



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

Grounds of Decision issued by the Competition Commission of Singapore

In relation to the Notification for Decision of the Proposed Acquisition by Daifuku Co. Ltd. of 80% of the shares of BCS Group Limited pursuant to section 57 of the Competition Act

26 January 2015

Case number: CCS 400/014/14

Redacted confidential information in the text of this version of the Decision is denoted by square parenthesis [✂].

TABLE OF CONTENTS

I.	Introduction	3
II.	The Parties	3
III.	The Acquisition	5
IV.	Competition Issues	6
V.	Counterfactuals	7
VI.	Relevant Markets	8
VII.	Market Structure	11
VIII.	Competition Assessment	21
IX.	Efficiencies	26
X.	Ancillary Restraints	27
XI.	Conclusion	28

I. Introduction

The Notification

1. On 12 December 2014, Daifuku Co. Ltd. (“Daifuku”) and BCS Group Limited (“BCS”) (collectively, “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 acquisition by Daifuku of 80% of the shares of BCS (“the Acquisition”), if carried into effect, will infringe the prohibition under section 54 of the Act.

2. In reviewing the Acquisition, CCS carried out a public consultation exercise which included approaching the Parties’ competitors¹ and customers² (i.e. end-users of automated material handling systems (“AMHS”)) for feedback. Nine responses were received during the public consultation exercise, none of which opposed the Acquisition.

3. After evaluating the submissions from the Parties, together with the views and feedback from third-parties during the public consultation exercise, CCS concludes that the Acquisition will not infringe section 54 of the Act.

II. The Parties

Daifuku

4. Daifuku is the ultimate parent company of a multi-national group of companies comprising 26 principal subsidiaries³ involved in the consulting, engineering, design, manufacture, installation, and after-sales services for logistics systems and material handling equipment.⁴ Daifuku supplies AMHS across a range of industries in North America, Europe, Asia, Mexico, South America, Middle East and Africa. The AMHS include:

- a. Factory automation and distribution systems;
- b. Clean room production line systems;
- c. Automotive factory automation systems;
- d. Lifestyle products;
- e. Airport baggage handling systems; and
- f. Industrial Personal Computers (“PC”) and Electronic Manufacturing Services items.⁵

¹ [REDACTED], [REDACTED], [REDACTED], [REDACTED], [REDACTED], [REDACTED], [REDACTED], [REDACTED] and [REDACTED].

² [REDACTED], [REDACTED], [REDACTED], [REDACTED] and [REDACTED].

³ Appendix 3 of Form M1.

⁴ Paragraph 7.1 of Form M1.

⁵ Paragraph 10.4 of Form M1.

5. Daifuku's registered office is in Osaka, Japan. The company has two subsidiaries registered in Singapore, Daifuku Mechatronics (Singapore) Pte. Ltd. ("Daifuku Singapore") and Singapore Contec Pte. Ltd. The former is a 100% owned subsidiary of Daifuku. It supplies AMHS and handles peripheral AMHS equipment. The latter is a 100% owned subsidiary of Contec Co. Ltd., in which Daifuku holds 61% of shares. It designs and manufactures a broad range of industrial computers and devices for PC-based automation, measurement, control, testing and communication.⁶

6. For the year ending 31 March 2014, the total turnover of the Daifuku group in Singapore was JPY 2.5 billion (approximately S\$27.3 million) while Daifuku's total group worldwide turnover was JPY 241.8 billion (approximately S\$2,639.2 million).⁷

BCS

7. BCS is the ultimate parent company of a multi-national group of companies comprising ten principal subsidiaries.⁸ BCS and its subsidiaries design, build, operate and maintain AMHS, predominantly in the areas of baggage handling systems ("BHS") for airports and courier sortation systems ("CSS") for logistics companies⁹ in Asia, the Middle East, Africa, Europe, North America and Mexico.¹⁰

8. BCS's registered office is in Auckland, New Zealand. BCS has a 100% owned subsidiary registered in Singapore, BCS Integration Solutions (Singapore) Pte. Ltd. ("BCS Singapore"). [X], though it is part of a consortium with Daifuku Singapore to compete for tenders for [X].¹¹ [X].¹²

9. For the year ending 30 June 2014, BCS's total group worldwide turnover was NZD 138.8 million (approximately S\$140.2 million) and its total group Singapore turnover was [X].¹³

⁶ Paragraphs 10.1(a) and (b) of Form M1.

⁷ Paragraph 13.1 of Form M1.

⁸ Appendix 4 of Form M1.

⁹ Paragraph 7.2 of Form M1.

¹⁰ Paragraph 10.5 of Form M1.

¹¹ Paragraph 10.2 of Form M1.

¹² Paragraph 10.7 of Form M1.

¹³ Paragraph 13.2 of Form M1.

III. The Acquisition

10. The Acquisition involves the purchase of shares through a Share Purchase Agreement dated 30 October 2014 (“SPA”). Daifuku will acquire 80% of the shares in BCS¹⁴ by way of a purchase from the sellers.¹⁵ The Acquisition will result in Daifuku gaining direct control of BCS, therefore constituting a merger within the meaning of section 54(2)(b) of the Act.

11. As a result of the Acquisition, Daifuku will become the majority shareholder in BCS. However, Daifuku intends to allow BCS to operate “business as usual” post-merger, taking up only minority board positions. The current directors of BCS will maintain their positions on the board post-merger.¹⁶

12. The Acquisition will take place at the parent company level and there are no plans for any of the Parties’ subsidiaries in Singapore to merge at the moment.¹⁷ The overall value of the transaction is [X].¹⁸ The SPA was signed on 30 October 2014 and the expected completion date of the agreement was 31 December 2014.¹⁹ CCS understands from the Parties that the Acquisition was indeed completed on 31 December 2014 whilst the outcome of CCS’s assessment of the same was still pending.

