



EXECUTIVE SUMMARY

In November 2019, the United States (US) Federal Aviation Administration (FAA) downgraded the Civil Aviation Authority of Malaysia (CAAM) to a Category 2 civil aviation authority, capping an already tumultuous decade for the Malaysian aviation industry. This is also particularly embarrassing considering Malaysia's re-election into the International Civil Aviation Authority (ICAO) Council for the 2019 – 2022 period just in the preceding month.

CAAM is both a technical regulator and provider of air navigation services in Malaysia. **A Category 2 rating indicates that CAAM may be deficient in one or more organizational and/or operational areas in its technical regulation role and not in its role as a provider of air navigation services.** It was reported that there were 33 issues raised in the US FAA findings pertaining to technical expertise, trained personnel, record-keeping, and/or inspection procedures. The US FAA audit findings have not been made public by CAAM or the Ministry of Transport (MOT).

The immediate consequence is that Malaysian carriers are banned from expanding existing routes to the US or operating new ones. This affects both direct routes operated by Malaysian carriers and those operated jointly with US airlines such as American Airlines Inc. (American Airlines). It is estimated that the revenue-at-risk for the Malaysian aviation sector is RM371.6mn, of which RM360.8mn is at risk for Malaysian carriers and RM10.8mn for aerodrome operators.

While the immediate impact of the downgrade is expected to be marginal, its **overall impact can be much greater if the US FAA audit triggers similar audits by other civil aviation authorities.** In 2018, 11.4% of total passenger traffic—translated into 7.1mn passengers—travelled between Malaysia and China, Japan, and South Korea on Malaysian carriers. If the civil aviation authorities of these countries follow the US FAA's actions, the estimated revenue-at-risk for the Malaysian carriers is RM4.0bn (24.0% of total revenue) while the corresponding value for aerodrome operators is RM0.4bn (24.9% of total revenue).

Additionally, **the indirect impact of the downgrade may be significant.** The reputation of Malaysia's aviation industry—tainted in recent years due to a series of mishaps—continues to be further affected. **The downgrade may compromise the effectiveness of CAAM's oversight, increase the cost of doing business, dent Malaysia's attractiveness as an aviation investment destination, and further damage Malaysia's reputation and credibility.**

A prolonged period in Category 2 may exacerbate these effects. There are doubts over CAAM's confidence in regaining its Category 1 status within the next 12 months. Thailand has yet to regain its Category 1 status after being downgraded in 2015 while the Philippines took six years to return to Category 1 in 2014 after being downgraded in 2008.

Additionally, it is unclear how CAAM's organizational and/or operational deficiencies will be resolved effectively. Currently, CAAM is neither financially nor functionally independent. While **the Government of Malaysia (GoM) stated that CAAM will move towards becoming financially independent using revised air navigation facility charges (ANFC), this may not be appropriate** as the charges are meant for developing air navigation services rather than financing CAAM's regulatory functions. Furthermore, the housing of CAAM's technical regulatory and air navigation service provider functions in one body points to serious governance concerns as it may open opportunities for regulatory capture and conflict of interest. The Civil Aviation Authority of Malaysia Act 2017 [Act 788] also provides that **CAAM may receive directions from the Minister regarding the performance of its functions and powers, hampering CAAM's independence further.**

The takeover of MAVCOM by CAAM is questionable as burdening CAAM with additional responsibilities over economic regulation will not aid its capacity to regain the Category 1 status. Indeed, these additional responsibilities will either be relegated in their importance or further stretch CAAM's already limited resources. **The MOT should be clearer on how its proposals will help CAAM regain its Category 1 status. Furthermore, it should consider more direct and fundamental reforms to improve CAAM's internal efficiency.**

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INTRODUCTION

Background

The Roles of the Civil Aviation Authority of Malaysia

CAAM is the civil aviation authority in Malaysia that oversees the management of safety and security of the civil aviation industry. CAAM's functions are separate from the functions of the MOT and MAVCOM (see Appendix 1). It undertakes two main functions, which are the technical regulator and provider of air navigation services in the country. Its technical regulatory role encompasses¹:

- ensuring airworthiness of aircraft;
- maintaining maintenance standards amongst aviation players;
- upholding safety and security of aircraft and airports;
- ensuring pilots and technical crew are properly qualified;
- maintaining environmental standards;
- maintaining air navigation standards rendered by air navigation service provider; and
- investigating aircraft accidents and incidents.

Additionally, CAAM's role as the provider of air navigation services for Malaysia-controlled airspace encompasses²:

- flight calibration; and
- air traffic management.

¹ CAAM (2019).

² Ibid.

CAAM was formerly known as the Department of Civil Aviation (DCA) prior to its corporatization in 2018 (see Box 1).

Box 1: Corporatization of the Department of Civil Aviation

The DCA was founded in 1969 under the Civil Aviation Act 1969 [Act 3]. As part of the GoM's privatization policy, the Airport and Aviation Services (Operating Company) Act 1991 [Act 467] was passed by the Malaysian Parliament. Subsequently, the asset ownership function for the industry was separated from its regulatory function to operationalize the privatization programme. Thereafter, Malaysia Airports Berhad³ was created to maintain, manage, and operate airports, while the regulatory function remained with the DCA.

The DCA evolved from an agency helmed by a Director-General under the MOT into a statutory body when it was corporatized⁴ on 19 February 2018 and it is now known as CAAM.⁵ CAAM was established under Act 788. CAAM's senior management consists of Board Members (including a Chairman) and a Chief Executive Officer. CAAM is responsible to the Minister. The Minister may give directions of a general character consistent with the provisions of civil aviation laws relating to CAAM's performance of its functions and powers and CAAM shall give effect to such direction.⁶

Civil Aviation Authority of Malaysia is Rated a Category 2 Civil Aviation Authority

On 11 November 2019, the US FAA announced that **CAAM did not meet the safety standards set by ICAO**. Consequently, **the US FAA rated CAAM as a Category 2 civil aviation authority**, which was a downgrade from a Category 1 rating that was assigned to CAAM in 2003. The assessment and rating are part of the US FAA's International Aviation Safety Assessment (IASA) programme. The US FAA audit was undertaken on CAAM's effectiveness as a technical regulator in Malaysia. The US FAA audit does not cover CAAM's role as the provider of air navigation service in the country.

