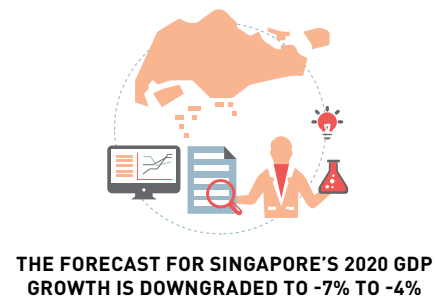
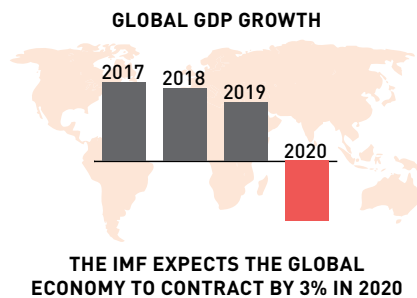


## FEATURE ARTICLE

# IMPACT OF THE COVID-19 PANDEMIC ON THE SINGAPORE ECONOMY

## INTRODUCTION

The COVID-19 pandemic has caused a severe disruption to global economic activity and has led to both demand- and supply-side shocks to the Singapore economy.



## ECONOMIC IMPACT

The impact of COVID-19 on the Singapore economy has been broad and significant, affecting different sectors of the economy to varying degrees.

### SEVERELY AFFECTED



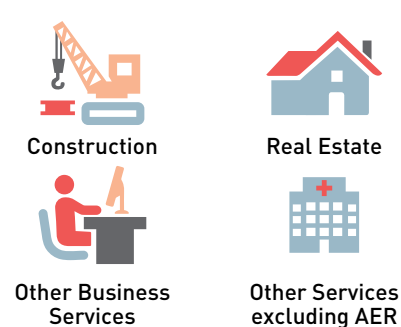
### SIGNIFICANTLY AFFECTED



### MODERATELY AFFECTED (OUTWARD-ORIENTED)



### MODERATELY AFFECTED (DOMESTICALLY-ORIENTED)



## CONCLUSION

While most sectors are expected to be adversely affected by the COVID-19 outbreak, there are some bright spots in the economy, including new opportunities that have come with the rise in demand for online sales and services.

In the months ahead, MTI will continue to closely monitor developments in the global and Singapore economies as the COVID-19 situation remains fluid. Globally, there continues to be a high degree of uncertainty over the length and severity of the outbreak, as well as the trajectory of the recovery in the global economy.



## EXECUTIVE SUMMARY

- ▶ The COVID-19 pandemic has severely disrupted global economic activity, and led to both demand- and supply-side shocks to the Singapore economy.
- ▶ Given the fast-evolving situation, it is important for policymakers to leverage high-frequency and real-time economic indicators to monitor the effects of COVID-19 on the Singapore economy.
- ▶ The impact of COVID-19 on the Singapore economy has been significant. Sectors that have been the most severely affected are those that rely on international travel, including the air transport, accommodation and other tourism-related sectors. Consumer-facing sectors such as retail and food services have also been badly affected by the cutback in domestic consumption amidst progressively stricter safe distancing measures. At the same time, outward-oriented sectors like manufacturing and wholesale trade have been affected by the fall in external demand and supply chain disruptions, while domestically-oriented sectors like construction and real estate have been affected by negative spillovers arising from the downturn in the domestic economy. However, there are also bright spots in the economy, with the rise in demand for online sales and services.
- ▶ Taking these factors into account, MTI has further downgraded the 2020 GDP growth forecast for the Singapore economy to “-7.0 per cent to -4.0 per cent”, from “-4.0 per cent to -1.0 per cent”.

*The views expressed in this paper are solely those of the authors and do not necessarily reflect those of the Ministry of Trade and Industry (MTI).<sup>1</sup>*

## 1. INTRODUCTION

Since the outbreak of the Coronavirus Disease 2019 (COVID-19) early this year, the virus has spread rapidly across the world, and more than 5 million people in over 200 countries have been infected to-date. In order to control the spread of the virus, many countries have implemented strict public health measures, including lockdowns and border closures to limit the movement of people. This has led to significant disruptions in global economic activity. As a result, the International Monetary Fund (IMF) has sharply revised its forecast for global growth downwards. Specifically, the IMF is now projecting that the global economy will contract by 3 per cent in 2020<sup>2</sup>, a reversal from the 3.3 per cent growth projected earlier, with full-year recessions expected in most of the major advanced and emerging economies [Exhibit 1].