13. The Parties are of the view that through the Acquisition, Daifuku would be able to expand and enhance its existing business in an efficient manner. The Acquisition would further allow Daifuku access to the BHS sector within the Asia Pacific region and access to innovation software products, in addition to high growth solutions. Daifuku may also gain additional opportunities in the medium term, such as access to complementary vertical markets arising from BCS’s experience in the CSS sector. On BCS’s part, it will be able to leverage on Daifuku’s larger operations base. The Parties further submit that they would both benefit from the Acquisition which will provide them access to the wider global network.²⁰

¹⁴ Paragraph 11.1 of Form M1.

¹⁵ See Clause 2.1 of the SPA and paragraph 11.3 of Form M1.

¹⁶ Paragraph 8.3 of Form M1.

¹⁷ Paragraph 11.2 of Form M1.

¹⁸ Paragraph 11.6 of Form M1.

¹⁹ Paragraph 11.7 of Form M1.

²⁰ Paragraph 12.1 of Form M1.

IV. Competition Issues

14. The Parties submit that the products and services provided by the Parties include the design, development, installation, operation and maintenance of AMHS and distribution systems in Singapore (including the sale of Radio-frequency Identification systems and related software solutions).

15. For this merger, the Parties submit that while they overlap in the design, development, installation, operation and maintenance of AMHS (collectively, the “Overlapping Products”), BCS only focuses on AMHS for the BHS and CSS sectors, while Daifuku has no presence in the BHS sector in Singapore or the CSS sector globally.²¹ They therefore submit that the relevant market should be that of the global supply of AMHS to Singapore.

16. The global market share by value estimates in 2013 submitted by the Parties for the Overlapping Products does not exceed the indicative thresholds set out in the *CCS Guidelines on the Substantive Assessment of Mergers*.²² The Parties submit that strong competition will be maintained post-Acquisition due to the following factors:

- a. There exists a multitude of competing providers of AMHS both in Singapore and globally, who will be able to provide substitutable products and services to customers;²³
- b. There are no significant entry barriers, whether in Singapore or worldwide;²⁴
- c. Post-Acquisition, neither Daifuku or BCS will be able to significantly and sustainably raise prices (or exercise market power in other non-price ways) in the relevant market;²⁵ and
- d. The Acquisition will not give rise to non-coordinated effects in Singapore²⁶.

17. CCS notes that Daifuku and BCS do not currently overlap in their operations in Singapore. However, CCS has gone on to consider whether the Acquisition will substantially lessen competition in the relevant markets given that feedback received from third-parties²⁷ and the Parties²⁸ indicated that

²¹ Paragraph 15.1 and 15.2 of Form M1.

²² Paragraph 21.3 of Form M1.

²³ Paragraph 34.5 of Form M1.

²⁴ Paragraph 34.6 of Form M1.

²⁵ Paragraphs 34.7 to 34.10 of Form M1.

²⁶ Paragraph 34.11 of Form M1.

²⁷ Public consultation response from [REDACTED],[REDACTED],[REDACTED]and [REDACTED].

²⁸ Paragraph 20.8 of Form M1.

manufacturers can switch from providing AMHS which is specific to one sector to another with relative ease.

18. Hence, in evaluating the impact of the Acquisition on competition, CCS has considered whether the Acquisition will lead to coordinated or non-coordinated effects that substantially lessen competition.

V. Counterfactuals

19. As stated in paragraph 4.6 of the *CCS Guidelines on Substantive Assessment of Mergers*, 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.

20. The *CCS Guidelines on Substantive Assessment of Mergers* 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.²⁹

(i) *The Parties’ submissions*

21. The Parties submit that in the absence of the Acquisition, the Parties will continue to operate separately and independently. However, there will be a loss in opportunity for the Parties to rationalise and achieve the efficiencies set out at paragraphs 12.1 and 12.2 of Form M1.³⁰

22. The Parties further submit that their competitors are likely to continue to compete for customers in the same manner, with or without, the Acquisition. The Parties submit that the Acquisition will not result in a substantial lessening of competition for the AMHS industry in Singapore or globally, or result in any adverse effect relative to the counterfactual scenario.³¹

²⁹ Paragraph 4.7 of the *CCS Guidelines on Substantive Assessment of Mergers*.

³⁰ Paragraph 23.1 of Form M1.

³¹ Paragraph 23.2 of Form M1.

(ii) CCS's assessment

23. CCS notes that the Parties have an existing consortium agreement for the purposes of bidding for, and if successful, delivering the BHS aspects of airport terminal development projects for Changi Airport.³² The consortium agreement covers projects pertaining to [X].³³ However, after bidding for these said projects, BCS and Daifuku will remain as competitors in the BHS sector, in the absence of the Acquisition.

24. CCS is of the view that the prevailing conditions of competition would be the likely scenario without the Acquisition and accordingly, this would be the counterfactual to which the SLC test will be applied.

VI. Relevant Markets

25. The Parties submit that the relevant market for the purpose of this notification is the global supply of all types of AMHS.³⁴

(a) Product markets

(i) The Parties' submissions

26. The Parties submit that the relevant product market is the general AMHS market.³⁵ AMHS involve the automated movement of finished goods and work in progress from point A to point B within a defined area. Examples of AMHS include:

- a. Baggage handling and baggage return conveyors at airports;
- b. Conveyors and warehouses operated at mail or courier sortation centres;
- c. Material conveyors operated within mining operations; and
- d. Conveyors and warehouses operated as part of a production line in manufacturing operations (including automotive, food and beverage, pharmaceutical and integrated circuit manufacturing, to name a few) as well as in distributing operations of finished goods.³⁶

While BCS focuses on the airport BHS and the CSS sectors, the Parties submit that these sectors constitute part of the much broader AMHS market.

³² Paragraph 9.1 of Form M1.

³³ Appendix 7 of Form M1 at paragraph 5.1.

³⁴ Paragraph 20.15 of Form M1.

³⁵ Paragraph 20.11 of Form M1.

³⁶ Paragraph 20.1 of Form M1.

