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**Section 57 of the Competition Act (Cap. 50B)**

**Grounds of Decision issued by the Competition Commission of Singapore**

**In relation to the application for decision of the proposed joint venture between The Boeing Company and SIA Engineering Company Limited pursuant to section 57 of the Competition Act**

**3 February 2015**

**Case number: CCS 400/013/14**

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Confidential information in the original version of this Decision has been redacted from the published version on the public register. Redacted confidential information in the text of the published version of the Decision is denoted by [X]

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## I. Introduction

### The notification

1. On 28 November 2014, The Boeing Company (“Boeing”) and SIA Engineering Company (“SIAEC”) (collectively referred to as the “Parties”) filed a joint notification pursuant to section 57 of the Competition Act (Cap. 50B)(the “Act”) for a decision by the Competition Commission of Singapore (“CCS”) as to whether the proposed joint venture between Boeing and SIAEC in respect of the provision of maintenance, repair, overhaul (“MRO”) services together with related engineering, logistics and supply chain and inventory management services with respect to specific aircraft manufactured by Boeing, to both customers in the SIA group of companies (the “SIA Group”) and other third-party customers primarily “Based”<sup>1</sup> in the South Asia Pacific region (“SAPAC”) (the “Transaction”) will infringe the section 54 prohibition of the Act, if carried into effect.
2. In reviewing the Transaction, CCS contacted 13 competitors, such as providers of MRO services, fleet management services and inventory management services in Singapore and worldwide, and 11 customers<sup>2</sup> for MRO services, fleet management services and inventory management services. CCS also contacted the Civil Aviation Authority of Singapore (“CAAS”) and the Economic Development Board of Singapore (“EDB”) for information as well as its views on the MRO services, fleet management services and inventory management services market in Singapore. Out of the third-parties contacted, seven have replied and six provided substantive responses to CCS’s questionnaires. Most of the customers<sup>3</sup> have indicated that they have no concerns with the Transaction. Specifically, they cited that there generally are multiple viable and competent alternatives to the Parties in the provision of the relevant services. One customer however cited concerns that there is a lack of alternatives for services for Boeing 787 aircraft due to the advanced technical nature of the aircraft.<sup>4</sup> Some of the competitors have similarly provided feedback that they are able to act as viable alternatives to the Parties for the relevant services.<sup>5</sup> While one competitor stated that the Transaction would induce more competition and better quality service for airlines<sup>6</sup>, another cited concerns that the Transaction might be a strategic move by Boeing to secure further aircraft sales.<sup>7</sup>

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<sup>1</sup> Defined in clause 1.1 of the JVA to be [REDACTED]

<sup>2</sup> The customers contacted are [REDACTED], [REDACTED], [REDACTED]. [REDACTED], [REDACTED], [REDACTED], [REDACTED], [REDACTED], [REDACTED], [REDACTED] and [REDACTED].

<sup>3</sup> [REDACTED] and [REDACTED].

<sup>4</sup> [REDACTED]. In the same response, [REDACTED] submitted that it does not have any comments on the Transaction.

<sup>5</sup> [REDACTED], [REDACTED], [REDACTED].

<sup>6</sup> [REDACTED].

<sup>7</sup> [REDACTED].

3. At the end of the consultation process and after evaluating all the evidence, CCS concludes that the Transaction, if carried into effect, will not infringe section 54 of the Act.

## **II. The Parties**

### Boeing

4. Boeing is listed and traded principally on the New York Stock Exchange. Boeing is the leading manufacturer of commercial jetliners and military aircraft. Boeing is also active in the business of designing and manufacturing rotorcraft, electronic and defence systems, missiles, satellites, launch vehicles and advanced information and communication systems. Boeing also provides numerous military and commercial airline support services to its various customers in 150 countries.
5. Boeing offers a broad range of capabilities, which include creating new, more efficient commercial airplanes; integrating military platforms, defence systems and the warfighter through network-centric operations; creating advanced technology solutions that reach across business units; e-enabling airplanes and providing connectivity on moving platforms; and arranging financing solutions for its customers.
6. In addition, Boeing provides assistance and services to facilitate efficient and safe aircraft operation to the operators of all its commercial airplane models. Collectively known as support services, these activities and services include flight and maintenance training, field service support, engineering support services, technical data and documents, consulting on maintenance, repair, and operational issues brought forth by the customer or regulators, updating manuals and engineering data, and the issuance of service bulletins that impact the entire model's fleet. Field service support involves personnel located at customer facilities providing and coordinating fleet support activities and requests.<sup>8</sup>
7. Boeing sells commercial airplanes to the Singapore Airlines Limited ("SIA") Group, which are delivered in the United States of America ("U.S."). In Singapore, Boeing has developed a strong customer relationship with BOC Aviation (formerly Singapore Aircraft Leasing Enterprise) for the purchase of Boeing aircraft. Boeing has also been a defence supplier to Singapore since the early 1990s.

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<sup>8</sup> Paragraphs 10.5 to 10.7 of Form M1.

8. Boeing Singapore, a wholly-owned subsidiary of Boeing, offers fleet management solutions to its customers. These fleet management solutions include, in particular, the management of various maintenance and repair services, fleet technical management (“FTM”) and inventory technical management (“ITM”).<sup>9</sup>
9. The total (group) worldwide turnover for Boeing in the financial year ended 31 December 2013 was US\$86,623 million (approximately S\$113,779.31 million).<sup>10</sup> The total (group) turnover for Boeing in Singapore over the same period was approximately [X].<sup>11</sup>

### SIAEC

10. SIAEC is a limited liability company incorporated in Singapore. SIAEC has been listed on the Main Board of the Singapore Exchange Securities Trading Limited (“SGX-ST”) since 2000. SIAEC is a subsidiary company of SIA and, as at 30 May 2014, 77.87% of SIAEC’s issued share capital is held by SIA. SIA has also been listed on the Main Board of the SGX-ST since 1985. The largest shareholder in SIA is Temasek Holdings (Private) Limited (“Temasek”), which is incorporated in Singapore.<sup>12</sup>
11. SIAEC provides MRO services for aircraft, engine and related components to its customers. Specifically, the service offerings of SIAEC include:
  - a. aircraft maintenance and overhaul;
  - b. line maintenance and technical handling;
  - c. component maintenance and overhaul;
  - d. fleet management programme;
  - e. engine overhaul;
  - f. passenger-to-freighter conversion;
  - g. cabin modifications;
  - h. training academy; and
  - i. aircraft painting.<sup>13</sup>
12. SIAEC is party to 26 joint ventures with strategic partners and original equipment manufacturers in Australia, China, Indonesia, Ireland, Philippines, Singapore, Taiwan, U.S., and Vietnam.<sup>14</sup>

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<sup>9</sup> Paragraphs 10.14 to 10.15 of Form M1.

<sup>10</sup> Paragraph 13.1 of Form M1.

<sup>11</sup> Paragraph 13.3 of Form M1.

<sup>12</sup> Paragraph 7.2 of Form M1.

<sup>13</sup> Paragraph 10.11 of Form M1.

<sup>14</sup> Paragraph 10.13 of Form M1.

13. The total (group) worldwide turnover for SIAEC in the financial year ended 31 March 2014 was S\$1,178.2 million.<sup>15</sup> The total (group) turnover for SIAEC in Singapore over the same period was [X].<sup>16</sup>

### III. The Transaction

14. Pursuant to a Formation and Contribution Agreement (“FCA”) entered into on 9 July 2014, the Parties intend to enter into a Joint Venture Agreement (“JVA”) to set up a joint venture, with its seat in Singapore, (the “JV”) to offer a broad range of MRO services, together with related engineering, logistics and supply chain and inventory management services for specific aircraft manufactured by Boeing, to both customers in the SIA Group and other third-party customers primarily Based in the SAPAC region.<sup>17</sup> As per Clause 3 of the FCA, Boeing Singapore will subscribe for 51% of the total issued share capital of the JV and SIAEC will subscribe for 49% of the total issued share capital of the JV. The total capital contribution to the JV is estimated to be approximately [X].<sup>18</sup> In addition to cash contributions, Boeing Singapore and SIAEC will novate to the JV, in stages, contracts for the provision of MRO services together with related engineering, logistics and supply chain and inventory management services with respect to specific aircraft manufactured by Boeing to both SIA Group airlines and third-party customers.<sup>19</sup>
15. CCS notes that the Transaction is not yet completed as [X], as per Clause 3.1 of the FCA. Clause 4.1(a) of the FCA requires the Parties to have obtained all governmental authorisations under the antitrust laws from the appropriate antitrust authorities as a condition precedent to First Completion.
16. Section 54(5) of the Act defines a joint venture that constitutes a merger as one that performs, on a lasting basis, all the functions of an autonomous economic entity. Paragraph 3.20 of the *CCS Guidelines on the Substantive Assessment of Mergers* (“*CCS Merger Guidelines*”) states that, a joint venture that falls within the definition of a merger under section 54 of the Act must fulfil the following criteria:
- a. It must be subject to joint control;
  - b. It must perform all the functions of an autonomous economic entity; and
  - c. It must do so on a lasting basis.

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<sup>15</sup> Paragraph 13.2 of Form M1.

<sup>16</sup> Paragraph 13.4 of Form M1.

<sup>17</sup> “SAPAC” is defined in the JVA as [X].

<sup>18</sup> Paragraph 11.11 of Form M1.

<sup>19</sup> Paragraph 11.8 of Form M1; Clause 9.2 of the FCA.

## Joint control

17. Joint control over an undertaking exists where two or more parties have the possibility of exercising decisive influence over that undertaking, including the power to block actions which determine the strategic commercial behavior of an undertaking.<sup>20</sup> [X].<sup>21</sup> However, CCS also notes that [X].<sup>22</sup>
18. In addition, the Parties submitted that pursuant to Clause 7.2 of the JVA, [X].<sup>23</sup> [X].<sup>24</sup>
19. The Parties further submitted that [X].<sup>25</sup>

## Autonomous economic entity

20. In order for a joint venture to operate on a market, perform the functions normally carried out by undertakings operating on that market and to conduct its business activities on a lasting basis, the joint venture must have a management dedicated to its day-to-day operations and access to sufficient resources, including finance, staff and assets (tangible and intangible).<sup>26</sup>
21. The Parties submitted that the JV will have a [X].<sup>27</sup> [X],<sup>28</sup> [X].<sup>29</sup>
22. [X] The Parties have stressed that [X] the JV's customers will have the discretion to direct the JV to procure MRO services from a provider other than SIAEC.<sup>30</sup>
23. CCS notes that [X].<sup>31</sup> The Parties submitted that the JV will provide its services to SIA Group airlines at arm's length.
24. The Parties further submitted that the JV is geared to play an active role on the market and will undertake its own marketing activities to secure new service contracts. [X].<sup>32</sup>

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<sup>20</sup> Paragraph 3.22 of the *CCS Merger Guidelines*.

<sup>21</sup> Clause 8.2 of the JVA.

<sup>22</sup> Clause 8.3 of the JVA; Schedule 2 of the JVA.

<sup>23</sup> Clause 7.9.4 and Schedule 1 of the JVA.

<sup>24</sup> Paragraph 11.6.1 of Form M1.

<sup>25</sup> Paragraph 11.6.2 of Form M1.

<sup>26</sup> Paragraph 3.24 of the *CCS Merger Guidelines*.

<sup>27</sup> Paragraph 11.6.4 of the JVA.

<sup>28</sup> Clause 13.2 of the JVA.

<sup>29</sup> Clause 9.5(h) of the FCA.