Against this backdrop, we can expect both demand- and supply-side shocks to the Singapore economy. On the demand-side, the global recession will lead to a sharp drop in external demand for the goods and services produced in Singapore. On the supply-side, the widespread curtailment of economic activity around the world has caused global supply chain disruptions, which have in turn affected some business operations in Singapore.

<sup>1</sup> We would like to thank Yong Yik Wei, Kuhan Harichandra, Andy Feng and Kenneth Yeow for their useful suggestions and comments.

<sup>2</sup> This is the forecast announced in the IMF's April World Economic Outlook (WEO).

Exhibit 1: World GDP Growth Forecasts

	2019	2020f
World GDP	2.9	-3.0
United States	2.3	-5.9
Eurozone	1.2	-7.5
Japan	0.7	-5.2
Mainland China	6.1	1.2
Hong Kong SAR	-1.2	-4.8
Taiwan	2.7	-0.5
Republic of Korea	2.0	-1.0
Malaysia	4.3	-3.3
Indonesia	5.0	-0.1
Thailand	2.4	-5.9
Philippines	6.0	-1.3
Vietnam	7.0	2.5

Source: IMF World Economic Outlook (April 2020), Asia Pacific Consensus Forecasts

Domestically, the measures implemented to contain the outbreak are also expected to have an impact on the Singapore economy. First, tighter border controls have been introduced to prevent the importation of COVID-19 cases, even as other countries have also imposed travel restrictions to protect their borders. These global and domestic travel restrictions have led to a sharp fall in tourist arrivals and air passengers handled at Changi Airport, thereby dampening the demand for tourism- and air transport-related services in Singapore. Second, progressively stricter safe distancing measures, culminating in the Circuit Breaker period from 7 April to 1 June, have also been implemented to reduce the community spread of COVID-19 in Singapore. While such measures are necessary to protect and save lives, they have further dampened domestic economic activity, especially given the closure of non-essential workplaces, and led to deeper cutbacks in domestic consumption.

Overall, the impact of the COVID-19 pandemic on the Singapore economy is expected to be significant. The next section details the impact of COVID-19 on the different sectors of the Singapore economy, as well as some of the high-frequency, real-time indicators used to monitor the effects of COVID-19 at the overall economy and sectoral levels.

## 2. ECONOMIC IMPACT OF COVID-19

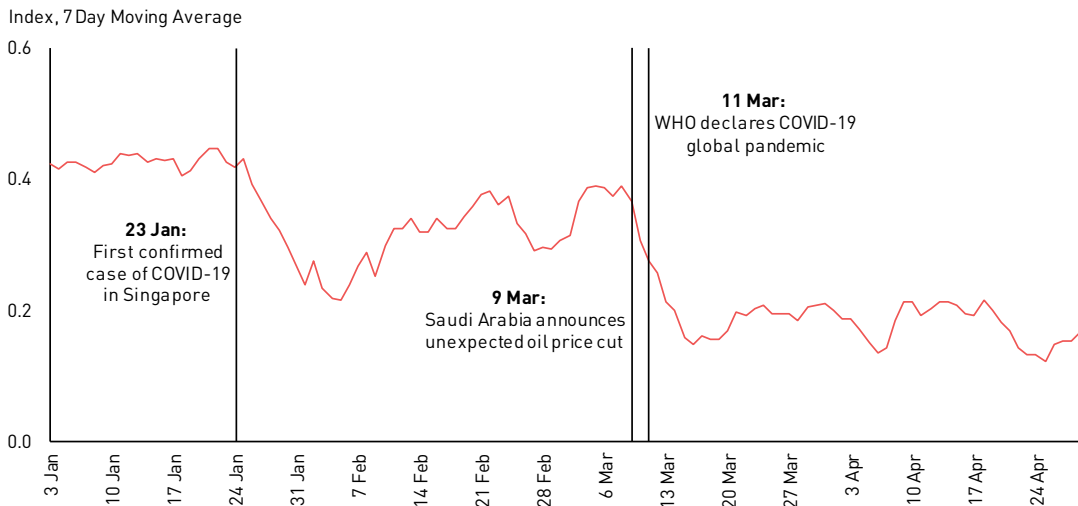
Given the highly-fluid situation, the Ministry of Trade and Industry (MTI) is tapping on high-frequency and real-time indicators, in addition to traditional indicators, to monitor the latest economic developments and assess the impact of COVID-19 on the Singapore economy. Apart from monitoring the real-time economic indicators that have been developed in-house, MTI has also worked with public and private sector partners to obtain new sources of non-traditional high-frequency data such as daily data on credit card spending, online food orders and electricity consumption, which can provide an indication of the health of different aspects of the Singapore economy on a more timely basis.

