

Impact of COVID-19 on the Sea Freight Transport and Freight Forwarding Price Indices

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Introduction

The COVID-19 outbreak in end 2019 saw many countries implementing strict public health measures and border restrictions to manage it. Logistic arrangements for transportation of goods across countries were thus affected.

The Sea Freight Transport Price Index (SFTPI) and Freight Forwarding Price Index (FFPI) compiled by the Singapore Department of Statistics exhibited significant movements over this period due to the supply chain disruptions.

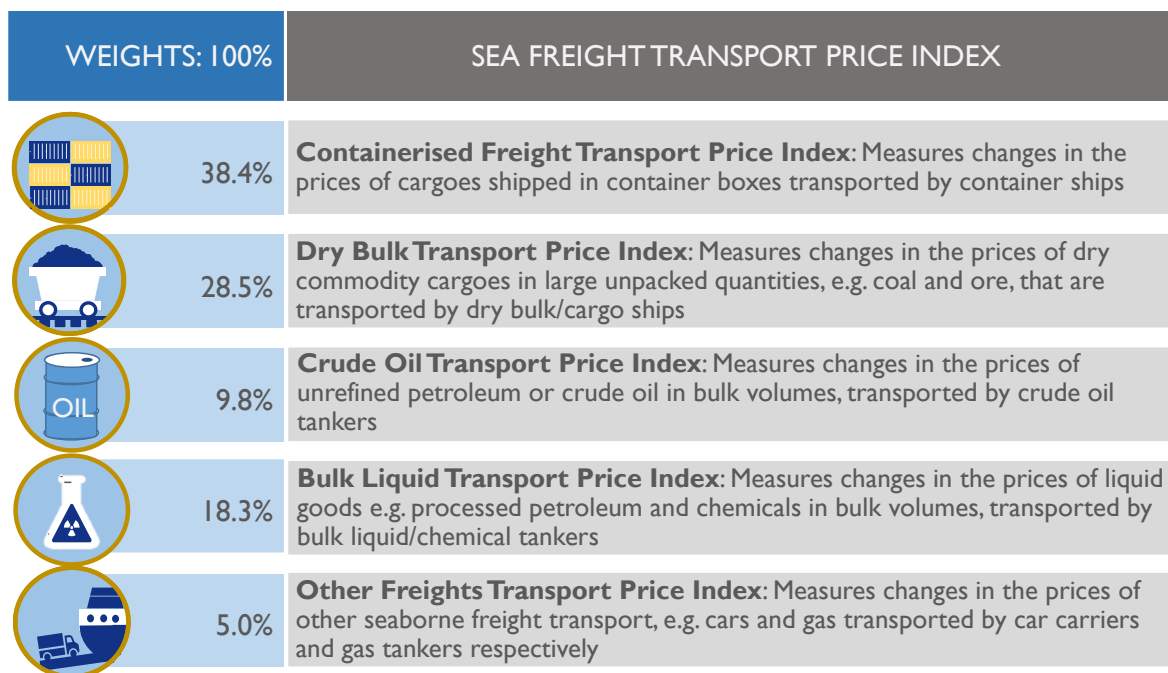
This article highlights the impact of COVID-19 on the SFTPI and FFPI.

Sea Freight Transport Price Index (SFTPI)

The SFTPI¹ measures changes in the prices of transporting seaborne freight by Singapore-registered ship operators. The SFTPI comprises five sub-indices for measuring average changes in the prices for transporting the various freight types (Figure 1).