A Category 2 classification indicates that a country's civil aviation authority is non-compliant in at least one of the Critical Elements (CEs) of an effective aviation oversight body specified by ICAO (see Appendix 2). These CEs include aviation legislation, technical personnel, and licensing and certification, among others. This means that **CAAM is deficient in one or more areas encompassing technical expertise, trained personnel, record-keeping, and/or inspection procedures**.

³ Incorporated as MAHB in 1999.

⁴ Corporatization is creating legal entities outside the government. A corporatized entity is typically empowered to manage and use the revenues it generates to cover its costs.

⁵ In this report, the authority/regulator will be referred to as DCA for pre-2018 discussion and CAAM for post-2018 discussion.

⁶ See section 18 of Act 788.

The Minister stated that there were 33 issues raised in the US FAA findings that led to the downgrade.⁷ However, the US FAA report has been classified as an official secret under the Official Secrets Act 1972 [Act 88] which prevents any information pertaining to it from being made public.⁸

Issues in CAAM have prevailed for years. It was highlighted during ICAO's Universal Safety Oversight Audit Programme (USOAP)⁹ in May 2016 that the then-DCA lacked qualified technical personnel.¹⁰ Additionally, in the MH370 Safety Investigation Report¹¹, the investigating team found that "*Malaysia does not enable an effective implementation of all ICAO Annex provisions*". The investigating team also noted that the then-DCA would consider the establishment of a State Safety Programme—an integrated set of regulations and activities aimed at improving aviation safety¹²—that would be applicable from November 2019 onwards. To date, the State Safety Programme has yet to be implemented.¹³

As a result of this downgrade, Malaysian carriers will not be able to increase services on existing routes, as well as, establish any new services to the US. This may impact the overall growth of the Malaysian aviation industry. The direct impact to passenger traffic and revenue due to the constraints imposed on Malaysian carriers' services to the US is expected to be minimal. However, the indirect impact will include **concerns over the effectiveness of CAAM's oversight, cost of doing business for industry players, Malaysia's attractiveness as an aviation investment destination, and the country's reputation and credibility.**

Furthermore, **if countries such as China, Japan, and South Korea follow the US FAA's action and downgrade CAAM, the effect to passenger traffic and revenue of Malaysian carriers and aerodrome operators would be greater.**

⁷ Syed Jaafar, S. (2019, November 19). CAAM to be made fully autonomous. *The Edge Malaysia*. Retrieved from <https://www.theedgemarkets.com/article/caam-be-made-fully-autonomous-%E2%80%94-mot>

⁸ Samarathisa, E. (2020). US aviation safety audit on Malaysia an official secret. *Focus Malaysia*. Retrieved from <https://focusmalaysia.my/mainstream/us-aviation-safety-audit-on-malaysia-an-official-secret/>

⁹ ICAO performs safety oversight audits under USOAP to track ICAO Member States' safety oversight capabilities, effectiveness, and development. Refer to later sub-section on p. 8 titled 'International Civil Aviation Organization'.

¹⁰ See for example the then-Minister of Transport's motion to restructure the DCA into a statutory body. House of Representatives. (2016). November 23 Debate (vol. 52).

¹¹ Safety Investigation Team for MH370. MH370 Safety Investigation Report. *Ministry of Transport, Malaysia*. Retrieved from <http://mh370.mot.gov.my/MH370SafetyInvestigationReport.pdf>

¹² See ICAO Doc 9859 for further information.

¹³ Chua, E. (2019, November 15). 'CAAM had inadequacies'. *The Star*. Retrieved from <https://www.thestar.com.my/news/nation/2019/11/15/caam-had-inadequacies>

All the Critical Elements Need to be Satisfied to Retain Category 1 Rating

Under the IASA programme, the US FAA determines whether other civil aviation authorities comply with ICAO's safety standards. These authorities are those from countries with designated carriers that fly or plan to fly to the US, or those that have codeshare arrangements with US carriers. The safety standards that the US FAA refers to are Annex 1 (Personnel Licensing), Annex 6 (Operation of Aircraft), and Annex 8 (Airworthiness of Aircraft) of the International Convention on Civil Aviation (Chicago Convention). The US FAA emphasized that the IASA programme does not address aviation security, airports or air traffic management. Additionally, the programme does not assess any individual airline operating inside or outside of a country.

The US FAA further highlights that the IASA programme focuses on eight CEs of an effective aviation safety oversight authority (see Appendix 2), which are in line with the ICAO Safety Oversight Manual (ICAO Document 9734). **For a country's civil aviation authority to be rated as Category 1, it must meet all eight CEs.**

Should a foreign carrier desire to conduct operations into the US, or codeshare with a US carrier, it will file for a permit from the US Department of Transportation (DOT). Upon doing so, the DOT will notify the US FAA of the application and request for the latter to evaluate the ability of the civil aviation authority of the foreign carrier to provide safety oversight for its carriers.

Out of the 101 countries and territories that fly to or have codeshare agreements with the US, seven are rated as Category 2. Meanwhile, out of the six Member States of the Association of Southeast Asian Nations that fly to or have codeshare agreements with the US, two are rated as Category 2, namely Malaysia and Thailand (see Appendix 3).

Potential Follow-on Action by Other Civil Aviation Authorities

An audit by the US FAA is usually matched by other civil aviation authorities. For example, after the US FAA downgraded Indonesia's Directorate General of Civil Aviation to Category 2 in April 2007, the European Aviation Safety Agency (EASA) followed suit by imposing bans on Indonesian airlines from flying to Europe in June of the same year. Similarly, EASA imposed a ban on the Philippines in 2010 following the downgrade of the Civil Aviation Authority of the Philippines (CAAP) to Category 2 by the US FAA in 2008.