27. In support of their submission, the Parties cite three European Commission (“EC”) decisions, namely *GEC Alstom/Cegelec*,³⁷ *SHV / ERIKS*,³⁸ and *AENA INTERNACIONAL/ AXA PE / LLAGL*,³⁹ in which the companies submitted that airport handling and industrial handling (which includes CSS) belong to the same product market.⁴⁰

28. In addition, the Parties submit that the low marginal cost of adapting one AMHS to encompass other business systems and the ease with which the technology for one AMHS (e.g. BHS and CSS) can be adapted to suit other industries suggests that the market is characterised by a high degree of supply-side substitutability. As such, the Parties submit that the relevant market encompasses the supply of AMHS in general.⁴¹

(ii) *CCS’s assessment*

29. CCS is of the view that there is no need to determine if either BHS or CSS, and more generally, different types of AMHS belong to the same product market, as competition concerns do not arise in any of the markets possibly defined.

30. CCS further considered the possibility that AMHS-related services⁴² may constitute a separate market. However, based on the Parties’ submissions and third-party feedback, AMHS-related services are typically provided by the firm installing the original AMHS.⁴³ Given that the provision of such services forms part of the package for the design and installation of the AMHS, CCS is of the view that it does not constitute a separate market.

31. CCS notes that in the EC decisions cited by the Parties and referred to in paragraph 27 above, the EC did not address the question of whether airport handling and industrial handling (which includes CSS) belong to the same product market given that no competition concerns arose under any alternative product market definition. As the EC made no finding on how the market(s) should be defined, CCS is of the view that these decisions do not support the Parties’ submission that the BHS and CSS sector should be considered as the AMHS market.

³⁷ IV/M. 1164, 15 May 1998.

³⁸ COMP/M.5563, 31 July 2009.

³⁹ COMP/M.7008 09 October 2013.

⁴⁰ Paragraphs 20.3 to 20.5 of Form M1.

⁴¹ Paragraph 2011 of Form M1.

⁴² AMHS-related services refer to services other than the initial design, manufacture and installation of the AMHS. AMHS-related services include the maintenance, upgrade, repair and replacement of spare parts for AMHS.

⁴³ Public consultation response from [REDACTED], [REDACTED], [REDACTED], [REDACTED] and [REDACTED].

32. For the purposes of this assessment, CCS finds that there is no need to define the product market given that no SLC concerns will arise under any of the alternative product market definition.

(b) Geographic Market

(i) The Parties' submissions

33. The Parties submit that the geographic scope of the market, whether considered as AMHS in general or limited to the BHS or CSS sectors specifically, is global.⁴⁴

34. The Parties also submit that companies can readily deploy their services to sites around the world and engage third-party component producers in those countries, such that the geographical location of their physical offices is not an impediment. In respect of after-sales care, companies can provide off-site services on a regular basis, or “fly in-fly out” services if on-site presence is required. If a permanent on-site presence is required, the companies are typically able to set up a local office within weeks to provide the necessary support.⁴⁵

(ii) CCS's assessment

35. CCS agrees with the Parties' submission that the geographic scope of the market is global, following a review of the Parties' submissions and third-party feedback.

36. In the [REDACTED], it was noted that [REDACTED].⁴⁶ This was further confirmed by responses received during the public consultation phase.⁴⁷ Specifically, submissions received from third-parties during the public consultation phase noted that more foreign suppliers are expanding into the region and Singapore.⁴⁸ Customers in Singapore also tend to source for suppliers with strong references and established track records in Asia and other parts of the world.⁴⁹ Where the foreign supplier has no presence in Singapore, they can either work through a third-party agent to provide sales support or set up an office in Singapore after they are awarded the projects.⁵⁰ CCS further understands that foreign firms, on

⁴⁴ Paragraph 20.13 of Form M1, citing *Alstom/Cegelec*, IV/M. 1164, 15 May 1998.

⁴⁵ Paragraph 20.15 of Form M1.

⁴⁶ Appendix 21 of Parties response to CCS's Request for Information dated 19 December 2014; [REDACTED].

⁴⁷ Public consultation response from [REDACTED].

⁴⁸ Public consultation response from [REDACTED] and [REDACTED].

⁴⁹ Public consultation response from [REDACTED], [REDACTED], [REDACTED] and [REDACTED].

⁵⁰ Public consultation response from [REDACTED], [REDACTED]; and [REDACTED].

occasion, hire local firms to install the AMHS and train them to provide maintenance subsequently.⁵¹

37. In addition to the above, third-party feedback revealed that the major players in Singapore are amongst the top five players in the global market. The major players in Singapore for AMHS in general were cited as Daifuku, Murata Machinery Singapore Pte. Ltd., Efacec Singapore Pte. Ltd., Swisslog Singapore Pte. Ltd., Dematic S. E. A. Pte. Ltd. and Schaefer Systems International Pte. Ltd., while the top five players in the global market are cited as Schaefer Group, Daifuku Group, Dematic Group (“Dematic”), Murata Manufacturing Co. Ltd. and Mecalux S. A..⁵²

38. On account of the above, CCS is therefore of the view that the relevant market for the purposes of this notification is the global supply of AMHS in the BHS and CSS sectors to Singapore.

VII. Market Structure

(a) Market shares and market concentration

39. As set out in the *CCS Guidelines on the Substantive Assessment of Mergers*, 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 at 70% or more.⁵³

(i) The Parties’ submissions

40. The Parties provided data on the market shares of the world’s leading AMHS suppliers. They obtained data on the worldwide revenue of the AMHS suppliers from Modern Materials Handling⁵⁴ and used the said data to derive estimates of the individual firms’ global market shares.⁵⁵

⁵¹ Public consultation response from [REDACTED].

⁵² Public consultation response from [REDACTED].

⁵³ Paragraphs 5.14 and 5.15 of *CCS Guidelines on the Substantive Assessment of Mergers*. CR3 refers to the combined market shares of the three largest firms.

⁵⁴ Modern Materials Handling is a magazine that covers productivity solutions for materials handling professionals in distribution, warehousing and manufacturing. The articles are available through their website, email newsletters, printed magazines, online webcasts/conferences and market research. (http://www.mmh.com/info/about_us)

⁵⁵ Paragraph 21.3 of Form M1.