At the overall economy level, MTI's own Singapore News Economic Sentiments Index<sup>3</sup> (SNES), which analyses text data from daily local news, provides MTI with a real-time sensing of economic sentiments in Singapore [Exhibit 2]. Not surprisingly, the COVID-19 outbreak has weighed heavily on economic sentiments. Specifically, the daily SNES (7-day moving average) declined from 0.42 on 23 January (when the first confirmed COVID-19 case in Singapore was announced) to 0.27 by end-January, reaching levels similar to that seen in March 2003 during the SARS outbreak.

3 The SNES Index is measured within a range of -1 to 1. A fall in the index indicates that economic sentiments have weakened. A value below 0 indicates that the overall economic sentiment is negative. See Lam (2016) and Chia & Foo (2018) for more details of the SNES, including the methodology used to construct the index.

Sentiments then began to see a gradual recovery until 9 March, when news of the oil price war between Saudi Arabia and Russia, as well as the World Health Organisation’s declaration of COVID-19 as a global pandemic caused sentiments to plunge again, reaching 0.15 by 17 March. Sentiments have fluctuated at around this low level since then.

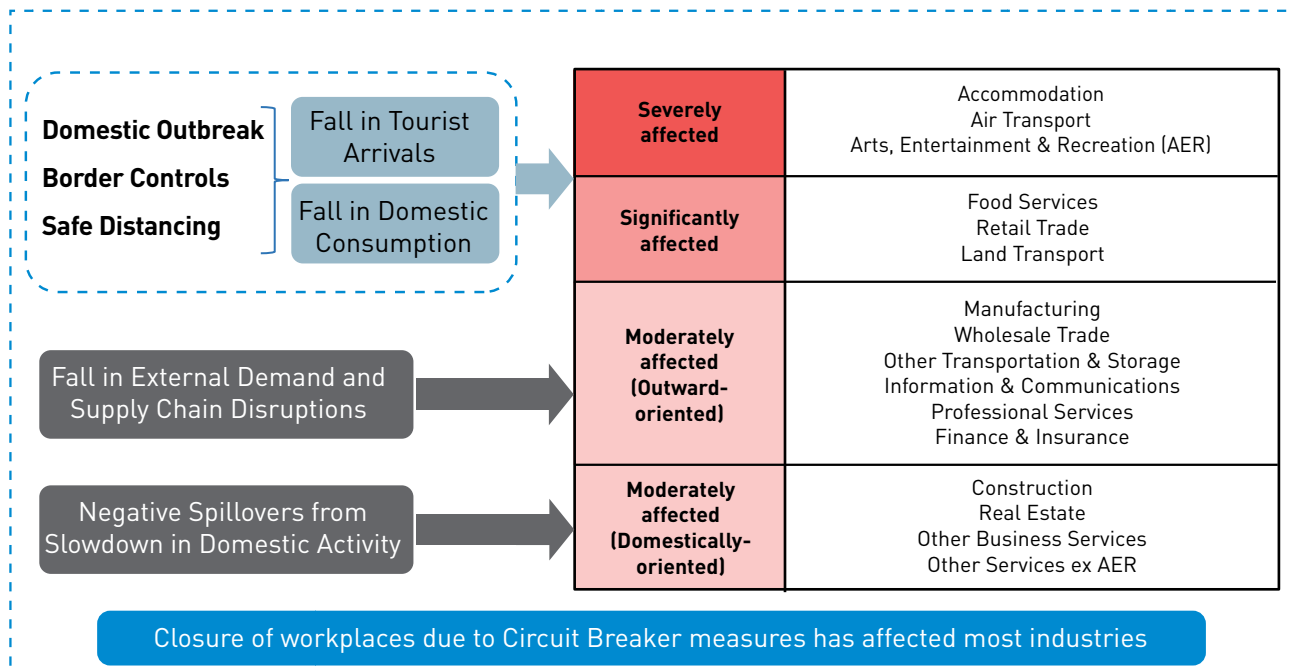
Exhibit 2: Daily Singapore News Economic Sentiments (January to April)



Source: Authors’ estimates

At the sectoral level, the COVID-19 pandemic is expected to affect the different sectors of the Singapore economy to varying degrees and through different transmission channels, as illustrated in Exhibit 3.

