Competition Commission SINGAPORE

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 Asia Renal Care (SEA) Pte Ltd of Orthe Pte Ltd pursuant to section 57 of the Competition Act

26 December 2012

Case number: CCS 400/008/12

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 [✂]

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I. Introduction

The Notification

1. On 16 November 2012, Asia Renal Care (SEA) Pte Ltd ("ARC SEA") and Orthe Group ("Orthe") filed a notification pursuant to section 57 of the Competition Act, Chapter 50B (the "Act"), applying for a decision by the Competition Commission of Singapore ("CCS") as to whether the proposed acquisition by ARC SEA, of 70% shares in Orthe ("the Transaction"), will infringe the section 54 prohibition of the Act if it is carried into effect. As ARC SEA currently owns 30% of Orthe, the Transaction will cause it to achieve sole control of Orthe.

2. For the purposes of this notification, CCS has taken into consideration the views of 11[1] third parties ("Respondents") who responded with regard to CCS' public consultation on the Transaction. In addition, there were eight third parties[2] who indicated that they had no comments or declined to comment on the Transaction. The third parties include voluntary welfare organisations ("VWO"), restructured hospitals, private hospitals, private operators, nephrologists in the private practice and relevant Government agencies. No Respondents objected to the Transaction.

3. At the end of the public consultation process and after evaluating all the submissions, CCS has concluded that the Transaction will not infringe section 54 of the Act.

II. The Parties Involved in the Transaction

ARC SEA

4. ARC SEA, is a 100% owned subsidiary of Asia Renal Care Limited. Asia Renal Care Limited is a holding company which owns shares in various companies active in the provision of kidney dialysis services and related services in the Asia-Pacific region including Singapore, Korea, Malaysia, Philippines, Thailand, Japan and Taiwan (collectively referred to as the "ARC Limited Group").[3] ARC SEA provides dialysis services in Singapore through a network of 18 dialysis centres.

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[1] [✂].
[2] [✂].
[3] Paragraph 7.2 of Form M1.

5. ARC Limited Group is 100% indirectly owned by Fresenius Medical Care AG & Co. KGaA ("FMC KGaA"), which is the ultimate holding company of the FMC Group. FMC KGaA is an integrated provider of products and services for individuals undergoing dialysis because of chronic kidney failure. Through its network of dialysis clinics, FMC KGaA provides dialysis treatments to patients in North America, Europe, Latin America, Asia-Pacific and Africa. FMC KGaA is also a worldwide provider of dialysis products such as haemodialysis machines, dialyzers and related disposable products. In Singapore, and apart from the Purchaser, FMC KGaA operates through its subsidiary FMC Singapore Pte Ltd ("FMC SG"), which provides dialysis services and sells dialysis products in Singapore.[4] FMC SG and its subsidiary, Nephro Care GDI Pte Ltd provides dialysis services in two dialysis centres. In addition, FMC SG acts as an outsourced provider for one centre owned by the Kidney Dialysis Foundation ("KDF"), pursuant to a 5 year management contract.[5]

6. In total, ARC SEA and its affiliates under FMC SG, have 21 dialysis centres in Singapore.[6]

Orthe

7. Orthe has 3 shareholders: Dr Lye Wai Choong and Dr Leong See Odd (collectively referred to as the "Sellers") each owns a 35% stake, and the remaining 30% is owned by ARC SEA.[7]

8. Orthe owns a 75% share in its subsidiary, Kidney Therapy Centre Pte Ltd ("KTC"), with the remaining 25% of the shares being owned by Dr Tan Seng Hoe. Dr Tan's 25% of KTC is not subject to the purchase.[8]

9. Orthe provides dialysis services through a network of 4 dialysis centres while KTC has a network of 2 dialysis centres in Singapore.[9] Neither Orthe nor KTC provides management services to other third party dialysis service providers.[10]

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[4] Paragraphs 7.3 and 7.4 of Form M1.
[5] Paragraph 10.10 of Form M1.
[6] Paragraph 10.9 and Table 8 of Form M1.
[7] Paragraph 7.5 of Form M1.
[8] Paragraph 7.5 of Form M1.
[9] Paragraph 7.5 and Table 9 of Form M1.
[10] Parties' response to question 20 of CCS' Request for Information on 4th December 2012 at 20.1.