Table 1: Market share estimates for top ten suppliers in the worldwide AMHS market by value for the years 2011 to 2013

2011		
Rank	Name of participants	Estimated market share (by value)
1.	Schaefer Holding International GmbH	9.6%
1.	Daifuku	9.6%
3.	Dematic	5.0%
4.	Murata Machinery Ltd	4.0%
5.	Mecalux S.A.	3.6%
6.	Vanderlande Industries	2.9%
7.	Swisslog AG	2.4%
8.	Kardex AG	2.3%
9.	Beumer Group GmbH (“Beumer”)	2.3%
10.	Fives Group	1.9%
2012		
Rank	Name of Competitor	Estimated market share (by value)
1.	Schaefer Holding International GmbH	9.8%
2.	Daifuku	9.1%
3.	Dematic	5.0%
4.	Murata Machinery Ltd	4.0%
5.	Mecalux S.A.	3.6%
6.	Vanderlande Industries	3.0%
7.	Beumer Group GmbH	2.8%
8.	Swisslog AG	2.6%

9.	Kardex AG	2.4%
10.	Intelligrated	2.0%
2013		
S/N	Name of Competitor	Estimated market share (by value)
1.	Schaefer Holding International GmBH	10.2%
2.	Daifuku	9.4%
3.	Dematic	5.7%
4.	Murata Machinery Ltd	3.7%
5.	Vanderlande Industries	3.7%
6.	Mecalux S.A.	3.6%
7.	Beumer Group GmbH	3.3%
8.	Fives Group	2.8%
9.	Swisslog AG	2.7%
10.	Knapp AG	2.3%

41. The Parties also provided an estimate of BCS's market shares for the same period, based on its total revenue. The market share figures worked out to 0.2% for 2011 and 2012, and 0.4% in 2013.⁵⁶ The Parties submit that they do not have any available data on the total market size (by value or volume) for the past three years.

CCS's assessment

42. As set out in paragraph 5.15 of the *CCS Guidelines on Substantive Assessment of Mergers*, CCS is unlikely to intervene in a merger situation unless:

- a. The merged entity will have a market share of 40% or more; or
- b. The merged entity will have a market share between 20% to 40%, and the post-merger CR3 is 70% or more.

⁵⁶ Paragraph 21.2 of Form M1.

43. Based on the 2013 figures, CCS notes that in relation to the global market for AMHS, the Parties will be the second largest player post-Acquisition. Nevertheless, their combined market share comes up to 9.8%, which does not cross the threshold of 40%. CCS notes that the three largest firms post-Acquisition, namely Schaefer Holding International GmbH, Daifuku-BCS and Dematic will have a post-merger CR3, again based on the 2013 figures, of 25.7%. This too does not cross the CR3 threshold.

44. CCS notes from the Parties' submissions in Table 1 that the top five competitors have remained constant over the period of 2011 to 2013 (although Mecalux and Vandelande switched positions in 2013). Coupled with the small incremental market share to Daifuku-BCS post-Acquisition, it appears that there is unlikely to be a drastic change in this trend post-Acquisition. This is consistent with feedback from the public consultation which indicates that the Acquisition is unlikely to have an impact on the level of competition in the market.⁵⁷

45. As evidenced by the market share figures above, the merged entity faces a multitude of competitors post-Acquisition. Further, CCS is satisfied at this point of the assessment that the Acquisition will not lead to a substantial lessening of competition in the global market for the supply of AMHS to Singapore, in view of the low barriers to entry for the supply of AMHS and strong countervailing buyer power discussed in the later sections of this decision.

46. CCS went on to consider the possible market shares if the market were to be defined at its narrowest, i.e. the global supply of AMHS to the BHS and CSS sectors in the Singapore market. In this regard, Daifuku has no market share in Singapore for either the BHS or CSS sectors while [REDACTED]. CCS is thus of the view that post-Acquisition, the merged entity's share of the Singapore market for the supply of AMHS to the BHS and CSS sectors is likely to be insignificant.

47. Third-party feedback on this matter is conflicted. While some were of the view that the competition landscape will be unchanged in general⁵⁸, other competitors who deal exclusively in certain sectors are of the view that the Acquisition will lead to less competition in BHS and CSS sectors. In particular, [REDACTED] submit that the Acquisition would create an almost oligopolistic structure in airport business, especially BHS.⁵⁹ On the other hand, AMHS suppliers have noted that the merged entity will essentially be a more credible competitor in the BHS sector⁶⁰ as airports look specifically for suppliers with a strong track record.⁶¹

⁵⁷ Public consultation response from [REDACTED],[REDACTED],[REDACTED],[REDACTED] and [REDACTED].

⁵⁸ Public consultation response from [REDACTED].

⁵⁹ Public consultation response from [REDACTED].

⁶⁰ Public consultation response from [REDACTED]and [REDACTED].

⁶¹ Public consultation response from [REDACTED] and [REDACTED].

48. Having considered the conflicting third-party responses, CCS is of the view that the Acquisition may in fact lead to more competition in the BHS sector instead of creating an oligopolistic structure in Singapore. [X] noted that post-merger, *“the BHS sector could become even more competitive as BCS did not have any presence in Singapore previously. The merged entity may bring about more competition in the BHS sector as they can compete with the incumbent suppliers Crisplant⁶² and Pteris.”*⁶³

49. Additionally, [X] noted that post-merger, Daifuku will be able to compete more aggressively in the BHS sector as BCS has a strong track record and experience in installing BHS in Australia and New Zealand. [X] also noted that BCS had some early success in Asia as it won its first contract at Kuala Lumpur International Airport in Malaysia. [X] opined that the merger will afford the merged entity more opportunities to tap in the BHS sector here as the merged entity now has access to Daifuku’s hardware and BCS’ BHS-related software systems.⁶⁴

50. As for other sectors such as AMHS for logistics and distribution in Singapore, CCS notes that Daifuku is an active competitor but that BCS has no presence in these sectors. Further, public consultation suggests that the merger would not have much of an impact on the logistics sector.⁶⁵ For the logistics and distribution sectors, CCS is of the view that the existing competitive conditions will prevail post-merger.