Exhibit 3: Impact of COVID-19 on Different Sectors of the Singapore Economy<sup>4</sup>

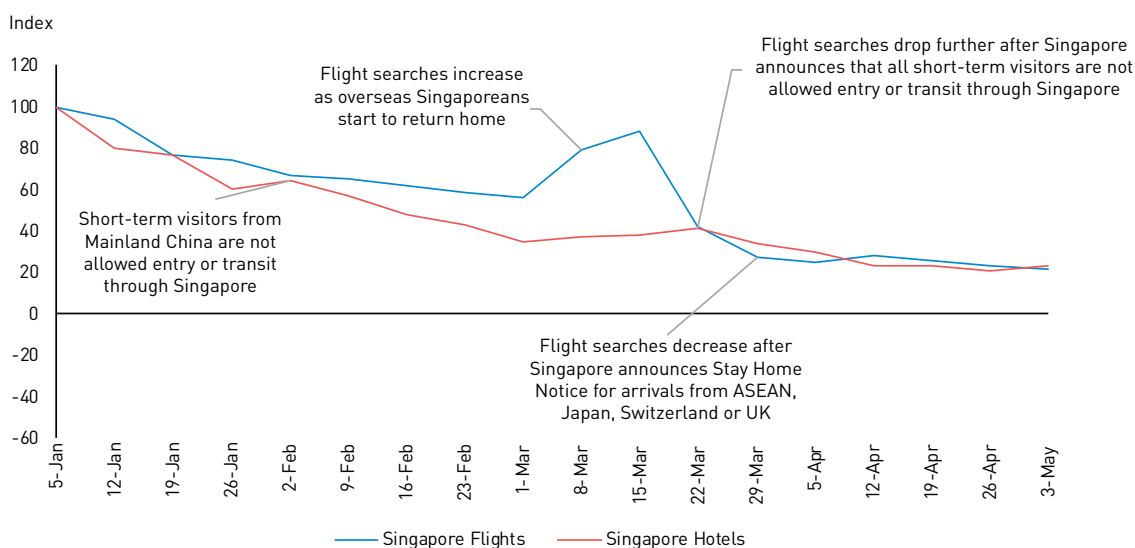


<sup>4</sup> The rest of the economy not covered in this framework comprises Other Goods Producing Industries, Utilities and Ownership of Dwellings.

First, global and domestic travel restrictions to contain the spread of COVID-19 have led to a sharp fall in tourist arrivals to Singapore and international air travel in general. This has severely affected the accommodation, air transport, and arts, entertainment & recreation sectors, as well as the tourism-related segments (e.g., travel agencies, tour operators and meetings, incentives, conventions & exhibitions organisers) within the business services sector.

An example of a high-frequency indicator used by MTI as a leading indicator to monitor trends in tourist arrivals is the Global Google Search Trends<sup>5</sup> for Singapore flights and hotels. From Exhibit 4, we can observe a steady fall in the Google search index for Singapore hotels over time as (i) Singapore progressively tightened its border controls to reduce the risk of importation of COVID-19 cases as the outbreak escalated around the world, and (ii) other countries also implemented their own travel restrictions to curb the cross-border spread of the virus. The Google search index for Singapore flights depicts the same downward trend, even though there was a short period between early March to mid-March when there was a reversal of trend as Singaporeans overseas, especially students studying overseas, were urged to return home.

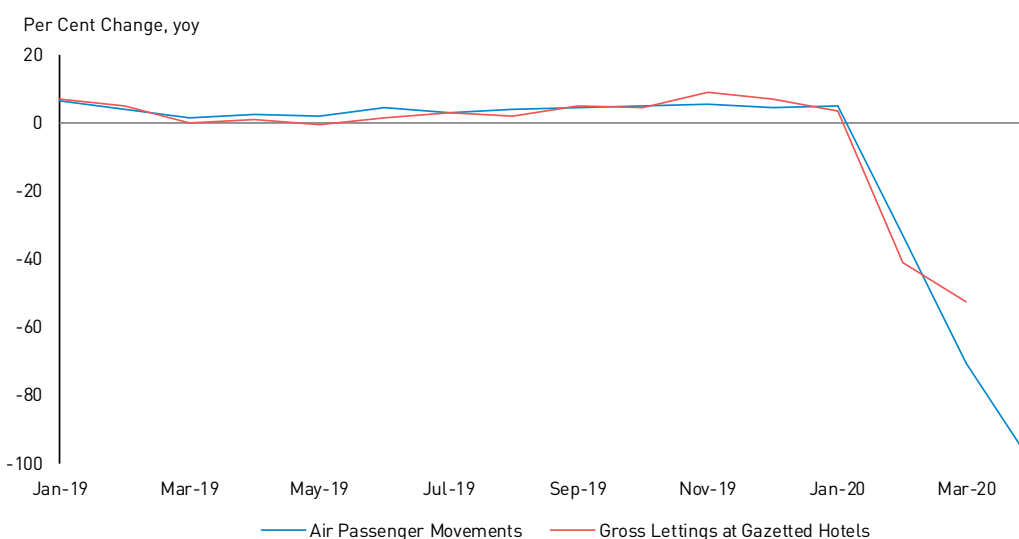
Exhibit 4: Weekly Global Google Search Trends for “Singapore Flights” and “Singapore Hotels”