Additionally, **civil aviation authorities may act against other civil aviation authorities that do not comply with the ICAO safety standards. This was provided for in the Chicago Convention**, where it states that *"no scheduled international air service may be operated over international or into the territory of a contracting State, except with the special permission or other authorization of the State, and in accordance with the term of such permission or authorization."* These authorities include supranational bodies such as ICAO and EASA, as well as, national bodies of individual countries.

International Civil Aviation Organization

ICAO performs safety oversight audits under USOAP. The aim of this audit programme is to track ICAO Member States' safety oversight capabilities, effectiveness, and development. The basis for the audit is to assess the status of the implementation of all safety-relevant ICAO Standards and Recommended Practices. The audit results validate the ICAO Member States' capability in performing safety oversight of their civil aviation industry.

ICAO may raise a Significant Safety Concern (SSC) on the Member States' ability to effectively oversee their carriers, airports, aircraft, and/or air navigational services providers. Thailand was instated an SSC by ICAO between June 2015 and October 2017. Meanwhile, Malaysia was last audited by ICAO in 2016 and no SSCs were raised at the time.

European Union Air Safety Committee

The European Commission periodically publishes the European Union (EU) Air Safety List—a list of carriers that are subject to an operating ban or operational restrictions within the EU. The ban is imposed on the carriers due to a lack of safety oversight by the civil aviation authorities from the respective States. The EU Air Safety Committee is responsible for assessing carriers' compliance to the ICAO safety standards by relying on the information gathered and reports issued by EASA, the EU Member States, ICAO, and the US FAA.

In 2007, the EU Air Safety Committee placed all Indonesian carriers including its national carrier, PT Garuda Indonesia (Persero) Tbk (Garuda Indonesia) on the EU Air Safety List and banned them from flying to Europe after a series of safety incidents and reported deteriorating safety standards. Although no Indonesian carriers flew to Europe at the time, the EU citizens were warned from flying with all Indonesian carriers on all other routes. Garuda Indonesia was eventually removed from the EU Air Safety List in 2009 after making improvements in its safety and maintenance standards.

Other National Civil Aviation Authorities

Other national civil aviation authorities may also conduct their own audits on another country's civil aviation authority. For example, the civil aviation authorities in China, Japan, and South Korea imposed restrictions on Thai carriers in 2015 due to the failure of the Civil Aviation Authority of Thailand (CAAT) to comply with the ICAO safety standards. Similarly, the Japanese and South Korean civil aviation authorities also imposed restrictions on Philippine carriers from flying into their airspace in 2010 after finding CAAP non-compliant with the ICAO safety standards.

IMPACT OF THE RATING DOWNGRADE

MAVCOM anticipates that the macroeconomic impact of the downgrade is marginal as the aviation industry's contribution to Malaysia's gross domestic product is an average of 0.55% between 2010 and 2015.¹⁴ This includes all activities related to air transport such as scheduled flights and airport and air navigation operations.

However, the microeconomic impact of the downgrade is expected to be greater, which is discussed in this Section.

Direct Impact

Impact on Passenger Traffic and Revenue is Expected to be Marginal due to Limited US Operations

The impact on Malaysia's passenger traffic in 2020 arising from the downgrade is expected to be minimal (see Waypoint: Malaysian Aviation Industry Outlook (December 2019)). Existing services that would directly be affected are the route between Kuala Lumpur International Airport (KUL) and Daniel K. Inouye International Airport (HNL) via Kansai International Airport (KIX) operated by AirAsia X Berhad (AirAsia X) and codesharing between Malaysia Airlines Berhad (MAB) and American Airlines (see Table 1). **In 2020, these routes are forecasted to contribute only 1.2% of the total seat capacity to and from Malaysia.**

Table 1: Existing Services between Malaysia and the US by Malaysian Carriers¹⁵

Malaysian Carrier	Route to/from the US	Commencement of Operations	Passenger Traffic (2018)
MAB	Codeshare with American Airlines for routes to and from Kuala Lumpur and Hong Kong, Japan, and the United Kingdom	January 2012	9,073
AirAsia X	KIX-HNL segment on the KUL-KIX-HNL service	June 2017	146,419

Source: AirportIS, ASL Holders

¹⁴ Based on the latest available Input-Output Table published by the Department of Statistics Malaysia. For details on the methodology to estimate the contribution of the civil aviation industry to the Malaysian economy, see MAVCOM's Technical Paper on the Aviation Sector Multiplier (2017).

¹⁵ As at December 2019, there are no foreign carriers operating between Malaysia and the US.

In terms of revenue, both MAB and AirAsia X may not be adversely affected due to the small revenue contribution from their US business. For MAB, the downgrade resulted in American Airlines removing their marketing code from MAB's flights i.e. stopping the sale of tickets on behalf of MAB for the codesharing routes. However, existing codeshare services between Malaysia and the US by MAB only contributed 0.23% of its total revenue in 2018.¹⁶ For AirAsia X, in terms of revenue, the services from Malaysia to HNL contributed 8.22% of its total revenue in 2018.¹⁷ The estimated revenue-at-risk for the Malaysian aviation industry is RM371.6mn, of which RM360.8mn is at risk for Malaysian carriers and RM10.8mn for aerodrome operators.

Nevertheless, news of the downgrade on 11 November 2019 had led to an immediate dip in the share prices of Malaysia Airports Holding Berhad (MAHB) and AirAsia Group (AirAsia). MAHB's stock closed RM0.15 (1.80%) lower at RM8.20 on the day after (i.e. 12 November 2019) the announcement compared to RM8.35 the previous day while AirAsia's stock closed 0.52% lower at RM1.92 compared to RM1.93 the previous day.¹⁸

In the case of Thailand, CAAT was downgraded to Category 2 by the US FAA on 1 December 2015 after ICAO raised an SSC in February of the same year. **Similar to Malaysia, share prices of Thai airlines also fell.** The share prices for Thai Airways International Public Co., Ltd., Nok Air, and Bangkok Airways Public Company Limited declined by 7.47%, 2.85%, and 4.41%, respectively, on the day after (i.e. 2 December 2015) the announcement.¹⁹

¹⁶ AirportIS.