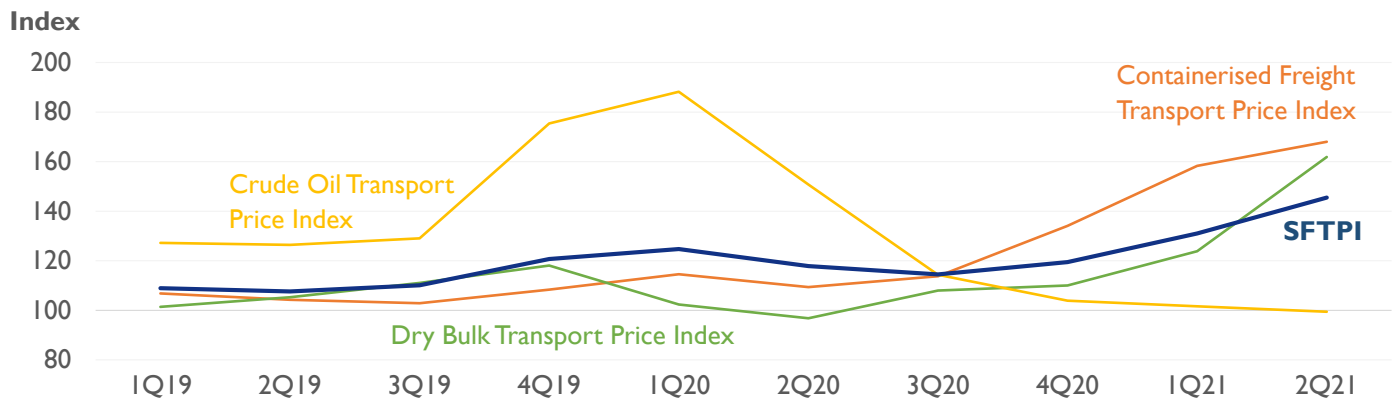
The SFTPI was on an upward trend from 1Q 2019 until 1Q 2020 before falling in 2Q 2020 due to decreases mainly from the Crude Oil Transport, Dry Bulk Transport and Containerised Freight Transport Price Indices (Chart 1). The decline in SFTPI moderated in 3Q 2020 and began to increase from 4Q 2020, driven largely by the Containerised Freight Transport Price Index which had started rising from 3Q 2020.

FIGURE 1 SFTPI BY FREIGHT TYPE



¹ Prices used in the SFTPI compilation were actual transacted prices, including surcharges and net of discounts. These are obtained quarterly from selected ship operators classified under the Singapore Standard Industrial Classifications 2020 (SSIC 2020) code: 50021-Shipping Companies, including chartering of ships and boats with crew (freight). Chartering of vessels without operator, and operation of barges, tugboats are excluded.

CHART 1
SFTPI AND SELECTED SUB-INDICES (2017=100)



Rising Containerised Freight Transport Rates Due to Global Container Shortage

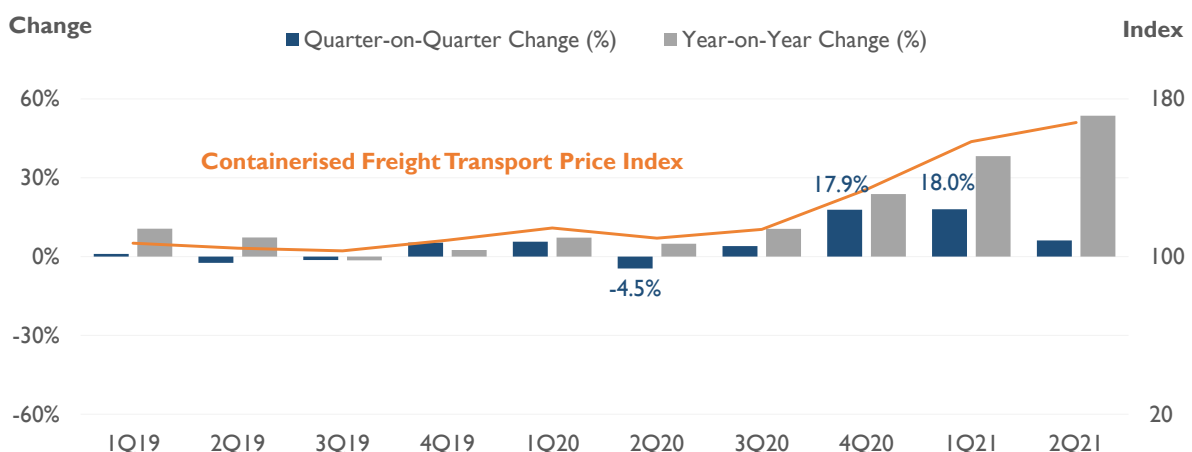
The Containerised Freight Transport Price Index accounts for 38.4 per cent of the SFTPI weight. After declining 4.5 per cent in 2Q 2020, the index began increasing in 3Q 2020, and rose 17.9 per cent and 18.0 per cent in 4Q 2020 and 1Q 2021 respectively (Chart 2) on a quarter-on-quarter basis, before the increase slowed down in 2Q 2021.

