

KEY HIGHLIGHTS

Record low passenger traffic expected in 2021

MAVCOM further revises downward its 2021 passenger traffic forecast. For the base case scenario, **the 2021 passenger traffic is forecasted to contract by between 77.0% YoY and 80.2% YoY, translating to 5.3mn – 6.1mn passengers** (previous forecast: 18.9mn – 20.6mn; -22.9% YoY to -29.1% YoY). This revised forecast assumes a lower load factor and a longer period of seat capacity recovery by airlines compared to MAVCOM's previous forecasts.

Passenger traffic remains low in 2Q21

In 2Q21, total passenger traffic was 1.3mn, the lowest since 2Q20 at 0.8mn. Due to the low base effect, **passenger traffic grew 62.0% YoY**. However, passenger traffic recorded a decline of 22.6% QoQ in 2Q21 (2Q20: -95.8% QoQ). The re-imposition of the Movement Control Orders (MCOs) starting from 4Q20 until 2Q21 had halted the recovery of domestic passenger traffic. International passenger traffic remains marginal due to the ongoing international border closures. Despite the current low passenger traffic numbers, **the near-term biggest anticipated travel trend is an increase in the domestic, short-haul travel for the fully vaccinated passengers.**

Total cargo volume expands 80.4% YoY in 2Q21

Malaysia's cargo volume in terms of total freight tonne kilometres (FTK) recorded a strong growth of 80.4% YoY in 2Q21 (2Q20: -45.5% YoY). However, it recorded a decline of 0.6% QoQ in 2Q21 (2Q20: -43.1% QoQ). **MAVCOM expects the air cargo traffic in 2021 to grow by between 26.5% YoY and 28.2% YoY and recover to pre-crisis levels.** The strong growth is attributable to the high demand for vaccines, medical equipment, personal protective equipment, electrical and electronic (E&E) components, and the growth of the e-commerce sector.

34 ATR applications received and approved, up by 25.9% YoY for 1H21

MAVCOM approved 34 Air Traffic Right (ATR) applications in 1H21, an increase of 25.9% YoY (1H20: 27 ATR applications). The ATR applications in 1H21 recorded a 100.0% approval. Of this, 26 ATR allocations were for international routes, while the remaining 8 were for domestic routes. 1H21 saw the largest share of ATR allocations for routes to China at 38.2% (1H20: 13.9%), followed by allocations to the domestic routes and the ASEAN region at 23.5% each (1H20: 44.3% and 16.5%, respectively).

Coping strategies for the new normal

Cost containment and reduction will be top priorities for airlines and airport operators as the market will be dominated by price-sensitive leisure travellers and industry players managing their cash burn during the pandemic.

***The data and facts in this publication are accurate as of 26 August 2021.**

TABLE OF ABBREVIATIONS

Abbreviations	
ACI	Airports Council International
ACRF	ASEAN Comprehensive Recovery Framework
Ag-RDT	Antigen Detection Rapid Diagnostic Test
AirAsia	AirAsia Bhd.
AirAsia X	AirAsia X Bhd.
AOL	Aerodrome Operating Licence
ASEAN	Association of Southeast Asian Nations
ASL	Air Service Licence
ASP	Air Service Permit
ATCAF	ASEAN Travel Corridor Arrangement Framework
ATR	Air Traffic Rights
bbf	barrel
bn	billion
BNM	Bank Negara Malaysia
CAAM	Civil Aviation Authority of Malaysia
CASK	Cost per Available Seat Kilometre
CCFF	COVID Corporate Financing Facility
CMCO	Conditional Movement Control Order
COVID-19	Coronavirus Disease 2019
DOS	Department of Statistics, Malaysia
E&E	Electrical and Electronic
ECB	European Central Bank
ECLGS	Emergency Credit Line Guarantee Scheme
EDCC	EU Digital COVID-19 Certificate
EU	European Union
Firefly	FlyFirefly Sdn. Bhd.
FMCO	Full Movement Control Order
FTK	Freight Tonne Kilometre
GDP	Gross Domestic Product
GHL	Ground Handling Licence
GOM	Government of Malaysia
HHI	Herfindahl-Hirschman Index
IATA	International Air Transport Association
IMF	International Monetary Fund
Khazanah	Khazanah Nasional Bhd.
LCC	Low-cost Carrier
MAB	Malaysia Airlines Bhd.
MAHB	Malaysia Airports Holdings Bhd.
Malindo	Malindo Airways Sdn. Bhd.
MAVCOM	Malaysian Aviation Commission
MCO	Movement Control Order
mn	million
MOF	Ministry of Finance

Abbreviations

MOH	Ministry of Health
MOTAC	Ministry of Tourism, Arts and Culture
NGEU	Next Generation EU
NRP	National Recovery Plan
NZ	New Zealand
PCR	Polymerase Chain Reaction
QoQ	Quarter-on-Quarter
RASK	Revenue per Available Seat Kilometre
RM	Ringgit Malaysia
RMCO	Recovery Movement Control Order
RPK	Revenue Passenger Kilometre
rRT-PCR	Real-Time Reverse Transcription Polymerase Chain Reaction
SARS	Severe acute respiratory syndrome
SDF	SHN Dedicated Facility
SHN	Stay Home Notice
TMDSB	Tanjung Manis Development Sdn. Bhd.
tn	trillion
UK	United Kingdom
UKEF	United Kingdom Export Finance
UNWTO	World Tourism Organization
US	United States of America
USD	United States Dollar
WCA	World Cargo Airline Sdn. Bhd.
WEF	World Economic Forum
WEO	World Economic Outlook
WHO	World Health Organisation
YoY	Year-on-Year

AIRPORT CODES

Airport Codes	Airport Names
BKK	Suvarnabhumi Airport, Bangkok, Thailand
BWN	Brunei International Airport, Brunei
CGK	Soekarno-Hatta International Airport, Jakarta, Indonesia
KUL	Kuala Lumpur International Airport, Malaysia
MNL	Ninoy Aquino International Airport, Philippines
PNH	Phnom Penh International Airport, Cambodia
RGN	Yangon International Airport, Myanmar
SGN	Tân Sơn Nhất International Airport, Vietnam
SIN	Changi Airport, Singapore
VTE	Wattay International Airport, Laos

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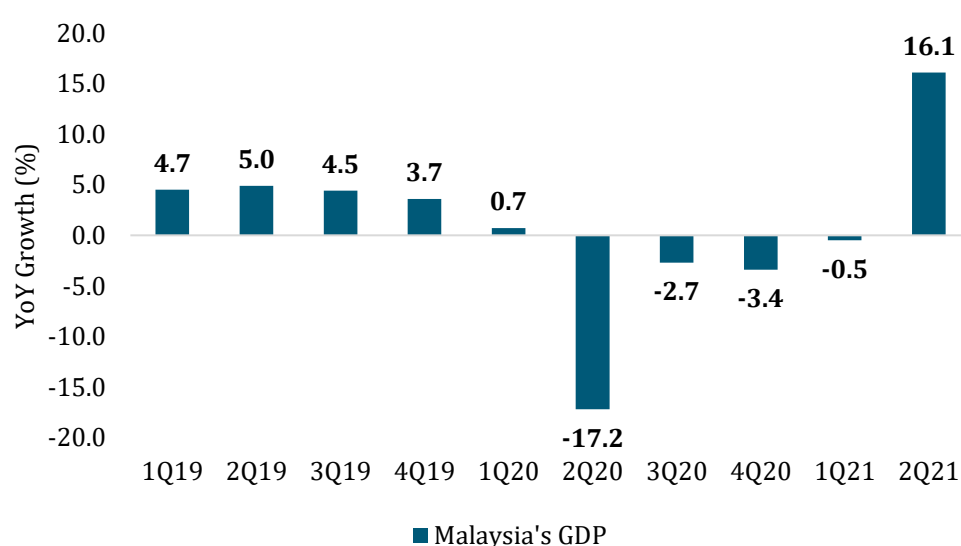
SECTION 1: MACROECONOMIC OVERVIEW AND OUTLOOK

Macroeconomic Overview

Malaysia's Economy Improved by 16.1% YoY in 2Q21

Malaysia's gross domestic product (GDP) expanded by 16.1% YoY in 2Q21 (2Q20: -17.2%) (see Figure 1). **The significant growth in 2Q21 was mainly due to the low base effect from the decline in economic activities during 2Q20, supported by expansion in exports, and improvement in domestic demand¹.**

Figure 1: Malaysia's GDP Growth, 2019 – 2021



Source: DOS

Overall, double-digit growth was recorded across most economic sectors, led by the expansion in the manufacturing sector and a rebound of the services sector in 2Q21 (see Table 1).

Table 1: Malaysia's GDP Growth by Sector, 2020 – 2021

Sectors	1Q21 YoY Growth (%)	2Q21 YoY Growth (%)
Headline GDP	-0.5	16.1
-Services	-2.3	13.4
-Manufacturing	6.6	26.6
-Agriculture	0.4	-1.5
-Mining & Quarrying	-5.0	13.9
-Construction	-10.4	40.3

Source: DOS

The services sector, which was a major contributor to Malaysia's GDP, expanded by 13.4% YoY, an improvement compared to the previous quarter. This was driven by the wholesale and retail trade subsectors, which expanded at a stronger

¹ BNM, Quarterly Bulletin 2Q21 (August 2021).

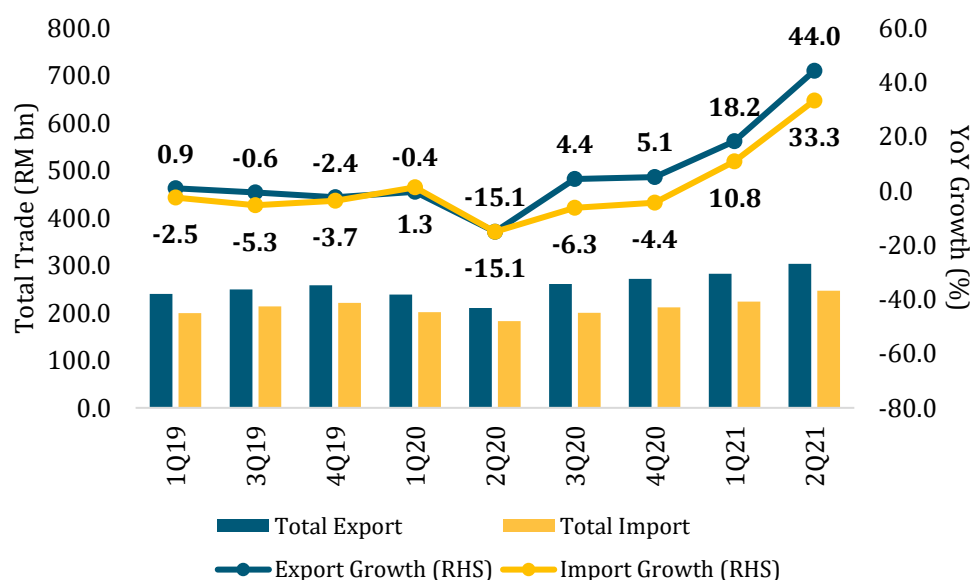
pace of 21.0% YoY. Growth was supported by a recovery in consumer-related activities in April and May 2021, but was partially reversed by the re-imposition of restrictions on non-essential retail activities, dine-ins, and inter-district and inter-state travel. The accommodation and the transport and storage subsectors experienced a growth of 48.3% YoY and 38.9% YoY, respectively, due to the low base effect from 2Q20. However, weakness in the tourism industry continues to affect the accommodation and the transport and storage subsectors on a QoQ basis, experiencing a decline of 5.2% QoQ and 18.2% QoQ, respectively.

The growth in the manufacturing sector was driven by the electrical, electronics & optical products due to the higher demand for microchips in electronic devices². The strong performance of the E&E subsectors indicated a higher global demand for semiconductors components, as reflected by the World Semiconductor Trade Statistics³. Demand conditions for the export-oriented industry remained resilient amid the continued global tech upcycle and recovery in global growth. This was in line with the overall gross exports performance, which recorded double-digit growth of 44.0% YoY in 2Q21 (see Figure 2).

Double-Digit Growth for Total Exports and Imports in 2Q21

In 2Q21, exports increased by 44.0% YoY to RM303.4bn whilst imports rose by 33.3% YoY to RM247.0bn (see Figure 2). As a result, the trade surplus expanded by 122.7% YoY to RM56.4bn.

Figure 2: Malaysia's External Trade, 2019 - 2021



Source: DOS

The expansion in 2Q21 for exports was mainly contributed by the higher global demand for the E&E, petroleum products, and rubber products. However, exports of services continued to decline as national borders were still closed. In the same

² Department of Statistics (DOS), Malaysia Economic Performance Second Quarter 2021 (August 2021).

³ The worldwide semiconductor market is forecasted to increase by 19.7% YoY in 2021.

period, the growth of imports was mainly due to an increase in production activities in the E&E, chemical products, and petroleum products.

Tables 2 and 3 show the breakdown of Malaysia's top 5 export and import markets, which constituted 69.5% of Malaysia's total exports and 69.3% of Malaysia's total imports, respectively, in 1H21.

Table 2: Malaysia's Top 5 Exports Markets, 1H21

Economy	Exports (RM bn)	Share (%)	YoY Growth (%)
ASEAN	161.9	27.6	26.3
China	88.9	15.2	27.7
US	68.1	11.6	47.3
EU	50.9	8.7	33.0
Japan	37.0	6.3	18.2

Source: DOS

Table 3: Malaysia's Top 5 Imports Markets, 1H21

Economy	Imports (RM bn)	Share (%)	YoY Growth (%)
China	110.6	23.5	37.1
ASEAN	108.0	23.0	32.6
Japan	36.9	7.8	26.3
EU	35.4	7.5	21.3
US	31.2	6.6	1.6

Source: DOS

In 1H21, exports to the ASEAN region rose by 26.3% YoY to RM161.9bn following the higher exports of E&E products, as well as chemicals and chemical products. Meanwhile, Malaysia's EU exports grew by 33.0% YoY to RM50.9bn due to the higher exports of rubber products and transport equipment. This was the seventh consecutive month of double-digit export growth to the EU region. Imports from the EU rose by 21.3% YoY to RM35.4bn. 1H21 also hit new record highs for exports to China and the US.

Improvement in GDP Observed in Most Economies

Similar to Malaysia, major economies worldwide also recorded significant improvements in their GDP growth for 2Q21 mainly due to the low base effect from 2Q20 (see Table 4).

Table 4: GDP Growth for Selected Countries, 2021

Countries	2Q20 YoY Growth (%)	2Q21 YoY Growth (%)
Malaysia	-17.1	16.1
Singapore	-13.2	14.7
Indonesia	-5.3	7.1
US	-31.4	12.2
UK	-21.5	22.2
EU	-13.6	13.2
China	3.2	7.9

Source: National Authorities

Among the selected countries, the UK recorded the greatest growth of 22.2% YoY following its easing of COVID-19 restrictions. The efficient vaccine programme in the UK had allowed the government to begin easing restrictions while businesses adapted to the constraints at a quicker pace than expected.

China continued to record a growth in 2Q21 of 7.9% YoY after a significant growth in 1Q21 of 18.3% YoY. This increase in growth came off the low base effect, where the economy shrank by 6.8% YoY during the height of the COVID-19 pandemic outbreak in 1Q20. China was the first country to deal with the pandemic and returned to positive growth by 2Q20.

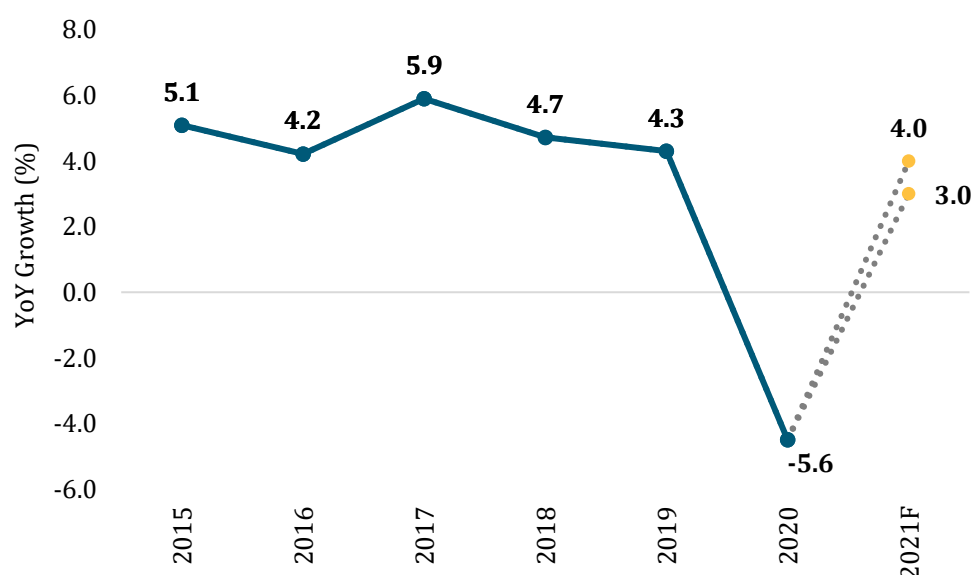
The EU economy expanded by 1.7% YoY in 2Q21 (1Q21: -1.3% YoY) as various governments opened parts of their economies. Among the EU Member States, Spain recorded the highest increase (19.8% YoY), followed by France (18.7% YoY), and Italy (17.3% YoY), while Lithuania (8.6% YoY) and Czechia (7.8% YoY) recorded the lowest increase. The YoY growth rates were positive for the EU Member States.

Macroeconomic Outlook

Malaysia's GDP Growth in 2021 is Expected to be Between 3.0% and 4.0% YoY

The BNM had revised its forecast for Malaysia's GDP growth to be between 3.0% and 4.0% YoY in 2021 (see Figure 3 and Table 5).

Figure 3: Malaysia's 2021 GDP Growth Forecast



Source: BNM

Table 5: Malaysia's GDP Forecasts by BNM, ADB, IMF, World Bank, and Market Consensus, 2020 – 2021

Sources	Month of Forecast	2020 YoY GDP Growth (%)	2021 YoY GDP Growth Forecast (%)
BNM	August 2021	-5.6	3.0 – 4.0
ADB	July 2021	-5.6	5.5
IMF	March 2021	-5.6	4.7
World Bank	June 2021	-5.6	4.5
Market Consensus	July 2021	-5.6	5.0

The projected growth is expected to be supported by stronger external demand, faster progress in the vaccination rate, and the continued targeted policy support for households and businesses. However, there is still uncertainty surrounding the forecast, with COVID-19 related risks remain as the key source of downside risk. The key risk concerns the spread of new virus variants that could lead to the resumption of containment measures to preserve healthcare capacity, amid lower effectiveness of vaccines against the new variants.

Global Economy is Expected to Grow by 6.0% YoY in 2021

In its July 2021 World Economic Outlook (WEO), the International Monetary Fund (IMF) forecasted that the global economy would grow by 6.0% YoY in 2021 (see Table 6).

Table 6: Global GDP Forecast by IMF, 2020 – 2021

Economy	2020 GDP YoY Growth (%)	2021 GDP YoY Growth Forecast (%)
Global	-3.2	6.0
- <i>Advanced Economies</i>	-4.6	5.6
- <i>Emerging Market Economies</i>	-2.1	6.3

Source: IMF

The 2021 global forecast is unchanged from the April 2021 WEO, but with offsetting revisions. Forecasts for emerging markets and developing economies have been marked down for 2021, especially for emerging Asia⁴. By contrast, the forecasts for advanced economies have been revised upwards. These revisions reflect the pandemic developments and changes in policy support in these various countries. Although economic growth is expected to recover in 2021, it remains significantly below pre-pandemic levels for most countries. According to the IMF, future development will depend on the path of the pandemic, policy actions, the evolution of financial conditions and commodity prices, and also the capacity of the economy to adjust to health-related impediments.