<sup>30</sup> Paragraph 11.6.5 of Form M1.

<sup>31</sup> Paragraph 11.6.11 of Form M1.

<sup>32</sup> Paragraph 11.6.13 of Form M1.

#### Function on a lasting basis

25. The Parties submitted that the JV is expected to be continuing for an indefinite period of time [X].<sup>33</sup>

#### *CCS's conclusion on whether the joint venture constitutes a merger*

26. Based on the Parties' submission that the Transaction consists of the creation, on a lasting basis, of a joint venture in respect of the provision of a broad range of MRO services, together with related engineering, logistics and supply chain and inventory management services for specific aircraft primarily in the SAPAC region and which is subject to effective joint control of its parent companies (i.e., Boeing Singapore and SIAEC) and performs all the functions of an autonomous economic entity, the Transaction creates a joint venture constituting a merger pursuant to section 54(5) of the Act.

#### **IV. Competition Issues**

27. As set out in the *CCS Merger Guidelines*, CCS is generally of the view that competition concerns are unlikely to arise in a merger situation unless the merged entity will have a market share of 40% or more or the merged entity will have a market share of more than 20% with the post-merger CR3<sup>34</sup> at 70% or more.<sup>35</sup>

28. For this Transaction, the Parties submitted that they overlap in the provision of MRO services together with related engineering, logistics and supply chain and inventory management services. However, as Boeing has only very limited MRO capacity in Singapore, the actual overlap between the Parties in Singapore is likewise very limited. While SIAEC is active in a broad range of MRO services (including line, heavy, engine and component maintenance) and related fleet management services in Singapore, Boeing only provides certain fleet management services and, in a very limited capacity, component maintenance services to customers based in Singapore.<sup>36</sup>

29. The Parties further submitted that Boeing's Flight Training also competes with the SIAEC Training Academy in respect of aircraft maintenance training. However, since the JV will not be providing any of these services and there is no other cooperation between Boeing and SIAEC pursuant to the

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<sup>33</sup> Paragraph 11.6.3 of Form M1; Clause 33.1 of the JVA.

<sup>34</sup> Paragraph 5.14 of *CCS Merger Guidelines*. CR3 refers to the combined market shares of the three largest firms.

<sup>35</sup> Paragraph 5.15 of the *CCS Merger Guidelines*.

<sup>36</sup> Paragraph 15.1 of Form M1.



JV, a detailed assessment of these activities is not relevant for the purposes of this notification.<sup>37</sup>

30. In addition, CCS notes that Boeing is active in the related market for the manufacture and sale of commercial jetliners.<sup>38</sup> Boeing is also active in the upstream market for the manufacture, sale and distribution of aerospace spare parts, including proprietary parts for which Boeing owns the engineering drawings. Following the formation of the JV, the JV will have the option to procure certain spare parts from Boeing.<sup>39</sup>
31. In evaluating the potential impact of the Transaction, CCS considered whether the Transaction will lead to coordinated horizontal, non-coordinated horizontal, and vertical effects that would substantially lessen competition or raise competition concerns within any markets in Singapore.

## V. Counterfactuals

32. As stated in paragraph 4.6 of the *CCS Merger Guidelines*, CCS will, in assessing mergers and applying the Substantial Lessening of Competition (“SLC”) test, evaluate the prospects for competition in the future with and without the merger. The competitive situation without the merger is referred to as the “counterfactual”. The SLC test will be applied prospectively, that is, future competition will be assessed with and without the merger.
33. The *CCS Merger Guidelines* also states that in most cases, the best guide to the appropriate counterfactual will be prevailing conditions of competition, as this may provide a reliable indicator of future competition without the merger. However, CCS may need to take into account likely and imminent changes in the structure of competition in order to reflect as accurately as possible the nature of rivalry without the merger.<sup>40</sup>

### *The Parties’ submissions*

34. Boeing submitted that [X].<sup>41</sup> SIAEC submitted that [X].<sup>42</sup> SIAEC further submitted that, in the absence of the JV, the Parties are likely to each continue participating in the fleet management market on its own as Boeing and SIAEC each have an existing presence in the fleet management market.<sup>43</sup>

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<sup>37</sup> Paragraph 15.2 of Form M1.

<sup>38</sup> Paragraph 36.1 of Form M1.

<sup>39</sup> Paragraph 36.2 of Form M1.

<sup>40</sup> Paragraph 4.7 of the *CCS Merger Guidelines*.

<sup>41</sup> Paragraph 23.1 of Form M1.

<sup>42</sup> Paragraph 23.2 of Form M1.

<sup>43</sup> Paragraph 23.3 of Form M1.

### *CCS's assessment*

35. CCS notes the two possible scenarios in the absence of the Transaction: one which is the prevailing conditions of competition i.e. where Boeing and SIAEC are potential competitors in the provision of fleet management solutions; the other which would be [X]. CCS further notes that in the second scenario, SIAEC and Boeing [X] would still be potential competitors in the provision of fleet management, while there would likely be a loss of competition between [X]. Therefore, CCS is of the view that adopting the first scenario as the basis of this competition assessment would adequately allow CCS to establish competition concerns, if any.
36. In light of the above, for the purpose of this assessment, CCS adopts the prevailing conditions of competition as the appropriate counterfactual with which CCS would base its competition assessment on.

## **VI. Relevant Markets**

37. The Parties submitted that the proposed JV will provide aircraft line and heavy maintenance, phase checks and other ramp services, maintenance tasks to incorporate airworthiness directives or service bulletins, repair and overhaul of rotatable aircraft parts together with the related fleet management solutions, which include the management of various maintenance and repair services, FTM and ITM.<sup>44</sup> The Parties considered FTM and ITM to involve the management of various maintenance and repair services, and therefore are not themselves MRO services but instead are overarching services that may include MRO services.<sup>45</sup>
38. However, the Parties submitted that the industry generally views FTM and ITM services together as part of overall fleet management services, and that even though FTM and ITM services can be offered to airlines both separate from each other and other MRO services, it does not consider FTM and ITM to form separate product markets. To the best of their knowledge, there are no standalone providers of FTM services or ITM services, since both services are offered as part of a broader menu of services within maintenance services.<sup>46</sup>
39. In addition, the Parties submitted that based on past decisions of the European Commission ("EC"), the MRO sector for commercial aircraft may be segmented into four categories, namely: line maintenance, heavy

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<sup>44</sup> Paragraph 11.3 of Form M1.

<sup>45</sup> Paragraph 6.2 of the Parties' replies to CCS's RFI dated 22 December 2014.

<sup>46</sup> Paragraph 15.3 and 15.4 of the Parties' replies to CCS's RFI dated 7 January 2015.

maintenance, engine maintenance and component maintenance. Applying the European Commission's segmentations of the MRO sector to the activities of the JV, the JV will be active in only the line maintenance, heavy maintenance and component maintenance market for commercial aircraft.<sup>47</sup>

40. In view of the above, the Parties submitted that the relevant product markets for the purposes of this notification are the separate markets for MRO services, together with related engineering, logistics and supply chain and inventory management services, namely line maintenance, heavy maintenance and component maintenance.<sup>48</sup>

**(a) Product markets**

Description of services – MRO Services<sup>49</sup>

41. The Parties submitted that there are three broad “categories” of MRO services that the proposed JV will be active in:
- a. Line maintenance;
  - b. Heavy maintenance; and
  - c. Component maintenance.
42. MRO services are maintenance, repair and overhaul services carried out on aircraft operated by airlines. MRO services were initially conducted by the airlines with very little work outsourced to independent providers or manufacturers. However, over the years, this situation has changed due to the increasing financial pressure on airlines which has forced them to seek ways to reduce costs. Today, there are a range of specialist MRO service providers who are able to undertake MRO work at lower unit costs, often by choosing locations with lower labour and set-up costs.<sup>50</sup>
43. MRO activities are closely interlinked with the aerospace industry. With the growth of Singapore as a regional aerospace hub, the Parties submitted that the expected growth in air traffic in the region is likewise expected to increase the demand for MRO services. Further, increasing ageing aircraft are also expected to result in a growth in demand for MRO services.<sup>51</sup>

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<sup>47</sup> Paragraph 15.3 of Form M1.

<sup>48</sup> Paragraph 20.1 of Form M1.

<sup>49</sup> Paragraph 15.3 of Form M1.

<sup>50</sup> Paragraph 18.6 of Form M1.

<sup>51</sup> Paragraph 18.7 of Form M1. Information is extracted from report entitled “Singapore: Aerospace Industry” dated January 2012 by the U.S. Commercial Service.

### *Line maintenance*

44. Line maintenance refers to light, regular maintenance checks carried out to ensure that an aircraft is fit for flight. Line maintenance includes troubleshooting, defect rectification, overnight maintenance, and component replacement.<sup>52</sup>

### *Heavy maintenance*

45. Heavy maintenance entails a detailed inspection of the airframe and certain components, including any applicable corrosion prevention programmes and comprehensive structural inspection and overhaul of the aircraft.<sup>53</sup>

### *Component maintenance*

46. Component maintenance refers to maintenance, including repair and overhaul of aircraft components, which provide the basic functionality for aircraft flight including aircraft control and navigation, communications, control surface movement, cabin air conditioning, electrical power, and braking.<sup>54</sup>

### Description of Services - Fleet Technical Management and Inventory Technical Management

47. Related to the maintenance and repair services of aircrafts are FTM and ITM services.
48. FTM covers various engineering support activities, including coordination and planning of maintenance visits, job card management, aircraft configuration management and maintenance control.<sup>55</sup>
49. ITM, on the other hand, encompasses component exchange services, as well as logistic, supply chain and inventory management in addition to repair and overhaul of rotatable aircraft parts.<sup>56</sup>
50. The JV will offer these services with respect to specific types of Boeing aircraft as listed in Schedule 4 of the JVA and any new aircraft added as an “In-Scope Aircraft Type” in accordance with Clause 2.4.4 of the JVA.

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<sup>52</sup> Paragraph 19.1 of Form M1.

<sup>53</sup> Paragraph 19.1 of Form M1.

<sup>54</sup> Paragraph 19.1 of Form M1.

<sup>55</sup> Paragraph 11.3 of Form M1.

<sup>56</sup> Paragraph 11.3 of Form M1.

### *Segmentation per type of aircraft*

51. The Parties submitted that the EC did not arrive at a conclusive view on whether it is necessary to further segment the relevant markets, for each of the MRO services markets, by type of aircraft manufacturer and aircraft type. In any event, as the JV will only provide services for Boeing aircraft and the Boeing aircraft platform, the Parties were of the view that it is not necessary to consider the aforementioned possible narrower delineations further.<sup>57</sup>
52. The Parties submitted that airlines do not procure FTM services on the basis of particular aircraft model types. The Parties further submitted that similar FTM services offerings are provided across all the different airplane types. From a supply-side perspective, all major FTM service providers are capable of supplying such services across all Airbus and Boeing models.<sup>58</sup>
53. The Parties were of the view that airlines do not procure ITM services on the basis of particular aircraft model types. The Parties submitted that similar ITM services offerings are provided across all the different airplane types. From a supply-side perspective, all of the major ITM providers are capable of providing ITM services across all Airbus and Boeing models, and many are also capable of providing ITM services for Embraer and Bombardier models.<sup>59</sup>

### Regulatory environment

54. Under paragraph 6 of the Air Navigation Order, aircraft registered in Singapore are required to have a valid Certificate of Airworthiness in order to fly in Singapore. For Singapore-registered aircraft, the Certificate of Airworthiness is issued by CAAS. Further, for an airline to operate a passenger transport service for the public, it is required to obtain an Air Operator Certificate (“AOC”) from CAAS. There are currently eight Singapore AOC holders, namely Singapore Airlines Ltd, Singapore Airlines Cargo Pte Ltd, SilkAir (S) Pte Ltd, Jetstar Asia Airways Pte Ltd, Valuair Ltd<sup>60</sup>, Tiger Airways Pte Ltd, ST Aerospace Engineering Pte Ltd and SCOOT Pte Ltd.<sup>61</sup>

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<sup>57</sup> Paragraph 19.6 of Form M1.