As many countries started national lockdowns and ceased the production of some goods in early 2020,

shipping companies reduced the number of cargo ships sent out², resulting in some uncollected empty containers being stacked up at cargo ports³. These created a backlog of containers, leading to critical shortage and worldwide port congestion⁴. Coupled with rising demand for essential products, containerised freight transport prices rose and are expected to persist for some time⁵.

The supply constraint is observed based on data from the Maritime and Port Authority of Singapore (MPA) (Chart 3). The number of container vessel arrivals⁶ in Singapore had been trending downwards,

CHART 2
PERCENTAGE CHANGE IN CONTAINERISED FREIGHT TRANSPORT PRICE INDEX (2017=100)



² Ship Technology, 29 Apr 2021: Global shipping container shortage: the story so far

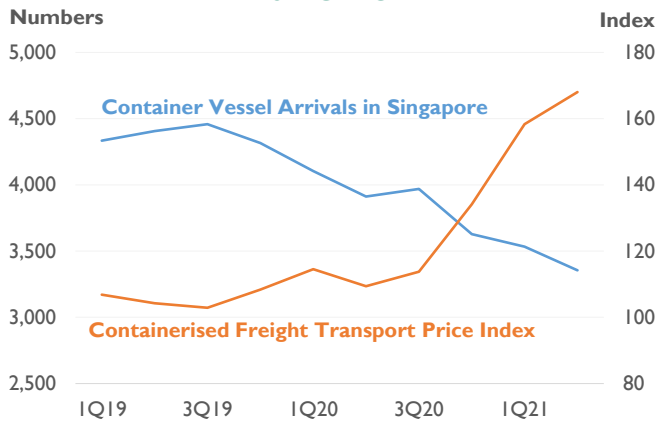
³ The Straits Times, 12 Mar 2021: Container ships facing longer wait times at Singapore port amid global surge in cargo demand

⁴ Source Today, 12 Apr 2021: Port congestion continues to throttle the world's supply chains

⁵ The Business Times, 5 Jul 2021: Pandemic drives sea freight prices to record high

⁶ Based on published Sea Cargo and Shipping Statistics from MPA.

CHART 3
CONTAINERISED FREIGHT TRANSPORT PRICE INDEX AND CONTAINER VESSEL ARRIVALS IN SINGAPORE



Source: Maritime and Port Authority of Singapore

especially with a larger fall registered in 4Q 2020, when the Containerised Freight Transport Price Index started to spike upwards.

Falling Demand for Crude Oil Leading to its Lower Prices

The Crude Oil Transport Price Index dipped 19.9 per cent in 2Q 2020 and dropped a further 24.1 per cent in 3Q 2020 (Chart 4). This could be attributed to the falling demand for crude oil^{7, 8}, as a result of travel restrictions, reduced air traffic, more business shutdowns, etc. Nonetheless, the decline in the price index slowed down in 1Q 2021 following the slight recovery in the global oil demand⁹.

Freight Forwarding Price Index (FFPI)

The FFPI¹⁰ measures changes in the prices of services provided by Singapore-registered freight forwarding companies and non-vessel operating common carriers categorised under the SSIC 2020 code: 52292 (Freight Transport Arrangement). These companies arrange cargo transportation on behalf of a shipper via air, sea, and land transportation modes. The FFPI is stratified into three transportation modes, namely air, sea and land¹¹ freight forwarding.