⁴ Emerging Asia: China, India, Indonesia, Korea, Malaysia, Pakistan, Philippines, Taiwan, and Thailand.

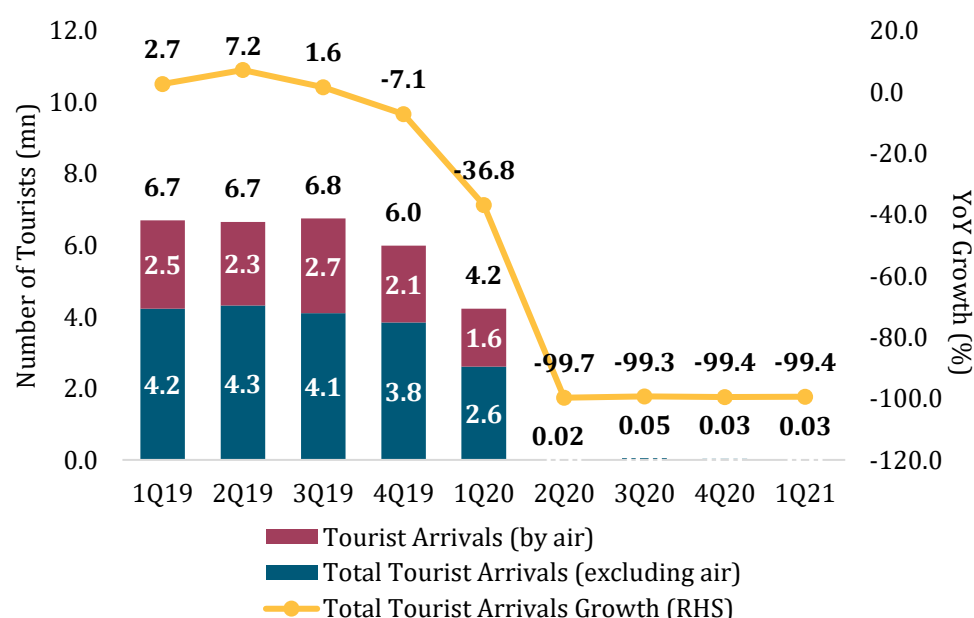
SECTION 2: INDUSTRY OVERVIEW AND OUTLOOK

Industry Overview

Tourist Arrivals Remains Low as Travel Restriction Still in Place in 1Q21

Malaysia's tourist arrivals recorded a decline of 99.4% YoY in 1Q21 (1Q20: -36.8% YoY) (see Figure 4). The number of tourist arrivals has been declining at a monthly average of 99.5% YoY since 2Q20. On a QoQ basis, the tourist arrivals recorded a decline of 1.5% QoQ in 1Q21 (1Q20: -8.0% QoQ).

Figure 4: Malaysia's Tourist Arrivals, 2019 – 2021



Source: Bloomberg, MOTAC

Notes: 1) This figure may contain rounding errors

2) Data only available up to 1Q21

Tourist arrivals remain low as travel restrictions for both domestic and international travel are still in place. Also, the COVID-19 cases in Malaysia have been on an uptrend since the start of 2021.

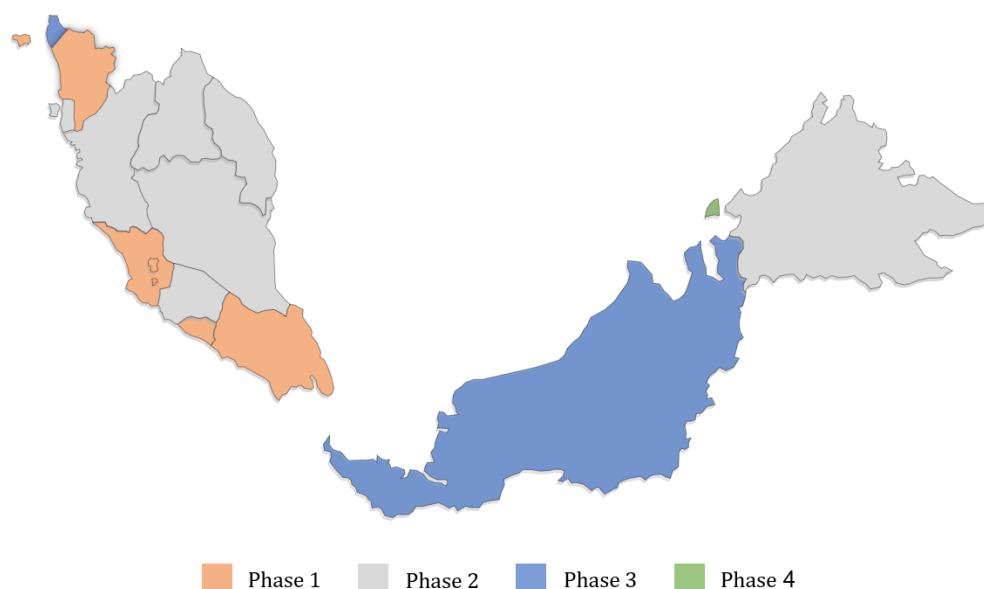
The Ministry of Tourism, Arts and Culture (MOTAC) had proposed a framework to reactivate the domestic tourism activities in line with the National Recovery Plan (NRP) through the COVID-19 Free Destination Programme. This programme aims to accelerate the vaccination process for residents in selected tourism destinations to revive the domestic tourism industry.

There are three phases to the programme. For the first phase, MOTAC had selected Langkawi and Kuching to be the pilot travel destinations. Accordingly, the vaccination capacity for the Langkawi population is expanded beginning mid-July 2021. In the second phase, the programme is to be extended to the other popular resort islands such as Redang, Perhentian, Pangkor, and Tioman, as well as other main attractions in various states such as Johor, Melaka, Penang, and Sabah. The third phase involves other main destinations across Malaysia.

Ease of Travel Restrictions for Phases 2, 3, and 4 States Announced

On 8 August, the GOM announced a new set of guidelines for individuals who have been fully vaccinated in the states classified under Phases 2 and 3 of the NRP (see Figure 5). For those states, intrastate tourism can resume with hotels and homestays open for business⁵. On 26 August, Labuan has moved to Phase 4 which allows all economic sectors to operate with the set standard operating procedures.

Figure 5: NRP Phase Classifications for the Malaysian States



Source: MAVCOM, GOM

Note: As at 26 August 2021

International Travel is Still Restricted

The recovery of international travel continues to be a challenge due to the current situation of the pandemic in Malaysia. Malaysia is not the only country that had been severely affected by the pandemic. The World Tourism Organization (UNWTO) had announced that the crash in international tourism due to the pandemic could cause a combined loss of more than RM16.6tn to the global GDP for 2020 and 2021. According to the UNWTO, the international tourist arrivals are not expected to return to pre-COVID-19 levels until 2023 or later⁶.

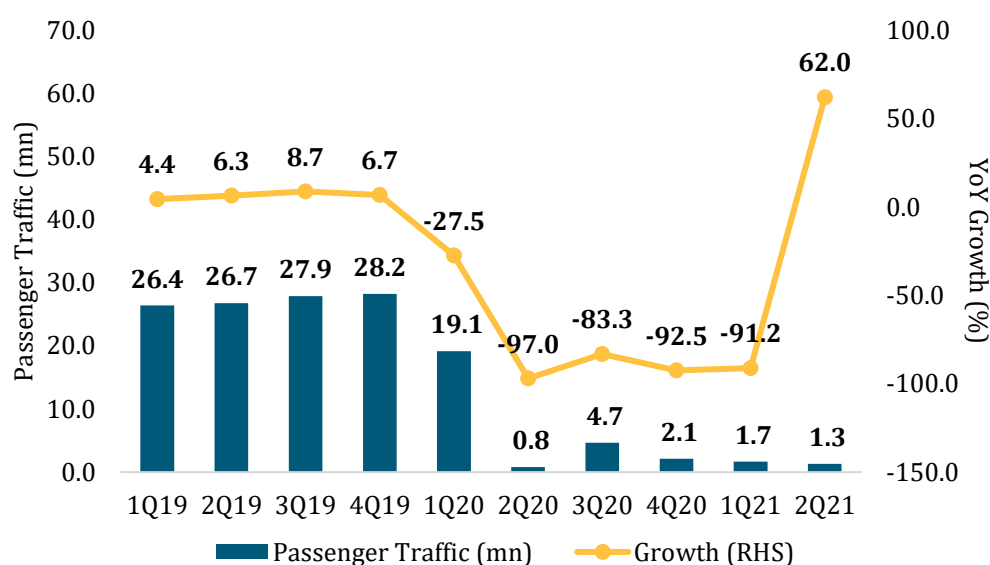
⁵ The Edge Markets, <https://www.theedgemarkets.com/article/malaysians-express-relief-over-govts-latest-decision-relax-sop> (10 August 2021).

⁶ UNWTO, <https://www.unwto.org/news/global-economy-could-lose-over-4-trillion-due-to-covid-19-impact-on-tourism> (30 June 2021).

Passenger Traffic Remains Low in 2Q21

In 2Q21, total passenger traffic was 1.3mn, the lowest since 2Q20 at 0.8mn (see Figure 6). Despite the lower number, **passenger traffic grew 62.0% YoY** as the jump in growth was due to the low base effect. However, passenger traffic recorded a decline of 22.6% QoQ in 2Q21 (2Q20: -95.8% QoQ).

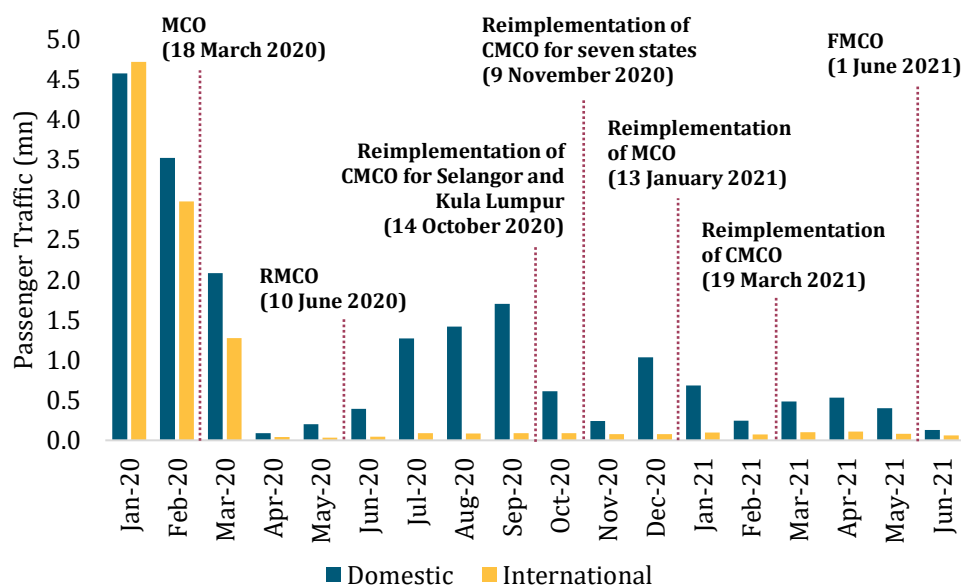
Figure 6: Malaysia's Quarterly Passenger Traffic, 2019 - 2021



Source: MAVCOM, AOL Holders

The decline in the passenger traffic number in 2Q21 was mainly attributable to the impositions of the MCOs. Indeed, the implementation of several MCOs had caused a significant adverse effect on Malaysia's overall passenger traffic number as shown in Figure 7 below.

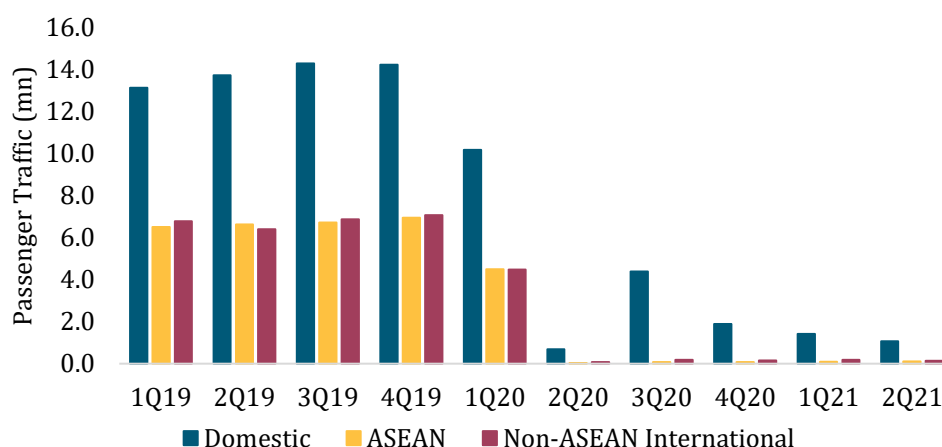
Figure 7: Effect of MCO on Malaysia's Monthly Passenger Traffic, 2020 - 2021



Source: MAVCOM, AOL Holders

Passenger Traffic was Driven by Domestic Passengers

Figure 8: Malaysia's Passenger Traffic by Region, 2019 – 2021



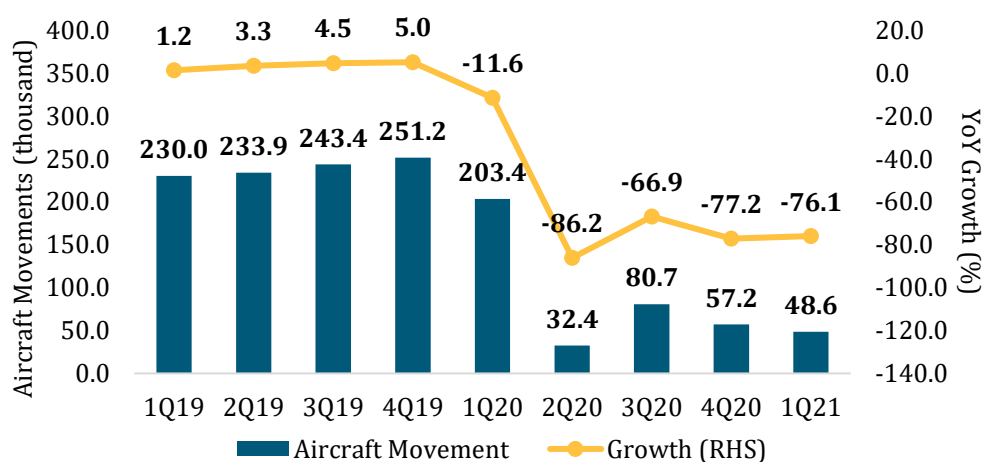
Source: MAVCOM, AOL Holders

Figure 8 shows the quarterly trend of Malaysia's passenger traffic according to regions. The domestic market experienced the greatest recovery in 3Q20 as domestic travel restrictions were eased at the end of 2Q20. However, a cycle of MCOs starting from 4Q20 until 2Q21 had halted the recovery of the domestic passenger traffic. Meanwhile, the international passenger traffic, both ASEAN and non-ASEAN, was marginal due to the ongoing international border closures.

Malaysia's Quarterly Aircraft Movements Contracted by 76.1% YoY in 1Q21

Malaysia's aircraft movements declined by 76.1% YoY in 1Q21 (1Q20: -11.6% YoY) and 14.9% QoQ (1Q20: -19.0% QoQ). There was a slight improvement in the 3Q20 due to the implementation of the Recovery Movement Control Order (RMCO). This had relaxed the domestic travel restrictions. However, the re-imposition of MCOs from 4Q20 until 2Q21 had halted the recovery of aircraft movements (see Figure 9).

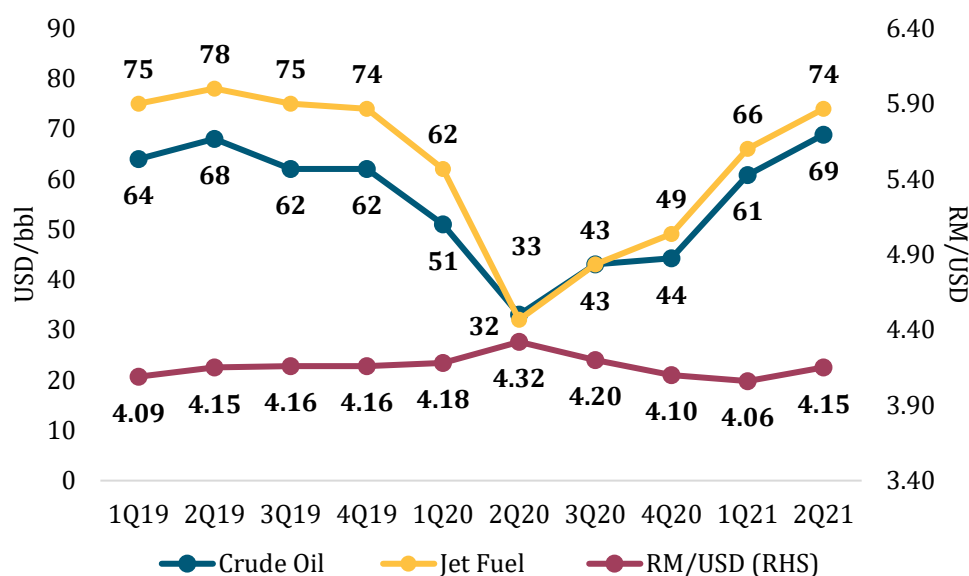
Figure 9: Malaysia's Aircraft Movements, 2019 – 2021



Source: MAVCOM, AOL Holders

Note: Data only available up to 1Q21

Increased Energy Costs and Stronger USD

Figure 10: Oil, Jet Fuel, and Exchange Rate Trends, 2019 – 2021

Source: Bloomberg

In 2Q21, Brent crude and jet fuel averaged at USD69/bbl and USD74/bbl, respectively (see Figure 10), with an average crack spread⁷ of USD5/bbl. In 2020, the consumption of jet fuel had decreased as airlines reduced flying as air travel demand decreased. This had sent the prices sharply lower in 2Q20. However, the recovery in overall economic activity around the world had caused the energy costs to rise significantly. As such, the prices for the Brent crude oil and jet fuel have been on a significant uptrend since 2Q20.

Meanwhile, the RM/USD exchange rate appreciated to RM4.15/USD in 2Q21. According to the BNM, the rise in long-term US Treasury yields during this period has led to shifts in international portfolio flows, resulting in the financial asset price adjustments globally. The improved US economic outlook and higher treasury yields supported the rebalancing of portfolio investments towards the US financial assets and contributed to the strengthening of the USD. As a result, there was a broad-based weakening of regional currencies against the USD, including the RM.

⁷ The crack spread is the price difference between a barrel of crude oil and jet fuel. It is also known as the refining margin.