Source: Google Trends (<https://www.google.com/trends>)

Reflecting the cumulative effect of the international and domestic travel restrictions, air passenger movements at Changi Airport and gross lettings at gazetted hotels have recorded double-digit declines since February [Exhibit 5]. As of April, air passenger movements at Changi Airport have plunged by almost 100 per cent.

Exhibit 5: Air Passenger Movements and Gross Lettings at Gazetted Hotels



Source: Changi Airport Group, Singapore Tourism Board. April data for Hotel Gross Lettings is not yet available.

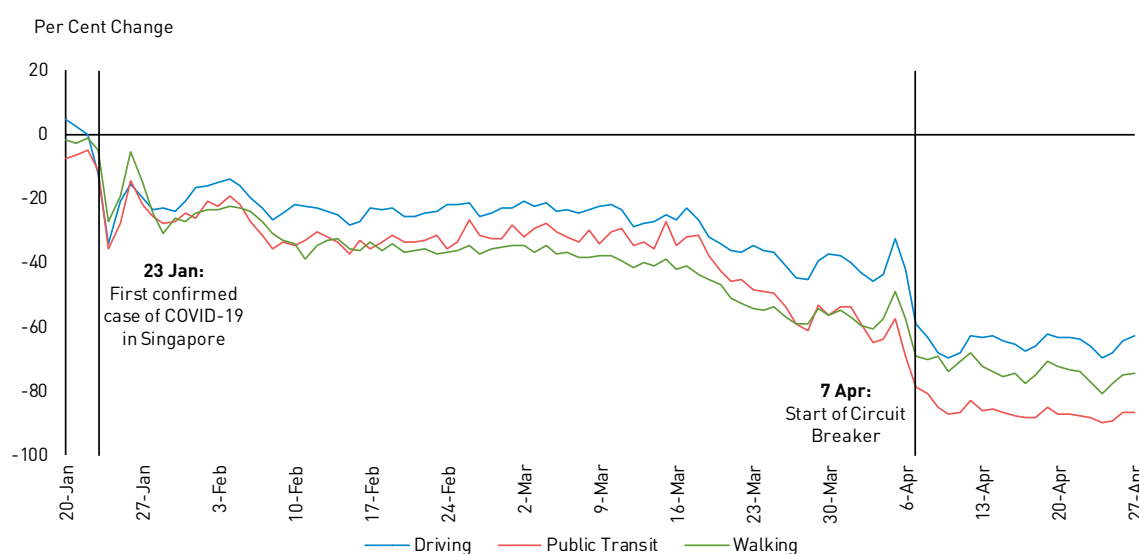
5 The Google Search Trends track how often specific key words, subjects and phrases have been entered into Google's search engine over a period of time.

Second, the COVID-19 outbreak has led to a reduction in domestic consumption and travel, which has had a significant impact on consumer-facing sectors such as food services, retail trade and land transport. Using data from the Apple Mobility Trends Report<sup>6</sup>, we find that mobility in the form of driving, public transit and walking has declined since the first confirmed case of COVID-19 in Singapore [Exhibit 6]. Subsequent safe distancing measures introduced in March (e.g., closure of entertainment venues such as bars and cinemas) and the Circuit Breaker measures implemented since 7 April to curb the community transmission of COVID-19 have led to a further drop in mobility. With more people staying home, the Retail Sales Index and the Food & Beverages Sales Index compiled by the Department of Statistics (DOS) fell by 9.6 per cent and 16.4 per cent year-on-year respectively in February, before worsening to register declines of 14.1 per cent and 23.6 per cent in March [Exhibit 7].

Of note, however, is that even though overall retail sales and food & beverage sales fell, there were some areas of retail sales and food services such as sales at grocery stores<sup>7</sup> and online sales that continued to do well. In particular, based on data compiled by DOS, online retail sales rose by almost 40 per cent year-on-year in both February and March. This was likely driven by specific retail categories such as computer & telecommunications equipment and furniture & household equipment, which had seen a significant increase in the proportion of retail sales that took place online.<sup>8</sup> Similarly, DOS' data showed that online food & beverage sales rose by 41 per cent and 47 per cent year-on-year in February and March respectively.