¹⁷ AirportIS.

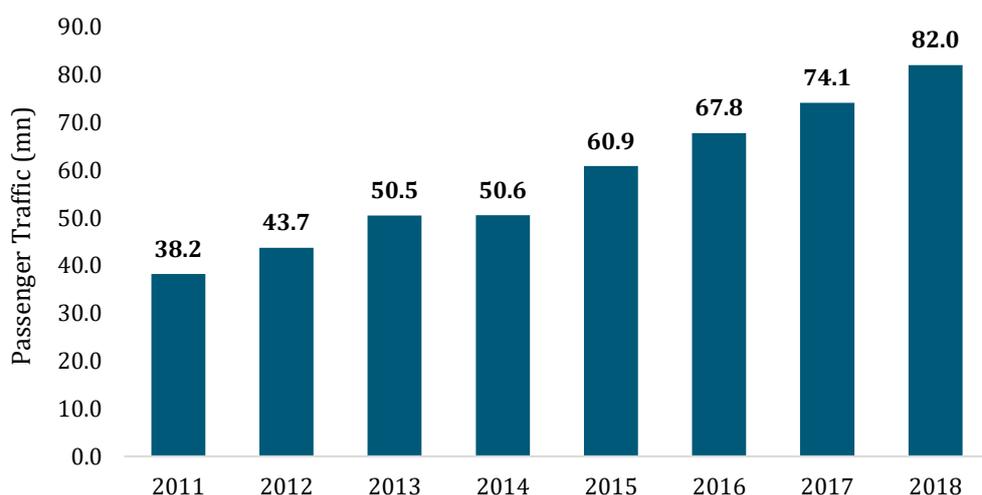
¹⁸ Bloomberg.

¹⁹ Bloomberg.

Impact on Passenger Traffic May Differ in Different Context

As regards passenger traffic, Thailand also experienced a marginal impact on its international passenger traffic for local carriers. However, in the case of Thailand, passengers would be able to opt for foreign carriers, which held 40% of scheduled seat capacity—rather than halting their travel altogether. As such, it can be observed that the overall international passenger traffic to and from Thailand had grown since 2011 (see Figure 1). **As for Malaysia, local carriers hold 80% of scheduled capacity and are thus more dominant. Hence, substitution may not occur at the same degree as in the case in Thailand.**

Figure 1: International Passenger Traffic to and from Thailand, 2011 - 2018



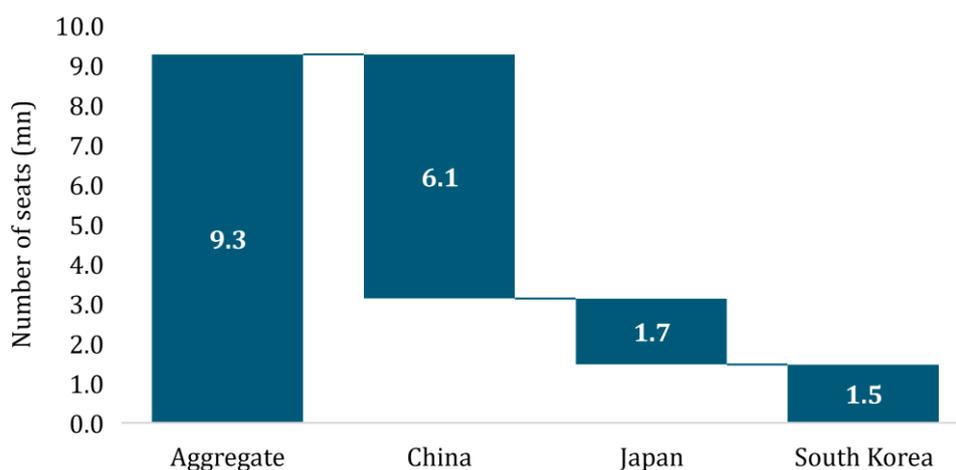
Source: AirportIS

Impact May be Greater if Other Civil Aviation Authorities Impose Similar Restrictions on Malaysian Carriers

Other civil aviation authorities such as those of China, Japan, and South Korea had restricted Thai carriers from flying into their airspace after ICAO raised an SSC on CAAT. Should they similarly prohibit Malaysian carriers from undertaking new operations to their respective countries, the impact will be greater than the downgrade by the US FAA. In 2018, 11.4% of total passenger traffic—translated into 7.1mn passengers—travelled between Malaysia and China, Japan, and South Korea on Malaysian carriers. It is estimated that seats by Malaysian carriers to these three countries contributed 8.6% of the total seat capacity (which made up 9.3mn seats) to and from Malaysia in 2019 (see Figure 2).

The estimated revenue-at-risk for the Malaysian carriers is RM4.0bn (24.0% of revenue) while the corresponding value for aerodrome operators is RM0.4bn (24.9% of revenue).²⁰ It should be noted that even if there are no official announcements of such restrictions, other civil aviation authorities may implicitly discriminate against Malaysian carriers in their internal decision-making—for example, fewer air traffic rights and unattractive airport slots may be offered by other States and airport authorities, respectively, to Malaysian carriers—which would add uncertainty to the prospects of Malaysian carriers arising from CAAM’s downgrade.

Figure 2: Number of Seats from Malaysia to China, Japan, and South Korea by Malaysian Carriers, 2019



Source: AirportIS

²⁰ AirportIS.