<sup>58</sup> Paragraphs 19.1 and 19.2 of the Parties’ replies to CCS’s second RFI dated 7 January 2015.

<sup>59</sup> Paragraphs 19.4 and 19.4 of the Parties’ replies to CCS’s second RFI dated 7 January 2015.

<sup>60</sup> Jetstar Asia Airways Pte Ltd acquired Valuair Ltd in 2005.

<sup>61</sup> [http://www.caas.gov.sg/caas/en/About\\_CAAS/Our\\_Strategic\\_Thrusts/Safety\\_Oversight\\_x\\_Promotion/Singapore\\_Air\\_Operators.html](http://www.caas.gov.sg/caas/en/About_CAAS/Our_Strategic_Thrusts/Safety_Oversight_x_Promotion/Singapore_Air_Operators.html).

55. In Singapore, for a MRO service provider to be able to perform maintenance, repair or overhaul work on Singapore-registered aircraft or components that are to be fitted on Singapore-registered aircraft, these organisations are required to obtain a SAR-145 approval from the CAAS. As part of the SAR-145 approval process, CAAS will validate the many aspect of the applicant's suitability such as its quality systems and competency of their staff. For example, aircraft maintenance engineers must hold a licence issued by CAAS.<sup>62</sup>
56. To be granted a licence, prospective maintenance engineers need to sit for an examination set by CAAS, clocked the required number of ground hours and complete on-job-training. The courses taken by the engineers and the licences subsequently granted to them after they have passed the examination by CAAS are also highly specific.<sup>63</sup>
57. Each licence clearly sets out the privileges that the licence holder are allowed to exercise; example, whether it is mechanical or avionics systems specific to which aircraft type.
58. However, there is no specific certification requirement for the provision of FTM and ITM services per se. For example, CAAS does not issue any certificates to Boeing even though the latter does supply FTM services. Instead, the airlines as holders of AOC are held accountable for the quality assurance of both the FTM and ITM services of their aircrafts.<sup>64</sup>
59. Both the SAR-145 and the AOC must be renewed on an annual basis and renewal is conditional on passing audit requirements set by CAAS.

### CCS's assessment

60. CCS notes that Boeing's involvement in MRO services is limited to airplane on ground situations<sup>65</sup> and largely relies on MRO services providers for MRO services.<sup>66</sup> [3<] also highlighted that Original Equipment Manufacturers ("OEMs") like Boeing generally do not provide MRO services and outsources such services to third-party MRO providers.<sup>67</sup> Lastly,

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[http://www.caas.gov.sg/caasWeb2010/export/sites/caas/en/About\\_CAAS/Our\\_Strategic\\_Thrusts/Safety\\_Oversight\\_x\\_Promotion/Maintenance\\_Organisations.html?\\_locale=en](http://www.caas.gov.sg/caasWeb2010/export/sites/caas/en/About_CAAS/Our_Strategic_Thrusts/Safety_Oversight_x_Promotion/Maintenance_Organisations.html?_locale=en)

<sup>63</sup> Response from CAAS dated 29 January 2015.

<sup>64</sup> Response from CAAS dated 29 January 2015.

<sup>65</sup> Airplane on ground situations occur when there are on-tarmac incidents such as airplane damage from a collision with baggage trolley.

<sup>66</sup> Notes of meeting with Parties dated 15 December 2014.

<sup>67</sup> Notes of meeting with [3<] dated 23 December 2014.

[X] noted that Boeing is a FTM/ITM services provider with no MRO service capabilities.<sup>68</sup> CCS is satisfied that the Parties mainly overlap in the FTM and ITM services and not MRO services. CCS proceeds to consider whether FTM and ITM services can be considered as separate product markets from MRO services.

61. CCS understands from consumers of MRO, FTM and ITM services that these services may not necessarily be bundled together and provided by one single service provider. For instance, [X] maintains in-house airframe MRO and FTM capabilities while outsourcing ITM component repairs. Also, feedback from [X], [X] and [X] revealed that there could be more than one service provider for MRO, FTM and ITM services at any one time.<sup>69</sup>
62. Feedback from MRO service providers such as [X], [X] and [X] also reaffirmed that FTM, ITM and MRO services are not typically bundled together and that each of these services can be performed independently, and the flexibility of bundling these services or not relies on the customer's requirements.<sup>70</sup>
63. In addition, these independent service providers have unanimously pointed out that not all MRO service providers have the capability to provide FTM and ITM services as MRO services are very different from FTM and ITM activities in terms of skills, capabilities and skillset. The capability of MRO services providers to provide FTM and ITM services largely depends either on their experience on an aircraft type, or on their investment capacity.<sup>71</sup>
64. Furthermore, CCS is of the view that the regulatory environment for MRO, FTM and ITM services are also significantly different. As mentioned in paragraphs 54-59 above, MRO service providers wanting to perform MRO work on Singapore-registered aircraft or components meant to be fitted on Singapore-registered aircraft are required to obtain a SAR-145 approval from CAAS. On the other hand, there is no specific certification requirement for the provision of FTM and ITM services per se. For example, CAAS does not issue any certificates to Boeing even though the latter does supply FTM services. Instead, the airlines which are required to obtain an AOC are held

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<sup>68</sup> Notes of meeting with [X] dated 22 December 2014.

<sup>69</sup> Response from [X] dated 9 December 2014, Response from [X] dated 9 December 2014 and Response from [X] dated 8 December 2014.

<sup>70</sup> Response from [X] dated 9 December 2014, Response from [X] dated 9 December 2014 and Response from [X] dated 7 December 2014.

<sup>71</sup> Response from [X] dated 9 December 2014, Response from [X] dated 9 December 2014 and Response from [X] dated 7 December 2014.

accountable for the quality assurance of both the FTM and ITM services of their planes.<sup>72</sup>

65. Above all, CCS notes that “Services” offered by the JV as set out in the JVA “means one or more of the following: FTM services, ITM services, and [X].”<sup>73</sup>
66. In view of the above, CCS is of the view that FTM and ITM services form different relevant product markets from that of MRO services. As the JV will be engaged in FTM and ITM services, and the Parties overlap in these markets, the competition assessment will be limited to only these markets.
67. CCS notes that FTM and ITM involve the management of different parts of the aircraft, and based on customers’ responses, FTM and ITM services are procured separately and awarded to different service providers, even for the same type of aircraft. CCS further notes [X] conducts FTM in-house while outsources ITM services for component repair.
68. Based on the above, CCS is of the view that FTM and ITM services form different relevant product markets.
69. While CCS notes that there may be room for further segmentation of the FTM and ITM services market by aircraft types, CCS is of the view that it is not necessary for the purpose of this Transaction as it has negligible effect on the competition assessment.

## **(b) Geographic market**

### Provision of FTM and ITM

70. CCS notes that the Parties made no submission on the specific geographical scope of FTM and ITM services.

### CCS’s assessment

71. CCS understands from third-parties that it is mandatory,<sup>74</sup> or at least highly desirable<sup>75</sup> for FTM and ITM service providers to have a local representative where the customers’ planes undergo MRO services due to risk, trust and cost efficiency considerations. In light of such preferences, CCS understands

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<sup>72</sup> As required by paragraph 8(1) of the Air Navigation Order.

<sup>73</sup> Clause 1.1 of the JVA.

<sup>74</sup> Response from [X] dated 9 December 2014; Response from [X] dated 7 December 2014.

<sup>75</sup> Response from [X] dated 9 December 2014; Response from [X] dated 8 December 2014.



from [X], [X] and [X] that they have scaled up their FTM and ITM presence to be able to provide FTM and ITM services anywhere in the world.<sup>76</sup> CCS notes that these service providers have a presence in the SAPAC region. CCS further notes that major service providers including Lufthansa Technik, AAR Corp, HAECO, SR Technics, Air France Industries KLM Engineering & Maintenance, A J Walter Aviation Limited and ST Aerospace have a presence in Singapore.

72. However, CCS also received comments that the provision of FTM and ITM services may not be bound by the location of operation. CCS notes that FTM services, being primarily the management of the engineering aspects of an airline's fleet, may be performed in a different location from where the customer is based. For example, [X] submitted that it manages and delivers most of the FTM services from [X], while being able to service customers who are based in Europe, Asia and the Middle East.
73. Similarly, with developments in global logistics capabilities ITM services could be performed at a regional or global level. [X] submitted that its ITM services are managed from [X] but delivered through a decentralised setup with management and pooling activities concentrated in [X].
74. In view of the above, given the mixed responses, CCS takes a conservative approach by defining the narrowest possible geographical scope, i.e. local geographical market, and conducts its competition assessment. If there are no competition concerns in the narrowest possible market, CCS is satisfied that there will be no competition concerns in the broader market.

**(c) Conclusion on relevant market**

75. CCS is of the view that the relevant market for the competition assessment of the Transaction is the following:
  - a) The local supply of FTM services to Singapore customers; and
  - b) The local supply of ITM services to Singapore customers.

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<sup>76</sup> Response from [X] dated 9 December 2014; Response from [X] dated 8 December 2014; Response from [X] dated 9 December 2014.

**VII. Market Structure**

**(a) Market shares and market concentration**

76. The Parties submitted the global and Singapore market share figures of MRO services providers based on publicly available information from independent data sources. Table 1 shows the Total Market Size for MRO Services, together with related engineering, logistics and supply chain and inventory management services, delineated by line, heavy and component maintenance, while Tables 2-4 shows the estimate market share figures of MRO service providers for each of the MRO services. The Parties submitted that the market size figures included the value of FTM and ITM services.<sup>77</sup>

**Table 1: Total Market Size for MRO Services, together with related engineering, logistics and supply chain and inventory management services, for Singapore and Global Market**

Relevant Market	Value		
	2011	2012	2013
Singapore market for line maintenance (all aircraft types) including revenue from ancillary engineering and management services, such as FTM	US\$629 million (approx. S\$829.19 million)	US\$662 million (approx. S\$869.54 million)	US\$720 million (approx. S\$945.72 million)
Worldwide market for heavy maintenance (all aircraft	[REDACTED]	[REDACTED]	[REDACTED]

<sup>77</sup> Footnote 18 of Form M1

types) including revenues from ancillary engineering and management services, such as FTM			
World market for component maintenance (all aircraft types) including revenues from ancillary management services, such as ITM	[X]	[X]	[X]

**Table 2: Singapore market for line maintenance (all aircraft types)**

Company	Estimated market shares by value (percent)		
	2011	2012	2013
<b>SIAEC</b>	[30-40]%	[30-40]%	[30-40]%
<b>Boeing</b>	[0-10]%	[0-10]%	[0-10]%
Hong Kong Aircraft Engineering Company (“HAECO”)	[0-10] %	[0-10]%	[0-10]%
ST Aerospace Engines Ptd Ltd (“ST Aerospace”)	[0-10]%	[0-10]%	[0-10]%