Going forward, the demand for online sales and services is expected to continue to increase as consumption patterns adapt to the COVID-19 situation. This is, in turn, expected to provide opportunities to businesses with e-commerce presence, including those that provide food and grocery deliveries.<sup>9</sup> With telecommuting and safe distancing set to become the new normal, more businesses are also going online to reach out to their customers, while adopting digital solutions to improve their processes such as e-payment and e-invoicing.

Exhibit 6: Change in Daily Movements



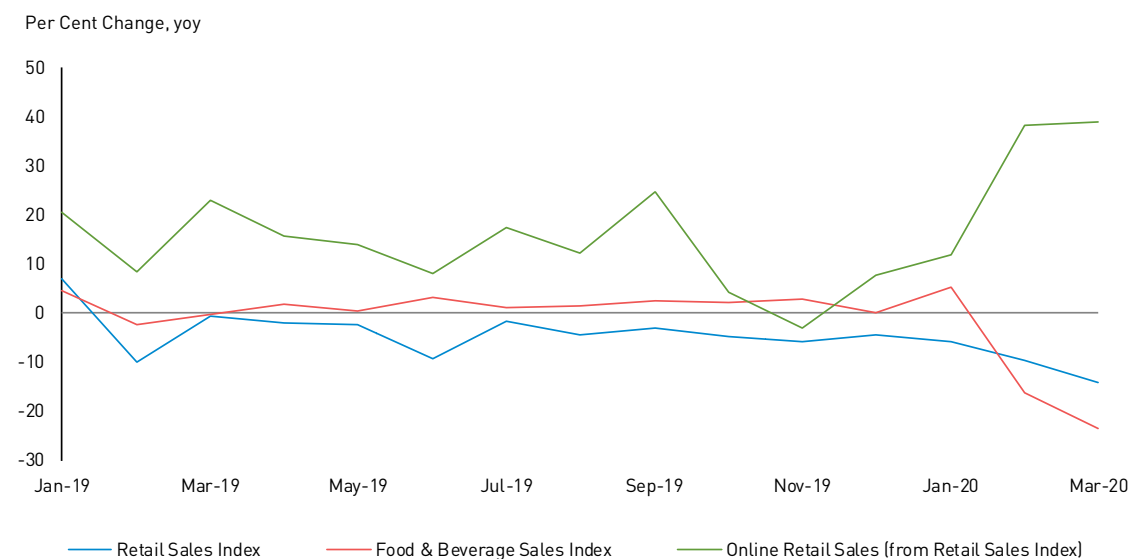
Source: Apple Mobility Trends Report (<https://www.apple.com/covid19/mobility>); Authors' estimates. Compared to the same day in the week of 13 to 19 January 2020.

<sup>6</sup> This indicator is compiled using aggregated anonymised data, and tracks the volume of daily requests for directions in Apple Maps by mode of transportation, compared to a baseline volume on 13 January 2020. Adjustments were made by the authors to compare each day to the same day in the week of 13 to 19 January 2020.

<sup>7</sup> According to credit card spending data obtained from a payment processing and technology company.

<sup>8</sup> The proportion of sales of computer & telecommunications equipment that took place online rose from 27.8 per cent in December 2019 to 41.2 per cent in March 2020, while that for furniture & household equipment increased from 12.3 per cent to 16.5 per cent over the same period.

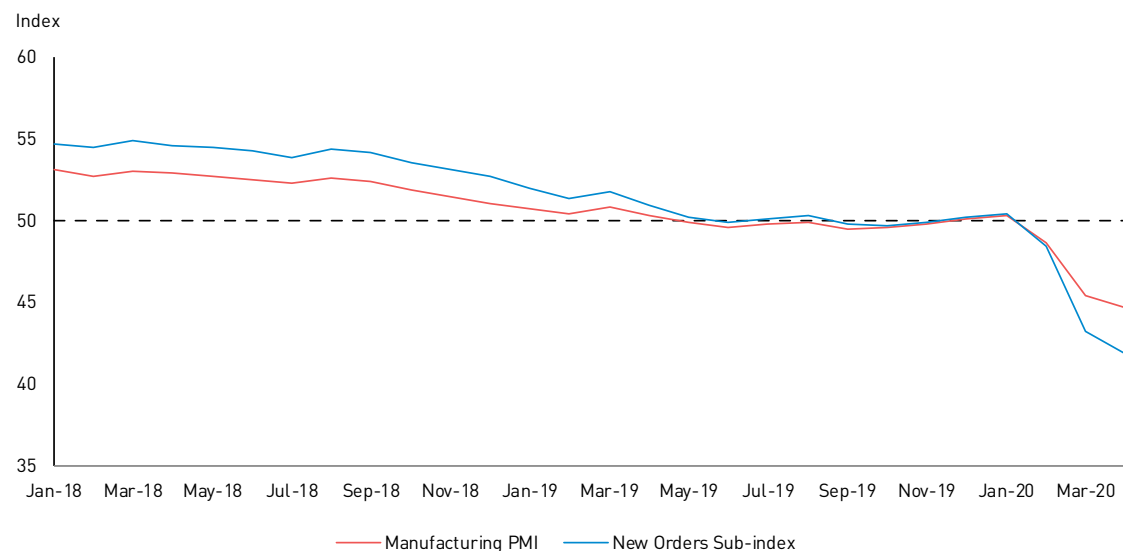
<sup>9</sup> According to data obtained from an online delivery fulfillment platform in Singapore.