(b) Barriers to entry and expansion

51. The likelihood, scope and timeliness of entry by new competitors or expansion by existing competitors may be sufficient to deter or defeat any attempt by a merged entity or their competitors to exploit the reduction in rivalry flowing from a merger (whether through coordinated or non-coordinated strategies).⁶⁶ Even though the market shares of the merged entity did not cross indicative merger thresholds, CCS went on to consider, for completeness, the likelihood, scope and timeliness of entry into and expansion in the market.

⁶² [X]

⁶³ Public consultation response from [X].

⁶⁴ Public consultation response from [X].

⁶⁵ Public consultation response from [X].

⁶⁶ Paragraph 7.2 of *CCS Guidelines on Substantive Assessment of Mergers*.

(i) *The Parties' submissions*

52. The Parties submit that it is difficult to provide an estimate of the capital expenditure required to enter the relevant market on a scale necessary to gain a five percent market share. As the global market for AMHS is a mature market with competitors made up mainly by international players, the Parties submit that it is very easy for these international players without local presence to enter a new country quickly and with ease to offer services to customers. In relation to the smaller projects, these market players have the option of either being stationed at that country for the period of time to build and develop the AMHS; provide off-site services; or set up a local subsidiary for larger projects.

53. These international players already have the know-how, expertise and contacts to provide the goods and services for the AMHS.⁶⁷ The Parties gave the example of Vanderlande Industries, which is one of the leading international providers of AMHS and services. Based on BCS' knowledge, Vanderlande has made minimal sales in Singapore but is actively bidding for various projects relating to the upgrade of the AMHS in Changi Airport Terminal 1.⁶⁸

54. On whether there are specific factors affecting entry with reference to Singapore, the Parties submit that the following factors are relevant to the general AMHS market:

- a. Development and production (or sourcing from third-parties) of the necessary components for AMHS – the technology is largely unsophisticated and relatively easy to produce, and also widely available for purchase from third-parties. As such, this does not pose as an appreciable barrier to entry to the industry;
- b. Demonstrable experience in similar projects;
- c. Size of firm;
- d. Clear understanding of the particular market and specific customer requirements; and
- e. Ability to provide on-going operation and maintenance support.⁶⁹

55. Specific to the BHS and CSS sectors, the Parties submit that the barriers to entry are low for existing firms in the AMHS market as it takes little time and capital for such firms to develop BHS or CSS capabilities from their existing operation solutions.⁷⁰

⁶⁷ Paragraph 26.1 of Form M1.

⁶⁸ Paragraph 24.7 of Form M1.

⁶⁹ Paragraphs 28.1 and 28.2 of Form M1.

⁷⁰ Paragraph 28.3 of Form M1.

56. That said, the Parties do not know of any instances of market entry and exit in the past five years. Still, they submit that that it is very easy for any existing international player to establish its presence in a country where it has no operations. Finally, the Parties are not aware of any regulations that apply specifically to the AMHS market.⁷¹

(ii) CCS's assessment

57. CCS notes that entry into the relevant market in Singapore is not regulated. Prospective entrants do not need to be physically present in Singapore, given that the supply of AMHS is global.

58. CCS also considered the barriers to entry specifically for the BHS and CSS sectors. It is noted that for existing AMHS firms with no presence in the sectors, the time and capital required for the firms to develop the requisite capabilities for the said sectors is little.

59. CCS understands from the feedback received from its public consultation that as most Singaporean buyers demand for “on site” support following the installation of the AHMS, the key barrier to foreign firms supplying services in Singapore is the need to set up an office here or to appoint an appropriate third-party to provide the requisite support.⁷² However, on balance, CCS is of the view that the barriers to entry are relatively low, given the ease with which existing AMHS firms can set up “shop-fronts” in Singapore and expand into the BHS and CSS sectors if they were not already active in supplying these types of AMHS.

60. Further, when considering the barriers to entry specifically for the BHS and CSS sectors, CCS notes that competitors have informed that firms currently in the business of providing BHS systems would be able to adapt their systems with little difficulty to provide CSS, while firms currently supplying AMHS would be able to adapt their technology to supply BHS and/or CSS.⁷³ However, third-parties have informed that it is difficult to break into the BHS sector in Singapore, given that the sole buyer, i.e. Changi Airport Group (“CAG”), places a large degree of emphasis on reputation of the system provider and would only engage one with good reputation.

61. Overall, CCS agrees with the Parties that the barriers to entry to new jurisdictions by an entrant which does not have any existing presence in the AMHS or AMHS-related markets are low, but caveats that this may not be the

⁷¹ Paragraph 18.7 of Form M1.

⁷² Public consultation response from [REDACTED].

⁷³ Public consultation response from [REDACTED], [REDACTED] and [REDACTED].

case for new entrants to the BHS sector. Further, in respect of entry to specific sectors, while technology does not pose as a high barrier, CCS notes that the weight which buyers put on company-reputation may well pose as a barrier.

(c) Countervailing buyer power

(i) The Parties' submissions

62. The Parties claim not to have any available information of Daifuku's top five customers for the global AMHS market as such information is individually recorded and retained by each Daifuku subsidiary around the world, and is not maintained by Daifuku at a global level.⁷⁴ However, they were able to provide information on Daifuku's top five AMHS customers in Singapore is as follows:

Table 2: Daifuku's top five AMHS customers in Singapore

S/N	Name of Customer	Business Activity	Proportion of Daifuku's total Singapore revenue
1.	[✂]	[✂]	[✂]
2.	[✂]	[✂]	[✂]
3.	[✂]	[✂]	[✂]
4.	[✂]	[✂]	[✂]
5.	[✂]	[✂]	[✂]

BCS's customer information is as follows:⁷⁵

Table 3: BCS's Singapore customers

S/N	Name of Customer	Business Activity	Proportion of BCS' total Singapore revenue
1.	[✂]	[✂]	[✂]

⁷⁴ Paragraph 31.1 of Form M1.