Indirect Impact

Continued Negative Impact on Industry Reputation and Development

The downgrade joins a series of aviation-related events and mishaps that have occurred in the industry over the last few years. These events have collectively contributed to a negative perception of Malaysia's aviation safety standards. The disappearance of MH370 in March 2014 had cast a shadow over the aviation safety standards in Malaysia, with the DCA and other government bodies being harshly criticized for their handling of the incident.²¹ In March 2019, a casualty at the Skypark Terminal Sultan Abdul Aziz Shah Airport (SZB) runway led to the suspension of two air traffic controllers as part of the incident investigation.²² Another incident happened in October 2019 where parts of the ceiling of the Subang air traffic control tower collapsed, leading to flight delays at SZB and KUL.²³

The downgrade is particularly embarrassing given Malaysia's re-election as an ICAO Council Member for the 2019 – 2022 period (see Box 2). Other than Costa Rica, Malaysia is currently the only other ICAO Council Member with a Category 2 rating civil aviation authority. Announced a mere month after Malaysia's re-election into the ICAO Council, it may damage Malaysia's influence and reputation in the international body for the rest of the Council's term.

Box 2: The ICAO Council

ICAO is a United Nations specialized agency that was first established as a provisional body at the Convention on International Civil Aviation, commonly known as the Chicago Convention. The Chicago Convention was signed on 7 December 1944 by 52 States and was later ratified on 5 March 1947. ICAO officially came into being on 4 April 1947.

ICAO currently has 193 Member States. Out of the 193 Member States, 36 are elected by the Assembly to be part of the ICAO Council for a three-year term (see Appendix 4). In the election, adequate representation is given to:

- States of chief importance in air transport;
- States not otherwise included but which make the largest contribution to the provision of facilities for international civil air navigation, and;
- States not otherwise included but whose inclusion will ensure that all major geographic areas of the world are represented on the Council.

²¹ See for example Leader of the Opposition's speech criticizing government bodies for communicating contradictory information. House of Representatives. (2014). March 13 Debate (vol. 4).

²² The Star. (2019, April 19). Subang airport accident: Two air traffic controllers suspended, says Loke. Retrieved from <https://www.thestar.com.my/news/nation/2019/04/19/subang-airport-accident-two-air-traffic-controllers-suspended-says-loke>

²³ Hassan, H. (2019, October 25). Parts of Subang Air Traffic Control's ceiling collapse, causing flight delays. *The Straits Times*. Retrieved from <https://www.straitstimes.com/asia/se-asia/parts-of-ceiling-at-subang-atc-collapse-causing-flight-delays>

The ICAO Council is one of two governing bodies of ICAO. Its mission is to function as a global forum for States on international civil aviation. Its five strategic objectives include safety, air navigation capacity and efficiency, security and facilitation, economic development of air transport, and environmental protection. The ICAO Council convenes the Assembly and appoints the Secretary General.

As mentioned previously, CAAM is a technical regulator overseeing the safety, maintenance, and security aspects of the civil aviation industry in Malaysia. The downgrade is likely to require the full and undivided attention of CAAM’s staff—currently reported as understaffed²⁴—to rectify the issues raised by the US FAA in order to regain its Category 1 rating. CAAM’s day-to-day operations are likely to be disrupted as resources may be fully diverted in regaining Category 1 status. This would likely affect several roles at CAAM—for example, this may cause a delay in the airworthiness inspection of aircraft and ineffective audit of maintenance standards among aviation players

Potential Negative Effect on Other Segments of the Value Chain and Functions of the Aviation Industry

The downgrade may affect CAAM’s oversight effectiveness, cost of doing business by industry players, Malaysia’s attractiveness as an aviation investment destination, and the country’s credibility in international civil aviation fora (see Table 2):

Table 2: Implications on Other Segments of the Aviation Industry

Areas	Examples	Implication
Effectiveness of CAAM’s oversight	Income and fees	<p>The effectiveness of CAAM’s oversight is heavily incumbent upon its ability to be financially independent.</p> <p>As a revenue generating stream, CAAM currently provides certifications to foreign carriers. This practice may now be unnecessary for airlines from nations classified in Category 1. At present, CAAM collects RM5,000 and RM1,000 per aircraft type for new and annual renewal of foreign airline operating certificates (AOCs), respectively.²⁵</p>

²⁴ Aziz, M. (2019, November 12). US FAA downgrades Malaysia to Category 2. *Maybank Investment Bank Research*, p. 1.

²⁵ CAAM.

Areas	Examples	Implication
	Certification of US-registered aircraft	US-registered (or N-registered) aircraft cannot undergo re-certification to be a Malaysia-registered (or 9M-registered ³⁰) aircraft, which disallows them to be parked in Malaysia for more than six months. For example, an ASP Holder in Malaysia who depends on US-registered aircraft would have to base its fleet outside of Malaysia, which increases its cost of doing business. In Malaysia, there are four US-registered aircraft ³¹ owned by licence holders, which would now face challenges in obtaining re-certification and potentially increase their cost of doing business.
Malaysia as an attractive aviation investment destination	Foreign direct investments	Given the many incidences over the years such as the MH370 disappearance, CAAM's downgrade may further solidify the reputation of the country's aviation industry as an unsafe one. Hence, this may discourage foreign direct investments into the industry and hamper any move by the government to liberalize the industry by way of allowing foreign ownership of industry players.

³⁰ According to CAAM, there are 425 Malaysian registered aircraft as at end-2019. Of these, 295 belong to ASL holders, 127 belong to ASP holders, and the remaining three aircraft belonging to ASP holders that have had their respective licenses revoked.

³¹ Based on current MAVCOM records.

Areas	Examples	Implication
	Human capital	Employability of Malaysian pilots and technical personnel in the maintenance, repair and overhaul (MRO) segment to work abroad may be jeopardized as CAAM's certification will not be recognized in the US and other countries, should more civil aviation authorities follow suit. Latest available data (2016) revealed that there are 8,700 personnel employed in the MRO segment. ³²
	MRO	Negative perception of the industry may lead to a slowdown in investment activities and stifle the expansion of the MRO segment in Malaysia. Malaysia may also face a bottleneck for approvals that involve the US FAA in relation to MRO, such as aircraft parts from the US. The additional cost of doing business in Malaysia due to increased expenses relating to regulatory compliance may also make the country less attractive to industry players.