III. The Transaction

10. The Transaction is the acquisition by ARC SEA of the remaining 70% share held by Dr Lye Wai Choong and Dr Leong See Odd in Orthe. The Transaction is subject to CCS issuing a favorable decision that the acquisition does not infringe section 54 of the Act.[11] The Transaction has been notified only to CCS.[12]

11. It was submitted that the acquisition will allow ARC SEA to benefit from economies of scale, thereby creating cost synergies which enable ARC SEA to continue to enhance the services provided to End Stage Renal Disease ("ESRD") patients in Singapore.[13]

12. Given that the Transaction is an acquisition for sole control, CCS agrees with the Parties' submission that the Transaction constitutes a merger pursuant to section 54(2)(b) of the Act.[14]

IV. Competition Issues

13. 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[15] at 70% or more.[16]

14. For this Transaction, the Parties have submitted that the overlapping services between ARC SEA and Orthe are the provision of dialysis services to ESRD patients.[17] ESRD patients require renal replacement in the form of kidney dialysis or kidney transplantation. There are two forms of dialysis used to treat patients with ESRD: haemodialysis ("HD", commonly known as blood dialysis) and peritoneal dialysis ("PD", commonly known as water dialysis).[18] The Parties

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[11] Paragraph 4.1.1 (b) of the Draft Sale and Purchase Agreement (Appendix 7b to Form M1).
[12] Paragraph 5.1 of Form M1.
[13] Paragraph 12.1 of Form M1.
[14] Paragraph 11.1 of Form M1.
[15] Paragraph 5.14 of *CCS Guidelines on the Substantive Assessment of Mergers*. CR3 refers to the combined market shares of the three largest firms.
[16] Paragraph 5.15 of *CCS Guidelines on the Substantive Assessment of Mergers*
[17] Paragraph 15.1 of Form M1.
[18] Paragraph 18.3 of Form M1.

only overlap in the provision of HD services at their dialysis centres.[19] They do not provide PD treatments.[20]

15. In evaluating the potential impact of the Transaction, CCS has considered whether the Transaction will lead to a substantial lessening of competition in Singapore.

V. Relevant Market

(a) Product Market

Parties' Submission

Substitutability of HD and PD Treatment

16. The Parties submit that both PD and HD have the same purpose and most ESRD patients typically have the option to choose between PD and HD treatment. The Parties referred to the *Australian Competition and Consumer v Baxter Health Pt Ltd* [2005] FCA 851 case, where the FCA stated that:

> *"PD and HD, subject to certain medical conditions on the part of the patient, are not mutually exclusive and as a result, some, but not all, patients have a choice of treatment. Patients who have had extensive abdominal operations or who have a colostomy, or who are incapable of strict hygiene are not suitable for PD. Patients who have vascular problems or diabetes are usually not suitable for HD, because the removal of blood during the HD process places a strain upon the heart.[...]*
>
> *Where a patient is physically able to have either PD or HD treatment there are various factors that may influence the decision as to the choice between PD or HD treatment. These include age, health, residual renal function, convenience, the desire for more intermittent treatment (in HD), body image, diet and other lifestyle factors."*

17. The Parties also referred to the article "*Treatment options for ESRD – Hemodialysis ('HD'), peritoneal dialysis ('PD') and kidney-transplantation ('TX') – Should one treatment method substitute the other?*" by Dr. med. Michael Etter (medical director of FMC Asia-Pacific Ltd), who noted that HD and PD have shown to produce similar outcomes and survival rates.[21] Given this, the Parties' view is that PD and HD treatments are generally substitutes and form part of the

[19] Paragraph 19.14 of Form M1.
[20] Parties' response to question 1 of CCS' Request for Information on 4th December 2012 at paragraph 1.2.
[21] Paragraph 19.9 of Form M1.

same market. The Parties also note that the Government subsidises both HD and PD treatments.[22]