Malaysia's Cargo Volume Expands by 80.4% YoY to 4,799mn in 2Q21

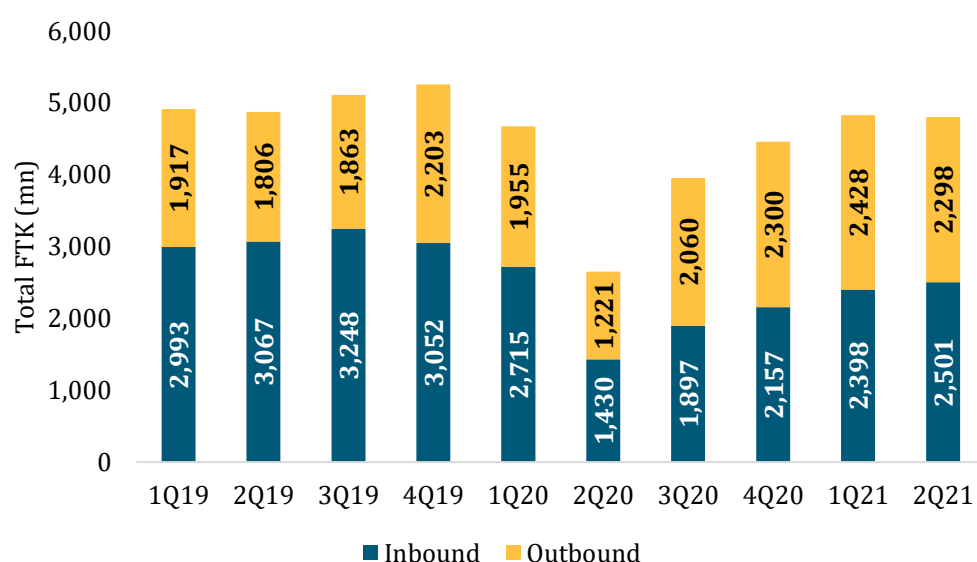
Malaysia's cargo volume in terms of total FTK recorded a strong growth of 80.4% YoY in 2Q21 (2Q20: -45.5% YoY). However, it recorded a decline of 0.6% QoQ in 2Q21 (2Q20: -43.1% QoQ).

Meanwhile, the inbound cargo increased by 74.9% YoY in 2Q21 (2Q20: -53.4% YoY) and by 4.3% QoQ in 2Q21 (2Q20: -47.3% QoQ). The inbound cargo FTK in 2Q21 was lower than the pre-pandemic level at 2,501mn (2Q19: 3,067mn). However, it has been on an uptrend.

As for the outbound cargo, it increased by 88.2% YoY (2Q20: -32.4% YoY), but declined by 5.3% QoQ (2Q20: -37.5% QoQ). The outbound cargo FTK in 2Q21 was 2,298mn, higher than the pre-pandemic level (2Q19: 1,806mn) (see Figure 11).

Malaysia's main cargo players are adding more routes as they see better commercial opportunities despite the pandemic. My Jet Xpress and World Cargo Airline (WCA) had upgraded their licences from Air Service Permits (ASPs) to Air Service Licences (ASLs)⁸. This hinted at a potential increase in Malaysia's cargo volume in the near future.

Figure 11: Total FTK in Malaysia, 2019 – 2021



Source: MAVCOM, CargoIS

Note: This figure excludes domestic cargo volume due to small numbers

⁸ ASP applies to unscheduled journeys while ASL applies to journeys with a fixed schedule.

Industry Outlook

Global Passenger Traffic is Expected to Grow by 26.0% YoY in 2021

In April 2021, the International Air Transport Association (IATA) had forecasted the global passenger traffic to grow by 26.0% YoY in 2021 (2020: -65.9% YoY) (see Table 7). This marks a 43.0% recovery from the 2019 pre-pandemic level. The forecast assumes a faster improvement in the domestic market as compared to the international market.

Table 7: IATA's Global Passenger Traffic Forecasts, 2020 – 2021

Key Figure	2020 YoY Growth (%)	2021 YoY Growth Forecast (%)
Global Passenger Traffic ⁹	-65.9	26.0

Source: IATA

According to the IATA, the vaccination progress in the developed countries, particularly the US and Europe, combined with the widespread testing capacity, is expected to enable a return of some international travel in the 2H21. However, the actual growth of international passenger traffic was still minimal and remained 86.6% below the pre-pandemic level in 1Q21. The spread of the new Delta variant may continue to dampen the recovery of the international market if the mutated virus is not successfully contained.

In contrast, the global domestic passenger traffic is expected to perform significantly better than the international markets. This will be driven by strong GDP growth, accumulated consumer disposable cash during lockdowns, pent-up demand, and the absence of domestic travel restrictions for most countries. The IATA estimates that domestic markets could recover to 96.0% of 2019 levels in the 2H21. However, the total passenger traffic is not expected to reach 2019 levels until 2024, a year later than previously forecasted.

In terms of the regional markets, significant differentiation is emerging between regions with large domestic markets and those relying primarily on international traffic (see Table 8).

Table 8: IATA's Passenger Traffic Forecasts by Region

Regions	2021 Passenger Traffic Growth Forecast vs 2019 ¹⁰ (%)
Global	-57.0
- North America	-41.5
- Europe	-66.3
- Asia Pacific	-57.8
- Middle East	-67.6
- Latin America	-48.9
- Africa	-64.5

Source: IATA

⁹ Growth forecasts in terms of RPK.

¹⁰ Growth forecasts in terms of RPK.

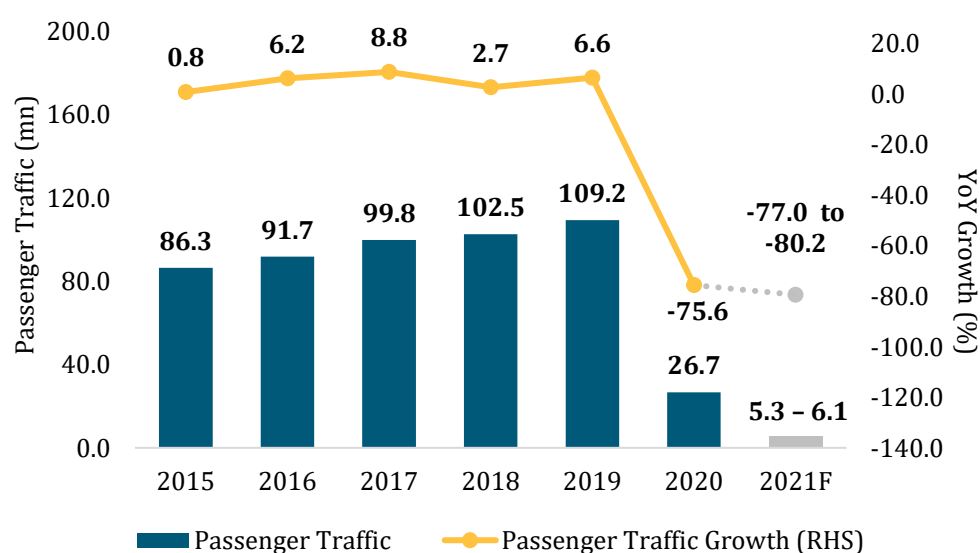
The North American region is expected to take advantage of the rapid vaccination boost for the domestic market, particularly in the US, whilst the Asia Pacific region is expected to benefit from the strength of the Chinese domestic market recovery. However, international travel restrictions continue to be a key obstacle. Measures have been the strictest in the Asia Pacific where vaccination has been slow, and governments are more risk-averse towards border openings to limit the virus spread.

Europe and the Middle East, which are highly dependent on international passengers, are expected to be the regions that will record the lowest growth in 2021. This is mainly due to the international travel restrictions that are expected to continue on important international routes such as the within-Europe market and the North Atlantic, as well as the Gulf hub connections.

No Signs of Recovery for Malaysia's Passenger Traffic in 2021

MAVCOM now estimates a decline in passenger traffic of 77.0% YoY – 80.2% YoY, translating to 5.3mn – 6.1mn passengers in 2021 (-94.8% of 2019) (see Figure 12). This is a downward revision from the forecast made in April 2021 (see Table 9). The passenger traffic in 2021 is expected to be lower than 2020 due to the continued implementation of travel restrictions, lower-than-expected load factor performance, and a higher seat capacity cancellation by airlines.

Figure 12: Malaysia's Passenger Traffic, 2015 – 2021F



Source: MAVCOM, AOL Holders

Table 9: Malaysia's 2021 Passenger Traffic Forecast Revision

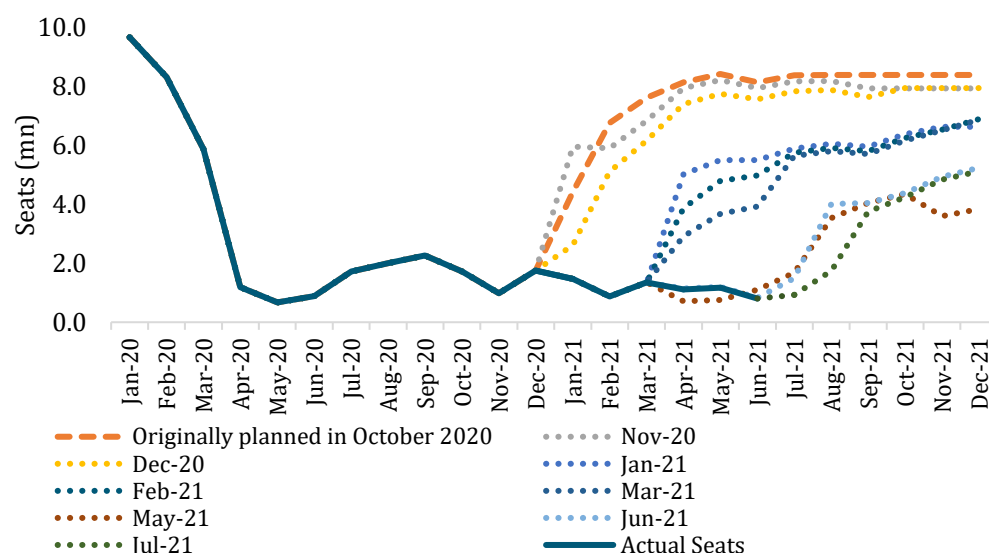
Scenarios	Previous Forecast ¹¹ (mn)	Revised Forecast (mn)
Best Case	23.6 – 25.5	6.9 – 7.8
Base Case	18.9 – 20.6	5.3 – 6.1
Worst Case	15.2 – 16.6	4.2 – 4.8

Source: MAVCOM

¹¹ Forecast made in April 2021.

Throughout 2021, airlines continue to cut seat capacity on a monthly basis as travel restrictions remain in place (see Figure 13). As of June 2021, airlines cancelled 67.1% of the originally planned seats. MAVCOM expects airlines to continue to cut more seat capacity for the remaining months of 2021.

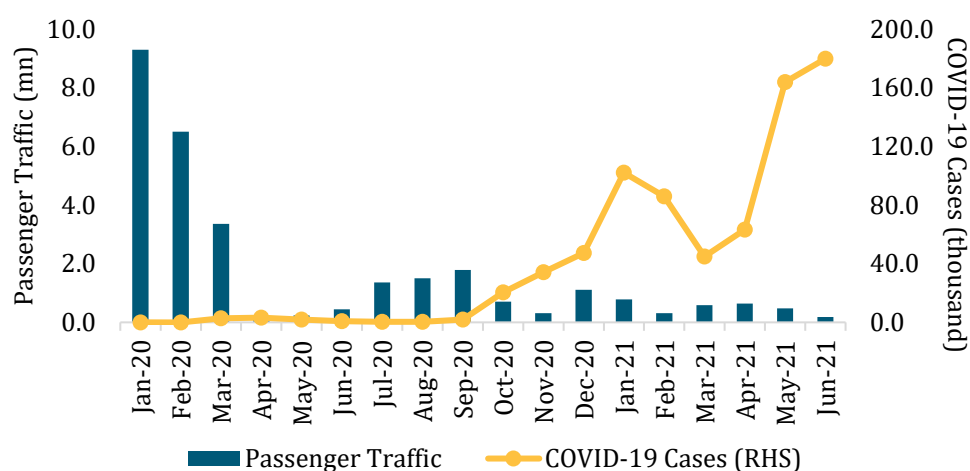
Figure 13: Malaysia's Monthly Seat Capacity, 2020 – 2021



Source: AirportIS

The load factor performance for both the international and domestic routes was also lower than expected. In the forecast made in April 2021, MAVCOM had assumed the load factor to be between 46.0% – 58.0% for the domestic flights and 26.0% – 38.0% for the international flights. However, so far, the actual domestic and international load factors have only been averaging 34.0% and 15.8%, respectively. This shows that the demand for air travel remains marginal. Ultimately, the recovery of the aviation industry depends largely on the success of the containment of the COVID-19 virus (see Figure 14).

Figure 14: Malaysia's Passenger Traffic vs. COVID-19 Cases

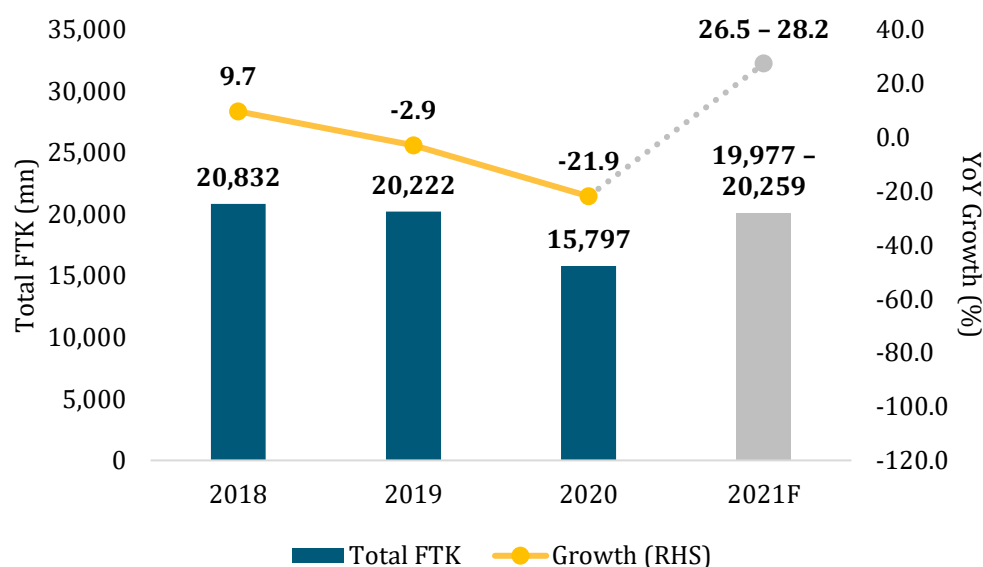


Source: AirportIS, Oxford University's Our World in Data

MAVCOM Forecasts Malaysia's Air Cargo Traffic to Grow by between 26.5% YoY and 28.2% YoY in 2021

MAVCOM expects the air cargo traffic in 2021 to grow by between 26.5% YoY and 28.2% YoY and recover to the pre-pandemic levels (see Figure 15). The strong air cargo growth in 2021 is attributable to the high demand for imported vaccines, medical equipment, personal protective equipment, E&E components, and the growth of the e-commerce sector.

Figure 15: Malaysia's Air Cargo Traffic, 2018 – 2021F



Source: MAVCOM, CargoIS

MAVCOM is forecasting a sharper growth recovery for 2021. This compares to the relatively flatter growth recovery for the global air cargo traffic as forecasted by IATA in April 2021 (see Table 10).

Table 10: IATA's Air Cargo Traffic Forecasts, 2019 – 2021

Key Figure	2019 YoY Growth (%)	2020 YoY Growth (%)	2021F YoY Growth (%)
Global Cargo Traffic	-3.2	-9.1	13.1

Source: IATA

SECTION 3: INDUSTRY STRUCTURE AND PERFORMANCE

Industry Structure

Scheduled Passenger Services Market

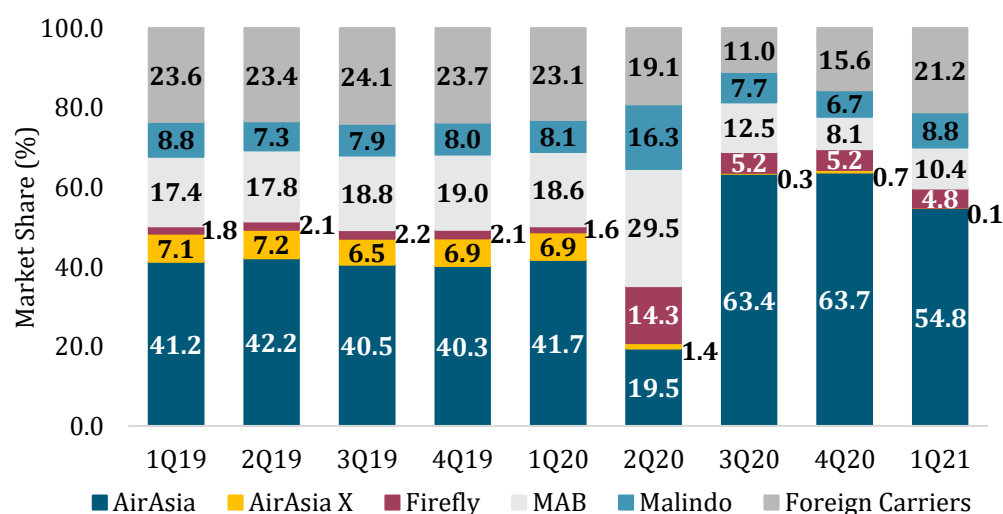
AirAsia Dominates More than Half of Malaysia's Passenger Market Share in 1Q21

In 1Q21, AirAsia considerably increased its market share to 54.8%, dominating more than half of Malaysia's passenger market (1Q20: 41.7%) (see Figure 16). In the same period, Firefly and Malindo's market shares rose marginally to 4.8% and 8.8%, respectively (1Q20: 1.6% and 8.1%). Meanwhile, the market shares for AirAsia X and MAB fell to 0.1% and 10.4%, respectively, in 1Q21 (1Q20: 6.9% and 18.6%).

AirAsia X continues to ground the majority of its fleets since mid-April 2020, experiencing a significant decline of 99.9% YoY in passengers in 1Q21 (1Q20: -29.1% YoY), as international air travel remains restricted. On a QoQ basis, AirAsia X had a decline of 90.5% QoQ in 1Q21 (1Q20: -30.0% QoQ). The airline is currently undergoing a corporate restructuring process¹² and plans to resume its commercial operations once the restructuring plan is completed and Malaysia's international borders re-open.

Overall, Malaysian carriers' passenger numbers declined by 90.5% YoY and 21.7% QoQ in 1Q21 (1Q20: -26.2% YoY and -29.4% QoQ). This was due to the continuous fall in demand for air travel and the imposition of travel restrictions. However, in terms of market share, Malaysian carriers' combined market share increased to 78.8% in 1Q21 (1Q20: 76.9%) due to the limited operations by foreign carriers.

Figure 16: Malaysia's Passenger Market Share by Airlines, 2019 – 2021



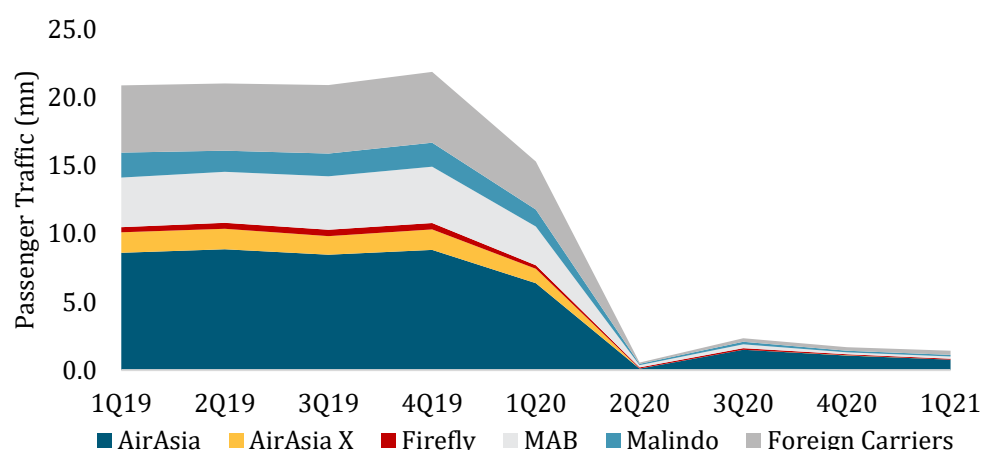
Source: MAVCOM, AirportIS

Note: Data only available up to 1Q21

¹² AirAsia X, http://www.airasiax.com/newsroom/01062021_Press_Release_-_AAX_EGM.pdf (1 June 2021).