The FFPI increased substantially in 2Q 2020 (Chart 5), reflecting the spike in air freight forwarding charges following the reduction in air cargo

CHART 5
FFPI AND SUB-INDICES (2017=100)

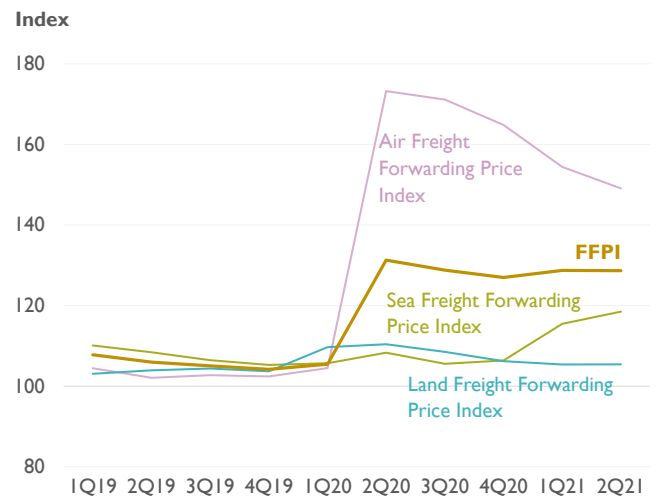
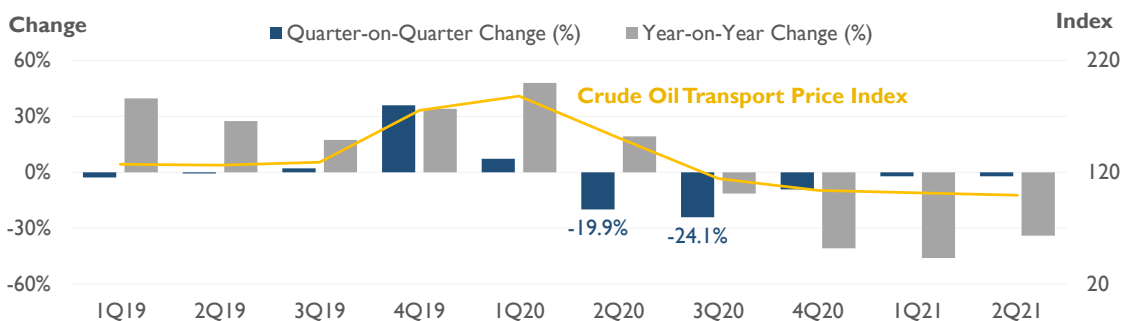


CHART 4
PERCENTAGE CHANGE IN CRUDE OIL TRANSPORT PRICE INDEX (2017=100)



7 The Business Times, 29 Apr 2020: Oil prices sink as world runs low on storage capacity amid frail demand

8 The Straits Times, 15 Sep 2020: Oil industry paints grimmer picture of pandemic's harm to demand

9 MarketWatch (The Wall Street Journal), 14 Apr 2021: IEA (International Energy Agency) says global oil market is recovering and lifts demand forecast

10 The index excludes shipping agents, haulage services and companies whose primary services are packing and crating services. Prices used in the index compilation include actual transacted prices that are net of discounts and are obtained quarterly from selected freight forwarding companies.

11 Land freight forwarding is defined as the arrangement of transporting freight via land across national borders. It excludes trucking/in-land transportation which is classified under SSIC 2020 code: 49231 (Freight transport by road).

capacity¹² during COVID-19. Some of the reported air freight forwarding price increases were about five times more than their usual charges. Although the air freight forwarding charges had declined gradually since 2Q 2020, the prices remained above the pre-COVID level¹³. While the Air Freight Forwarding index slipped downwards, the Sea Freight Forwarding Index crept up in 1Q 2021.