**Table 3: Global market for heavy maintenance (all aircraft types)**

Company	Estimated market shares by value (percent)		
	2011	2012	2013
<b>SIAEC</b>	[0-10]%	[0-10]%	[0-10]%
<b>Boeing</b>	[0-10]%	[0-10]%	[0-10]%
Lufthansa Technik AG (“Lufthansa Technik”)	[10-20]%	[10-20] %	[10-20]%
Air France Industries KLM Engineering & Maintenance (“AF/KLM”)	[10-20] %	[10-20] %	[10-20]%
SR Technics	[0-10]%	[0-10]%	[0-10]%
ST Aerospace	[0-10]%	[0-10]%	[0-10]%
Aircraft Maintenance & Engineering Corporation (“Ameco Beijing”)	[0-10]%	[0-10]%	[0-10]%

**Table 4: Global market for component maintenance (all aircraft types)**

Company	Estimated market shares by value (percent)		
	2011	2012	2013
<b>SIAEC</b>	[0-10]%	[0-10]%	[0-10]%
<b>Boeing</b>	[0-10]%	[0-10]%	[0-10]%
Lufthansa Technik	[10-20]%	[10-20]%	[10-20]%
AF/KLM	[10-20]%	[10-20]%	[10-20]%
SR Technics	[0-10]%	[0-10]%	[0-10]%
ST	[0-10]%	[0-10]%	[0-10]%

Aerospace			
Ameco Beijing	[0-10]%	[0-10]%	[0-10]%

Market for the supply of ITM services

77. The Parties submitted that they are not aware of any independent data source for the estimated total value of ITM services, and therefore were not able to provide any estimate of the total value of FTM services procured.<sup>78</sup>

78. SIAEC submitted that SIAEC’s Fleet Management Programme (“FMP”) comprises of FTM and ITM services. SIAEC submits that it does not track its customers under its FMP based on the provision of separate FTM and ITM services. However, SIAEC provided below best estimates of its revenue from SIAEC’s ITM services.<sup>79</sup>

<b>SIAEC estimated revenue for ITM services (FY 2013/14)</b>	
Global	[X]
Singapore	[X]

79. Boeing submitted below details of Boeing’s worldwide and Singapore revenues from ITM services for FY 2013.<sup>80</sup>

<b>Boeing global and Singapore revenues from ITM</b>	
Global	[X]
Singapore	[X]

80. SIAEC submitted the following list of airlines which are based in Singapore, which are currently outsourcing the procurement of ITM services:<sup>81</sup>

[X]

81. SIAEC submitted the following list of ITM service provider currently providing ITM services globally and is ready to provide ITM services to Singapore-registered airlines.<sup>82</sup>

<b>S/N</b>	<b>Provider</b>
1	AAR
2	Abu Dhabi Aircraft Technologies LLC

<sup>78</sup> Paragraphs 1.1 and 1.4 of the Parties replies to CCS’s RFI dated 7 January 2015.

<sup>79</sup> Paragraph 20.1 of the Parties’ replies to CCS’s RFI dated 7 January 2015.

<sup>80</sup> Paragraph 9.1 of the Parties’ replies to CCS’s RFI dated 22 December 2014.

<sup>81</sup> Paragraph 4.2 of the Parties’ replies to CCS’s RFI dated 7 January 2015.

<sup>82</sup> Paragraph 14.1 of the Parties’ replies to CCS’s RFI dated 7 January 2015.

3	AF/KLM
4	Airinmar Ltd
5	A J Walter Aviation Limited
6	Guangzhou Aircraft Maintenance Engineering Co., Ltd.
7	HAECO
8	Honeywell International Inc
9	Lufthansa Technik
10	Rockwell Collins Inc
11	SR Technics
12	ST Aerospace
13	United Technologies Corporation

Market for the supply of FTM services

82. Similarly, SIAEC has submitted that it does not track its customers under its FMP based on the provision of separate FTM services, and provided below a best estimate of its revenue from SIAEC's FTM services:<sup>83</sup>

<b>SIAEC estimated revenue for FTM services (FY 2013/14)</b>	
Global	[X]
Singapore	[X]

83. Boeing submitted below details of Boeing's worldwide and Singapore revenues from FTM services for FY 2013.<sup>84</sup>

<b>Boeing global and Singapore revenues from FTM</b>	
Global	[X]
Singapore	[X]

84. SIAEC submitted the following list of airlines which are based in Singapore, which are currently outsourcing the procurement of FTM services:<sup>85</sup>

[X]

85. SIAEC submitted the following list of FTM service providers currently providing ITM services globally and ready to provide FTM services to Singapore-registered airlines.<sup>86</sup>

<sup>83</sup> Paragraph 16.4 of Form M1; Paragraph 11.1 of the Parties' replies to CCS' RFI dated 22 December 2014; Paragraph 20.1 of the Parties' replies to CCS' RFI dated 7 January 2015.

<sup>84</sup> Paragraph 9.1 of the Parties' replies to CCS' RFI dated 22 December 2014.

<sup>85</sup> Paragraph 2.2 of the Parties' replies to CCS's RFI dated 7 January 2015.

<sup>86</sup> Paragraph 12.1 of the Parties' replies to CCS's RFI dated 7 January 2015.

S/N	Provider
1	Abu Dhabi Aircraft Technologies
2	AF/KLM
3	A J Walter Aviation Limited
4	GAMECO
5	HAECO
6	Lufthansa Technik
7	SR Technics
8	ST Aerospace

*CCS's assessment*

86. CCS notes that there are limitations to data collection pertaining to Singapore and global market share for FTM and ITM services due to commercial sensitivity and the fact that airlines outsource FTM and/or ITM services to third-party providers rather than provide such service in-house is a recent development.<sup>87</sup> While the market share figures of the MRO services in Tables 1 to 4 do not provide the clear depiction of the competition landscape of both the FTM and ITM markets, it serves to provide an indication of the relative strength of the MRO services providers who are also active in the FTM and ITM markets.
87. Further, CCS notes that given that FTM and ITM contracts are awarded through a bidding process with a relatively long term duration, short-term market share figures of FTM and ITM markets would depict a skewed competitive landscape where current FTM and ITM suppliers would have high market shares, even though they are constrained by other potential suppliers due to the bidding process. This is in especially the case where the number of customers in this case is limited (there are currently eight AOC holders in Singapore). Therefore CCS focuses the competition assessment on whether customers are able to find viable alternatives to the Parties post-Transaction.
88. Based on responses from third-parties, CCS is of the view that there are strong and viable competitors, such as [X] and [X] in the FTM and ITM space which could serve as competitive constraints. Based on responses from [X] and [X], these players with strong presence in the MRO market are fully equipped with the capabilities to deliver FTM and ITM services

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<sup>87</sup> Paragraph 1.3 of the Parties' replies to CCS's RFI dated 7 January 2015.

globally. As such, it is unlikely that Boeing and SIAEC have significant market share in the FTM and ITM market.<sup>88</sup>

**(b) Barriers to entry**

89. *CCS Merger Guidelines* provide that a new entry and the threat of entry can represent important competition constraints on the behavior of merger parties. Entry by new competitors or expansion by existing competitors may be sufficient in likelihood, scope and time to deter or defeat any attempt by the merger parties or their competitors to exploit the reduction in rivalry flowing from the Transaction (whether through coordinated or non-coordinated strategies).<sup>89</sup>

*The Parties' submission*

90. SIAEC submitted that, apart from capital expenditure, there are other non-capital prerequisites for new entrants to the fleet management business to gain market share in the Relevant Markets, including access to manpower, regulatory approvals and access to customers. Investments in capital expenditure alone may not ensure a 5% market share as there are a multitude of competitors in the global fleet management business, the market is fragmented and it would be difficult for any single entrant to achieve a 5% market share on a global scale.<sup>90</sup>

91. For FTM Services, the Parties submitted that they are largely scalable by reference to the fleet size under management, as the key requirement to provide the services is manpower. In addition, some readily available third-party software for maintenance systems and typical hardware are required. The majority of the manpower required is personnel with experience in managing maintenance support of airplanes for an airline. The Parties estimated that approximately [X] personnel would typically be required for a fleet of [X] airplanes, with approximately [20-30]% of these personnel being trained engineers.<sup>91</sup>

92. For ITM Services, the Parties submitted that they are also largely scalable by reference to the fleet size under management, which requires manpower, logistics support, and warehousing space. The manpower required includes demand planning and parts management personnel, as well as logistics and

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<sup>88</sup> Response from [X] dated 9 December 2014; Response from [X] dated 9 December 2014; and Response from [X] dated 7 December 2014.

<sup>89</sup> Paragraph 7.2 of *CCS Merger Guidelines*.

<sup>90</sup> Paragraph 26.1 of Form M1.

<sup>91</sup> Paragraph 1.1 of Parties' replies to CCS's RFI dated 22 December 2014.



warehousing personnel. In general, ITM service providers may have the demand planning and parts management personnel in-house, while outsourcing the logistics and warehousing (both facilities and manpower requirement) to third-parties such as DB Schenker and Deutsche Post DHL. The Parties shared that [REDACTED]. Technology for connectivity to the demand planning system being used for an airline is required. This technology is usually based on third-party database systems such as those by the Oracle Corporation or SAP SE.<sup>92</sup>

### *Feedback from third-parties*

#### Market for the provision of FTM

93. Third-parties provided feedback that key prerequisites for new entrants providing FTM services include engineering know-how, technical expertise, aircraft maintenance, planning and operation knowledge in fleet technical management.<sup>93</sup>
94. Furthermore, CCS received feedback that MRO service providers do not necessarily have the capability to provide FTM services due to the different skills and capabilities required for MRO, FTM and ITM services. For instance, FTM service providers typically developed specific skill sets from airline operating experience.<sup>94</sup>

#### Market for the provision of ITM

95. General feedback from third-parties indicate that the key prerequisites for new entrants providing ITM services include possession of aircraft maintenance and operation knowledge, component assets, access to OEM component manuals, repair data, sufficient capital for warehouse investment and other logistics capabilities.<sup>95</sup>
96. Furthermore, feedback from third-parties has shown that MRO service providers do not necessarily have the capability to provide ITM services due to the different skills and capabilities required for MRO, FTM and ITM services. For instance, aircraft parts and component inventory pool are

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<sup>92</sup> Paragraph 2.1 of Parties' replies to CCS's RFI dated 22 December 2014.

<sup>93</sup> Response from [REDACTED] dated 9 December 2014; Response from [REDACTED] dated 9 December 2014; and Response from [REDACTED] dated 7 December 2014.

<sup>94</sup> Response from [REDACTED] dated 9 December 2014; Response from [REDACTED] dated 9 December 2014; and Response from [REDACTED] dated 7 December 2014.

<sup>95</sup> Response from [REDACTED] dated 9 December 2014; Response from [REDACTED] dated 9 December 2014; and Response from [REDACTED] dated 7 December 2014.

typically assets held by airlines themselves rather than being provisioned by MRO service providers.<sup>96</sup>

*CCS's assessment*

97. CCS is of the view the potential FTM and ITM service providers that are affiliated with airlines might have relative ease of entry, given that there will be the pool of airline operating experience and component inventory pool. However, potential independent MRO service providers might have difficulty in sourcing for such expertise and inventory capabilities.