Overall, Malaysia's market size in 1Q21 is still minuscule compared to the pre-pandemic level in 2019 (see Figure 17).

Figure 17: Malaysia's Quarterly Passenger Traffic by Airlines, 2019 – 2021



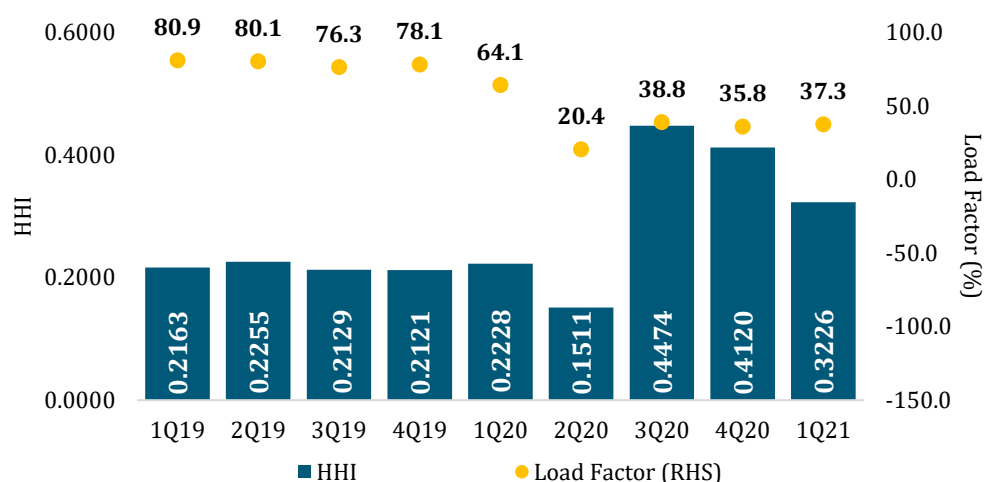
Source: MAVCOM, AirportIS

Note: Data only available up to 1Q21

Market Concentration Increased while Average Load Factor Drastically Reduced to 37.3% in 1Q21

Market concentration¹³ in Malaysia's aviation market increased to 0.3226 in 1Q21 (1Q20: 0.1511) due to the increase in the market shares of AirAsia, Firefly, and Malindo. Their market shares increased as AirAsia X and MAB experienced a significant decline in passenger traffic (see Figure 18). **The average load factor for all carriers had drastically reduced to 37.3% in 1Q21 (1Q20: 64.1%).** This was mainly due to the reduction in demand for air travel and the imposition of strict travel restrictions as the COVID-19 outbreak continues to worsen.

Figure 18: Market Concentration Level and Load Factor, 2019 – 2021



Source: MAVCOM, AirportIS

Note: Data only available up to 1Q21

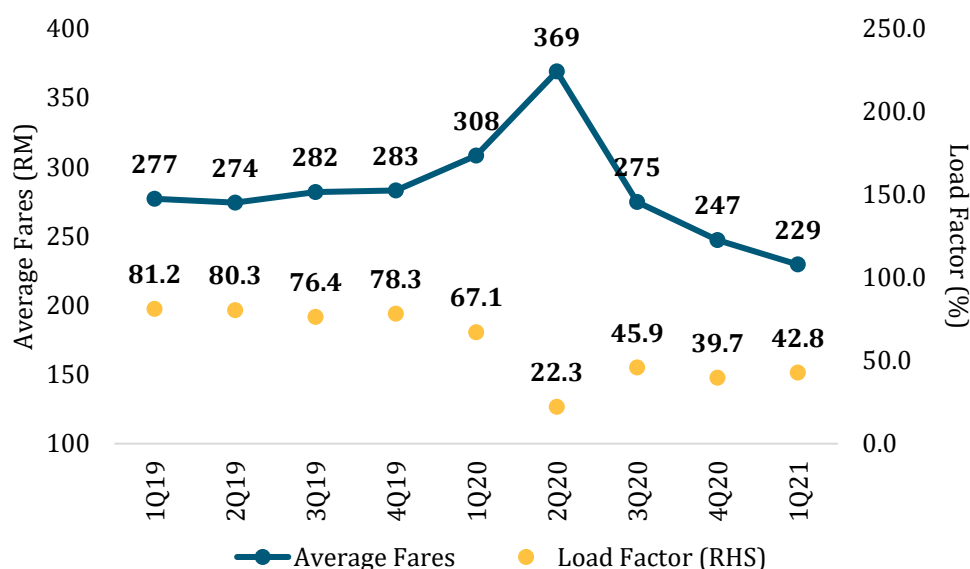
¹³ Market concentration is measured by using the Herfindahl-Hirschman Index (HHI). The index ranges from '0' which denotes perfect competition to '1' which denotes a monopoly.

Malaysian Carriers' Average Load Factor and Fares Both Decreased in 1Q21

Malaysian carriers' average load factor fell to 42.8% in 1Q21 (1Q20: 67.1%) (see Figure 19). This was due to the larger contraction in the passenger traffic as compared to the contraction in the seat capacity. The seat capacity contracted by 84.5% YoY and 17.2% QoQ (1Q20: -9.6% YoY and -14.7% QoQ).

Additionally, Malaysian carriers' average fares had also decreased by 25.5% YoY and by 7.1% QoQ (1Q20: 11.3% YoY and 8.9% QoQ). This came to RM229 in 1Q21 (1Q20: RM308).

Figure 19: Malaysian Carrier's Average Fares and Load Factor, 2019 – 2021

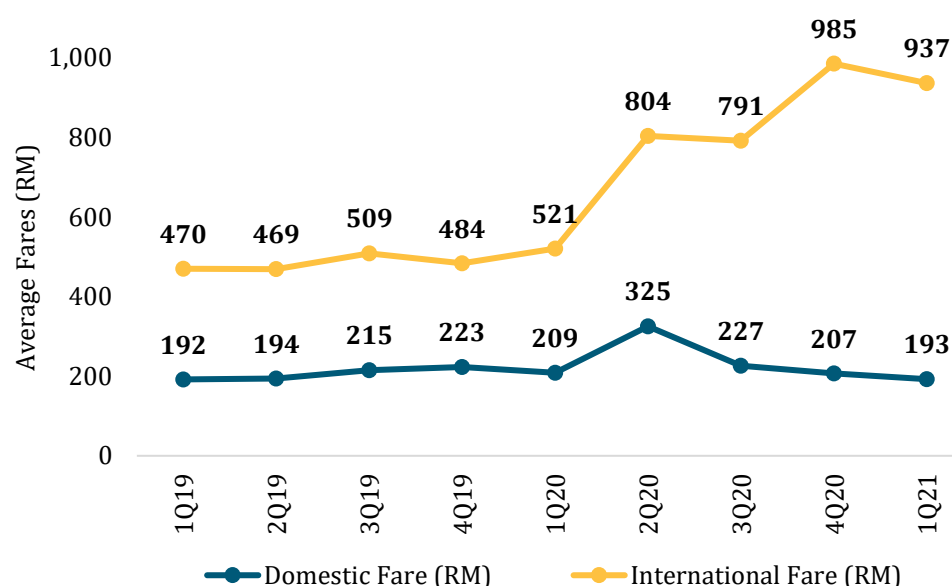


Source: MAVCOM, AirportIS
Data only available up to 1Q21

The average domestic fares decreased while the average international fares increased in 1Q21 (see Figure 20). The domestic fares had steadily declined to RM193 in 1Q21 (1Q20: RM209). Meanwhile, international fares increased significantly to RM937 in 1Q21 (1Q20: RM521).

The decline in the domestic airfares was due to the airlines' strategies to stimulate demand for air travel despite the implementation of strict travel restrictions. Indeed, the current low demand in a high seat capacity environment was key in the lower domestic fares. On the contrary, high international fares were due to the low number of international flight frequencies and passengers.

Figure 20: Malaysian Carriers' Domestic and International Average Fares, 2019 – 2021



Source: MAVCOM, AirportIS

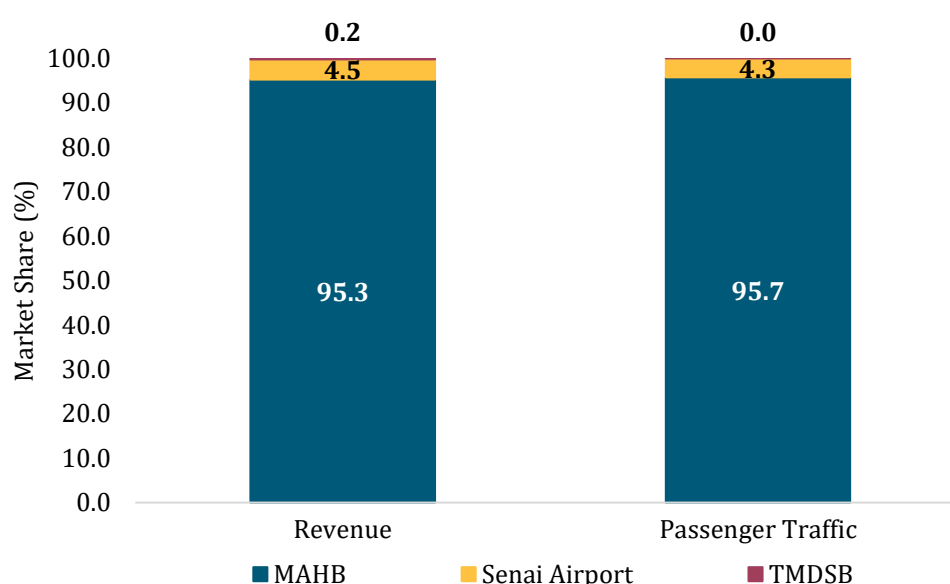
Note: Data only available up to 1Q21

Aerodrome Operations Segment

MAHB Dominates the Aerodrome Operations Segment

MAHB continues to dominate the aerodrome operators' market share as it operates 39 of the 41 airports in Malaysia. In 2020, the aerodrome operations segment reported a total revenue of RM2.0bn, of which 95.3% was generated by MAHB (2019: 98.1%) (see Figure 21). As the biggest airport operator in the country, MAHB handled 95.7% of the total passenger traffic in Malaysia in 2020 (2019: 96.0%). Meanwhile, Senai Airport's passenger market share marginally increased from 4.0% in 2019 to 4.3% in 2020, while its revenue market share rose to 4.5% in 2020 (2019: 1.8%).

Figure 21: Market Shares of the Aerodrome Operations Segment by Revenue and Passenger Traffic, 2020



Source: MAVCOM, AOL Holders

Note: TMDSB's passenger market share was approximately 0.005% in 2020

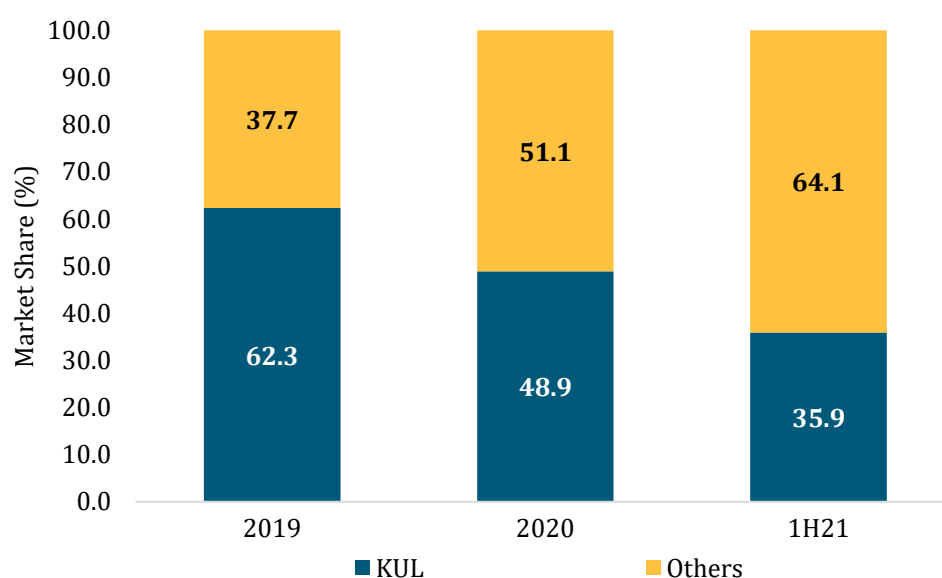
Additionally, the aerodrome operator segment was the most concentrated segment within the aviation services market with an HHI of 0.9093 in 2020 (2019: 0.9634). It is worth noting that **Sanzbury Stead Sdn. Bhd. is no longer an aerodrome operator**, thus reducing the number of Aerodrome Operating Licence (AOL) holders in Malaysia. It previously operated Kerteh Airport but the airport is now under the management of Senai Airport¹⁴.

¹⁴ The Edge Markets, <https://www.theedgemarkets.com/article/senai-international-airport-now-manages-kertih-airport-operations> (2 January 2019).

KUL's Market Share Declined as International Borders Remain Closed

Due to the ongoing international border closures, KUL experienced a decline in its market share from 48.9% in 2020 and to 35.9% in 1H21 (see Figure 22). Before the pandemic, passenger traffic at Malaysian airports in 2019 was highly concentrated at KUL, which handled 62.3% of the total passenger traffic for Malaysia. In 2019, 72.1% of the total passenger traffic in KUL were international passengers (see Table 11).

Figure 22: Market Shares of Airports in Malaysia in Terms of Passenger Traffic, 2019 – 2021



Source: MAVCOM, AOL Holders

Table 11: Percentage of KUL's Passenger Traffic by Segment, 2019 – 2021

Segment	2019 (%)	2020 (%)	1H21 (%)
Domestic	27.9	37.4	54.2
International	72.1	62.6	45.8

Source: AOL Holders

Ground Handling Services Segment

Ground Handling is the Least Concentrated Aviation Services Segment

As at 1Q21, there are 21 Ground Handling Licence (GHL) holders that operate in three ground handling services sub-segments. **In 1Q21, the GHL holders' revenue grew by 10.6% YoY to RM0.7bn** (1Q20: RM0.6bn) due to a 24.1% YoY increase in the general ground handling revenue. On a QoQ basis, the GHL holders' revenue decreased by 0.6% QoQ in 1Q21 (1Q20: 77.5% QoQ) due to a 37.6% QoQ decline in the revenue of the catering sub-segment.

Based on the 2020 financial data, the GHL holders reported RM2.6bn in revenue¹⁵ (2019: RM1.3bn) (see Table 12). In terms of profitability, the segment reported an operating profit margin of 7.0% in 2020 (2019: -0.3%).

Ground handling is the least concentrated segment compared to scheduled passenger services, non-scheduled services, and aerodrome operation segments. However, the different sub-segments within the ground handling segment may have different degrees of market concentration. For example, the general ground handling is the most concentrated sub-segment with an HHI of 0.6853 in 2020.

Table 12: Market Structure of the GHL Segment, 2020

Type of Business	No. of Licence Holders	HHI	Revenue (RM mn)	Operating Profit Margin (%)
Catering	3	0.5913	104.3	-100.2
General Ground Handling ¹⁶	17	0.6853	2,451.8	11.8
Refuelling ¹⁷	3	0.5570	29.0	-7.1
TOTAL	23		2,585.1	7.0

Source: MAVCOM, GHL Holders

The general ground handling sub-segment includes 10 types of services. A general ground handler may provide multiple services within the list shown in Table 13.

Table 13: Types of General Ground Handling Services

No.	Ground Handling Services
1	Ground administration and supervision
2	Passenger handling
3	Freight and mail handling (documentations handling)
4	Aircraft services
5	Aircraft maintenance
6	Flight operations and crew administration
7	Surface transport
8	Baggage handling
9	Freight and mail handling (physical handling)
10	Ramp handling

Source: MAVCOM

¹⁵ The calculation excludes GHL Holders that are multi-licence holders, i.e., those that are also ASL, ASP, or AOL Holders, and petroleum products retailers.

¹⁶ As at 1Q21, there are only 15 GHL Holders in the general ground handling sub-segment.

¹⁷ The calculation of the refuelling sub-segment excludes Petronas, Petron, Shell, and Shell Timur.

ATRs Awarded by MAVCOM as of 30 June 2021

In 1H21, the ASL holders were awarded 34 additional ATR (see Table 14), with My Jet Xpress receiving the highest number of ATRs at 19, followed by MAB at 6, and AirAsia Group at 5. WCA converted its ASP to an ASL effective from 1 April 2021 and is the latest ASL holder for the cargo segment.

During this period, no expiration of ATRs was recorded as MAVCOM continues to allow airlines to retain their current portfolio of ATR without the risk of expiry, in line with the ongoing efforts to support the needs of aviation players that are facing the impact of the pandemic. MAVCOM has eased the condition which automatically revokes unutilised ATRs within six months from the date of the ATR approval. This flexibility has been in effect since 5 June 2020 and was implemented to facilitate the administrative and regulatory challenges of airlines, as well as to enable them to keep their current ATR portfolio active. This marks the second consecutive half without any expiration of ATRs.

Table 14: Breakdown of ATRs Awarded, 2020 – 2021

ASL Holder	Total Domestic & International ATRs Awarded		Failed to Operate ¹⁸		Surrendered ¹⁹	
	2020	1H21	2020	1H21	2020	1H21
AirAsia	16	2	15	-	-	-
AirAsia X	6	3	2	-	-	-
Firefly	5	-	1	-	-	-
MAB ²⁰	25	6	5	-	-	-
Malindo	7	1	15	-	-	-
My Jet Xpress	10	19	-	-	-	2
Raya Airways	10	2	1	-	-	-
WCA	-	1	-	-	-	-
TOTAL	79	34	39	-	-	2

Source: MAVCOM

¹⁸ ATRs revoked for failing to operate within six months from the ATRs' date of issuance.

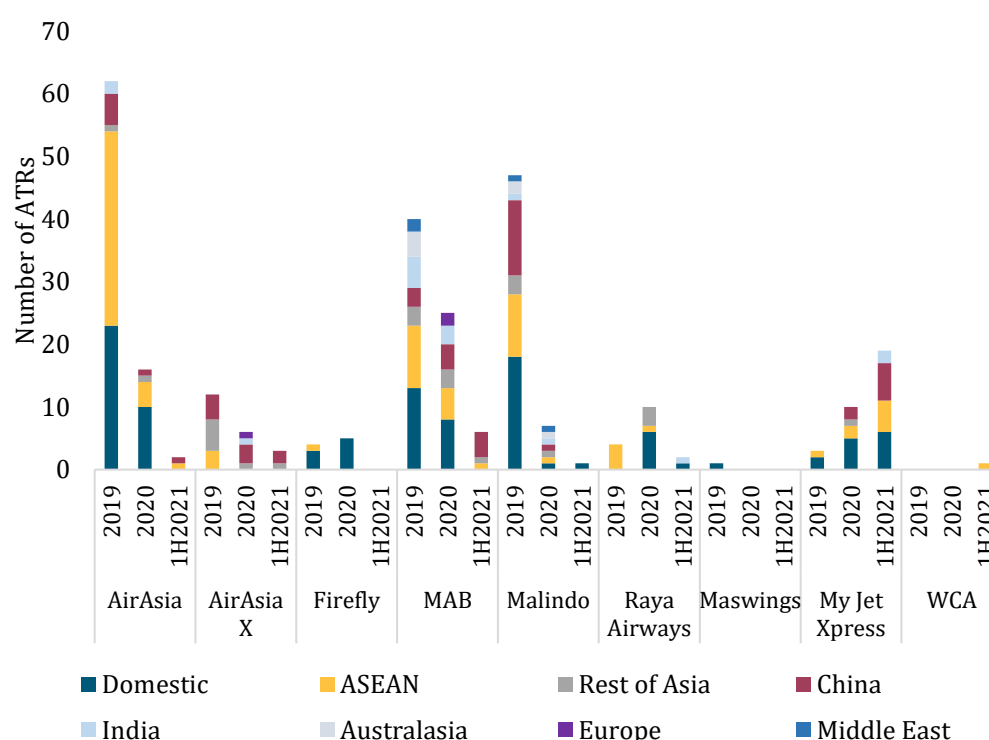
¹⁹ ATRs surrendered by the ASL Holders.