18. Although kidney transplant would be an alternative to PD or HD treatment, the Parties submit that, for the purposes of competition law analysis, kidney transplant is not a substitute to PD or HD treatment. This is because the average waiting time for non-living donor renal transplant is seven years in Singapore and not all patients are eligible for transplant or find a donor match because of their medical conditions and age. The Parties cited CCS' 2010 decision[23] on the *Proposed Acquisition by Fresenius Medical Care Beteiligungsgellchaft mbH and Frensius Medical Care AG & Co KGaA of Asia Renal Care Limited*, where CCS noted that:

> *"... there is a long waiting time for kidney transplant in Singapore. As of end 2008, there were 511 ESRD patients waiting for a deceased donor kidney transplant in Singapore and the median waiting time for patients undergoing deceased donor kidney transplant in Singapore was 9.44 years."*

The Parties further observed from the National Kidney Foundation ("NKF") and Ministry of Health ("MOH") websites that the average waiting time for a kidney transplant is still seven to eight years.[24]

19. The Parties cited CCS' 2010 decision[25] where CCS concluded that:

> *"...it is arguable that HD and PD may be substitutes for each other and that the relevant market is kidney dialysis services, CCS has, in any event, proceeded to consider the effect of the merger on both (i) the HD treatment and (ii) HD and PD treatment markets for dialysis services separately."*

20. The Parties considered the market for the provision of HD services as being the narrowest possible relevant market. The Parties noted that whether a perfect substitute or otherwise, PD treatments do, in any event, exert a competitive constraint on the ability of HD treatment providers to raise prices as, in most cases, the patients can choose between PD or HD treatment.[26] The Parties added that in any event, given that the numbers who opt for PD are relatively small, it will not impact on competition in any manner, let alone substantially.[27]

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[22] Paragraph 19.10 of Form M1.
[23] CCS decision [400/005/10] on "*Proposed Acquisition by Fresenius Medical Care Beteiligungsgellchaft mbH and Frensius Medical Care AG & Co KGaA of Asia Renal Care Limited*" at paragraph 22.
[24] Paragraph 19.12 of Form M1.
[25] CCS decision [400/005/10] on "*Proposed Acquisition by Fresenius Medical Care Beteiligungsgellchaft mbH and Frensius Medical Care AG & Co KGaA of Asia Renal Care Limited*" at paragraph 26
[26] Paragraph 19.14 of Form M1.
[27] Parties' response to question 27 of CCS' Request for Information on 4th December 2012

Dialysis Service Providers

21. The Parties noted that there are three main categories of HD service providers in Singapore: restructured hospitals, VWOs such as NKF and KDF, and dialysis service providers from the private sector, such as the Parties.[28]

22. The Parties consider VWOs and Restructured hospitals as competitors to private operators. They claimed that the vast majority of HD patients in Singapore are treated at VWOs, with the two biggest providers in the public dialysis sector being NKF and KDF. Being recipients of donations and grants, VWOs can and do provide financial subsidies to their patients. The Parties claim that VWOs are always preferred over private care providers, such as ARC SEA and Orthe.[29]

23. Patients in the public or private sectors pay effectively the same amount for their treatment through a combination of their Medisave and Medishield funds, as long as they have sufficient funds.[30] The public and private sector operators, as well as the VWOs, participate in the Medisave scheme. Under the Medisave scheme, patients can use up to S$450 per month to fund their dialysis treatments at both public and private treatment centres.[31]

24. The Parties further submitted that there are no restrictions for a patient to switch from one dialysis service provider to another and patients are free to do so at any point in time. While a patient who benefits from Government and/or a VWO's subsidies will be reluctant to switch to a private sector service provider and lose the subsidy, the reverse is not true.[32]

CCS' Assessment

Substitutability of HD and PD Treatment

25. The feedback received from Respondents indicates that HD and PD treatments are not easily substitutable in practice due to either medical reasons (treatment advised by the nephrologist) or the patients' personal preferences (reluctance to make a switch as they had become accustomed to the method of treatment).[33] Respondents note that only a small percentage of patients switch treatment modality.[34]

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[28] Paragraph 24.1 of Form M1.
[29] Paragraph 18.15 of Form M1.
[30] Paragraph 18.15 of Form M1.
[31] Paragraph 24.11 of Form M1.
[32] Paragraph 24.10 of Form M1.
[33] [✂].
[34] [✂].