Exhibit 7: Retail Sales Volume Index and Food & Beverage Sales Volume Index<sup>10</sup>

Source: Department of Statistics

Third, outward-oriented sectors such as manufacturing, wholesale trade and transportation & storage have been adversely affected by the fall in external demand and supply chain disruptions. For example, reflecting the weakness in external demand conditions and worsening business sentiments, the manufacturing Purchasing Managers' Index has declined sharply since February, weighed down by a fall in new orders [Exhibit 8]. In addition, sentiment-sensitive sectors such as finance & insurance have experienced greater volatility amidst heightened uncertainty and concerns over the spread of COVID-19. International trade has also been affected by weak global demand and supply chain disruptions, and this has in turn contributed to a fall in air and sea cargo handled at our air and sea ports [Exhibit 9].

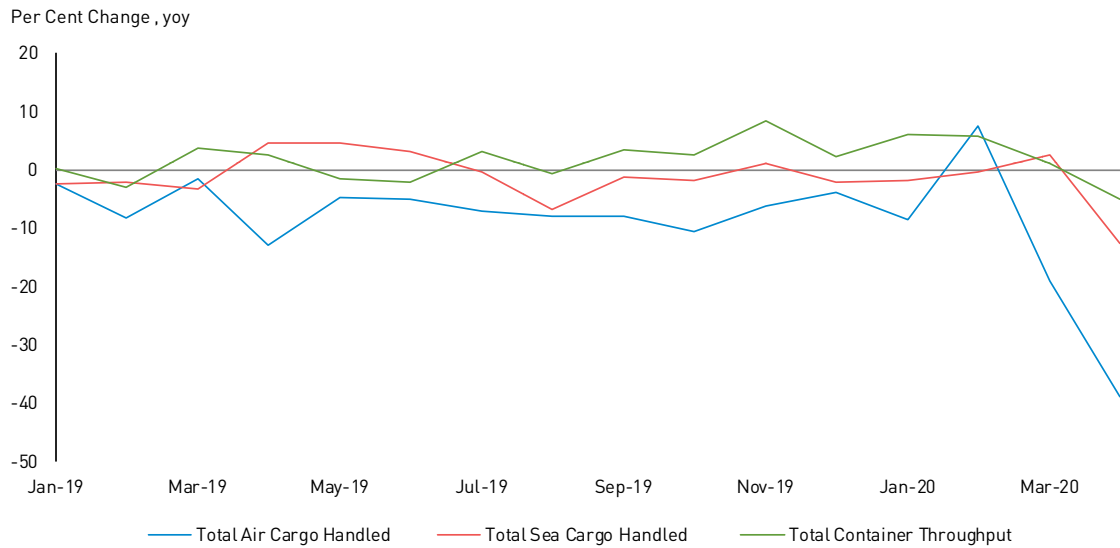
Exhibit 8: Manufacturing Purchasing Managers' Index



Source: Singapore Institute of Purchasing and Materials Management

<sup>10</sup> Data on online food & beverage sales is not included in the chart. This is because the year-on-year growth rates of online food & beverage sales prior to January 2020 cannot be computed given that data on online food & beverage sales before 2019 is not available.