²⁰ ATRs awarded include ATRs for the use of MAB Kargo.

1H21 saw the largest share of ATR allocations for routes to China at 38.2% (1H20: 13.9%), followed by allocations to the domestic routes and the ASEAN region at 23.5% each (1H20: 44.3% and 16.5%, respectively) (see Figure 23). The share of ATR allocations to the destinations in China increased in part due to My Jet Xpress receiving the highest number of ATRs at 46.0%, encouraged by the continued healthy growth shown by the cargo segment given the accelerated and increased demand for logistical needs.

The ATR applications in 1H21 recorded a 100.0% approval for the 34 ATR applications received from airlines. Of this, 26 ATR allocations were for international routes, while the remaining 8 were for domestic routes. Of the 34 ATR approvals for 1H21, My Jet Xpress received the highest number of approvals, totalling 19 ATRs. MAB, AirAsia Group, and Raya Airways followed with 6, 5, and 2 ATR approvals, respectively. The ATR application rate increased by 25.9% YoY in contrast with the 27 ATR applications in 1H20.

Figure 23: Breakdown of ATRs Awarded by Region, 2019 – 2021



Source: MAVCOM

Note: Raya Airways, My Jet Xpress, and WCA are ASL Holders providing scheduled cargo services

Industry Performance

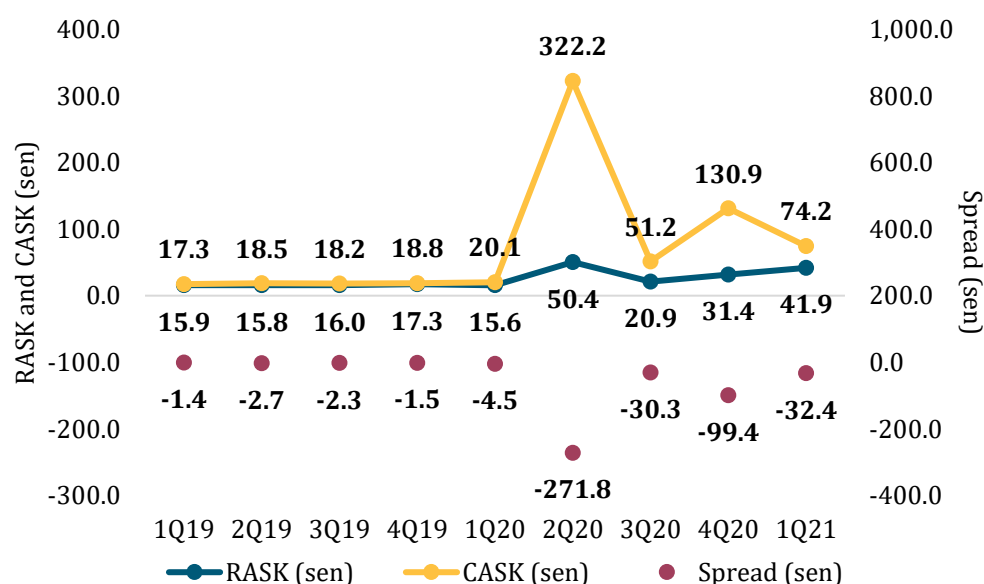
Scheduled Passenger Services Market

The Spread between RASK and CASK Decreased in 1Q21

In 1Q21, the decrease in the cost per available seat kilometre (CASK) resulted in a smaller gap between revenue per available seat kilometre (RASK) and CASK as compared to the previous quarter. CASK decreased from 130.9 sen in 4Q20 to 74.2 sen in 1Q21. At the same time, RASK increased slightly from 31.4 sen in 4Q20 to 41.9 sen in 1Q21. This led to a RASK-CASK spread of 32.4 sen in 1Q21 (see Figure 24).

Whilst the revenue of passenger ASL holders fell considerably from RM2.2bn in 4Q20 to RM0.7bn in 1Q21, the total number of ASKs had a relatively larger reduction between these two quarters. This resulted in a marginal increase in RASK. On the other hand, CASK decreased in 1Q21 compared to the previous quarter despite an increase in jet fuel prices and a depreciation of RM.

Figure 24: Malaysian Carriers' RASK and CASK Trends, 2019 – 2021



Source: MAVCOM, ASL Holders

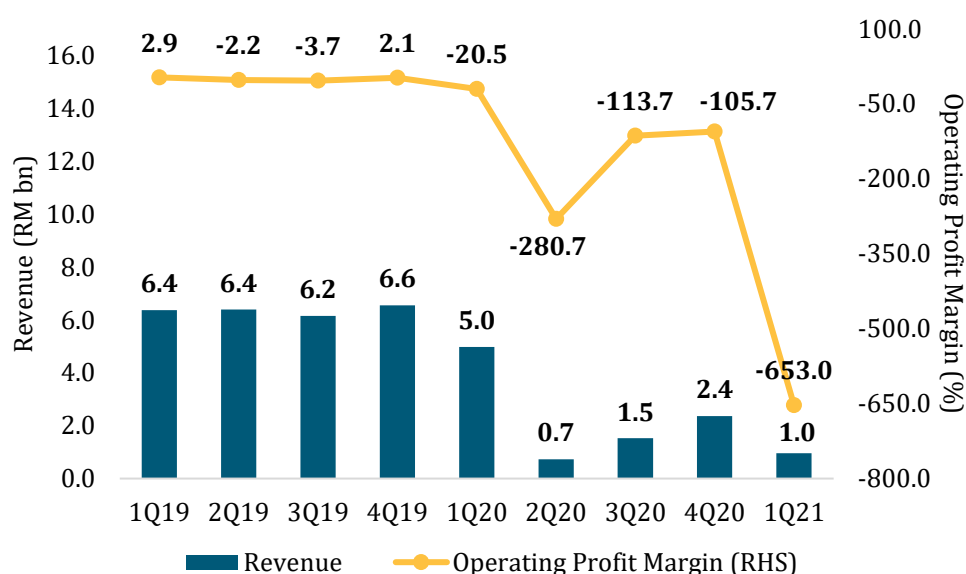
Note: Data only available up to 1Q21

Industry Operating Profit Margin on a Decline

Malaysian carriers reported RM1.0bn revenue in 1Q21 (1Q20: RM5.0bn), a 80.8% YoY decrease (1Q20: -21.9% YoY). **Their operating profit margin went into further negative territory in 1Q21**, recording an operating loss margin of 653.0% (1Q20: -20.5%). This was **caused by a 59.7% QoQ decline in revenue** (1Q20: -24.1% QoQ) (see Figure 25). The deterioration of Malaysian carriers' operating margin was further escalated due to the reimplementation of MCO since 13 January 2021 and an increase in jet fuel prices.

As a result, **Malaysian carriers like AirAsia Group and MAB have been actively managing their costs through a combination of debt and equity financing.** The private share placement exercise in 1Q21 formed part of AirAsia Group's larger plans to raise between RM2.0bn and RM2.5bn to finance, among others, its working capital requirements. MAB's turnaround plan to be cash flow positive by 2023 was also affected by the pandemic. However, MAB has managed to undertake a RM15.0bn debt restructuring exercise, which eliminated RM10.0bn of debt from its balance sheet²¹. MAB's shareholder, Khazanah Nasional Bhd. (Khazanah), provided interim funding of RM1.1bn in 1Q21 and pledged a further RM3.6bn capital injection into MAB over the next five years.

Figure 25: Malaysian Carriers' Revenue and Operating Profit Margin, 2019 – 2021



Source: MAVCOM, ASL Holders

Note: Data only available up to 1Q21

²¹ The Edge Markets, <https://www.theedgemarkets.com/article/another-reboot-%E2%80%94-can-malaysia-airlines-get-it-right-time> (8 May 2021).

Aerodrome Operations Segment

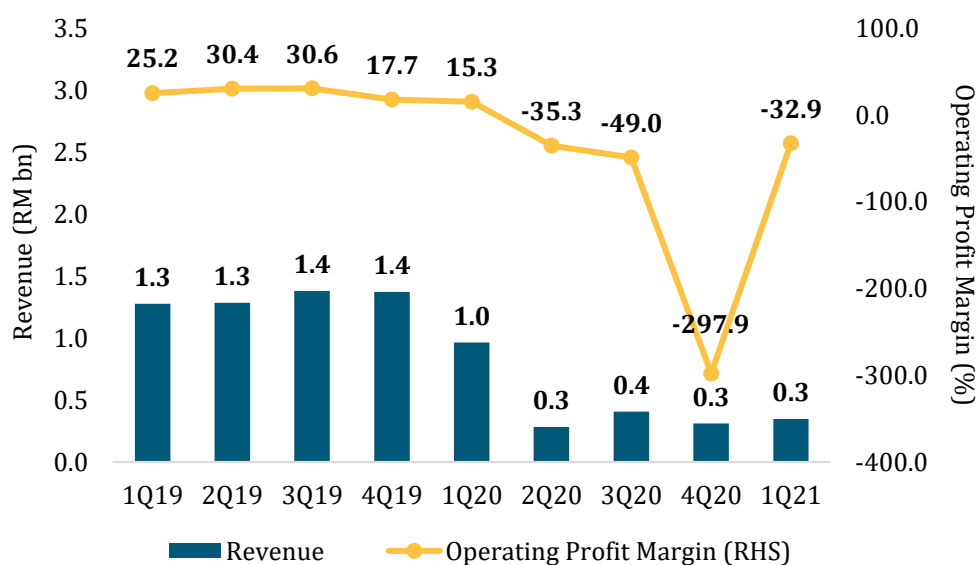
64.2% YoY Decline in Revenue for Aerodrome Operators in 1Q21

Aerodrome operators' airport operations typically include airport services, duty-free and non-duty-free outlets while non-airport operations typically include project and repair maintenance, hotel operations, agriculture and horticulture, and other activities.

For 1Q21, the aerodrome operators' revenue decreased by 64.2% YoY to RM0.3bn (1Q20: RM1.0bn) (see Figure 26), in line with the decline exhibited by the passenger traffic and aircraft movements. The AOL holders' revenue increased by 11.5% QoQ in 1Q21 (1Q20: -29.9% QoQ) due to a 27.8% QoQ and 258.4% QoQ increase in revenue by MAHB and TMDSB, respectively. The aggregate financial performance of Malaysian aerodrome operators is heavily skewed by MAHB's numbers as the company makes up 95.3% of the total revenue and operating profit of all aerodrome operators in the country.

Meanwhile, the average operating profit margin for this segment decreased by 315.2% YoY (1Q20: 39.4% YoY). However, on a QoQ basis, it improved significantly by 88.9% QoQ in 1Q21 (1Q20: -13.5% QoQ) as MAHB attributed its improved margin to the lower provision for doubtful debts. This was a follow-through from MAHB's receivable monetisation exercise in 4Q20.

Figure 26: AOL Holders' Revenue and Operating Profit Margin, 2019 – 2021



Source: MAVCOM, AOL Holders

Note: Data only available up to 1Q21

Ground Handling Services Segment

Revenue for General Ground Handling Increased in 1Q21

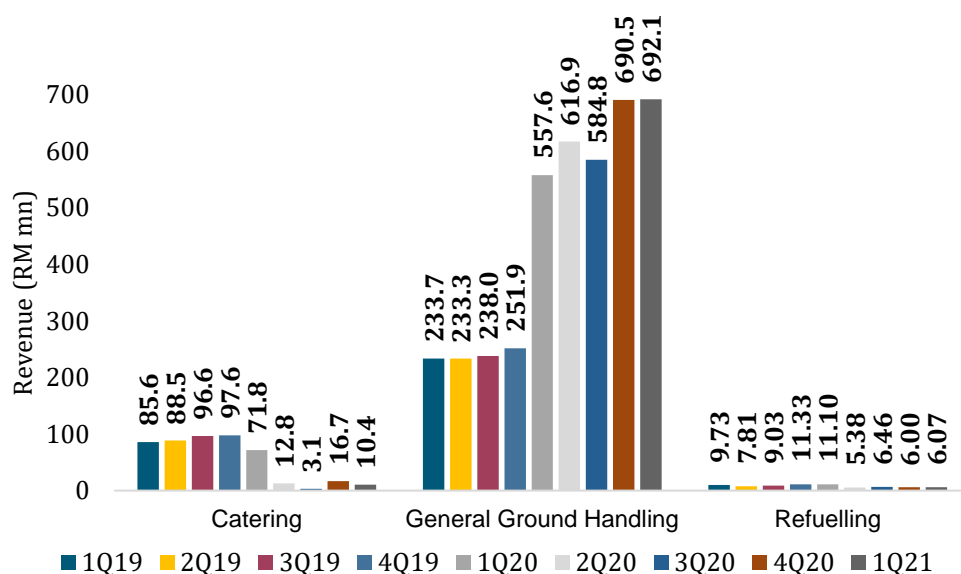
In 1Q21, the catering sub-segment revenue declined by 85.5% YoY and 37.6% QoQ to RM10.4mn (1Q20: -19.2% YoY, -26.5% QoQ, and RM71.8mn). This is due to the majority of flights being grounded and the massive decline in passenger traffic from the effects of the pandemic.

Meanwhile, the revenue generated by the general ground handling sub-segment in 1Q21 increased by 24.1% YoY and 0.2% QoQ to RM692.1mn (1Q20: 58.1% YoY, 121.4% QoQ, and RM557.6mn). This was due to the substantial revenues recorded by MAB Kargo relative to other, smaller players which made up 88.7% of the total revenue for the sub-segment in 1Q21. MAB Kargo has continued its dominance throughout 2020 with an average of 82.2% of the total revenue for the general ground handling sub-segment. The increase in revenue was also partly due to an increase in some players' alternative revenue sources such as maintenance, repair and overhaul, and hangarage.

As for the refuelling sub-segment, its revenue declined by 45.3% YoY but increased marginally by 1.2% QoQ to RM6.1mn (1Q20: 12.3% YoY, -2.0% QoQ, and RM11.1mn).

Figure 27 provides details of revenue for all the ground handling sub-segments between 2019 and 2021.

Figure 27: Revenue for Ground Handling Sub-Segments, 2019 – 2021



Source: MAVCOM, GHL Holders

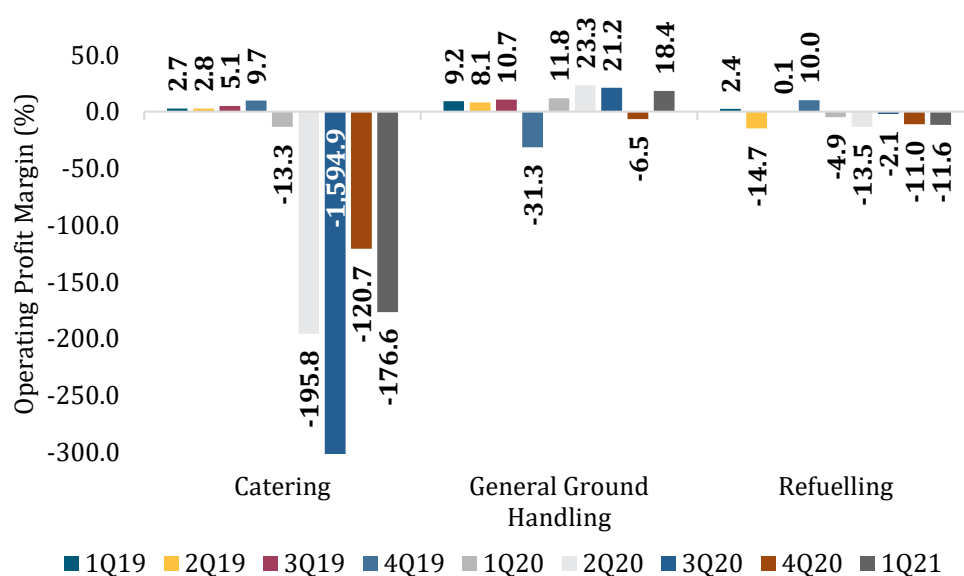
Note: Data only available up to 1Q21

The General Ground Handling Recorded Operating Profit Margin for 1Q21

The general ground handling sub-segment reported positive margins of 18.4% in 1Q21. This encouraging trend by the general ground handling sub-segment shows the continuous growth of the cargo segment given the robust trade activities during the pandemic.

In contrast, **the catering and refuelling sub-segments reported an operating loss margin of 176.6% and 11.6%, respectively in 1Q21**, continuing the negative trend of the last four quarters (see Figure 28). This was the result of fewer business jets being handled and the massive decline in passenger traffic throughout 2020.

Figure 28: Operating Profit Margin for Ground Handling Sub-Segments, 2019 – 2021



Source: MAVCOM, GHL Holders

Note: Data only available up to 1Q21

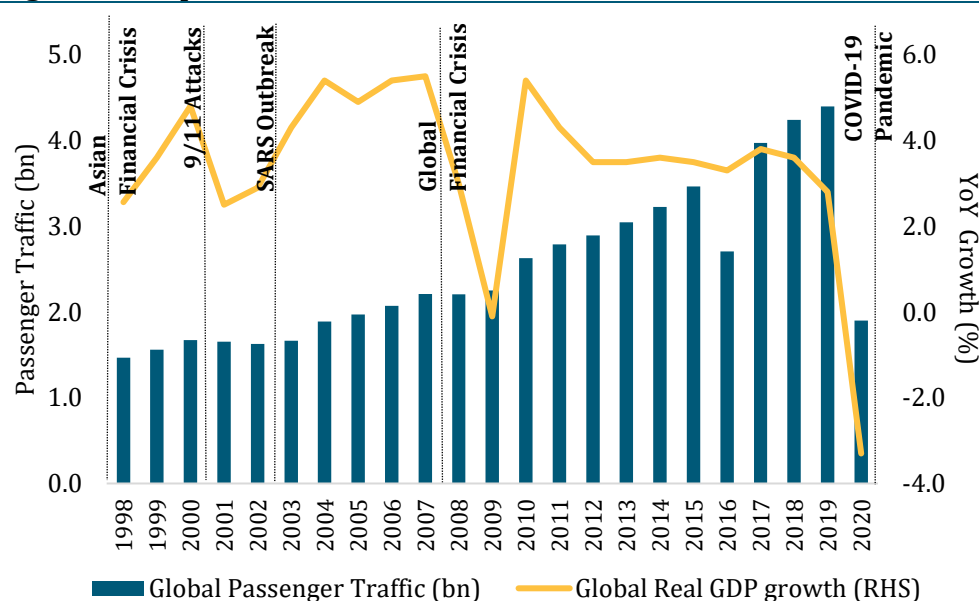
SECTION 4: POST-COVID-19 PANDEMIC RECOVERY

Economic Impact of COVID-19 on Civil Aviation

The Pandemic has had a Devastating Impact on the Global Aviation Industry

The COVID-19 pandemic is an unprecedented shock to the air travel industry. **This pandemic has had one of the largest and longest-lasting impact on air travel compared to previous crises** such as the September 11 attacks (2001), the SARS epidemic (2003), and the Global Financial Crisis (2008)²². According to the IATA, **the pandemic caused the global annual air passenger traffic to collapse by 66.0% YoY in 2020, which returned the air travel industry to 1998 level** (see Figure 29). At the lowest point in April 2020, the global revenue passenger kilometres (RPKs) flown contracted by 94.0% YoY.