**(c) Countervailing buyer power**

*The Parties' submission*

98. The Parties submitted that any potential customers have the ability to self-supply or to outsource to other providers in the Relevant Markets in Singapore. Particularly, airlines with relatively large fleets that are already able to self-perform MRO services, or have subsidiaries with MRO capabilities include:

- a. Thai Airways: Thai Airway's maintenance centre provides a full range of maintenance services including certified Heavy Maintenance (D-checks) or complete aircraft overhaul. At present, Thai Airway's maintenance centre conducts aircraft maintenance and provides services for Thai Airways, as well as customer airlines in four hangars located at Don Mueang Airport, Bangkok;
- b. Lufthansa Technik: Lufthansa is part of the group of companies of Deutsche Lufthansa AG, which is the flag carrier of Germany. Lufthansa Technik is one of the world's leading independent providers of aircraft-related technical services. Lufthansa's portfolio covers the entire spectrum of MRO, modification and conversion, and engines and components for commercial passenger aircraft; and
- c. AF/KLM: As the MRO arm of the Air France KLM Group, AF/KLM provides the full range of MRO services for aircraft, including airframe, engines, components, and landing gear.<sup>97</sup>

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<sup>96</sup> Response from [X] dated 9 December 2014; Response from [X] dated 9 December 2014; and Response from [X] dated 7 December 2014.

<sup>97</sup> Paragraph 32.1 of Form M1.

*Details of buyers being able to switch suppliers*

99. The Parties submitted that the MRO services market is highly competitive and there are no barriers that would impede customers from switching suppliers. While customers will likely enter into long-term contracts (e.g. for ten years) for MRO services, customers are able to terminate such contracts easily and to switch suppliers upon termination of the contracts. There may be fees incurred for early termination, or other switching costs incurred due to operational complexity in switching suppliers. However, the Parties submitted that such switching costs are not high, and are not prohibitive such that customers would be deterred from switching suppliers. Customers also procure MRO services from different MRO service providers to service their aircraft fleet, such that certain of the aircraft are serviced by one MRO service provider, and the remaining aircraft are serviced by other MRO service providers or in-house. For example, [X], one of SIAEC's customers, operates its own hangar and can decide to either service its aircraft in-house or to procure MRO services from either SIAEC or any other third-party MRO service providers. Accordingly, there are no restrictions on switching suppliers, and customers may easily choose to procure MRO services from other providers.<sup>98</sup>
100. Further, a customer is not restricted by the identity of the specific aircraft manufacturer of its aircraft, and is free to choose from the multitude of MRO service providers for MRO services. As submitted by the Parties, customers may award contracts to an MRO service provider to service their aircraft fleet which includes aircraft manufactured by different aircraft manufacturers.<sup>99</sup>
101. CCS notes that the above information submitted by the Parties is in relation to the provision of MRO services, and not specifically FTM and ITM services.

*Feedback from third-parties*

102. Third-parties<sup>100</sup> have commented that while there are sufficient MRO service providers such as ST Aerospace, Lufthansa Technik and HAECO that are equipped with the ability to fulfill their FTM and ITM needs, there are some concerns that service providers with the necessary skills and technology to provide MRO, FTM and ITM services for certain aircrafts are limited, especially for the newer aircraft. For example, [X] responded that there are

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<sup>98</sup> Paragraph 32.2 of Form M1.

<sup>99</sup> Paragraphs 24.5 and 32.3 of Form M1.

<sup>100</sup> Response from [X] dated 9 December 2014; Response from [X] dated 8 December 2014.

fewer service providers with the specific knowledge, technical equipment and access to component OEM proprietary information necessary to repair Boeing 787 aircraft components.<sup>101</sup>

103. Specifically, [X] shared that aside from components, engine, passenger seats, wheels, brakes and tyres, virtually all items and repair capabilities for Boeing 787 aircrafts are supplied almost exclusively with a sole OEM. In its opinion, there is a possibility where non-OEM competitors are unable to develop repair capability with the OEMs restricting necessary data.<sup>102</sup>

104. [X] and [X] also shared that there are concerns within the aerospace industry regarding the increasing sophistication of technology and electrification of aircraft. These developments have resulted in significant amounts of proprietary information residing with the OEM, such that independent MRO, FTM or ITM service providers may not have access to critical information necessary to compete in the market.<sup>103</sup>

105. Furthermore, CCS understands from [X] that a critical mass is required to justify the creation of an in-house engineering department to run in-house FTM. As a result, small or start up carriers lacking engineering resources and critical mass may not be able to self-supply FTM services in-house.<sup>104</sup>

#### *Details of buyers being able to switch suppliers*

106. Based on responses from independent MRO service providers,<sup>105</sup> CCS notes that contracts for MRO and FTM services usually span between one to ten years while that for ITM may span across three to ten years, depending on the needs of the airlines. In addition, CCS recognises from the responses that it is not common for airlines to switch service providers while under contracts due to presence of “early exit fees” which can be quite significant depending on the investment and the type of services provided.<sup>106</sup>

#### *CCS’s assessment*

107. CCS is of the view that customers presently have numerous FTM and ITM providers in the region from which they could choose. However, the ability

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<sup>101</sup> Response from [X] dated 9 December 2014.

<sup>102</sup> Response from [X] dated 9 December 2014.

<sup>103</sup> Notes of Meeting with [X] dated 22 December 2014; Notes of Meeting with [X] dated 23 December 2014

<sup>104</sup> Response from [X] dated 7 December 2014.

<sup>105</sup> Response from [X] dated 9 December 2014, Response from [X] dated 9 December 2014; and Response from [X] dated 7 December 2014.

<sup>106</sup> Response from [X] dated 9 December 2014; Response from [X] dated 8 December 2014.

of these independent third-party, FTM and ITM providers to provide these services hinges on their ability to obtain necessary proprietary information and technical know-how, which OEMs may not openly disclose. As mentioned above, Boeing is the sole supplier of such information and expertise specific to Boeing aircrafts. On balance, the customers would be likely to be able to exercise some countervailing power with their choices of numerous independent third-party training providers if these service providers' ability to obtain such information is not hindered.

108. It is also worthy to note that OEMs are required to disclose to the airlines the information which are critical to the airworthiness of the airlines' fleet. Boeing mentioned that all data and maintenance information belonged to the airlines because airlines are ultimately accountable for the safety of their fleet. Therefore the airlines have discretion to share this information with the MRO service providers they eventually opt for. Boeing also stated that OEMs like Boeing are required to furnish airline companies with all the relevant information such as repair and maintenance instructions so that airline companies do not necessarily need to rely on OEMs for MRO services, and are able to perform the services in-house if required.<sup>107</sup>
109. CAAS also mentioned that while there may be instances where OEMs are limiting the level of details accessible by third-party service providers in the maintenance data and repair scheme, OEMs are still obliged to provide their airline customers with the necessary information in order to carry out the basic repairs, which air operators may appoint third-party MRO service providers to do so.<sup>108</sup>
110. Lastly, CCS notes that FTM and ITM services providers [X] and [X] submitted that they are able to provide both FTM and ITM services for a particular type of aircraft immediately if an airline provides them with the relevant maintenance manual from the OEM.<sup>109</sup>
111. In conclusion, given that OEMs like Boeing are obligated to provide necessary information for the maintenance of the airworthiness of the airline's aircrafts, CCS finds that airlines have considerable countervailing power and are able to switch suppliers.

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<sup>107</sup> Notes of Meeting with Parties dated 15 December 2014.

<sup>108</sup> Response from CAAS dated 29 January 2015.

<sup>109</sup> Response from [X] dated 7 December 2014; Response from [X] dated 9 December 2014.

## VIII. Competition Assessment

### (a) Non-coordinated effects

112. Non-coordinated effects may arise where, as a result of the Transaction, the merged entity finds it profitable to raise prices (or reduce output or quality) because of the loss of competition between the merged entities.<sup>110</sup> Other firms in the market may also find it profitable to raise their prices because the higher prices of the merged entity's product will cause some customers to switch to rival products, thereby increasing demand for the rivals' products.<sup>111</sup>
113. The Parties submitted that the Transaction would not lead to a SLC as non-coordinated effects will not arise as a result of the proposed JV in view of the following:<sup>112</sup>
- a. The magnitude and competitive strengths of viable alternative suppliers;
  - b. The barriers to entry are not unduly restrictive, and the likelihood of potential new entrants; and
  - c. The ability of customers to easily switch between suppliers.
114. Multitude of existing and potential competitors. The Parties submitted that there are a number of competitors offering MRO services.<sup>113</sup> In addition, the Parties further submitted that airlines themselves can and do also provide in-house MRO services, and so will likewise be able to exert a competitive restraint on the merged entity.<sup>114</sup> The MRO services market is accordingly a highly competitive one, in view of the multitude of independent, third-party competitors, as well as competing in-house MRO service providers. The Parties submitted that it would also be possible for an airline to procure FTM services, both globally and in Singapore, from an OEM or an MRO services provider. In addition, the Parties submitted that any of the global FTM service providers could potentially also provide FTM services to Singapore-registered airlines, including Abu Dhabi Aircraft Technologies LLC, AF/KLM, A J Walter Aviation Limited, Guangzhou Aircraft Maintenance Engineering Co., Ltd., HAECO, Lufthansa Technik, SR Technics and ST Aerospace.<sup>115</sup>

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<sup>110</sup> Paragraph 6.3 of *CCS Merger Guidelines*.

<sup>111</sup> Paragraph 6.3 of *CCS Merger Guidelines*.

<sup>112</sup> Paragraph 34.14 of Form M1.

<sup>113</sup> Paragraph 34.6 of Form M1.

<sup>114</sup> Paragraph 34.7 of Form M1. Paragraph 32.1 of the Form M1 stated that Thai Airways, Lufthansa Technik and Air France KLM Group are examples of airlines with relatively large fleets that are already able to self-perform MRO services, or have subsidiaries with MRO capabilities.

<sup>115</sup> Paragraphs 12.1 and 12.2 of Parties' replies to CCS's RFI dated 7 January 2015.

115. The Parties submitted that, based on their internal knowledge of the market and their commercial experience, any of the global ITM service providers could potentially also provide ITM services to Singapore-registered airlines, including AAR, Abu Dhabi Aircraft Technologies, AF/KLM, Airinmar Ltd, AJW Aviation, GAMECO, HAECO, Honeywell International Inc., Lufthansa Technik, Rockwell Collins Inc, SR Technics, ST Aerospace and United Technologies Corporation.<sup>116</sup>

116. Barriers to Entry. The Parties submitted that FTM Services are largely scalable by reference to the fleet size under management, as the key requirement to provide the services is manpower. In addition to manpower, some readily available third-party software for maintenance systems and typical technology (desktop and laptop computers) are required. The majority of the manpower required is personnel with experience in managing maintenance support of airplanes for an airline. By way of illustration, for a fleet of [X] airplanes, approximately [X] such personnel would typically be required. However, such personnel need not all be trained in maintenance or aerospace engineering. Instead, approximately [20-30]% would generally need to be trained engineers, while the rest could be less-educated maintenance planners.<sup>117</sup>

117. Similarly, ITM Services are also largely scalable by reference to the fleet size under management, which require manpower, logistics support, and warehousing space. The manpower required includes demand planning and parts management personnel, as well as logistics and warehousing personnel. In general, ITM service providers may have the demand planning and parts management personnel in-house, while outsourcing the logistics and warehousing (both facilities and manpower requirements) to third-parties such as DB Schenker and Deutsche Post DHL. [X]. There are a few additional technology requirements other than connectivity to the demand planning system being used for an airline, which are usually based on third-party database systems such as those by the Oracle Corporation or SAP SE.<sup>118</sup>

118. The ability of customers to switch service providers easily. The Parties submitted that, while customers will likely enter into relatively long-term contracts (e.g. for up to ten years) for MRO services as submitted in paragraphs 24.7, 28.2, 32.2 and 34.9 of the Form M1, in respect of FTM and ITM services customers will typically enter into contracts of five to ten years, and are able easily to terminate such contracts and to switch suppliers. The

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<sup>116</sup> Paragraph 14.1 of Parties' replies to CCS's RFI dated 7 January 2015.