⁷⁵ Paragraph 31.2 of Form M1.

63. The Parties submit that while buyers will be able to “self-supply” the operations and maintenance of the AMHS, they generally have to rely on a provider to design and build the AMHS for them.⁷⁶ On whether buyers are able to switch suppliers, the Parties submit that buyers of AMHS are generally large, sophisticated businesses which hold countervailing power in the AMHS market. By virtue of their size, financial resources and market power, they are able to credibly threaten to bypass even the largest of competitors in this market, whether by taking certain functions in-house, or by sponsoring new entry.⁷⁷

64. The Parties also submit that for the BHS sector alone, the airports effectively “run the show”. Combined with the reality of an absence of barriers to entry into this market, and the wide global availability of “import” options in terms of airport baggage handling products, providers of airport BHS are very much at the mercy of the airports. The relatively modest investment required for a supplier of AMHS to acquire or develop alternate airport BHS means that even a threat by the smaller airports to bypass an existing airport BHS provider is credible.⁷⁸

65. The position is similar in the CSS sector, where the small numbers of potential customers each have limited needs for operation and maintenance of the AMHS, and typically manage their own timelines for new building and development of the same.⁷⁹

(ii) Third-party views

66. CCS notes that not all buyers of AMHS systems are sophisticated businesses, as some may be new to AMHS product. Such buyers often rely on the AMHS businesses to supply not only the solutions, but the after-sales care in terms of maintenance and trouble shooting of installed systems as well.

67. Third-parties have further expressed the view that it is relatively easy for one firm to supply maintenance for another firm’s AMHS, as proprietary software linked with a specific AMHS system can easily be replaced by the maintenance firm’s own software.⁸⁰ Additionally, the components required for AMHS are easily available, whether via production by the maintenance firms or via purchase from third-party manufacturers.⁸¹

⁷⁶ Paragraph 32.1 of Form M1.

⁷⁷ Paragraph 32.2 of Form M1.

⁷⁸ Paragraph 32.3 of Form M1. Note, however, the purchasing preferences of airports at paragraph 60, above.

⁷⁹ Paragraph 32.4 of Form M1.

⁸⁰ Public consultation response from [redacted], [redacted] and [redacted].

⁸¹ Paragraphs 24.8 and 28.1 of Form M1.

(iii) CCS's assessment

68. From the Parties' submissions and third-party feedback, there is indication that the customers of AMHS generally have relatively significant bargaining power.

69. In respect of procuring new AMHS, CCS understands from third-parties that most tenders are by invitation and while after-sales care is a concern for Singapore buyers, the firms invited to participate in the tenders usually compete on the global market. AMHS suppliers noted that demand for new AMHS by a firm which already has existing AMHS is driven by business expansion plans and/or the replacement of that AMHS. AMHS suppliers also noted that the former happens on an ad-hoc basis while the latter happens approximately once every 10 years as these AMHS generally last for that duration before a replacement is required.⁸² More importantly, success at winning these subsequent tenders is not largely predicated upon the firm having provided the buyer with AMHS previously and that firms do switch AMHS suppliers.⁸³

70. CCS also understands from third-parties that businesses which previously did not have AMHS may also drive demand for AMHS but these happen on an ad-hoc basis.

71. Third-parties have also informed CCS that price is a key factor considered by buyers in Asia, including Singapore. To secure a tender, other than being able to come up with the most suitable solution, the firms must price themselves competitively.⁸⁴ CCS will discuss specifically, countervailing buyer power in the BHS sector i.e. CAG's countervailing buyer power in paragraphs 82 and 83 below.

72. Even though as highlighted at paragraph 29 above that AMHS-related services are typically provided by the firm installing the original AMHS,⁸⁵ customers are able to switch easily from one firm to another, as most AMHS suppliers in the market are able to provide the necessary maintenance services for systems installed by competitors.⁸⁶ This further provides customers with more bargaining power when negotiating maintenance and servicing contracts with their existing AMHS supplier.

⁸² Public consultation response from [REDACTED], [REDACTED], [REDACTED] and [REDACTED].

⁸³ Public consultation response from [REDACTED], [REDACTED] and [REDACTED].

⁸⁴ Public consultation response from [REDACTED], [REDACTED] and [REDACTED].

⁸⁵ Public consultation response from [REDACTED], [REDACTED], [REDACTED] and [REDACTED].

⁸⁶ Public consultation response from [REDACTED] and [REDACTED].

73. On account of the above, CCS is of the view that there is relatively strong countervailing buyer power which would pose a competitive constraint on the Parties post-Acquisition.

VIII. Competition Assessment

(a) Non-coordinated effects

74. Non-coordinated effects may arise where, as a result of the Acquisition, the merged entity finds it profitable to raise prices (or reduce output or quality) because of the loss of competition between the merged entities. 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.⁸⁷

(i) The Parties' submissions

75. The Parties submit that the Acquisition does not give rise to non-coordinated effects in Singapore in view of the following:

- a. Absence of market power post-Acquisition - The Parties submit that the market shares post-Acquisition do not exceed CCS's indicative thresholds in both the wider AMHS market and the narrower BHS and CSS sectors. The Parties also relied on the factors raised below to support their assertion that the Acquisition will not give rise to market power;⁸⁸
- b. Multitude of competitors that currently exists in the relevant markets - The Parties submit that there exists a multitude of competing providers of AMHS both in Singapore and globally, that will be able to provide substitutable products and services to customers and maintain strong competition post-Acquisition;⁸⁹
- c. Absence of significant barriers to entry and the ease and likelihood of entry of potential competitors into the relevant market - As noted at paragraphs 52 to 56 above, the Parties are of the view that the market for AMHS both in Singapore and worldwide is not characterised by significant entry barriers;⁹⁰ and

⁸⁷ Paragraph 6.3 of *CCS Guidelines on the Substantive Assessment of Mergers*.

⁸⁸ Paragraphs 34.2 and 34.4 of Form M1.

⁸⁹ Paragraph 34.5 of Form M1.

⁹⁰ Paragraph 34.6 of Form M1.