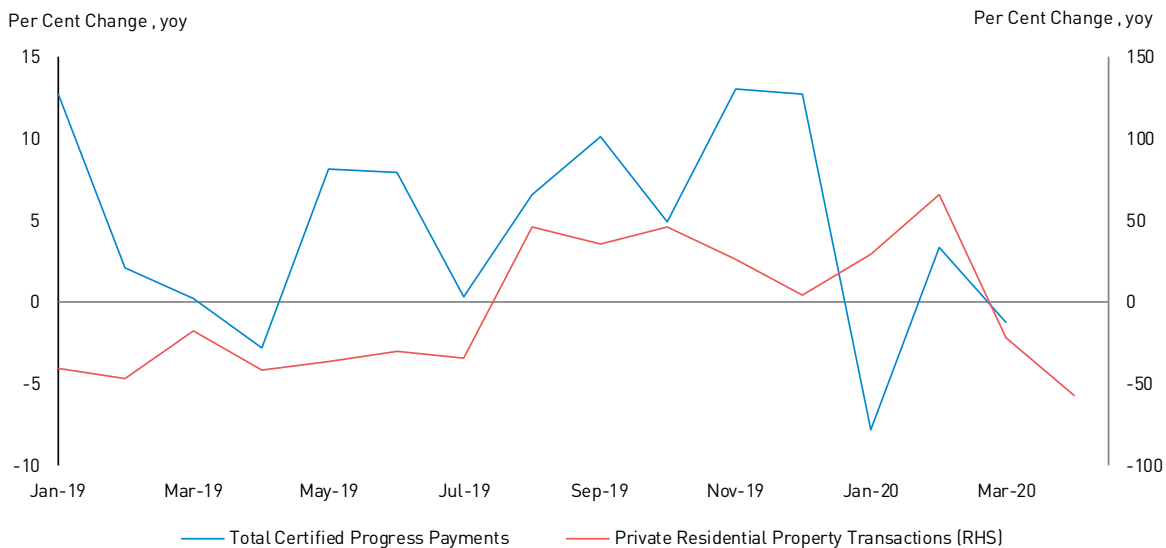
Exhibit 9: Air and Sea Cargo Volumes<sup>11</sup>



Source: Civil Aviation Authority of Singapore, Changi Airport Group, Maritime and Port Authority of Singapore

Fourth, domestically-oriented sectors such as construction, real estate and other business services sectors have experienced negative spillovers from the slowdown in domestic economic activity, as well as weaker sentiments. Reflecting this, certified progress payments, a proxy for nominal construction output, declined by 1.2 per cent year-on-year in March, while residential property transactions plunged by 22 per cent and 57 per cent year-on-year in March and April respectively [Exhibit 10]. In the near-term, the construction sector is also expected to be affected by manpower disruptions due to the additional measures implemented to curb the spread of COVID-19 at construction worksites and foreign worker dormitories (e.g., movement restrictions at the foreign worker dormitories).

Exhibit 10: Construction Certified Progress Payments<sup>12</sup> and Private Residential Property Transactions



Source: Building and Construction Authority, Urban Redevelopment Authority

11 Air cargo volumes refer to those handled at Changi Airport only, and exclude passenger baggage, diplomatic cargo and aircraft stores. Sea cargo and container throughput for April 2020 are preliminary estimates.

12 Data on certified progress payments for March 2020 are preliminary estimates.



Fifth, the closure of most workplaces during the Circuit Breaker period has affected firms in most sectors, especially those that cannot operate fully from home. However, this impact should ease over time as more firms are allowed to resume activities with the gradual lifting of the Circuit Breaker measures from 2 June onwards.

### 3. CONCLUSION

In view of the weaker external demand outlook for Singapore and the expected economic impact of the domestic measures taken to contain the spread of COVID-19, MTI has further downgraded Singapore's GDP growth forecast for 2020 to "-7.0 per cent to -4.0 per cent", from its earlier forecast of "-4.0 per cent to -1.0 per cent". While most sectors are expected to be adversely affected by the COVID-19 outbreak, there are some bright spots in the economy, including new opportunities that have come with the rise in demand for online sales and services.

In the months ahead, MTI will continue to closely monitor developments in the global and Singapore economies as the COVID-19 situation remains fluid. Globally, there continues to be a high degree of uncertainty over the length and severity of the outbreak, as well as the trajectory of the recovery in the global economy.

Domestically, how the Singapore economy performs in the remaining quarters of the year will also depend on the extent to which we are able to resume economic activities safely and without a resurgence of infections in the community as we exit from the Circuit Breaker period. To this end, it is important for businesses to ensure that safe management practices are implemented at the workplace, and that their workers continue to work from home to the maximum extent possible. Similarly, Singaporeans should continue to adhere to the safe distancing measures, including limiting their movements and social interactions as much as possible. The Government has introduced substantial support through three Budgets (Unity, Resilience and Solidarity) to help businesses and Singaporeans tide through this difficult period, with more support to be announced soon.

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