<sup>117</sup> Paragraph 1.1 of Parties' replies to CCS's RFI dated 22 December 2014.

<sup>118</sup> Paragraph 2.1 of Parties' replies to CCS's RFI dated 22 December 2014.

Parties further stated that any fees incurred for early termination are generally insignificant. While there may be other ancillary switching costs incurred relating to operational issues, such as data migration to the IT system of the new FTM and ITM services provider, formulating new processes and economies of scale for rotatable pooling of aircraft parts, the Parties submitted that overall such ancillary switching costs are also not prohibitively high.<sup>119</sup>

*CCS's assessment and conclusion on non-coordinated effects*

Market for the provision of ITM services

119. The magnitude and competitive strengths of viable alternative suppliers. Based on third-party feedback, CCS notes that, there are sufficient alternative ITM service providers in the market to SIAEC and Boeing, with the ability to fulfill airlines' ITM needs. Besides the Parties, HAECO, SR Technics, ST Aerospace, Lufthansa Technik, Airfrance/KLM and Avianor are deemed as suitable ITM service providers by airline customers.<sup>120</sup> As such, CCS is of the view that there are sufficient viable alternative suppliers with the competitive strengths in the market such that there will still be strong competitive forces capable of sustaining sufficient levels of post-transaction rivalry. As mentioned in paragraph 71, CCS notes that Lufthansa Technik, HAECO, SR Technics, Airfrance/KLM and ST Aerospace have a presence in Singapore.
120. The barriers to entry are not unduly restrictive, and the likelihood of potential new entrants. As noted above, CCS finds that there are moderate barriers to entry for potential new entrants.
121. The ability of customers to easily switch between suppliers. Based on third-party feedback, CCS notes that instances ITM contracts are prematurely terminated are not common due to the presence of "early exit fees" and other costs involved depending on types of investment and services provided by the service provider.<sup>121</sup> One airline estimated that switching costs mid-contract could involve millions of dollars for FTM contracts, and less for ITM contracts due to the generally shorter length of ITM contracts.<sup>122</sup> Boeing submitted that early termination costs are tailored to each specific customer to compensate it for any costs borne or investments made to support the

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<sup>119</sup> Paragraphs 21.1 and 21.2 of the Parties' replies to CCS's second RFI dated 22 December 2012.

<sup>120</sup> Response from [redacted] dated 9 December 2014; Response from [redacted] dated 8 December 2014.

<sup>121</sup> Response from [redacted] dated 9 December 2014.

<sup>122</sup> Response from [redacted] dated 8 December 2014.



particular contract. It further submitted that the purpose of such costs is not to influence a customer in its decision to switch service providers.<sup>123</sup>

122. SIAEC provided an example of [REDACTED].<sup>124</sup>

#### Market for the provision of FTM services

123. The magnitude and competitive strengths of viable alternative suppliers.

Based on third-party feedback, CCS notes that there are sufficient alternative FTM service providers in the market to SIAEC and Boeing, with the ability to fulfill airlines' FTM needs. Besides the Parties, Lufthansa Technik, Airfrance/KLM, AAR Corp and GTA Aviation are deemed as suitable ITM service providers by airline customers.<sup>125</sup> CCS further notes that [REDACTED] does not procure FTM services and does its FTM functions in-house.<sup>126</sup> As such, CCS is of the view that there are sufficient viable alternative suppliers with the competitive strengths in the market such that there will still be strong competitive forces capable of sustaining sufficient levels of post-transaction rivalry. As mentioned in paragraph 71, CCS notes that Lufthansa Technik, AAR Corp and Airfrance/KLM have a presence in Singapore.

124. The barriers to entry are not unduly restrictive, and the likelihood of potential new entrants. As noted above, CCS finds that there are moderate barriers to entry for potential new entrants.

125. The ability of customers to easily switch between suppliers. Based on third-party feedback, CCS notes that instances FTM contracts are prematurely terminated are not common due to the presence of "early exit fees" and other costs involved depending on types of investment and services provided by the service provider.<sup>127</sup> One airline estimated that switching costs mid-contract could involve millions of dollars for FTM contracts.<sup>128</sup>

126. Boeing submitted that early termination costs are tailored to each specific customer to compensate it for any costs borne or investments made to support the particular contract. It further submitted that the purpose of such costs is not to influence a customer in its decision to switch service providers.<sup>129</sup> To support its submission, Boeing provided an example of a

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<sup>123</sup> Paragraph 17.6 of Parties' replies to CCS's RFI dated 7 January 2015.

<sup>124</sup> Paragraph 16.1 of Parties replies to CCS's RFI dated 7 January 2015.

<sup>125</sup> Response from [REDACTED] dated 8 December 2014.

<sup>126</sup> Response from [REDACTED] dated 9 December 2014.

<sup>127</sup> Response from [REDACTED] dated 9 December 2014.

<sup>128</sup> Response from [REDACTED] dated 8 December 2014.

<sup>129</sup> Paragraph 17.2 of Parties' replies to CCS's RFI dated 7 January 2015.

termination clause where [X].<sup>130</sup> However, CCS notes that Boeing did not provide further examples or details, nor estimates or figures in general terms.

127. SIAEC provided an example of [X].<sup>131</sup>

128. In light of the above, CCS finds that while customers are unlikely to switch providers mid-contract, CCS is of the view that consumers of FTM services will not be prohibited from switching between suppliers at the end of the each contract, given the number of alternatives available. The possibility of the JV raising prices mid-contract would likely to be low given the sufficient competitive pressure exerted by its competitors, and the threat of customers conducting FTM services in-house.

129. Therefore, CCS is satisfied that the Transaction is unlikely to lead to non-coordinated effects which will not lead to competition concerns in all relevant markets.

#### **(b) Coordinated effects**

130. A merger may also lessen competition substantially by increasing the possibility that, post-merger, firms in the same market may coordinate their behaviour to raise prices, or reduce quality or output. Given certain market conditions, and without any express agreement, tacit collusion may arise merely from an understanding that it will be in the firms' mutual interests to coordinate their decisions. Coordinated effects may also arise where a merger reduces competitive constraints in a market, thus increasing the probability that competitors will collude or strengthen a tendency to do so.<sup>132</sup> Vertical mergers may facilitate coordination, for example by increasing market transparency. Integration may afford the merged entity better knowledge of selling prices in the upstream or downstream market, thereby facilitating collusion in either of those markets.<sup>133</sup>

131. The Parties submitted that Boeing (as an aircraft manufacturer) and SIAEC have its core business in different markets with some overlaps for the provision of FTM and ITM services in the region, are essentially active in different markets and pursue very different objectives from the joint venture. The likelihood of co-ordination can therefore be excluded.<sup>134</sup>

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<sup>130</sup> Paragraph 17.4 of Parties' replies to CCS's RFI dated 7 January 2015.

<sup>131</sup> Paragraph 16.1 of Parties' replies to CCS's RFI dated 7 January 2015.

<sup>132</sup> Paragraph 6.7 of *CCS Merger Guidelines*.

<sup>133</sup> Paragraph 8.8 of *CCS Merger Guidelines*.

<sup>134</sup> Paragraph 35.1 of Form M1.

*CCS's assessment and conclusion on coordinated effects*

132. CCS is of the view that given the number of players in the market for the provision of FTM and ITM services in the region, customers have considerable countervailing buyer power and this might render cooperation between competitors ineffective.
133. In light of the above, CCS concludes that the Transaction does not raise concerns in terms of coordinated effects on competition.

**(c) Vertical effects**

134. With regard to the manufacture of large commercial jet aircraft, the Parties submitted that based on past EC decisions<sup>135</sup>, there are two separate relevant markets within the overall market for large commercial jet aircraft, the market for narrow-body aircraft and the market for wide-body aircraft. Boeing submitted that its estimated worldwide market share for the manufacture of narrow-body commercial jet aircraft is approximately [40-50]% and its estimated worldwide market share for the manufacture of wide-body commercial jet aircraft is approximately [60-70]%.<sup>136</sup>
135. The Parties also submitted that the quoted value of an aircraft is a function of both its capacity to generate revenue and the costs incurred in operating it and that maintenance costs figure heavily in the equation.<sup>137</sup>
136. One of the competitors noted that MRO activities are not core for airframe OEMs like Boeing but strategic moves to secure further aircraft sales from key airline customers. It further highlighted the concern that OEMs like Boeing might provide MRO services at a loss as an offset for further aircraft orders and to protect long-term profitable core business.<sup>138</sup>
137. Further, there are third-party comments on concerns within the aerospace industry regarding the increasing sophistication of technology and electrification of aircraft. These developments have resulted in significant amounts of proprietary information residing with the OEMs, such that

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<sup>135</sup> EC Case No. IV/M. 877 – *Boeing/McDonnell Douglas*; EC Case No. COMP/M. 2220 – *General Electric/Honeywell*.

<sup>136</sup> Paragraph 28.3 of Parties' replies to CCS's RFI dated 22 December 2014.

<sup>137</sup> Notes of Meeting with Parties dated 15 December 2014.

<sup>138</sup> Response from [redacted] dated 7 December 2014.

independent MRO, FTM or ITM service providers may not have access to critical information necessary to compete in the market.<sup>139</sup>

*CCS's assessment*

138. As stated in paragraph 8.4 of the *CCS Merger Guidelines*, vertical aspects of acquisitions leading to vertical integration are unlikely to result in SLC in a market, unless market power exists at one of the affected functional levels.
139. CCS notes that based on Boeing's market share in the manufacture of wide-body commercial jet aircraft is more than [60]% and the manufacture of narrow-body commercial jet aircraft is [40-50]% and it may be construed that Boeing has certain market power in the manufacture of both narrow-body and wide-body commercial jet aircrafts. However, given that CCS found that there is no evidence of any foreclosure effects, as shown in the following paragraphs, CCS is of the view that it is not necessary to conclude whether Boeing has market power in the manufacture of wide-body commercial jet aircraft and/or narrow-body commercial jet aircraft.
140. In assessing the concern that Boeing might provide MRO services at a loss as to boost its sales of its aircraft, CCS reviewed the five-year management plans of the JV.<sup>140</sup> Based on the management plans, [§]. This shows that the JV is meant to be a viable business in the provision of FTM, ITM and/or MRO services, and not used by Boeing to subsidize the sale of its aircraft.
141. In addition, Boeing submitted [§] the customer will retain an overriding discretion as to whether or not to enter into a MRO services contract with the JV.<sup>141</sup> CCS notes that [§],<sup>142</sup> [§].<sup>143</sup>
142. Lastly, Boeing highlighted that there would be no expected differences in the terms of aircraft sold by Boeing to a customer if the customer chooses to engage the JV for the provision of FTM, ITM and/or MRO services, as compared to if the customer chooses not to engage the JV for the provision of such services.<sup>144</sup>
143. In relation to Boeing withholding proprietary information resulting in independent MRO, FTM or ITM service providers not having access to

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<sup>139</sup> Notes of Meeting with [§] dated 22 December 2014; Notes of Meeting with [§] dated 23 December 2014; Response from [§] dated 9 January 2015.

<sup>140</sup> Annex 6 of Parties' Letter to CCS dated 8 December 2014.

<sup>141</sup> Paragraph 4.2 of Parties' replies to CCS's RFI dated 22 December 2014.

