Times reported that several European agricultural producers reduced their output because transportation costs made it unprofitable for these firms to export their produce.

Outlook: Industry experts suggest that the higher CMFS costs may be temporary, and relief may begin as early as April or early summer. The shock of higher transportation costs and delays may change how some firms approach supply chains. Before the pandemic, "just-in-time" supply chains were the prevailing approach. Companies in a post-pandemic world may shift conventional wisdom toward supporting limited inventories. For example, the automobile industry, which has had to idle some plants due to an ongoing shortage of microchips, is now considering stockpiling those key inputs.

Sources: Bloomberg News, "China Ends 2020 With Record Trade Surplus as Pandemic Goods Soar," January 13, 2021; Eley et al., "European retailers face goods shortages as shipping costs soar," January 31, 2021; Freightos, "Freightos Baltic Container Freight Index (FBX)," accessed February 8, 2021; Kapadia, "Peloton will incur 10 times its usual transportation costs as it ships by air, expedited ocean," accessed February 8, 2021; Miller, Campbell, "Carmakers consider supply chain overhaul to avert more chip crises," February 5, 2021; Mongelluzzo, "COVID-19 surge hurting productivity, but won't close LA-LB ports," January 22, 2021; Steer and Romei, "Shipping costs quadruple to record highs on China-Europe 'bottleneck,'" January 19, 2021; United Nations Center for Trade and Development, "Review of Maritime Transport 2018," October 3, 2018.