Figure 29: Impact of Past Crises on Global Air Travel, 1998 – 2020



Source: IATA, IMF

Globally, the international air services remain marginal, whereas the domestic air services have largely returned to the pre-pandemic levels. In March 2021, the number of international routes and the average monthly flight frequencies were only half of March 2019 levels. On the other hand, the number of domestic routes had already returned to its pre-pandemic level by March 2021. Despite this, the average monthly domestic flight frequencies had been cut to 76.0% of March 2019 levels. Additionally, the global annual passenger revenues fell by USD418.0bn in 2020, reducing the passenger revenues back to 1993 level. **Passenger revenues were more severely affected than the passenger numbers during the pandemic due to the weak yields.**

²² IATA, <https://www.iata.org/en/iata-repository/publications/economic-reports/COVID-19-has-been-an-unprecedented-shock/> (17 March 2021).

More than 30 airlines have ceased operations in 2020²³, including NokScoot, Flybe, LATAM Argentina, Cathay Dragon, and AirAsia Japan, to name a few²⁴. These were largely due to the financial difficulties faced by these airlines or their parent companies prior to the pandemic, which were then exacerbated by the current health crisis and forced the grounding of planes.

The air cargo sector has been the silver lining in mitigating the impact of the pandemic. **The global air cargo demand has reached an all-time high in January 2021 and returned to the pre-pandemic levels for the first time since the onset of the pandemic**²⁵, driven largely by unprecedented growth in e-commerce. This can be contrasted with the decrease in belly cargo capacity due to the reduced passenger traffic. The air cargo volume in February grew even further, returning to the 2018 levels, seen before the US-China trade war.

Slight Improvement in Malaysia's International Air Connectivity in 1H21

During the height of the pandemic in 2020, Malaysia lost its connection to 104 international destinations, which accounted for a 96.0% reduction in international seat capacity. A similar negative trend was observed for all the ASEAN Member States due to the imposition of international border restrictions. However, **international air connectivity has slightly improved in 1H21**. Based on MAVCOM's Air Connectivity Index, Malaysia currently ranks fifth in ASEAN in 1H21, with a connectivity index of 13.0 (see Table 15). Nonetheless, there is still a wide gap between the current connectivity score and Malaysia's pre-pandemic index of 101.3.

Table 15: Air Connectivity Index of ASEAN Countries, 2020 – 2021

Countries	2020 Pre-Pandemic	2020 During the Pandemic	1H21
Singapore	122.1	5.4	23.4
Thailand	179.3	15.6	22.7
Philippines	101.3	7.8	21.4
Vietnam	108.0	9.8	20.0
Malaysia	101.3	4.9	13.0
Indonesia	110.9	4.9	12.9
Cambodia	26.7	1.1	2.2
Myanmar	14.8	0.7	1.2
Laos	7.2	0.6	0.7
Brunei	5.6	0.4	0.6

Source: MAVCOM, AirportIS

²³ KPMG, <https://assets.kpmg/content/dam/kpmg/ie/pdf/2021/01/ie-aviation-industry-leaders-report-route-to-recovery.pdf> (20 January 2021).

²⁴ The full list of airlines that have ceased operations in 2020 is included in Appendix A1.

²⁵ IATA, <https://www.iata.org/en/iata-repository/publications/economic-reports/air-freight-monthly-analysis---january-2021/> (2 March 2021).

At an airport level, KUL's air connectivity ranking increased from sixth to fourth among the busiest airports in ASEAN, with a connectivity score of 10.9 in 1H21 (see Table 16). For Malaysia's air connectivity, both at an airport and country level, to improve, steps must be taken to overcome the impacts of the pandemic. These are discussed in the next section.

Table 16: Air Connectivity Index of the Busiest Airports in ASEAN, 2020 – 2021

Airports	2020 Pre-Pandemic	2020 During the Pandemic	1H21
SIN	122.1	5.4	23.4
BKK	114.1	8.9	22.0
MNL	69.4	5.5	17.2
KUL	75.5	3.8	10.9
CGK	50.3	4.4	10.8
SGN	41.9	4.2	9.5
PNH	17.8	0.7	2.0
RGN	13.1	0.7	1.2
VTE	5.5	0.5	0.7
BWN	5.6	0.4	0.6

Source: MAVCOM, AirportIS

Coping Strategies for the New Normal

As the aviation industry looks beyond the pandemic to survive, it is vital for all the industry players to devise coping strategies to adapt to the new normal. The IATA expects the net airline industry losses of USD47.7bn in 2021 (2020: net loss of USD126.4bn), a 62.0% improvement on the back of 2020²⁶. Airports and airlines are working with governments to prepare for the restart of global connectivity when the pandemic recedes. However, in a market dominated by price-sensitive leisure travellers, one common factor prevails for the stakeholders: cost will become king²⁷.

Coping Strategies for the Airport Operators

The pandemic has forced airports to spend on new health and biosafety measures for the health and safety of passengers. For instance, the associated costs include terminal and facility disinfection and cleaning costs, installation of protective barriers at counters, and investments in touchless or low touch technologies. These increased costs but decreased passenger traffic would affect airports' profitability.

It is recommended for airports to match their terminal operations with flight activities²⁸. This is to minimise the overall cost by continuing to safely operate with limited services. Hence, airports could review all the scheduled flight operations, as well as the charter flight itineraries. Most importantly, **airports may consider focusing on technology, digitalisation, and innovation** to create demand and boost revenue while reducing overall costs at the same time.

Digital identity can be leveraged for non-aeronautical revenue generation²⁹. This may include passengers using digital identities to execute transactions at airport retail zones. This reduces the number of physical exchanges using currency or documentation, thereby reducing the risk of disease transmission.

Additionally, **airports may focus on their ability to raise liquidity and cash.** During this period, airports may utilise all means possible to manage their debts while managing their operating cash flow. Moreover, **airports may revise their budget and consider reviewing their capital expenditure projects.** Essentially, they must decide whether to defer, cancel, or continue capital plans, as some projects may be worth spending if cost savings and productivity enhancement can be anticipated. This allows airports the opportunity to grow after the negative impact of COVID-19 has passed. Also, **airports could continue building their commercial strategies and brands.** Even during these uncertain times, it is important for airports to engage with their passengers to boost their confidence in air travel to stimulate future demand.

²⁶ IATA, <https://www.iata.org/en/pressroom/pr/2021-04-21-01/> (21 April 2021).

²⁷ CAPA, <https://centreforaviation.com/analysis/reports/this-is-a-big-downturn-beyond-comprehension-capalive-541670> (28 October 2020).

²⁸ For more details, please refer to the various articles in the Airports Council International (ACI) Insights, accessible on <https://blog.aci.aero/articles>.

²⁹ ACI – The Future of Travel and Digital Identity at Airports Report (May 2021).

MAHB, the major aerodrome operator in Malaysia, has implemented some of these strategies in its 5-Year Strategy and Transformation Plan³⁰. The plan aims to make Malaysian airports financially sustainable, impact-driven, and technology-focused, which is in line with the recommendations above.

Survivorship of Airlines Depends on How Airlines are Managing their Debt

As the industry recovers, airlines will continue managing their cash burn throughout the year. Since the onset of the pandemic, Malaysian carriers had retrenched about 40.0% of their employees³¹ and reduced their fleet sizes to manage their cash burn rate.

According to the IATA, the debt of global airlines has increased to over USD650.0bn³². Exceptional debt leverage to equity and cash flows will shape the recovery period for airlines, which will be forced to either raise equity or use free cash flow to deleverage. There will be limited ability to invest in fleets or reward investors in the initial recovery period.

Airlines have been struggling to halt cash burn in 2021 due to the increasing cost of jet kerosene. Meanwhile, the high levels of debt accumulated before and during the pandemic will compel airlines to adopt a more conservative approach. Globally, based on an IATA Survey, 67.0% of airlines highlighted that they would reduce flight frequencies, while 55.0% stated that they would shrink their network³³. Airlines may consider reintroducing capacity at the most opportune time to avoid further cash burn. 70.0% of airlines also reported that a reduction in their workforce will continue to affect operations as the pandemic prolongs.

Government Assistance

As at end of 1Q21, governments around the world have provided USD227.0bn in support, which includes direct aid, wage subsidies, and various tax reliefs to the aviation industry³⁴. The level of government support for the aviation sector contrasts widely between jurisdictions.

In Malaysia, there have been various assistance and initiatives provided to the aviation and tourism industries. These comprise both financial and non-financial assistance with the latter including flexibility in industry regulations (see Table 17).

³⁰ MAHB, https://mahb.listedcompany.com/misc/ar/mahb_ar2020.pdf (2021).

³¹ Data from ASL Holders.

³² IATA, <https://www.iata.org/en/iata-repository/pressroom/presentations/infrastructure-costs-at-global-media-days-july-2021/> (7 July 2021).

³³ IATA, <https://www.iata.org/en/iata-repository/publications/economic-reports/business-confidence-survey---april-2021/> (21 April 2021).

³⁴ IATA, <https://www.iata.org/en/iata-repository/publications/economic-reports/airline-industry-economic-performance---april-2021---report/> (21 April 2021).

Table 17: Assistance and Initiatives Provided to the Aviation and Tourism Industries in Malaysia

Stakeholders	Assistance and Initiatives
GOM	<ul style="list-style-type: none"> Review of aviation services charges i.e. passenger service charge, landing and parking charges, as well as other charges by MAVCOM (work-in-progress) Establishment of a mega vaccination centre at KUL for the frontliners of the aviation sector Various wage subsidy programmes through PRIHATIN, Budget 2021, PERMAI, PEMERKASA, PEMERKASA+, and PEMULIH³⁵ Employment insurance scheme by the Social Security Organisation 15.0% discount on monthly electricity bills RM50.0bn credit guarantee scheme made available for companies to apply Jom Cuti-Cuti Malaysia campaign by Tourism Malaysia from 31 December 2020 until 31 March 2021 Reskilling allocation of RM20.0mn Loan moratorium for individuals and businesses
MAVCOM	<ul style="list-style-type: none"> Granted flexibility in ASL renewal evaluation process Allowed airlines to retain their existing portfolio of ATRs if unutilised for six months Temporary partial suspension of the domestic ATR application evaluation to enable quicker delivery of domestic ATR approvals and stimulate market demand Extension of grace period for airlines to resolve consumer complaints and refunds from 30 days to 60 days Non-enforcement for non-compliance with The Malaysian Aviation Consumer Protection Code 2016 requirements from February 2020 until September 2021 Non-enforcement of Quality of Service penalties for MAHB from February 2020 until September 2021 Enhancements to FlySmart by providing travel advisories to consumers (work-in-progress)
Civil Aviation Authority of Malaysia	<ul style="list-style-type: none"> Deferment of payment for fees and charges Exemption for carriage and stowage of cargo in aircraft passenger bin—allows cargo in passenger cabin and cargo on seats Track shortening for operating aircrafts—helps minimise fuel burns and reduces carbon emission Reduce airport operating hours

³⁵ Pakej Rangsangan Ekonomi Prihatin Rakyat (PRIHATIN), Perlindungan Ekonomi dan Rakyat Malaysia (PERMAI), Program Strategik Memperkasa Rakyat dan Ekonomi (PEMERKASA), PEMERKASA+, and Pakej Perlindungan Rakyat dan Pemulihan Ekonomi (PEMULIH).

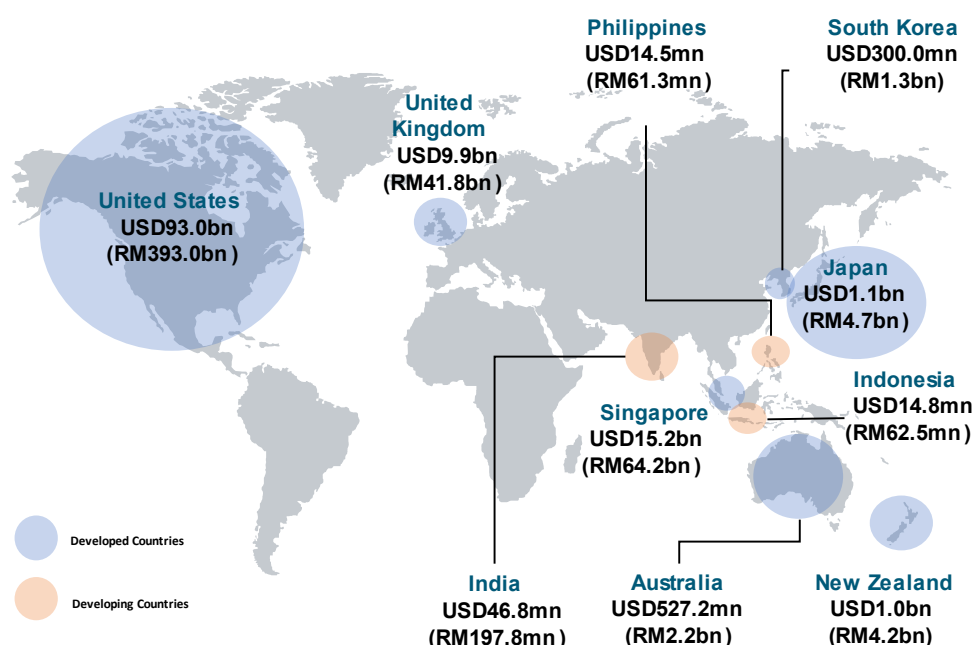
Stakeholders Assistance and Initiatives

- Collaboration with the National Slot Coordination Malaysia to improve the predictability of traffic demand

Source: GOM, MAVCOM, CAAM

Figure 30 highlights the various government assistance packages in selected jurisdictions for the aviation industry in 2020 and 2021.

Figure 30: Government Assistance Packages in Selected Jurisdictions for the Aviation Industry Disbursed in 2020 and 2021



Source: MAVCOM Analysis, IATA

Note: Exchange rates as at 23 August 2021

In 2020, the support in Asia for airlines was rather sporadic, from the full support shown by Singapore for its flag carrier and to Thailand, the Philippines, and India where their carriers have initially been denied financial assistance from their respective governments³⁶. In 4Q20, Indonesia's Ministry of Transportation provided its aviation industry with a stimulus package worth USD14.8mn.

In 2021, some governments have eased their stance on providing support to the aviation sector. In May 2021, the Indian Government announced the inclusion of the civil aviation sector into the Emergency Credit Line Guarantee Scheme (ECLGS), a move that is expected to provide liquidity for the sector. Similarly, in July 2021, the Thai Government announced that it would be extending relief measures to airlines until the end of the year. The measures include extended credit terms, reduced landing and parking fees, and a late

³⁶ Ch-aviation, <https://www.ch-aviation.com/portal/news/93061-air-india-lays-off-cabin-crew-pilots-govt-rejects-funding> (15 July 2020).

payment penalty waiver³⁷. The Singapore Government also announced a USD640.2mn OneAviation Support Package for the aviation sector in Budget 2021. The package will enable aviation companies to preserve their core capabilities and maintain Singapore's position as an aviation hub post-pandemic³⁸.

The US Congress has provided the biggest stimulus package in the aviation sector with USD93.0bn that has been disbursed thus far to help the airlines keep their employees on the payroll. The UK Government has supported its airlines with furlough payment schemes, with larger firms being eligible for the COVID Corporate Financing Facility (CCFF) scheme. It was designed to boost liquidity through the purchase of short-term debt in the form of commercial paper. Out of the total disbursements, the majority has been provided as guarantees for loans to airlines through the United Kingdom Export Finance (UKEF) of USD4.7bn.

In July 2020, **the European Central Bank (ECB) endorsed a USD879.5bn recovery instrument called Next Generation EU (NGEU)**. This was accompanied by a revamped EU budget of USD1.3tn to support the hardest hit sectors of the EU economy, including the aviation sector. The disbursements are expected to begin in 3Q21 to aid the airline industry in its respective jurisdictions as part of the EU's substantial packages of wider economic measures. Some of the EU Member States have relied extensively on fiscal policy. However, the cost of survival for airlines has seen a massive increase in fiscal debt, as almost half of government aid has been in the form of debt.

A Unified Approach is Essential in Building a Resilient Recovery

A harmonised approach among governments worldwide is crucial to re-establish international travel. In July 2021, the World Health Organization (WHO) published policy considerations for implementing a risk-based approach to international travel in the context of COVID-19. The guidance document recommends that national authorities³⁹:

- not require proof of vaccination as a mandatory condition for entry or exit;
- lift measures such as testing and/or quarantine requirements for passengers who have been fully vaccinated and have not had previous COVID-19 infection within the past six months;
- offer alternatives for unvaccinated individuals to travel, such as through the real-time reverse transcription Polymerase Chain Reaction (rRT-PCR) tests or antigen detection rapid diagnostic tests (Ag-RDTs);
- only implement test and/or quarantine measures to international passengers in a risk-based manner;
- review policies for testing and quarantine regularly to ensure they are lifted when no longer necessary; and

³⁷ Bangkok Post, <https://www.bangkokpost.com/thailand/general/2146347/airlines-win-covid-relief-aid-extension> (10 July 2021).

³⁸ CNA, <https://www.channelnewsasia.com/singapore/budget-2021-aviation-travel-sector-870-million-aid-arts-sports-354571> (16 February 2021).

³⁹ WHO, <https://apps.who.int/iris/rest/bitstreams/1354080/retrieve> (2 July 2021).

- communicate any changes to international health-related measures and requirements in a timely and adequate manner to promote and enable adherence.

Closer to home, aside from the mass vaccination currently being administered, **the ASEAN Member States are working closely together on an ASEAN Travel Corridor Arrangement Framework (ATCAF)**. This may hopefully resuscitate an intraregional travel and tourism market that accounted for more than 50.0mn annual visitor arrivals before the pandemic⁴⁰. Having originally been submitted for approval at the 36th ASEAN Summit in June 2020, the plan for a network of travel corridors in ASEAN is expected to be completed within 2021. The main concept behind ATCAF is to open up channels for business travel and commerce between the ASEAN Member States. The first phase of the scheme will not permit leisure travel or the unrestricted flow of people between the ASEAN Member States.

In November 2020, ASEAN endorsed the ASEAN Comprehensive Recovery Framework (ACRF) comprising five broad strategies serving as the consolidated exit strategy from the pandemic. The tourism industry has been identified as one of the hardest hit sectors that needs accelerated sectoral recovery and safeguarding of employment. According to the ACRF, before the pandemic, the tourism sector in ASEAN contributed 14.3% of the GDP, and 13.7% of total employment for ASEAN in 2019⁴¹. However, in 2020, the tourism sector had seen the international tourist arrivals in ASEAN declining by 80.5% YoY and accumulating losses of 75.8% YoY in tourism receipts. Despite tourism being a significant contributor towards ASEAN's GDP, essential business travel has been ranked as the top priority for the ASEAN bloc, in a move designed to revive local business interests without compromising pandemic containment.

Concurrently, with the recent regulation of the EU Digital COVID Certificate (EDCC) entering into application in July 2021, ASEAN may leverage its best practices and improvise from the implementation of the EDCC to accommodate its 675.8mn population⁴². Given that long-haul international travel may take a long time to recover, intra-ASEAN travel can be the first international segment for the industry to capitalise on. In 2019, ASEAN passengers contributed as much as non-ASEAN passengers (24.5% vs. 24.7%) to the total passenger traffic in Malaysia. Some ASEAN Member States such as Indonesia and Thailand have reopened their borders to international tourists recently, albeit in smaller and contained tourist areas such as Bali and Phuket⁴³.