<sup>142</sup> For example [§].

<sup>143</sup> Clause 1.1 of the JVA.

<sup>144</sup> Paragraph 4.4 of Parties' replies to CCS's RFI dated 22 December 2014.

critical information necessary to compete in the market, CCS notes that Boeing mentioned that all data and maintenance information belonged to the airlines because airlines are ultimately accountable for the safety of their fleet. As such, the airlines have discretion to share this information with the MRO service providers they eventually opt for. Boeing also stated that OEMs like Boeing are required to furnish airline companies with all the relevant information such as repair and maintenance instructions so that airline companies do not necessarily need to rely on OEMs for MRO services, and are able to perform the services in-house if required.<sup>145</sup>

144. CAAS also mentioned that while there may be instances where OEMs are limiting the level of details accessible by third-party service providers in the maintenance data and repair scheme, OEMs are still obliged to provide their airline customers with the necessary information in order to carry out the basic repairs, which air operators may appoint third-party MRO service providers to do so.<sup>146</sup>

145. Lastly, CCS notes that MRO, FTM and ITM services providers [X] and [Y] submitted that they are able to provide MRO, FTM and/or ITM services for a particular type of aircraft immediately if an airline provides them with the relevant maintenance manual from the OEM.<sup>147</sup>

146. Based on the foregoing, CCS concludes that the risk is low for the Transaction to give rise to vertical effects that would raise competition concerns.

## **IX. Efficiencies**

147. The Parties submitted that the JV is a “greenfield” business that will enjoy economies of scale as its business grows. Specifically, they submit that the JV will be well-positioned to more effectively and efficiently provide MRO and related fleet management services primarily to customers Based in the SAPAC region. Efficiency will be gained by the location of the JV being in the same time zone. The JV engineers will be closer in proximity to the airline customer engineering departments, ensuring better integration and service levels. Additionally, the JV will have access to Boeing fleet management expertise, allowing it to provide more informed maintenance plans and decisions for its customers.<sup>148</sup>

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<sup>145</sup> Notes of Meeting with Parties dated 15 December 2014.

<sup>146</sup> Response from CAAS dated 29 January 2015.

<sup>147</sup> Response from [X] dated 7 January 2015; Response from [Y] dated 9 January 2015.

<sup>148</sup> Paragraph 42.1 of Form M1.

*CCS's assessment*

148. CCS notes that claimed efficiencies may be taken into account at two separate points in the analytical framework: first, where they increase rivalry in the market so that no SLC will result from the merger and second, efficiencies can be taken into account where they do not avert an SLC, but will nevertheless bring about lower costs, greater innovation, greater choice or higher quality and be sufficient to outweigh the detriments to competition caused by the merger in Singapore.<sup>149</sup>
149. Given that the above competition assessment did not point to an SLC, CCS is of the view that it is not necessary to make an assessment on the claimed efficiencies by the Parties.

**X. Ancillary Restraints**

150. Paragraph 10 of the Third Schedule to the Act states that “the section 34 prohibition and the section 47 prohibition shall not apply to any agreement or conduct that is directly related and necessary to the implementation of a merger” (the “Ancillary Restriction Exclusion”). A restriction is not automatically deemed directly related to the merger simply because it is agreed at the same time as the merger or is expressed to be so related.<sup>150</sup> In order to be directly related, a restriction needs to be subordinate to its main object.<sup>151</sup> In determining the necessity of the restriction to the implementation of the merger, considerations such as whether its duration, subject matter and geographical field of application are proportionate to the overall requirements of the merger will be taken into account.<sup>152</sup>
151. The Parties have submitted that the non-compete restrictions contained in Clause 25 of the JVA in their entirety are directly related and ancillary to the subject of the JV, and that the restrictions are necessary for the implementation of the JV in order to protect the value of the investments by the shareholders into the JV by ensuring that each Party will focus its efforts on the JV during the duration of the JV. This would ensure that the JV receives the full benefit of the goodwill of the Parties.<sup>153</sup>

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<sup>149</sup> Paragraphs 7.15 to 7.17 of *CCS Merger Guidelines*.

<sup>150</sup> Paragraph 10.12 of *CCS Merger Guidelines*.

<sup>151</sup> Paragraph 10.10 of *CCS Merger Guidelines*.

<sup>152</sup> Paragraph 10.13 of *CCS Merger Guidelines*.

<sup>153</sup> Paragraph 43.6 of Form M1.

152. The restrictions detailed in Clause 25 of the JVA consist of non-compete and non-solicitation obligations by SIAEC as well as Boeing and Boeing Singapore. These restrictions are detailed below.

### **Boeing/SIAEC Non-Compete Restrictions**

153. Under Clause 25.1 of the JVA, Boeing, Boeing Singapore, SIAEC, and their subsidiaries shall not compete with the JV in the provision of [X].<sup>154</sup> <sup>155</sup> This includes a prohibition against [X].<sup>156</sup> The restrictions will be in force for [X].<sup>157</sup>

### *CCS's assessment regarding the Parties' Non-Compete Restrictions*

154. The *CCS Merger Guidelines* state that non-compete clauses, if properly limited, are generally accepted as essential if the purchaser is to receive the full benefit of any goodwill and/or know-how acquired with any tangible assets. CCS will consider the duration of the clause, its geographical field of application, its subject matter and the persons subject to it. Any restriction must relate only to the goods and services of the acquired business and apply only to the area in which the relevant goods and services were established under the previous/current owner.<sup>158</sup>

155. The Boeing/SIAEC Non-Compete Restrictions essentially prevent SIAEC, Boeing and Boeing Singapore from competing with the JV. The Parties submitted that these are directly related to the JV, and necessary for the implementation of the JV to allow the Parties to protect the value of the investments by the Parties into the JV by ensuring that each Party will focus its efforts on the JV during the duration of the JV. This would ensure that the JV receives the full benefit of the goodwill of the Parties.<sup>159</sup>

156. CCS is of the view that the Boeing/SIAEC Non-Compete Restrictions is limited to the services constituting the economic activity of the JV and is also limited to the geographical area primarily contemplated by the JV and therefore does not exceed the scope of the Transaction i.e., the provision of “FTM Services”, “ITM Services” and “FMP Services” in the SAPAC Region.<sup>160</sup>

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<sup>154</sup> As defined in Clause 1.1 of the JVA.

<sup>155</sup> Clause 25.1.1 (i) of the JVA.

<sup>156</sup> Clause 25.1.1 (ii) of the JVA.

<sup>157</sup> Paragraph 43.7 of Form M1.

<sup>158</sup> Paragraph 10.15 of the *CCS Merger Guidelines*.

<sup>159</sup> Paragraph 43.6 of Form M1.

<sup>160</sup> Paragraph 36 and 38 of the EC Notice on Ancillary Restraints.

157. The duration of the Boeing/SIAEC Non-Compete Restrictions is limited to [X]. CCS has assessed that it is reasonable that the non-compete restrictions between the parent undertakings Boeing, Boeing Singapore and SIAEC lasts for the [X].<sup>161</sup> As such, CCS is of the view that the Boeing/SIAEC Non-Compete Restrictions are directly related to and necessary for the Transaction and in the context of the Transaction constitutes ancillary restrictions which fall within the exclusion under paragraph 10 of the Third Schedule of the Act insofar as it applies to Singapore.

**(a) [X]Restrictions**

*(i)* [X]

158. Under Clause 25.3.1 of the JVA, SIAEC or its subsidiaries will not:

[X]

159. In light of Boeing's commitments to the JV in relation to [X], the Parties submitted that the restriction on SIAEC to [X] is necessary to protect the value of Boeing's interest in the JV.<sup>162</sup>

160. Pursuant to Clause 2.5 of the JVA, Boeing will [X].

161. The Parties highlighted, however, that in each case these restrictions are [X].<sup>163</sup>

*(ii)* [X]

162. Clause 25.3.2 extends the restrictions on SIAEC and its subsidiaries contained in Clause 25.3.1 to [X].

163. The Parties submitted that the nature, scope and effect of Clause 25.3.2 is to protect the viability of the JV and to prevent a conflict of interest [X].<sup>164</sup>

164. Also, the Parties submitted that the provisions of Clause 25.3.2 are directly related and ancillary to the subject of the JV, and are necessary to protect

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<sup>161</sup> Paragraph 36 of the EC Notice on Ancillary Restraints similarly states that non-compete obligations can be regarded as directly related and necessary to the implementation of the concentration for the lifetime of the joint venture.

<sup>162</sup> Paragraph 43.8 of Form M1.

<sup>163</sup> Paragraph 43.2 of Form M1.

<sup>164</sup> Paragraph 1.9 of Parties' replies to CCS's RFI dated 19 January 2015.



against active competition between the JV and SIAEC or its Subsidiaries [X]. This will, accordingly, allow the JV to receive the full benefit of the goodwill of the parties to the JV, and protect the value of the investments by the shareholders into the JV.<sup>165</sup>

165. The Parties further submitted that the provisions of Clause 25.3.2 of the JVA are directly related to and do not exceed the geographic and business scope of the Proposed Transaction because they protect the JV from competition by SIAEC and its Subsidiaries [X]. The Parties noted that the restriction contained in Clause 25.3.2 of the JVA relates to [X]<sup>166</sup>. As submitted in paragraph 11.1 of the Form M1, the JV will offer services to customers in the SIA Group and other third party customers primarily Based in SAPAC. Nonetheless, the scope of the JV is not limited to customers Based in SAPAC. Further, if customers [X] seek the JV's services, [X]. Similarly, a customer in the SAPAC Region can procure services from any other service provider it chooses regardless of the service provider's location.<sup>167</sup>

*CCS's assessment regarding the [X]*

166. CCS notes that the [X] Restrictions are entered into by the Parties for the purposes of protecting Boeing's investment in the [X] JV. [X].

167. The duration of the [X] Restrictions is limited to [X]. CCS has assessed that it is reasonable that the non-compete obligations between the parent undertakings Boeing, Boeing Singapore and SIAEC lasts for [X].<sup>168</sup>

168. For [X], the [X] Restrictions clearly are within the geographic scope of the JVA. While Clause 25.3.2 extends the restrictions to [X], CCS notes that this is only applicable where [X], placing the JV and SIAEC in direct competition with each other in the absence of the restriction. Therefore, the restrictions are directly related and necessary to the transaction to prevent competition between the JV and its parent (SIAEC).

169. In view of the above, CCS concludes that the [X] constitute ancillary restrictions and consequently fall within the exclusion under paragraph 10 of the Third Schedule of the Act insofar as they apply to Singapore.

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<sup>165</sup> Paragraph 1.10 of Parties' replies to CCS's RFI dated 19 January 2015.

<sup>166</sup> As defined in Clause 1.1 the JVA.

<sup>167</sup> Paragraph 6 of the Parties' letter to CCS dated 16 January 2015; Paragraph 1.11 of Parties' replies to CCS's RFI dated 19 January 2015.

<sup>168</sup> Paragraph 36 of the EC Notice on Ancillary Restraints similarly states that non-compete obligations can be regarded as directly related and necessary to the implementation of the concentration for the lifetime of the joint venture.