- d. Inability to unilaterally affect prices in view of the strong influence of macroeconomic factors - The Parties argue that they already face a number of large, well-resourced and sophisticated competitors in the relevant market and that this will not change post-Acquisition. Furthermore, the countervailing power of customers for AMHS will preclude the merged entity from acting this way.⁹¹

76. In the narrower sectors of BHS and CSS, the Parties argue that the merged entity would not be able to significantly and sustainably raise prices or profit margins because of the:

- a. Overwhelming countervailing power it faces from airports and courier companies;
- b. Reality of low barriers to entry into this market; and
- c. High level of import competition.

The Parties submit that if the merged entity increased its prices, customers, who are highly sophisticated, would react swiftly to replace the merged entity with one of its many competitors. Customers are able to easily bring alternate international suppliers from overseas. They could go to any market and find local hardware and maintenance suppliers to realise affordable local prices.⁹²

(ii) CCS's assessment

77. CCS will proceed to assess the non-coordinated effects arising from the merger in the BHS and CSS sectors in Singapore. CCS also notes that the analysis below will remain unchanged even if the BHS and CSS sectors were considered as a single relevant market.

BHS Sector

78. As discussed at paragraph 23 above, CCS notes that the Parties have an existing consortium agreement for the purposes of bidding for, and if successful, delivering the BHS aspects of airport terminal development projects for Changi Airport. That being said, BCS and Daifuku are competitors with regard to all other BHS projects except for the projects agreed upon in the consortium agreement. CCS will therefore proceed to assess if the Acquisition will give rise to non-coordinated effects on the basis that the Parties are competitors in the BHS sector.

⁹¹ Paragraphs 34.7 to 34.9 of Form M1.

⁹² Paragraph 34.10 of Form M1.

79. Firstly, CCS notes that the merged entity does not have significant market shares in the BHS sector as BCS currently only [X].⁹³ The key suppliers of BHS at Changi Airport are Crisplant and Pteris Global Ltd.

80. That said, CCS is of the view that market shares are not conclusive indicators of market power, especially in the relevant market in question. In the EC merger case *SHV/ERIKS*⁹⁴, it was noted that:

Despite Vanderlande's market share in relation to airport handling systems, it should however be noted that in this sector market shares are very volatile as the sales are mainly linked to large projects. ... As a consequence, present market shares cannot be considered as absolutely faithful indicators of long term market power.⁹⁵

The same approach was also taken in an earlier EC merger decision *GEC ALSTHOM CEGELEC*.⁹⁶

81. In the present context, CCS considers that market share figures are sensitive to the relative size of the project. The size of the project depends on the primary purpose for its installation, e.g. upgrade, expansion of existing systems or installation of new systems. Furthermore, the bidding for these projects occurs very infrequently, bestowing the winning bidder with large market shares for long periods of time.

82. More importantly, consideration must be given to how projects are awarded via tender and the keen level of competition that the merged entity will face during tenders conducted by CAG. [X].⁹⁷ The Parties also submit that Vanderlande Industries is actively bidding for various projects relating to the upgrade of the AMHS in Changi Airport Terminal 1.⁹⁸

83. As CAG is the only BHS buyer in Singapore, BHS suppliers face strong countervailing buyer power, and it will be difficult for the merged entity to unilaterally raise prices in this sector. The EC merger decision in *SHV/ERIKS* similarly concluded that customers in this sector (i.e. airports) have significant buying power.⁹⁹

⁹³ Paragraph 10.7 of Form M1.

⁹⁴ EC DG COMP/M.5563, 31 July 2009.

⁹⁵ *Ibid.*, at paragraph 33.

⁹⁶ EU DG COMP/M.1164 *GEC ALSTHOM/ CEGELEC* 15 May 1998 at paragraph 25.

⁹⁷ Paragraph 25.3 of Form M1.

⁹⁸ Paragraph 24.7 of Form M1.

⁹⁹ EC DG Comp *SHV/ERIKS* 31st July 2009 at paragraph 33.

84. Given the above, it is therefore unlikely that non-coordinated effects will arise in the BHS sector post-Acquisition.

CSS Sector

85. CCS notes that the Parties are not active in the CSS sector in Singapore. Further to that, Daifuku does not currently supply CSS systems to any customer globally.¹⁰⁰ Only BCS has existing business in the CSS sector. However, to date, BCS has not generated any turnover in Singapore in the CSS sector.¹⁰¹

86. Although the Parties are not currently active in the CSS sector in Singapore, CCS will still proceed to assess if the Acquisition will give rise to non-coordinated effects as competitors and Parties submit that most suppliers have or are able to quickly acquire the technical know-how to supply to both the BHS and CSS sectors.¹⁰²

87. Specifically, [X] noted that most sorter suppliers have solutions for both the BHS and CSS sectors and are in fact suppliers in both sectors. Additionally, the Parties submit that historically, BCS only provided AMHS for the BHS sector and moved into the CSS sector through adapting its current technology, developing some new technologies, and sourcing for specialist technology that it could not efficiently develop itself. The Parties also noted that Siemens Aktiengesellschaft, which historically was very active in the CSS sector, and although not currently active, could very easily re-enter that sector.¹⁰³

88. [X], noted that *“as long as one has the right technology/software and the supply of hardware, it is possible that suppliers of AMHS can supply AMHS to any type of business.”*¹⁰⁴ Based on the above, the merged entity will face a multitude of potential competitors in Singapore given the ease with which new or existing suppliers of BHS can enter and re-enter the CSS sector.

89. That being said, although it can be argued that, absent the Acquisition, Daifuku will be a “potential” competitor to BCS in the CSS sector, it is unlikely that there will be any non-coordinated effects. This is because customers generally look for suppliers with relevant track record. [X], which is active in supplying AMHS to the CSS sector in Singapore, noted that customers generally look for suppliers with relevant references and experiences in Asia or even their own countries.¹⁰⁵ Even though the merged entity can quickly enter the CSS sector, they

¹⁰⁰ Paragraph 12.1(c) of Form M1.