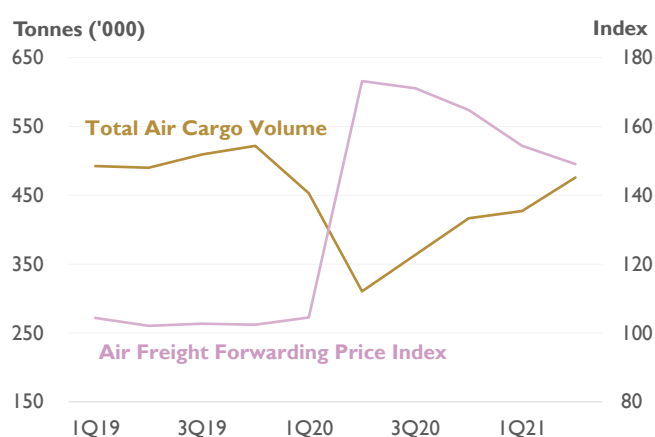
Spike in Prices for Air Freight Forwarding as a Result of Reduction in Air Cargo Capacity

Given the travel restrictions imposed, the supply for air freight space became very limited as most of the airlines grounded their aircrafts¹⁴.

According to the Civil Aviation Authority of Singapore (CAAS), the total air cargo volume¹⁵ in 2Q 2020 fell close to half of that in 4Q 2019, before rising progressively in the later half of the year (Chart 6).

With the gradual recovery in air cargo capacity from 3Q 2020 onwards, marginal declines were observed in the Air Freight Forwarding Index. Nevertheless, given the faster turnaround time of air cargo as compared to sea cargo, the demand for air cargo remained for essential goods, resulting in persistently high air freight forwarding charges.

CHART 6
AIR FREIGHT FORWARDING PRICE INDEX AND TOTAL AIR CARGO VOLUME



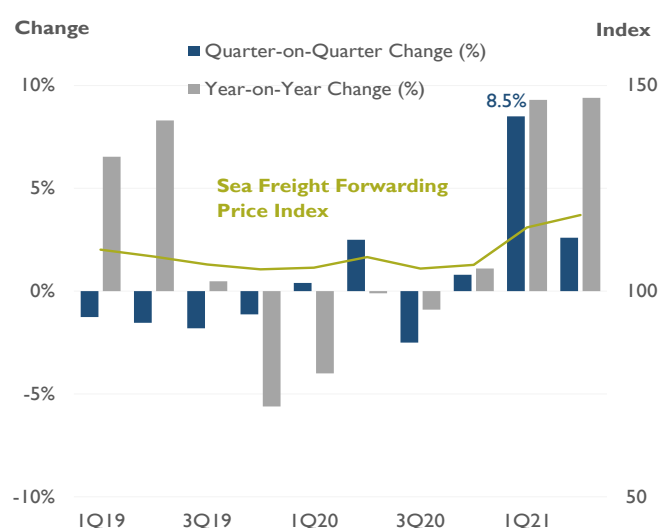
Source: Civil Aviation Authority of Singapore

Higher Rates for Sea Freight Forwarding Following Global Container Shortage and Congestion in Some Ports

Prices for sea freight forwarding services were similarly affected, where the demand for container space exceeded the available supply of containers. The laden containers were held up in congested ports, causing a lack of reusable empty containers¹⁶. These delayed effects were passed on, giving rise to general price increases in sea freight forwarding services since 4Q 2020.

The Sea Freight Forwarding Price Index which makes up close to two thirds (60.0 per cent) of the total FFPI's weight, rose 8.5 per cent in 1Q 2021 over the last quarter (Chart 7), highest quarter-on-quarter change since the start of the index in 1Q 2017.

CHART 7
PERCENTAGE CHANGE IN SEA FREIGHT FORWARDING PRICE INDEX (2017=100)



Concluding Remarks

With uncertainty over the length and severity of COVID-19, as well as the trajectory of the recovery in the global economy, the longer term impact on the transportation and logistics industry remains ambiguous. The SFTPI and FFPI which track price changes in these sectors serve as useful indicators for further analysis.

12 The Straits Times, 29 Apr 2020: Aviation industry warns of severe cargo capacity shortage amid coronavirus crisis

13 The Business Times, 27 Jul 2020: Air freight rates ease, but yet to come back down to earth

14 The Business Times, 13 Apr 2020: Freight rates soar as cargo capacity shrinks amid Covid-19 crisis

15 Based on published Air Cargo Discharged and Air Cargo Loaded data from CAAS.

16 CNA, 26 Mar 2021: Singapore navigating shipping squeeze, container congestion amid surge in cargo demand