**(c) Provision of Services by SIAEC**

170. Clause 25.5 provides that [REDACTED].<sup>169</sup>

171. The Parties submitted that the nature, scope and effect of Clause 25.5 is to protect the viability of the JV and prevent a conflict of interest [REDACTED].<sup>170</sup> Clause 25.5 protects the JV by [REDACTED].<sup>171</sup>

172. The Parties also submitted that the provisions contained in Clause 25.5 are directly related and ancillary to the subject of the JV, and are necessary to avoid the conflict of interest [REDACTED]. This will accordingly allow the JV to receive the full benefit of the goodwill of the parties to the JV, and protect the value of the investments by the shareholders into the JV.<sup>172</sup>

173. In addition, the Parties submitted that the provisions contained in Clause 25.5 of the JVA are directly related to and do not exceed the geographic and business scope of the Proposed Transaction [REDACTED].<sup>173</sup>

*CCS's assessment regarding the [REDACTED] Provision of Services by SIAEC*

174. CCS notes that Clause 25.5 does not restrict [REDACTED], but rather is [REDACTED]. This is in light of [REDACTED]. [REDACTED]. This restriction effectively prevents [REDACTED], thus competing against the JV [REDACTED] and creating a conflict of interest.

175. CCS finds that the restriction with regard to procurement of MRO services is directly related and necessary to the implementation of the JV in that it ensures that [REDACTED]. In view of the above, CCS concludes that the above restriction constitutes an ancillary restriction and consequently falls within the exclusion under paragraph 10 of the Third Schedule of the Act insofar as it applies to Singapore.

**(d) Non-Solicitation Restrictions**

*(i) Restriction on SIAEC [REDACTED]*

176. Clause 25.6.1 of the JVA provides that

[REDACTED]

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<sup>169</sup> As defined in Clause 1.1 of the JVA.

<sup>170</sup> As defined in Clause 1.1 of the JVA.

<sup>171</sup> Paragraph 1.12 of Parties' replies to CCS's RFI dated 19 January 2015.

<sup>172</sup> Paragraph 1.13 of Parties' replies to CCS's RFI dated 19 January 2015.

<sup>173</sup> Paragraph 1.14 of Parties' replies to CCS's RFI dated 19 January 2015.

177. The Parties submitted that the nature, scope and effect of Clause 25.6.1 is to [X]<sup>174</sup><sup>175</sup><sup>176</sup>.

178. The Parties also submitted that Clause 25.6.1 is necessary in order to ensure the success of the JV with customers Based in SAPAC. Nonetheless, if customers [X] seek the JV's services, [X]. Similarly, customers Based in SAPAC are not limited to seeking services from the JV; they may seek services from any service provider worldwide.<sup>177</sup>

179. The Parties noted that the restriction contained in Clause 25.6.1 of the JVA relates to [X]. As submitted in paragraph 11.1 of the Form M1, the JV will offer services to customers in the SIA Group and other third-party customers primarily Based in SAPAC. Nonetheless, the scope of the JV is not limited to customers Based in SAPAC. Further, as submitted in paragraph 6 of the 16 January 2015 letter, if customers [X] want to use the JV's services, [X]. No customer, regardless of where it is Based, is precluded from selecting the JV as a service provider. Further, the Parties submitted that the provisions contained in Clause 25.6.1 do not exceed the geographic and business scope of the Proposed Transaction, as they simply allow the JV to focus on the geographic region where it is likely to be the most successful.<sup>178</sup>

*CCS's assessment regarding Restriction on SIAEC [X]*

180. CCS notes that [X].<sup>179</sup> CCS finds that the restriction contained within Clause 25.6.1 will [X], thereby ensuring that Boeing remains committed to the JV, which will ensure the success of the JV. This will allow the JV to fully receive the full benefit of goodwill and know-how transferred to the JV.

181. CCS therefore concludes that the restriction contained within Clause 25.6.1 is an ancillary restriction within the meaning of paragraph 10 of the Third Schedule of the Act insofar as it applies to Singapore.

*(ii) Restriction on Boeing [X]*

182. Clause 25.6.2 provides that

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<sup>174</sup> As defined in Clause 1.1 of the JVA.

<sup>175</sup> As defined in Clause 1.1 of the JVA.

<sup>176</sup> Paragraph 1.15 of Parties' replies to CCS's RFI dated 19 January 2015.

<sup>177</sup> Paragraph 1.16 of Parties' replies to CCS's RFI dated 19 January 2015.

<sup>178</sup> Paragraph 1.17 of Parties' replies to CCS's RFI dated 19 January 2015.

<sup>179</sup> Notes of Meeting with the Parties dated 15 December 2014.

[X]

183. The Parties submitted that the nature, scope and effect of Clause 25.6.2 is to restrict Boeing from [X]. Although the JV will offer services to customers primarily Based in SAPAC and a customer may always select its service provider, Boeing should not interfere with customers in SAPAC. This provision, similar to Clause 25.7 (discussed below), is intended to prevent Boeing from [X] compete against the JV in SAPAC.<sup>180</sup>
184. The Parties also submitted that Clause 25.6.2 is directly related and ancillary to the subject of the JV, and is necessary to ensure that Boeing will not actively compete with, or otherwise solicit business away from, the JV in SAPAC. This will protect the value of the investments in the JV by its shareholders. A customer may always choose from whom it would like to seek the relevant services, but Boeing should not be actively encouraging or soliciting those choices.<sup>181</sup>
185. In addition, the Parties submitted that the provisions contained in Clause 25.6.2 of the JVA are directly related to and do not exceed the geographic and business scope of the Proposed Transaction.<sup>182</sup>

*CCS's assessment regarding Restriction on Boeing [X]*

186. CCS finds that the restriction contained within Clause 25.6.2 is necessary to prevent Boeing and its subsidiaries from acting against the interests of the JV by diverting business away from the JV and to another person.
187. In view of the above, CCS concludes that the above restriction constitutes an ancillary restriction and consequently falls within the exclusion under paragraph 10 of the Third Schedule of the Act insofar as it applies to Singapore.

**(e) JVC Prime Customer Contracts**

188. Clause 25.7 provides that [X].
189. The Parties submitted that the nature, scope and effect of Clause 25.7 is to ensure that [X]neither Boeing nor SIAEC will (nor will they authorise their

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<sup>180</sup> Paragraph 1.18 of Parties' replies to CCS's RFI dated 19 January 2015.

<sup>181</sup> Paragraph 1.19 of Parties' replies to CCS's RFI dated 19 January 2015.

<sup>182</sup> Paragraph 1.20 of Parties' replies to CCS's RFI dated 19 January 2015.

respective Subsidiaries to) actively compete with, or otherwise solicit business away from, the JV by [X]. [X].<sup>183</sup>

190. The Parties also submitted that Clause 25.7 is directly related and ancillary to the subject of the JV, as it ensures that (i) none of Boeing, SIAEC or their respective Subsidiaries competes with the JV by actively soliciting customers from the JV; and (ii) the value of the Shareholders' investments is protected.<sup>184</sup>

191. On top of that, the Parties submitted that the provisions contained in Clause 25.7 of the JVA are directly related to and do not exceed the geographic and business scope of the Proposed Transaction.<sup>185</sup>

*CCS's assessment regarding JVC Prime Customer Contracts*

192. CCS finds that the restriction contained within Clause 25.7 is necessary to prevent the Parties and their respective entities from diverting business away from the JV to themselves directly, [X]. This will ensure that the Parties encourage customers to contract with the JV directly.

193. In view of the above, CCS concludes that the above restriction constitutes an ancillary restriction and consequently falls within the exclusion under paragraph 10 of the Third Schedule of the Act insofar as it applies to Singapore.

**(f) Restrictions on SIA**

194. [X].

Clause 25.8

195. The Parties submitted that Clause 25.8 does not in any way restrict the conduct of the Parties to the JV. [X].<sup>186</sup>

196. The Parties also submitted that Clause 25.8 is necessary to ensure [X]<sup>187</sup>. Clause 25.8 does not go further than is necessary for the implementation of the JV. [X].<sup>188</sup>

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<sup>183</sup> Paragraph 1.21 of Parties' replies to CCS's RFI dated 19 January 2015.

<sup>184</sup> Paragraph 1.22 of Parties' replies to CCS's RFI dated 19 January 2015.

<sup>185</sup> Paragraph 1.23 of Parties' replies to CCS's RFI dated 19 January 2015.

<sup>186</sup> Paragraph 1.24 of Parties' replies to CCS's RFI dated 19 January 2015.

<sup>187</sup> As at May 30, 2014, SIA owned 77.87% of SIAEC.

<sup>188</sup> Paragraph 1.25 of Parties' replies to CCS's RFI dated 19 January 2015.

197. In addition, the Parties submitted that Clause 25.8 does not impose any restriction on the conduct of the Parties to the JV, and that the scope of Clause 25.8 is directly related to and does not exceed the geographic and business scope of the Proposed Transaction.<sup>189</sup>

#### Clause 25.10

198. The Parties submitted that the nature, scope and effect of Clause 25.10 is to further define the scope of the clarifications provided for in Clause 25.9.<sup>190</sup> The Parties submitted that as Clause 25.10 further defines the scope of the clarifications contained in Clause 25.9, Clause 25.10 itself does not impose any restriction. Accordingly, it is not a restriction that goes beyond what is directly related and ancillary to the subject of the JV, or the geographic and business scope of the Proposed Transaction.<sup>191</sup>

#### Clause 25.11

199. The Parties submitted that the nature, scope and effect of Clause 25.11 (and its sub-clauses) is to ensure that [X]<sup>192, 193</sup>.

200. Accordingly, Clause 25.11 does not go beyond what is directly related and ancillary to the subject of the JV, as it would ensure that the JV receives the full benefit of the goodwill of the Parties, and protect the value of the investments by the shareholders into the JV. The Parties submitted that the scope of the provisions contained in Clause 25.11 (and its sub-clauses) is directly related to and does not go beyond the geographic and business scope of the Proposed Transaction.<sup>194</sup>

#### *CCS's assessment regarding the Restrictions on SIA*

201. CCS finds that for each of the clauses, the restrictions in Clause 25.11 do not extend beyond the scope of the JV's business, namely the provision of FTM services, ITM services and FMP services. In particular, CCS notes that [X]. Therefore each of the clauses is directly related to the JV.

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<sup>189</sup> Paragraph 1.26 of Parties' replies to CCS's RFI dated 19 January 2015.

<sup>190</sup> Paragraph 1.29 of Parties' replies to CCS's RFI dated 19 January 2015.

<sup>191</sup> Paragraph 1.30 of Parties' replies to CCS's RFI dated 19 January 2015.

<sup>192</sup> As at May 30, 2014, SIA owned 77.87% of SIAEC.

<sup>193</sup> Paragraph 1.31 of Parties' replies to CCS's RFI dated 19 January 2015.

<sup>194</sup> Paragraphs 1.32 and 1.33 of Parties' replies to CCS's RFI dated 19 January 2015.

202. Given that SIA is the majority shareholder of SIAEC, these clauses are necessary to ensure that the investments made into the JV are protected by preventing SIA and SIAEC from competing with the JV. CCS further notes that SIA has the ability to enter the markets for the provision of FTM services, ITM services and FMP services with relative ease given its airline experience and majority shareholding in SIAEC.
203. In view of the above, CCS concludes that the restrictions contained in Clauses 25.8, 25.10 and 25.11 constitute ancillary restrictions and consequently fall within the exclusion under paragraph 10 of the Third Schedule of the Act insofar as they apply to Singapore.

## **XI. Conclusion**

204. For the reasons above and based on the information available, CCS assesses that the Transaction is unlikely to lead to SLC concerns, and accordingly, will not infringe the section 54 prohibition if carried into effect. Pursuant to section 57 (7) of the Act, this decision shall remain valid for one year, starting from the date of this decision.



Toh Han Li  
Chief Executive  
Competition Commission of Singapore