26. The Parties stated that patients who adopt PD as their first choice treatment do so because it offers them more lifestyle flexibility. HD requires being attached to a machine for about four to five hours three times a week, while PD (CAPD) involves fluid exchange three times a day, each exchange taking about half an hour.[35]

27. Patients who switch from PD to HD treatment do so because of infection/inflammation of the peritoneal membrane. While the condition can be treated, sometimes the infection is so severe that the patient has to stop PD. In such a case, the only available treatment modality is HD. Further, the peritoneum, after use over period of time deteriorates and ceases to have the properties that enable PD. At this stage patients switch to HD.[36] One Respondent noted that "*the peritoneal membrane which is used for PD treatment is usually functional for 7 years, hence at some point in time, PD patients will need to switch to HD.*"[37] The Parties also noted that PD treatment patients will likely end up on HD treatment and for the majority of PD treatment patients, PD treatment is unlikely to be the one and only dialysis treatment in the patient's treatment lifecycle.[38]

28. In short, it is rare for patients to switch from HD to PD.[39] Data shows that over 80% of all ESRD patients in Singapore are receiving HD treatment. [40] Under the circumstances, CCS is of the view that HD and PD are not substitutes in practice and the analysis will focus on HD treatment in dialysis centres.

Dialysis Service Providers

29. CCS also gathered feedback from Respondents to inform its assessment of the relevant market with regard to whether the three main categories of HD service providers in Singapore, viz. restructured hospitals, VWOs and private operators, are competitors.

30. CCS noted in its 2010 Decision[41] that:

> "*...VWOs are focused on providing patient care for needy patients and they are operating at close to full capacity, they may not be able to take in*

[35] Parties' response to question 1(b) of CCS' Request for Information on 4th December 2012 at 1.5.
[36] Parties' response to question 1(b) of CCS' Request for Information on 4th December 2012 at 1.4.
[37] [✂].
[38] Notes of Meeting with Parties on 22nd November 2012 at page 3.
[39] Parties' response to question 1(b) of CCS' Request for Information on 4th December 2012 at 1.5.
[40] [✂]and 8th Report of the Singapore Renal Registry at Table 7.1.1.1 out of a total number of prevalence of patients on dialysis treatment (4378), 3784 patients are on HD treatment.
[41] CCS decision [400/005/10] on "*Proposed Acquisition by Fresenius Medical Care Beteiligungsgellchaft mbH and Frensius Medical Care AG & Co KGaA of Asia Renal Care Limited*" at paragraph 38.

additional non-subsidised HD patients, who wish to switch from the merged entity to the VWO dialysis centres."

31. VWO Respondents noted that they generally do not accept patients who fail the means test, and only accept needy patients.[42]

32. [✂].[43][✂].[44][✂].[45][✂].[46]

33. [✂].[47]

34. Other Respondents opined that VWOs should not be considered as competitors to dialysis service providers operated by private operators and restructured hospitals, given that VWOs only serve subsidized patients.[48]

35. Given the above explanation, dialysis centres operated by VWOs are likely to be in a different market from those operated by private operators, restructured hospital and restructured hospitals-private operator joint ventures. VWOs serve a different set of patients, i.e. needy patients who pass the means test. Private patients are not commonly accepted for dialysis treatment at the VWO dialysis centres. For the purposes of this analysis, CCS will take the position that the dialysis services of VWOs are not within the relevant market.

36. CCS understands from a restructured hospital Respondent that its existing dialysis centre treats non-subsidized patients and consequently competes with private operators.[49] Other Respondents noted that the restructured hospital-private operator joint venture dialysis centres treat non-subsidized patients only.[50] Hence, CCS considers the outpatient dialysis services provided by restructured hospitals and restructured hospitals in joint venture with private operators to be within the relevant market.

37. CCS will proceed to consider the effect of the Transaction on HD treatment in dialysis centres operated by restructured hospitals and private sector service providers, including joint ventures between restructured hospitals and private operators.

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[42] [✂].
[43] [✂].
[44] [✂].
[45] [✂].
[46] [✂].
[47] [✂].
[48] [✂].
[49] [✂].
[50] [✂].