³² National Aerospace Industry Coordinating Office (NAICO). (2017). *Malaysian Aerospace Blueprint 2030*. Kuala Lumpur: NAICO. Retrieved from https://www.miti.gov.my/miti/resources/8_Aerospace_Industry_.pdf

Areas	Examples	Implication
		<p>The MRO segment recorded a revenue of RM6.7bn in 2018, representing 46% of the total Malaysian aerospace industry revenue.³³ Additionally, Malaysia is currently home to 66 MRO companies comprising both local and international industry players. Under the Malaysian Aerospace Blueprint 2030, Malaysia targets to capture 5% of the projected MRO global market share of USD116.0bn in 2030 (equivalent to RM20.6bn).³⁴ In 2015, Malaysia's MRO constituted 3% of the global market share.³⁵ The feasibility of projects that support the realization of the Malaysian Aerospace Blueprint 2030 such as the Malaysia Vision Valley (MVV) in Negri Sembilan could also be jeopardized due to the downgrade of CAAM. The MVV hopes to attract Tier 1, 2, and 3 aerospace and original equipment manufacturers.</p> <p>CAAM's downgrade to Category 2 may further nullify these attempts to increase MRO investments in the country as foreign carriers may not have the confidence in the ability of local players to service their aircraft effectively. Instead, foreign carriers may utilize MRO players in other countries in the region in the servicing of their aircraft, hampering Malaysia's attempt to grow the industry.</p>

³³ Aziz, A. (2019, August 16). MITI: Aerospace industry to grow 10% to 15%. *The Malaysian Reserve*. Retrieved from <https://themalaysianreserve.com/2019/08/16/miti-aerospace-industry-to-grow-10-to-15/>

³⁴ National Aerospace Industry Coordinating Office (NAICO). (2017). *Malaysian Aerospace Blueprint 2030*. Kuala Lumpur: NAICO. Retrieved from

https://www.miti.gov.my/miti/resources/8_Aerospace_Industry_.pdf

³⁵ Ibid.

Areas	Examples	Implication
Reputation and credibility	Malaysia's representation in the ICAO council	<p>As mentioned above, Malaysia has been re-elected as an ICAO Council Member for the 2019 – 2022 period. The duration of Malaysia's downgrade in Category 2 may affect the credibility of the country's representation in the ICAO Council for instance, in the governance of international civil aviation rules.</p> <p>A prolonged period in Category 2 may also affect Malaysia's chances of being re-elected in the next ICAO Council term, further denting the country's credibility in international civil aviation fora.</p>

Stakeholders have largely reacted negatively to the downgrade due to the potential wider impact on not just airline operations but also other segments of the civil aviation industry. For example, Maybank Investment Bank Research maintained a negative rating of the industry and anticipated a downward pressure on carriers' share prices. The research assigned a "sell" call for AirAsia X and AirAsia, respectively and a "hold" recommendation for MAHB.³⁶ This indicates that the negative perception will reverberate throughout the whole industry.

³⁶ Aziz, M. (2019, November 12). US FAA downgrades Malaysia to Category 2 *Maybank Investment Bank Research*, p. 1.

ACTION PLAN BY THE MINISTRY OF TRANSPORT

Reforming the Civil Aviation Authority of Malaysia

Following the recent Category 2 downgrade by the US FAA, the MOT announced two major reforms to CAAM. The first one is CAAM's restructuring to become a financially independent statutory body and the second one is the authority's takeover of MAVCOM, its counterpart responsible for economic regulation.

Proposed Restructuring Exercise May be Overly Optimistic

On 18 November 2019, the MOT announced the formation of an eight-member task force consisting of four pilots, three engineers, and one technical coordinator—three of whom will be international experts appointed from ICAO. **The task force will be responsible to investigate and give recommendations to solve and improve deficiencies found by the US FAA audit.** The task force reports directly to the Minister of Transport, as well as, CAAM authority members.

Both CAAM and the MOT expressed its confidence that there are plans in place to solve the issues and requested the US FAA to conduct a reassessment within the next 12 months. Based on the experience of other countries, it is uncertain whether this goal is realistic. Thailand has yet to regain its Category 1 status after being downgraded in 2015 while the Philippines took six years to return to Category 1 in 2014 after being downgraded in 2008.

CAAM Needs Funding to Upgrade Its Human Capital and Infrastructure ...

One of the issues faced by CAAM is its inability to offer competitive remuneration packages to attract and retain qualified technical personnel. **Despite being corporatized in January 2018, CAAM continues to rely on financial support from the GoM via the MOT.** Therefore, CAAM's remuneration packages are limited by those set by the Public Service Department. These, among other issues, have led to **calls to restructure CAAM to become a fully autonomous and financially independent statutory body.**

In addition, the GoM—in the 11th Malaysia Plan (2016 - 2020)—indicated the need to upgrade the communication, navigation, surveillance, and air traffic management systems to improve the efficiency of air navigation services. Hence, under current arrangements, **CAAM faces a formidable challenge in securing sufficient funding** to execute its regulatory functions and to invest in Malaysia's air navigation services. At present, the MOT has plans for CAAM to continue to receive government funding for the next few years, as well as, to revise the ANFC to meet CAAM's financial requirements.

... but Current Proposals May be Mired in Conflict of Interest

The use of ANFC to bolster CAAM's regulatory capacity underlines an issue surrounding the current governance arrangements in Malaysia's civil aviation sector. **CAAM's simultaneous functions as a technical regulator and an air navigation service provider are vulnerable to conflict of interest.** ICAO principles state that there should be a clear separation of the regulatory and service provider functions.³⁷ Too close a relationship between the regulator and the service provider, especially when both are housed in the same organisation, may result in conflict of interest and undermine public confidence in the system.

For example, the authority may have, or be perceived to have, a perverse incentive to loosen technical requirements imposed on the air navigation service provider in order to improve the authority's financial position by reducing investments into air navigation service infrastructure. Indeed, ICAO principles state that the ANFC should be used to fund the provision of air navigation services, rather than general regulatory functions.³⁸ This example highlights the risk of regulatory capture under the current arrangements. Hence, **the MOT and CAAM should consider to clearly separate CAAM's regulatory and service provider functions.**

Therefore, **the proposal to use the ANFC to fund CAAM's regulatory functions and its effort to regain its Category 1 rating may undermine both CAAM's regulatory and air navigation services functions in the long run.** Additionally, doing so may contravene ICAO principles, which may risk further reputational damage to Malaysia, especially given our membership on the ICAO Council.