⁴⁰ ASEAN, <https://asean.org/asean-declaration-asean-travel-corridor-arrangement-framework/> (12 November 2020).

⁴¹ ASEAN, https://asean.org/storage/2020/11/2-FINAL-ACRF_adopted-37th-ASEAN-Summit_12112020.pdf (12 November 2020).

⁴² UN estimates, as at 6 August 2021.

⁴³ Bloomberg, <https://www.bloomberg.com/news/newsletters/2021-06-19/thailand-s-travel-experiment> (19 June 2021).

More EU Member States are taking steps to reopen borders⁴⁴ by making travel affordable with the use of antigen testing. However, this method is not universally implemented across the EU. Many EU Member States have yet to significantly ease borders at all. These fragmented policies should be replaced with a more consistent approach in line with the policy recommendations of WHO and the EU.

A consistent approach across the EU is required if the EDCC also known as EU Digital Green Pass is to be implemented effectively. **Governments need to allow digital certificates and vaccination passports to be integrated with passenger applications, such as the IATA Travel Pass, to relieve pressure on airports.** A data-driven approach is essential in guiding countries to introduce targeted policies to keep populations safe, while concurrently moving towards recovery.

Table 18 compares the different key features of the digital vaccine certificates during COVID-19 travel for the two regions.

Table 18: Regional Digital Vaccine Certificates During COVID-19 Travel

Regions	Key Features
EDCC	<ul style="list-style-type: none"> • The regulation entered into application at the beginning of 3Q21 • A digital proof that a person has either been vaccinated, received a negative test result, or recovered from COVID-19 • Accepted in all EU Member States • Contains a QR code with a digital signature to protect it against falsification • Exempted from free movement restrictions⁴⁵
ATCAF ⁴⁶	<ul style="list-style-type: none"> • To allow essential business travel first among member states, and then extended to tourists at a later stage • A common set of pre-departure and post-arrival health and safety measures across member states

Source: European Commission, ASEAN

⁴⁴ See Appendix A2 for examples of the relaxation of COVID-19 border measures in selected jurisdictions in the EU and the UK as of August 2021.

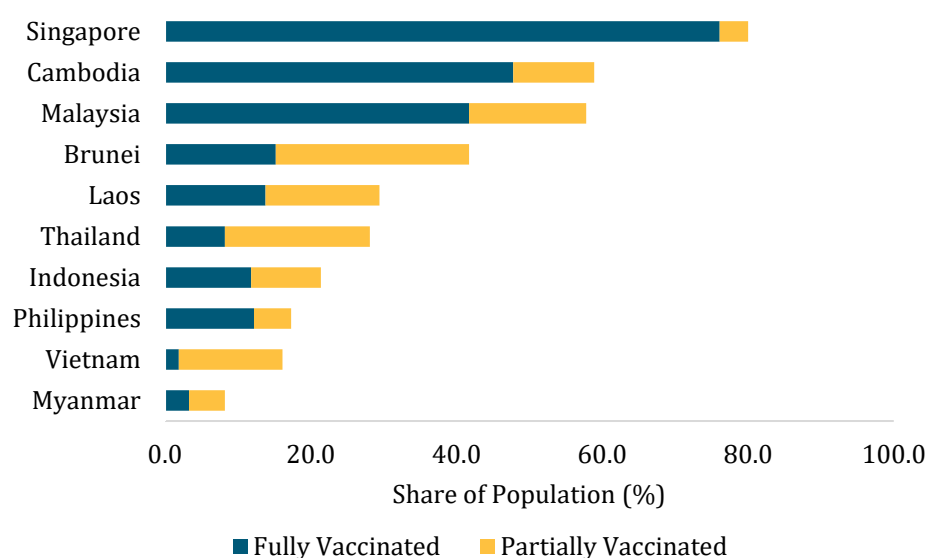
⁴⁵ Free movement is a fundamental right in the EU.

⁴⁶ ATCAF has yet to be finalised as at 18 June 2021.

Unequal Travel Restart

Countries need to agree to a consistent vaccine recognition and certification, especially for vaccines recognised under the WHO. This will assist in facilitating travel, tourism, and economic recovery in the near future, without having to deal with restrictions of specific vaccine recognitions. Malaysia has emerged within the top 3 of the ASEAN Member States in terms of the percentage of people who have received at least a first dose of COVID-19 vaccine (see Figure 31).

Figure 31: The COVID-19 Vaccination Race in ASEAN

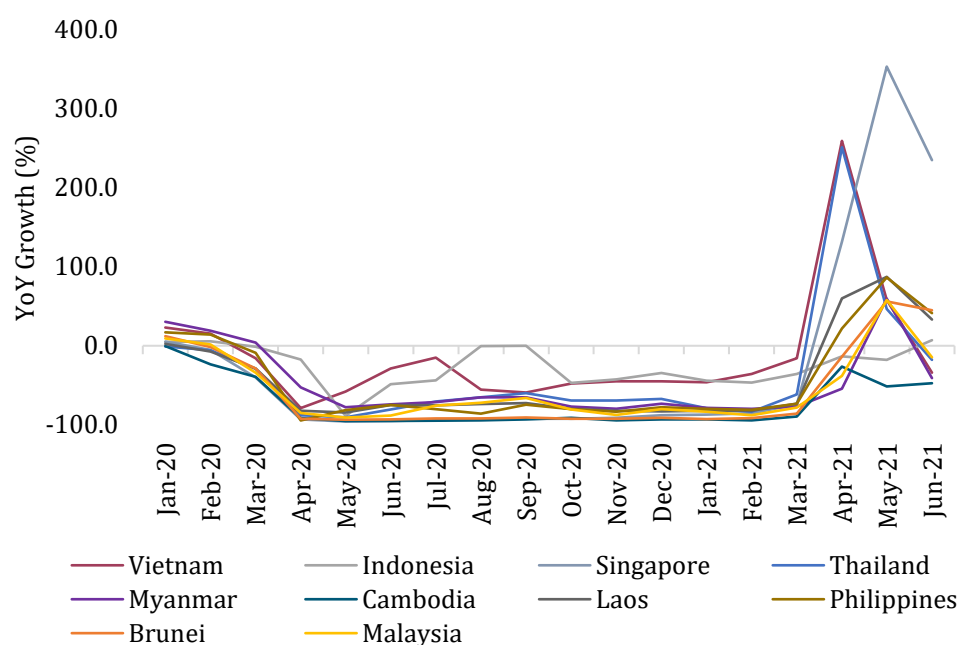


Source: Oxford University's Our World in Data

Note: As at 26 August 2021

Due to the differing timelines of the vaccine rollouts, as well as the containment measures of the COVID-19 pandemic in each country, the seat capacity growth among the ASEAN Member States is recovering at different rates (see Figure 32). Some ASEAN Member States such as Singapore, Vietnam, and Thailand experienced growth in their seat capacity of more than 200.0% YoY in 2Q21 due to the low base effect. In comparison, Malaysia's seat capacity only reached a peak growth of 57.9% YoY in May 2021. Overall, most ASEAN Member States showed a similar downward trend in seat capacity growth following the spike in the number of COVID-19 cases in June 2021.

Figure 32: ASEAN Seat Capacity Growth, 2020 – 2021



Source: AirportIS

As ASEAN accelerates its vaccination efforts for its population for the eventual resumption of global travel, there is a growing concern on vaccine acceptance among countries due to the ever-changing cross-border travel restrictions. Hence, the type of vaccine received determines if a traveller can have entry into a country or destination. **To date, Malaysia has approved 6 out of the 8 major vaccines listed in Table 19.** The vaccination recognition status in each country is imperative for the development of future travel bubbles and the opening of international borders.

Table 19: COVID-19 Vaccinations Recognised for Cross-Border Travel by Selected Countries and Regions

Countries /Regions	AstraZeneca	Pfizer-BioNTech	Sputnik V	Sinopharm	Moderna	Johnson & Johnson	Covishield	Sinovac
Malaysia	✓	✓		✓	✓	✓		✓
Singapore	✓	✓		✓	✓	✓		✓
Thailand	✓	✓		✓	✓	✓		✓
Philippines	✓	✓	✓	✓	✓	✓		✓
Indonesia	✓	✓		✓	✓			✓
Brunei	✓	✓		✓	✓			
Vietnam	✓	✓	✓	✓	✓	✓		
Laos			✓	✓				✓
Myanmar			✓				✓	
Cambodia	✓			✓				✓
US		✓			✓	✓		
UK	✓	✓			✓	✓		
EU	✓	✓			✓	✓		
China				✓				✓
Australia	✓	✓			✓			
NZ	✓	✓				✓		

✓ Approved Undergoing Evaluation Not Approved

Source: McGill University's COVID-19 Vaccine Tracker, National Health Authorities

Note: As at 26 August 2021, subject to change

A unified approach on vaccination recognition is vital for the resumption of international tourism. According to the IATA's latest survey, about 89.0% of travellers agreed that governments must standardize vaccinations and testing certifications⁴⁷. Despite the vaccines being approved by the WHO, it is essential for travellers to check with the national health authorities of the destination countries on whether the vaccine taken is accepted as valid proof of COVID-19 immunity. This is due to the ongoing evaluation of vaccine recognition by countries.

Future Travel Trends

Local Before Global

With many international travel restrictions still in effect, **the near-term biggest anticipated travel trend is an increase in the domestic, short-haul travel for the fully vaccinated passengers**⁴⁸. The increase in the number of passengers experienced towards the end of 2Q20 as domestic travel restrictions were eased is indicative of the post-lockdown air travel trend. The domestic region experienced the greatest recovery in 3Q20. This was despite borders being opened only for several months, namely in the 1Q20, then from the 3Q20 before the MCO was reimplemented. Hence, the aviation sector's resilience is demonstrated by rebounds in the domestic markets without travel restrictions.

The pandemic is transforming traveller preferences and behaviours. Travellers are becoming more conscious with an increased desire to travel to destinations that are aligned with their values and where they can have a positive impact on communities⁴⁹. 59.0% of travellers are interested in 'philantourism', the act of choosing a vacation or an experience to support a destination through tourism. Additionally, 60.0% of travellers plan to reconnect with immediate family for their first trip, followed by friends⁵⁰. According to AMEX, **an increase in air travel demand is expected due to the rise of pent-up demand, with 56.0% of travellers indicating that they are willing to book a trip even if there is a chance that it might be cancelled in the future.**

Hence, adequate planning for operational readiness remains essential in preparing for the restart of international travel to match the pent-up demand of incoming travellers. Airlines and airport operators should activate their business continuity planning processes to ensure smooth operations in a controlled environment.

⁴⁷ IATA, <https://www.iata.org/en/pressroom/pr/2021-07-21-01/> (21 July 2021).

⁴⁸ Details are provided in MAVCOM's upcoming Consumer Report.

⁴⁹ AMEX, Global Travel Trends Report 2021 (January 2021).

⁵⁰ Airbnb and YouGov, <https://news.airbnb.com/ms/connecting-with-loved-ones-a-priority-for-malaysians-in-2021-airbnb-survey/> (15 March 2021).

Relaxation of Travel Restrictions and Affordable COVID-19 Testing are Key Factors for an Efficient Travel Restart

The relaxation of travel restrictions will be a vital step towards the aviation industry's recovery. In an attempt to re-establish global air connectivity, "Test and Fly" screening programmes have been set out to resume safe, post-pandemic travelling. Testing sites have been in effect at various airports in Hong Kong and across the UK, including Hong Kong International Airport, Heathrow Airport T2 and T5, Manchester Airport, Stansted Airport, and Luton Airport⁵¹. **However, to facilitate an efficient restart of international travel, COVID-19 testing should be made affordable as well as timely, widely available, and effective for passengers⁵².** It is worth noting that only France has complied with the WHO's recommendation for the government to bear the cost of testing for travellers.

According to an IATA sampling of costs for COVID-19 screening tests in 16 countries (including Malaysia), **adding COVID testing costs to airfares may substantially increase the cost of flying⁵³.** Hence, it is imperative for governments—as part of their growth strategy in assessing the feasibility of health safety protocols once international travel restrictions are lifted—to ensure that the high costs for COVID-19 testing will not deter passengers from travelling in the future. High testing costs might also incentivise the market for fake digital certificates. **It is essential for governments to ensure consistency across the board on mutual recognition of vaccination certificates and passports** to ensure a smooth transition on international travel recovery.

The IATA has been undertaking bi-monthly thematic traveller response surveys since February 2020. Based on these surveys⁵⁴, the biggest factors hindering the recovery of the industry are travel restrictions and quarantine measures⁵⁵ that effectively prevent a meaningful revival of travel.

In the March 2021 survey, about 84.0% of travellers revealed that they will not travel if it involves additional quarantine at the destination. The survey indicated that the pick-up in business travel will also take time, with 62.0% of travellers declaring they are unlikely to travel for business even after the virus is contained.

⁵¹ Airport Technology, <https://www.airport-technology.com/features/ready-jet-go-are-uk-airports-ready-for-a-june-departure-date/> (1 June 2021).

⁵² CAPA, <https://centreforaviation.com/analysis/reports/europe-lower-travel-barriers--testing-costs-key-to-aviation-recovery-559953> (6 May 2021).

⁵³ IATA, <https://airlines.iata.org/news/the-cost-of-testing-must-not-stop-travel-restart> (5 May 2021).

⁵⁴ IATA, <https://www.iata.org/contentassets/bc49a433b047432cbbfe77840d218ba9/covid-survey-march2021-briefing.pdf> (9 March 2021).

⁵⁵ See Appendix A3 for examples of the additional quarantine measures by selected countries as of August 2021.

The latest survey in July 2021 focused on the impact of COVID-19 related rules and requirements on passengers' willingness to travel. It highlighted that testing may hinder recovery, as 67.0% of travellers view testing arrangements as burdensome⁵⁶.

Meanwhile, the World Economic Forum (WEF) had published in April 2021 its survey on passengers' perception on vaccine passports. The survey respondents came from 28 countries, including Malaysia. It highlighted that most respondents are in support of vaccine certificates. The strongest support was from Malaysia, where 92.0% of people supported for vaccine certificates to be made mandatory for travel⁵⁷. As the testing capacity and vaccination rollout improve, the conditions for removing quarantine measures should be considered to reduce the burden on quarantine time costs of future travellers.

Restructuring, Deferrals, and Fleet Rightsizing Impact

COVID-19 has rendered airline fleet plans mismatched to market realities⁵⁸.

While there is no 'one-size-fits-all' approach, airlines have been deferring the delivery, reducing aircraft, adapting to new market developments, and reassessing long-term orders to realign their strategies with the aviation industry's bleak outlook (see Table 20). With many of their fleets likely to remain parked for an extended period, there will also be significant changes in the composition of existing fleets, as larger aircraft are retired early or grounded for the foreseeable future. Constant evaluation of the market trend is crucial for realigning fleet size to match changing demand with efficient connectivity and capacity.

⁵⁶ IATA, <https://www.iata.org/en/pressroom/pr/2021-07-21-01/> (21 July 2021).

⁵⁷ WEF, <https://www.weforum.org/agenda/2021/04/vaccine-passport-travel-covid-19/> (28 April 2021).

⁵⁸ CAPA, <https://centreforaviation.com/analysis/reports/COVID-19-disrupts-asia-pacific-airline-fleet-strategies-530975> (15 July 2020).

Table 20: Fleet Strategies for Malaysian Carriers

Airlines	Total	Parked	Active (>14 days)	Remarks
AirAsia	96x	86x (84x A320s, 2x A321)	10x (10x A320s)	2x new A321s sold to Russian client; AirAsia Group to return 14x A320s in 2021
AirAsia X	22x	20x A330s	2x A330s	3x A330s repossessed, leased to VietJet
Firefly	15x	3x ATR 72s	12x (9x ATR 72s, 3x B737s)	3x ATR 72s to be sold; to receive 7x B737s from MH
MAB	80x	37x (6x A330s, 3x A350, 6x A380s, 22x B737s)	43x (18x A330s, 3x A350s, 22x B737s)	7x B737s to be transferred to FY; 6x A380s to be disposed
Malindo Air	25x	14x (6x ATR 72s, 8x B737s)	11x (7x ATR 72s, 4x B737s)	7x B737s returning to lessor in June/July (result: nil B737-900ER)

Source: ASL Holders, News Site

Most Asia-Pacific airlines have been pursuing aircraft delivery delays in response to the crisis. Korean Air and Singapore Airlines are examples of airlines making substantial deferrals to push back spending commitments while also preserving their long-term fleet renewal strategies. Independent LCCs, such as AirAsia, are trying to spread out their vast number of deliveries.

In many cases, these negotiations are key aspects of broader airline restructuring efforts. MAB is relying on revised fleet and financial restructuring to achieve its goal of long-term stability. However, as with all airlines at the moment, the major factor determining its short-term prospects is how quickly demand recovers in its key markets.

The difficulty for airlines is that the projections underpinning recovery plans are extremely fluid due to the unpredictable demand shifts during COVID-19. This makes any recovery timetable forecast a moving target. While the timing remains uncertain, airlines' strategic changes and restructuring initiatives may improve their odds in the post-pandemic industry environment.