¹⁰¹ Paragraph 16.2 of Form M1.

¹⁰² Public consultation response from [X], [X] and [X].

¹⁰³ Paragraph 24.9 of Form M1.

¹⁰⁴ Public consultation response from [X].

¹⁰⁵ Public consultation response from [X].

will not have the incentive and ability to unilaterally raise prices post-merger as they do not have a strong track record of supplying CSS in Singapore.

90. Lastly, the merged entity will also not have the incentive to unilaterally raise prices post-merger in light of the multitude of existing and potential global competitors that could easily supply to customers in Singapore.

Summary

91. In light of the above, CCS concludes that the Acquisition is unlikely to lead to a substantial lessening of competition by way of non-coordinated effects.

d. Coordinated effects

92. 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.¹⁰⁶

(i) The Parties' submissions

93. The Parties submit that, for a number of reasons, the Acquisition will not lessen competition through coordinated effects.

94. First, the nature of the procurement and design of AMHS prevents participants in the market from being able to monitor compliance with any supposed coordination. Second, competitors in the AMHS market would not have any incentive to coordinate behaviour given the multiplicity of alternative suppliers. The Parties submit that due to the countervailing power of customers and the low barriers to entry for competitors, any coordination as between the merged entity and any other participant would be unsustainable.¹⁰⁷

95. The Parties further submit that any form of tacit agreement not to compete between Daifuku and a larger competitor would not provide any appreciable benefits to the larger competitor. In addition, any decrease in product innovation in this market would be likely to have the effect of incentivising new entry or expansion of existing suppliers of automated material handling systems.¹⁰⁸

¹⁰⁶ Paragraph 6.7 of *CCS Guidelines on Substantive Assessment of Mergers*.

¹⁰⁷ Paragraph 35.2 of Form M1.

¹⁰⁸ Paragraph 35.3 of Form M1.

(ii) *CCS's assessment*

96. For coordination to work effectively, market players ought to be able to monitor compliance with the said coordination effectively. CCS accepts that given the low barriers to entry to supply AMHS, the strong countervailing buyer power and the multitude of existing and potential global competitors, it is unlikely that competitors in both the BHS and CSS sectors will be able to effectively monitor compliance with any supposed coordination.

97. Specifically in the BHS sector, it is unlikely that any coordination between the merged entity and other competitors will be sustainable given the strong countervailing buyer power of CAG.

98. Further, as discussed in paragraphs 48 and 49 above, CCS notes from third-party feedback that the Acquisition may in fact lead to more competition in the BHS sector. Additionally, [X], an AMHS supplier, noted that “*even though we are not involved in BHS, we see fierce competition between companies such as Beumer/Crisplant, Vanderlande, Siemens, Pteris, Logan and TKK.*”¹⁰⁹

99. In light of the above, CCS concludes that the Acquisition is unlikely to lead to a substantial lessening of competition by way of coordinated effects.

IX. Efficiencies

(i) *The Parties' submissions*

100. Daifuku currently sources for its BHS hardware from the United States of America, United Kingdom and Japan, whereas BCS does its main sourcing for such hardware components in Malaysia. Through the Acquisition, Daifuku will benefit from using BCS' suppliers, which can provide the same hardware at a lower cost. Based on Daifuku's estimates, this may lower Daifuku's manufacturing cost by around 50% from its existing level. BCS will also benefit from economies of scale and enjoy a reduction in manufacturing costs. The Parties submit that such cost savings will be passed on downstream.¹¹⁰

101. As a benefit of this Acquisition, BCS can expect sophisticated BHS technologies such as Tilt Tray System, Baggage Tray System and Early Baggage Storage from Daifuku, and the Parties expect that the components required for these technologies can be manufactured at lower cost, utilising BCS' supply base. With regard to BCS' self-service bag-drop solution, BAGgate, BCS will be able to

¹⁰⁹ Public consultation response from [X].

¹¹⁰ Paragraph 42.1 of Form M1.

tap on Daifuku's IP management expertise to expand those operations. This will result in a more efficient provision of services.¹¹¹

(ii) CCS's assessment

102. As the Parties did not submit supporting evidence in relation to how the merger may lower Daifuku's manufacturing cost by 50% and how the cost savings will be passed on downstream, CCS is unable to assess cost savings as an efficiency arising from the merger.

X. Ancillary Restraints

(i) The Parties' submissions

103. The Parties submit that there are no ancillary restrictions to the SPA which gives effect to the Acquisition.¹¹²

104. Clause 13.2 of the SPA provides that:

[✂]

105. Given the Parties' submission noted in paragraph 103 above, CCS sought clarifications from the Parties on the effect and scope of clause 13.2 of the SPA, specifically in the context of ancillary restrictions. The Parties submit that the non-compete obligations are imposed on the five named individuals in their capacity as shareholding employees. Similarly, clause 4.3 of the Shareholders' Agreement, referred to in clause 13.2 of the SPA, which imposes a non-compete obligation on all Shareholders except Daifuku, also constitutes a restrictive covenant on the management shareholders in their capacity as individual shareholders who have management powers over BCS, as well as shareholding employees in their capacity as employees. These individuals are not business undertakings unto themselves, and hence, from a competition law perspective, clause 13.2 of the PA was not an ancillary restriction.¹¹³

(ii) CCS's assessment

106. On account of the Parties' submission, CCS makes no assessment as to whether the non-compete clause in clause 13.2 of the SPA should benefit from the exclusion from the prohibitions under sections 34 and 47 of the Act, pursuant to paragraph 10 of the Third Schedule of the Act.

¹¹¹ Paragraph 42.2 of Form M1.

¹¹² Paragraph 43.1 of Form M1.

¹¹³ Paragraph 1.1 of the Parties response to CCS's Request for Information dated 19 December 2014. [✂]

XI. Conclusion

107. For the reasons set out above, the Parties' submissions and the feedback received from the public consultation, CCS concludes that the Acquisition is unlikely to lead to an SLC in the relevant market in Singapore and accordingly is unlikely to infringe the prohibition under section 54 of the Act.



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