CAAM's Takeover of MAVCOM: Right Diagnosis, Wrong Treatment?

The MOT announced on 12 December 2019 to transfer the roles and functions of MAVCOM to CAAM to empower the latter to become an effective civil aviation authority. **The announcement only mentioned that the Malaysian Aviation Commission Act 2015 [Act 771] will be repealed, while Act 788 will be amended to include the new functions that CAAM will take over from MAVCOM.** No further details were provided on how these functions would be integrated into CAAM.

Given that **the US FAA audit was strictly confined to issues of technical regulatory oversight, it is unclear how granting CAAM additional responsibilities over economic regulation, hitherto held by MAVCOM, will help improve its capacity in technical regulation.** While the MOT's stated objectives for the merger are to optimize human and financial resources and improve operational and service efficiency, some commentators have cast doubt on this, given the difference in the two regulators' areas of responsibility.³⁹

³⁷ ICAO Documents 9082 and 9161 elaborate this in detail.

³⁸ ICAO principles allow for costs directly relating to the oversight of air navigation services be included in the cost basis, but this does not include more general oversight functions for other segments of civil aviation. See ICAO Document 9082 for further information.

³⁹ Azhar, K. (2019, December 16). Aviation experts voice concerns on Mavcom-CAAM merger. *The Edge Malaysia*, p. 22.

Indeed, **burdening CAAM with additional responsibilities inherited from MAVCOM seems a dubious method to strengthen CAAM's capacity to undertake its existing functions of technical regulation.** Before the merger announcement, as the economic regulator, MAVCOM was in the process of developing a national aviation strategy, a national airports strategic plan, and the Regulated Asset Base Framework for airport funding. MAVCOM is also currently assessing a major joint venture application and was anticipating a major merger⁴⁰ application as well.

While CAAM will be responsible for such work after MAVCOM is dissolved, it is highly likely that such policy and regulatory development, enforcement of competition law⁴¹, and consumer protection will not be pursued by CAAM with comparable vigour, given its expressed intent to focus on technical regulation in an attempt to regain its Category 1 status.

CAAM may also not be well-equipped to undertake its economic regulatory functions even if it successfully re-obtains its Category 1 status. Contrary to some commentators, many of MAVCOM's functions were newly created and not merely inherited from the then-DCA. This means that CAAM does not have any institutional experience or expertise in undertaking economic regulation and considerable effort will be required to develop its internal capacity to do so.⁴²

⁴⁰ The anticipated merger is as defined by section 54 of Act 771.

⁴¹ It may be argued that these responsibilities can be handed over to other authorities. However, it is doubtful that these responsibilities can be performed with the same rigour as other authorities may not appreciate the intricacies of and the interlinkages between general economic and competition regulations for aviation—one of the reasons for the establishment of MAVCOM in the first place.

⁴² Singh, R. (2019, December 24). Problems expected with MAVCOM-CAAM merger. *The Sun Daily*. Retrieved from <https://www.thesundaily.my/local/problems-expected-with-mavcom-caam-merger-BM1817928>

CAAM Lacks Independence and Operational Autonomy to Function Credibly and Effectively

In accordance with principles of good governance, an economic regulator must be given clear objectives and sufficient operating autonomy through a statute in order to hold it accountable⁴³—which is the case with MAVCOM. Whilst the Minister stated that the MOT intends to make CAAM an autonomous regulator that is financially independent, it is unclear whether this autonomy also extends to CAAM’s ability to perform its functions (functionally independent).

Indeed, the recent disputes between the MOT and MAVCOM over airports funding imply that MAVCOM’s functional autonomy may have been a bane⁴⁴ to parties within the MOT. With regards to CAAM, section 18 of Act 788 states that CAAM may receive directions from the Minister regarding the performance of its functions and powers, which indicates CAAM’s lack of independence from the MOT. Hence, **the disbandment of MAVCOM signals that the MOT is not comfortable with having an independent economic regulator and is unlikely to extend such independence to a supposedly reformed CAAM.**

⁴³ See ICAO Document 9161 for further information.

⁴⁴ Fong, K., Tay, C., Idris, N., & Lim, J. (2019, December 23). MAVCOM is free to implement RAB framework despite merger. *The Edge Malaysia*, p.63. The Minister is quoted as saying: *“Of course, I made a decision to disinvite Mavcom. We stopped the invitation in October. The reason was not because I was angry. The post-cab meeting is meant for execution, where I inform all the departments the Cabinet’s decisions for execution. If you refuse to execute a Cabinet decision, there is no reason for you to attend our post-cab, so I stopped inviting them.”*