APPENDIX A

Table A1: Airlines that Ceased Operations in 2020

Airline	Country
Leeward Islands Air Transport - LIAT	Antigua
Flyest	Argentina
LATAM Argentina	Argentina
Tigerair Australia	Australia
LEVEL Europe	Austria
Air Georgian	Canada
One Airlines	Chile
Jet Time	Denmark
TAME EP	Ecuador
Germanwings	Germany
German Airways	Germany
SunExpress Deutschland	Germany
Cathay Dragon	Hong Kong
Air Deccan	India
Air Italy (previously known as Meridiana)	Italy
Air Asia Japan	Japan
Avianca Peru	Peru
Montenegro Airlines	Republic of Montenegro
Go2Sky	Slovakia
South African Airways	South Africa
South African Express	South Africa
NokScoot	Thailand
Atlasglobal	Turkey
Flybe	UK
Nantucket Express	US
Trans States Airlines	US
Compass Airlines	US
Ravn	US
Miami Air International	US
Shoreline Aviation	US
Expressjet	US

Source: KPMG

Table A2: Relaxation of COVID-19 Border Measures in Selected Jurisdictions in the EU and UK as of August 2021

Countries	International Travel During COVID-19
Germany	<ul style="list-style-type: none"> • Allow entry to EU travellers with a negative antigen test • Passengers from any other country is only possible for fully vaccinated passengers
France	<ul style="list-style-type: none"> • Opened to all countries except for those assessed as high risk • Passengers from medium-risk countries will need to provide proof of a negative COVID-19 antigen or PCR test taken less than 72 hours • Unvaccinated people must still self-isolate for seven days
UK	<ul style="list-style-type: none"> • Passengers who have been fully vaccinated under the UK vaccination programme and are returning from amber countries will be required to complete a pre-departure test before arrival, alongside a PCR test on or before Day 2 after arrival • Testing requirements for children vary according to age

Source: Foreign Affairs and Department of Health by Country

Table A3: Additional Quarantine Measures by selected Countries as of August 2021

Countries	International Travel During COVID-19
US	<ul style="list-style-type: none"> • All passengers, including US citizens, are required to have a negative COVID-19 test result no more than 3 days before travel or documentation of recovery from COVID-19 in the past 3 months • Get tested with a viral test 3-5 days upon arrival and stay home and self-quarantine for a full 7 days after travel
Australia	<ul style="list-style-type: none"> • Australian borders are only open to Australian citizens, permanent residents, and immediate family members • Travellers will be required to quarantine in a government-approved mandatory quarantine area for 14 days from arrival, exceptions include travellers who are either travelling from a green zone or in an exemption category • For inter-state travel, travellers must quarantine in the city of arrival for 14 days
Singapore	<ul style="list-style-type: none"> • Citizens and Permanent Residents returning from all countries/regions may return to Singapore without seeking entry approval • Travellers from low-risk countries are only subject to an On-Arrival PCR test • Travellers arriving from higher-risk countries/regions will be required to serve their Stay Home Notice (SHN) at an SHN Dedicated Facility (SDF) for 14 days

Source: Foreign Affairs and Department of Health by Country

APPENDIX B: DATA TABLES

Table B1: Malaysia's GDP Growth, 2019 – 2021

Year	YoY Growth (%)
1Q19	4.7
2Q19	5.0
3Q19	4.5
4Q19	3.7
1Q20	0.7
2Q20	-17.1
3Q20	-2.7
4Q20	-3.4
1Q21	-0.5
2Q21	16.1

Source: DOS

Table B2: Malaysia's External Trade, 2019 – 2021

Quarter	Total Export (RM bn)	Total Import (RM bn)	Export YoY Growth (%)	Import YoY Growth (%)
1Q19	239.7	199.2	0.9	-2.5
2Q19	247.7	215.1	1.1	-1.2
3Q19	249.5	213.7	-0.6	-5.3
4Q19	258.2	221.4	-2.4	-3.7
1Q20	238.7	201.7	-0.4	1.3
2Q20	210.3	182.7	-15.1	-15.1
3Q20	260.6	200.3	4.4	-6.3
4Q20	271.4	211.6	5.1	-4.4
1Q21	282.2	223.5	18.2	10.8
2Q21	303.4	247.0	44.3	35.2

Source: DOS

Table B3: Global and Malaysia's GDP Growth, 2015 – 2021F

Year	Global YoY Growth (%)	Malaysia YoY Growth (%)
2015	3.5	5.1
2016	3.3	4.2
2017	3.8	5.9
2018	3.5	4.7
2019	2.8	4.3
2020	-3.2	-5.6
2021F	6.0	3.0 – 4.0

Source: Bloomberg, BNM, IMF, MOF

Table B4: Malaysia's Tourist Arrivals, 2019 – 2021

Quarter	Tourist Arrivals (by air) (mn)	Total Tourist Arrivals (excluding air) (mn)	Total Tourist Arrivals (mn)	Total Tourist Arrivals YoY Growth (%)
1Q19	2.5	4.2	6.7	2.7
2Q19	2.3	4.3	6.7	7.2
3Q19	2.7	4.1	6.8	1.6
4Q19	2.1	3.8	6.0	-7.1
1Q20	1.6	2.6	4.2	-36.8
2Q20	0.0	0.0	0.02	-99.7
3Q20	0.0	0.0	0.05	-99.3
4Q20	0.0	0.0	0.03	-99.4
1Q21	0.0	0.0	0.03	-99.4

Source: Bloomberg, Tourism Malaysia

Table B5: NRP Phase Classifications for Malaysian States

Phase	State
1	Johor, Kedah, Kuala Lumpur, Melaka, , Putrajaya, Selangor
2	Kelantan, Pahang, Perak, Pulau Pinang, Sabah, Terengganu, Negeri Sembilan
3	Perlis, Sarawak
4	Labuan

Source: MAVCOM, GOM

Note: As at 26 August 2021

Table B6: Malaysia's Quarterly Passenger Traffic, 2019 – 2021

Quarter	Passenger Traffic (mn)	YoY Growth (%)
1Q19	26.4	4.4
2Q19	26.7	6.3
3Q19	27.9	8.7
4Q19	28.2	6.7
1Q20	19.1	-27.5
2Q20	0.8	-97.0
3Q20	4.7	-83.3
4Q20	2.1	-92.5
1Q21	1.7	-91.2
2Q21	1.3	62.0

Source: MAVCOM, AOL Holders

Table B7: Malaysia's Monthly Passenger Traffic, 2020 - 2021

Month	Passenger Traffic (mn)	
	Domestic	International
Jan-20	4.6	4.7
Feb-20	3.5	3.0
Mac-20	2.1	1.3
Apr-20	0.1	0.0
May-20	0.2	0.0
Jun-20	0.4	0.1
Jul-20	1.3	0.1
Aug-20	1.5	0.1
Sep-20	1.7	0.1
Oct-20	0.6	0.1
Nov-20	0.2	0.1
Dec-20	1.0	0.1
Jan-21	0.7	0.1
Feb-21	0.2	0.1
Mar-21	0.5	0.1
Apr-21	0.5	0.1
May-21	0.4	0.1
Jun-21	0.1	0.1

Source: MAVCOM, AOL Holders

Table B8: Malaysia's Passenger Traffic by Region, 2019 - 2021

Quarter	Passenger Traffic (mn)		
	Domestic	ASEAN	Non-ASEAN International
1Q19	13.1	6.5	6.8
2Q19	13.7	6.6	6.4
3Q19	14.3	6.7	6.9
4Q19	14.2	6.9	7.1
1Q20	10.2	4.5	4.5
2Q20	0.7	0.0	0.1
3Q20	4.4	0.1	0.2
4Q20	1.9	0.1	0.2
1Q21	1.4	0.1	0.2
2Q21	1.1	0.1	0.1

Source: MAVCOM, AOL Holders

Table B9: Malaysia's Aircraft Movements, 2019 – 2021

Quarter	Aircraft Movement (thousand)	YoY Growth (%)
1Q19	230.0	1.2
2Q19	233.9	3.3
3Q19	243.4	4.5
4Q19	251.2	5.0
1Q20	203.4	-11.6
2Q20	32.4	-86.2
3Q20	80.7	-66.9
4Q20	57.2	-77.2
1Q21	48.6	-76.1

Source: MAVCOM, AOL Holders

Table B10: Oil, Jet Fuel, and Exchange Rate Trends, 2019 – 2021

Quarter	Crude Oil (USD/bbl)	Jet Fuel (USD/bbl)	RM/USD
1Q19	64	75	4.09
2Q19	68	78	4.15
3Q19	62	75	4.16
4Q19	62	74	4.16
1Q20	51	62	4.18
2Q20	33	32	4.32
3Q20	43	43	4.20
4Q20	44	49	4.10
1Q21	61	66	4.06
2Q21	69	74	4.15

Source: Bloomberg

Table B11: Malaysia's Total FTK, 2019 – 2021

Quarter	Inbound (mn)	Outbound (mn)	Within (mn)
1Q19	2,993.2	1,916.8	18.5
2Q19	3,066.6	1,806.1	18.9
3Q19	3,247.7	1,862.6	19.6
4Q19	3,052.2	2,203.1	18.8
1Q20	2,714.9	1,954.7	16.8
2Q20	1,429.5	1,220.9	15.3
3Q20	1,896.6	2,059.9	10.7
4Q20	2,156.6	2,300.3	15.3
1Q21	2,398.5	2,428.1	13.1
2Q21	2,500.6	2,298.3	9.9

Source: MAVCOM, CargoIS

Table B12: Malaysia's Passenger Traffic, 2015 – 2021F

Year	Passenger Traffic (mn)	YoY Growth (%)
2015	86.3	0.8
2016	91.7	6.2
2017	99.8	8.8
2018	102.5	2.7
2019	109.2	6.6
2020	26.7	-75.6
2021F	5.7	-78.7

Source: MAVCOM, AOL Holders

Table B13: Malaysia's Air Cargo Traffic, 2018 – 2021F

Year	Total FTK (mn)	YoY Growth (%)
2018	20,832	9.7
2019	20,222	-2.9
2020	15,797	-21.9
2021F	19,977 – 20,259	26.5 – 28.2

Source: MAVCOM, CargoIS

Table B14: Malaysia's Passenger Market Share by Airlines, 2019 – 2021

Quarter	AirAsia	AirAsia X	Firefly	MAB	Malindo	Others
1Q19	41.2	7.1	1.8	17.4	8.8	23.6
2Q19	42.2	7.2	2.1	17.8	7.3	23.4
3Q19	40.5	6.5	2.2	18.8	7.9	24.1
4Q19	40.3	6.9	2.1	19.0	8.0	23.7
1Q20	41.7	6.9	1.6	18.6	8.1	23.1
2Q20	19.5	1.4	14.3	29.5	16.3	19.1
3Q20	63.5	0.3	5.2	12.5	7.7	11.0
4Q20	63.7	0.7	5.2	8.1	6.7	15.6
1Q21	54.8	0.1	4.8	10.4	8.8	21.2

Source: MAVCOM, AirportIS

Table B15: Market Concentration Level and Load Factors, 2019 – 2021

Quarter	HHI	Load Factor (%)
1Q19	0.2163	81.0
2Q19	0.2255	80.1
3Q19	0.2129	76.3
4Q19	0.2121	78.1
1Q20	0.2228	64.1
2Q20	0.1511	20.4
3Q20	0.4474	38.8
4Q20	0.4120	35.8
1Q21	0.3266	37.3

Source: MAVCOM, AirportIS

Table B16: Malaysian Carriers' Average Fares and Load Factor, 2019 – 2021

Quarter	Load Factor (%)	Average Fare (RM)	
		Domestic	International
1Q19	81.2	192	470
2Q19	80.3	194	469
3Q19	76.4	215	509
4Q19	78.3	223	484
1Q20	67.1	209	521
2Q20	22.3	325	804
3Q20	45.9	227	791
4Q20	39.7	207	985
1Q21	42.8	193	937

Source: MAVCOM, AirportIS

Table B17: Market Shares of the Aerodrome Operations Segment by Revenue and Passenger Traffic, 2020

Company	Market Share (%)	
	Revenue	Passenger Traffic
MAHB	95.3	95.7
Senai Airport	4.5	4.3
TMDSB	0.2	0.0

Source: MAVCOM, AOL Holders

Note: TMDSB's passenger market share was approximately 0.005% in 2020

Table B18: Market Shares of Airports in Malaysia in Terms of Passenger Traffic, 2019 – 2021

Airport	Market Share (%)		
	2019	2020	1H21
KUL	62.3	48.9	35.9
Others	37.7	51.1	64.1

Source: MAVCOM, AOL Holders

Table B19: Breakdown of ATRs Awarded by Region, 2019 - 2021

Region	AirAsia	AirAsia X	Firefly	MAB*	Malindo	Raya Airways	MASwings	My Jet Xpress	WCA	Total
2019										
Domestic	23	-	3	13	18	-	1	2	-	60
ASEAN	31	3	1	10	10	4	-	1	-	60
Rest of ASIA	1	5	-	3	3	-	-	-	-	12
China	5	4	-	3	12	-	-	-	-	24
India	2	-	-	5	1	-	-	-	-	8
Australasia	-	-	-	4	2	-	-	-	-	6
Europe	-	-	-	-	-	-	-	-	-	0
Middle East	-	-	-	2	1	-	-	-	-	3
TOTAL	62	12	4	40	47	4	1	3	0	173
2020										
Domestic	10	-	5	8	1	6	-	5	-	35
ASEAN	4	-	-	5	1	1	-	2	-	13
Rest of ASIA	1	1	-	3	1	3	-	1	-	10
China	1	3	-	4	1	-	-	2	-	11
India	-	1	-	3	1	-	-	-	-	5
Australasia	-	-	-	-	1	-	-	-	-	1
Europe	-	1	-	2	-	-	-	-	-	3
Middle East	-	-	-	-	1	-	-	-	-	1
TOTAL	16	6	5	25	7	10	0	10	0	79
1H21										
Domestic	-	-	-	-	1	1	-	6	-	8
ASEAN	1	-	-	1	-	-	-	5	1	8
Rest of ASIA	-	1	-	1	-	-	-	-	-	2
China	1	2	-	4	-	-	-	6	-	13
India	-	-	-	-	-	1	-	2	-	3
Australasia	-	-	-	-	-	-	-	-	-	0
Europe	-	-	-	-	-	-	-	-	-	0
Middle East	-	-	-	-	-	-	-	-	-	0
TOTAL	2	3	0	6	1	2	0	19	1	34

Source: MAVCOM

Note*: Including MAB Kargo

Table B20: Malaysian Carriers' RASK and CASK Trends, 2019 – 2021

Quarter	RASK (sen)	CASK (sen)	RASK-CASK Spread (sen)
1Q19	15.9	17.3	-1.4
2Q19	15.8	18.5	-2.7
3Q19	16.0	18.2	-2.3
4Q19	17.3	18.8	-1.5
1Q20	15.6	20.1	-4.5
2Q20	50.4	322.2	-271.8
3Q20	20.9	51.2	-30.3
4Q20	31.4	130.9	-99.4
1Q21	41.9	74.2	-32.4

Source: MAVCOM, ASL Holders

Table B21: Malaysian Carriers' Revenue and Operating Profit Margin, 2019 – 2021

Quarter	Revenue (RM bn)	Operating Profit Margin (%)
1Q19	6.4	2.9
2Q19	6.4	-2.2
3Q19	6.2	-3.7
4Q19	6.6	2.1
1Q20	5.0	-20.5
2Q20	0.7	-280.7
3Q20	1.5	-113.7
4Q20	2.4	-105.7
1Q21	1.0	-653.0

Source: MAVCOM, ASL Holders

Table B22: AOL Holders' Revenue and Operating Profit Margin, 2019 – 2021

Quarter	Revenue (RM bn)	Operating Profit Margin (%)
1Q19	1.3	25.2
2Q19	1.3	30.4
3Q19	1.4	30.6
4Q19	1.4	17.7
1Q20	1.0	15.3
2Q20	0.3	-35.3
3Q20	0.4	-49.0
4Q20	0.3	-297.9
1Q21	0.3	-32.9

Source: MAVCOM, AOL Holders

Table B23: Revenue for Ground Handling Sub-Segments, 2019 – 2021

Year	Revenue (RM mn)		
	Catering	General Ground Handling	Refuelling
1Q19	85.6	233.7	9.7
2Q19	88.5	233.3	7.8
3Q19	96.6	238.0	9.0
4Q19	97.6	251.9	11.3
1Q20	71.8	557.6	11.1
2Q20	12.8	616.9	5.4
3Q20	3.1	584.8	6.5
4Q20	16.7	689.9	6.0
1Q21	10.4	691.6	6.1

Source: MAVCOM, GHL Holders

Table B24: Operating Profit Margin for Ground Handling Sub-Segments, 2019 – 2021

Year	Operating Profit Margin (%)		
	Catering	General Ground Handling	Refuelling
1Q19	2.7	9.2	2.4
2Q19	2.8	8.1	-14.7
3Q19	5.1	10.7	0.1
4Q19	9.7	-31.3	10.0
1Q20	-13.3	11.8	-4.9
2Q20	-195.8	23.3	-13.5
3Q20	-1594.9	21.2	-2.1
4Q20	-120.7	-6.5	-11.0
1Q21	-176.6	18.4	-11.6

Source: MAVCOM, GHL Holders

Table B25: Number of ASP Holders by Sub-Segment, 2021

Sub-segment	Number of Companies
Aerial work – cloud seeding, mapping	2
Oil & Gas	4
On-demand charter	7
Pleasure flying	2
Total	15

Source: MAVCOM

Table B26: ASP Holders' Revenue and Operating Profit Margin, 2019 – 2021

Quarter	Revenue (RM mn)	Operating Profit Margin (%)
1Q19	285.2	14.2
2Q19	267.4	3.6
3Q19	274.1	22.7
4Q19	342.3	-14.2
1Q20	320.5	18.4
2Q20	278.7	15.6
3Q20	271.4	10.9
4Q20	302.4	22.0
1Q21	265.1	16.6

Source: MAVCOM, ASP Holders

Table B27: Global Passenger Traffic and Real GDP Growth (%), 1998 – 2021

Annual	Global Passenger Traffic (bn)	Global Real GDP Growth (%)
1998	1.5	2.6
1999	1.6	3.6
2000	1.7	4.8
2001	1.7	2.5
2002	1.6	2.9
2003	1.7	4.3
2004	1.9	5.4
2005	2.0	4.9
2006	2.1	5.4
2007	2.2	5.5
2008	2.2	3.0
2009	2.3	-0.1
2010	2.6	5.4
2011	2.8	4.3
2012	2.9	3.5
2013	3.0	3.5
2014	3.2	3.6
2015	3.5	3.5
2016	2.7	3.3
2017	4.0	3.8
2018	4.2	3.6
2019	4.4	2.8
2020	1.9	-3.3

Source: IATA, IMF

APPENDIX C: LIST OF LICENCE AND PERMIT HOLDERS

Table C1: AOL Holders

No.	Company Name
1	Malaysia Airports (Sepang) Sdn. Bhd.
2	Malaysia Airports Sdn. Bhd.
3	Senai Airport Terminal Services Sdn. Bhd.
4	Tanjung Manis Development Sdn. Bhd.

Source: MAVCOM

Table C2: ASL Holders

No.	Company Name
1	AirAsia Bhd.
2	AirAsia X Bhd.
3	FlyFirefly Sdn. Bhd.
4	Malaysia Airlines Bhd.
5	Malindo Airways Sdn. Bhd.
6	MASwings Sdn. Bhd.
7	My Jet Xpress Airlines Sdn. Bhd.
8	Raya Airways Sdn. Bhd.
9	World Cargo Airline Sdn. Bhd.

Source: MAVCOM

Table C3: ASP Holders

No.	Company Name
1	Afjets Sdn. Bhd.
2	Cempaka Helicopter Corporation Sdn. Bhd.
3	Helistar Resources Sdn. Bhd.
4	Hevilift (M) Sdn. Bhd.
5	Hornbill Skyways Sdn. Bhd.
6	Jet Premier One (M) Sdn. Bhd.
7	Layang-layang Aerospace Sdn. Bhd.
8	MHS Aviation Bhd.
9	Myballoon Adventure Sdn. Bhd.
10	Plus Helicopter Services Sdn. Bhd.
11	Prima Air Sdn. Bhd.
12	Sabah Air Aviation Sdn. Bhd.
13	Sazma Aviation Sdn. Bhd.
14	Systematic Aviation Services Sdn. Bhd.
15	Weststar Aviation Services Sdn. Bhd.

Source: MAVCOM

Table C4: GHL Holders

No.	Company Name
1	AeroDarat Services Sdn. Bhd.
2	Aerohandlers Sdn. Bhd.
3	BCS Contract & Supply Services Sdn. Bhd.
4	Brahim's SATS Food Services Sdn. Bhd.
5	Cloudera Aviation Services Sdn. Bhd.
6	Conor Engineering & Services Sdn. Bhd.
7	Dviation Technics Sdn. Bhd.
8	Execujet Handling Services Sdn. Bhd.
9	Ground Team Red Sdn. Bhd.
10	Hasrat Asia (M) Sdn. Bhd.
11	Helitech Aviation Services Sdn. Bhd.*
12	Jets Fuels Sdn. Bhd.
13	KLM Line Maintenance Sdn. Bhd.
14	MAB Kargo Sdn. Bhd.
15	Mas Awana Services Sdn. Bhd.
16	MNM Aviation Services Sdn. Bhd.
17	Nusantara Aviation Services Sdn. Bhd.
18	Petron Malaysia Refining & Marketing Bhd.
19	Petronas Dagangan Bhd.
20	POS Aviation Sdn. Bhd.
21	Prosky Services Sdn. Bhd.
22	Safeair Technical Sdn. Bhd.*
23	Select Inflight Services Sdn. Bhd.
24	Shell Malaysia Trading Sdn. Bhd.
25	Shell Timur Sdn. Bhd.
26	Skypark FBO Malaysia Sdn. Bhd.
27	Smooth Route Sdn. Bhd.

Source: MAVCOM

Note*: These are no longer licence holders in 2021

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