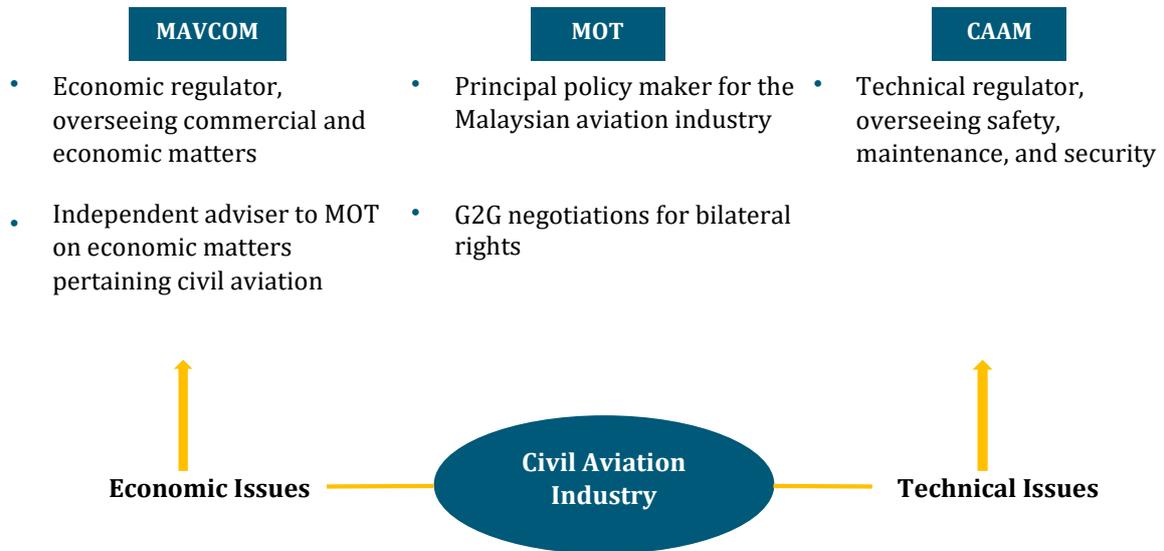
CONCLUSION

We expect that the downgrade of CAAM will have a minimal direct impact on passenger growth and Malaysian carriers' profitability in the foreseeable future. This is due to the low volume of passengers between the US and Malaysia. However, Malaysia is vulnerable to follow-on action from parties such as ICAO, EASA, and other national civil aviation authorities. Restrictions imposed by these parties, especially from countries with substantial passenger traffic to and from Malaysia, may amplify the impact of CAAM's downgrade on Malaysian carriers and the broader aviation industry value chain. Such follow-on action and the damage to the aviation industry's reputation in terms of safety standards and oversight may lead to substantial impact in the medium- to long-term.

To date, the MOT's proposals to strengthen CAAM to regain its Category 1 status have been questionable, at best. Relying on the ANFC to fund CAAM's regulatory functions opens opportunities for regulatory capture and conflict of interest, whereas burdening CAAM with additional responsibilities over economic regulation risks overstressing CAAM's already limited resources. MAVCOM takes the position that the MOT should prioritize strengthening CAAM's internal capacity to undertake its existing functions effectively before considering further steps that may compromise this primary objective.

APPENDIX 1

Figure 1: Roles and Functions of the MOT, CAAM, and MAVCOM



Source: MAVCOM

APPENDIX 2

Critical Elements of the International Aviation Safety Assessment

- (CE-1) Primary aviation legislation
- (CE-2) Specific operating regulations
- (CE-3) State civil aviation system and safety oversight functions
- (CE-4) Technical personnel qualification and training
- (CE-5) Technical guidance, tools and the provision of safety critical information
- (CE-6) Licensing, certification, authorization, and approval obligations
- (CE-7) Surveillance obligations
- (CE-8) Resolution of safety concerns

APPENDIX 3

Civil Aviation Authority Rating by the US FAA

Table 1: Civil Aviation Authority Rating by the US FAA

Country	Category
Argentina	1
Aruba	1
Australia	1
Austria	1
Azerbaijan	1
Bahamas	1
Bangladesh	2
Belgium	1
Bermuda	1
Bolivia	1
Brazil	1
Bulgaria	1
Canada	1
Cabo Verde	1
Cayman Islands	1
Chile	1
China	1
Colombia	1
Costa Rica	2
Croatia	1
Curacao	1
Czech Republic	2
Denmark	1
Dominican Republic	1
Ecuador	1
Egypt	1
El Salvador	1
Ethiopia	1
Fiji	1
Finland	1
France (including Guadeloupe and French Polynesia)	1
Germany	1
Ghana	2
Greece	1
Hong Kong	1
Iceland	1
India	1
Indonesia	1
Ireland	1

Country	Category
Israel	1
Italy	1
Jamaica	1
Japan	1
Jordan	1
Kenya	1
Kuwait	1
Luxembourg	1
Malaysia	2
Malta	1
Mexico	1
Morocco	1
Netherlands (including Bonaire, Saba, and St. Eustatius)	1
New Zealand	1
Nicaragua	1
Nigeria	1
Norway	1
Organization of Eastern Caribbean States (Eastern Caribbean Civil Aviation Authority members: Antigua & Barbuda, Dominica, Grenada, St. Lucia, St. Vincent & the Grenadines, and St. Kitts & Nevis)	1
Pakistan	1
Panama	1
Peru	1
Philippines	1
Poland	1
Portugal	1
Qatar	1
Republic of Korea	1
Romania	1
Russia	1
Samoa	1
Saudi Arabia	1
Serbia	1
Singapore	1
South Africa	1
Spain	1
Suriname	1
Sweden	1
Switzerland	1
Taiwan	1
Thailand	2
Trinidad & Tobago	1

Country	Category
Turkey	1
Ukraine	1
United Arab Emirates	1
United Kingdom (including Anguilla, British Virgin Islands, Montserrat, and Turks & Caicos)	1
Uzbekistan	1
Venezuela	2
Vietnam	1

Source: US FAA

Note: Countries highlighted are classified Category 2 by the US FAA.

APPENDIX 4

Member States Elected into the ICAO Council for the 2019 – 2022 Period

Table 1: ICAO Council Members (2019 – 2022)

Category	Country
Part I – States of chief importance in air transport	Australia
	Brazil
	Canada
	China
	France
	Germany
	Italy
	Japan
	Russian Federation
	United Kingdom
	United States
Part II – States which make the largest contribution to the provision of facilities for international civil air navigation	Argentina
	Colombia
	Egypt
	Finland*
	India
	Mexico
	Netherlands*
	Nigeria
	Saudi Arabia
	Singapore
	South Africa
	Spain
	Part III – States ensuring geographic representation
Côte d'Ivoire*	
Dominican Republic*	
Equatorial Guinea*	
Greece*	
Malaysia	
Paraguay*	
Peru*	
Republic of Korea	
Sudan*	
Tunisia*	
United Arab Emirates	
Zambia*	

Source: ICAO

*States which were newly included in 2019.

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