(b) Geographic Market

Parties' submission

38. The Parties submitted that the relevant geographical market for dialysis services is not wider nor narrower than Singapore. The Parties cited the US Federal Trade Commission's assessment of a complaint in the matter of *DaVita Inc-Gambro*[51] that noted,

> *"...As a general rule, ESRD patients do not travel more than 30 miles or 30 minutes to receive dialysis treatment, although travel times and distances vary depending no geographical barriers, travel patterns, and whether an area is urban, suburban, or rural."*

The same observation was also made by the US Federal Trade Commission in its assessment of 2 other complaints.[52]

39. The Parties noted that although the US cases suggest that the geographical market may be narrower than national boundary, these cases are distinguishable from the present case. Due to the physical size of Singapore, it is unlikely that the geographical market will be narrower than national boundary in scope. Although patients may prefer shorter travel distances, that does not in itself result in a narrower market definition, particularly in a city state like Singapore. Whilst proximity is one criterion for a patient to decide which clinic to go to, there are other criteria a patient will look at, including possible comfort level with the doctors and the suggestion as to which clinic to use provided by doctors and social workers.[53]

40. The Parties added that although HD treatment is cheaper in Malaysia, it is not practical for kidney dialysis patients to travel there frequently for treatment. In addition, patients who seek treatment outside Singapore are unable to utilise funds from their Medisave (a national medical savings scheme) accounts or Medishield (low cost catastrophic illness insurance scheme initiated by the Singapore Government) accounts to cover or defray the costs of overseas kidney dialysis treatment. The Parties cited the CCS in its 2010 decision[54] that the geographic market for dialysis treatment is limited to Singapore.

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[51] US FTC File no. 051 0051 Docket C-4152 "*Complaint in the Matter of DaVita Inc-Gambro*" at paragraph 10.

[52] US FTC File no. 111 0103 Docket C-4334 "*Complaint in the Matter of Davita Inc-DSI*" at paragraph 10. US FTC File no.111 0170 Docket C-4348 "*Complaint in the Matter of FMC KGaA-Liberty*" at paragraph 10.

[53] Parties' response to question 6(a) of CCS' Request for Information on 4th December 2012 at 6.1.

[54] CCS decision on [400/005/10] "*Proposed Acquisition by Fresenius Medical Care Beteiligungsgellchaft mbH and Frensius Medical Care AG & Co KGaA of Asia Renal Care Limited*" at paragraph 28.

CCS' assessment

41. Based on the submissions received and research carried out by CCS, CCS is in agreement with the geographic market definition provided by the Parties. The relevant geographic market is Singapore for the purposes of assessing the Transaction.

VI. Market Structure

(a) Market shares and market concentration

Parties' submission

42. The Parties submitted data collected by ARC SEA in relation to the value HD and PD treatment market and the number of ESRD patients receiving HD and PD treatment in Singapore from 2009 to 2011. The Parties estimates that the total value of the market for HD treatment is S$101 million in 2011 and the total number of patients receiving HD and PD treatment in 2011 is 5,206. [55]

43. The Parties also submitted that it is not possible to provide the value of the PD treatment market, as there are no PD treatments in clinics.[56]

44. The Parties provided the end of the year patient numbers and annual revenue from HD treatment across all three categories of HD services providers (VWOs, restructured hospitals and private operators) in Singapore:

Table 1

HD Treatment 2011	Number of Patients	Revenue
NKF (VWO)	[✂]	$[✂]
KDF (VWO)	[✂]	$[✂]
PDC (VWO)	[✂]	$[✂]
ARC	[✂]	$[✂]
FMC	[✂]	$[✂]
KTC	[✂]	$[✂]
Orthe	[✂]	$[✂]
Post-Merger (Merged Entity)	**[✂]**	**$[✂]**
Others[57]	[✂]	$[✂]
Total	[✂]	$[✂]

[55] Paragraph 21.2, Tables 12 and 13 of Form M1.
[56] Parties' response to question 27 of CCS' Request for Information on 4th December 2012.
[57] NUH, SGH (Renal Health), Immmanuel, Advance Renal Therapy, TTSH (B. Braun), Asia Kidney Centre, Dr Pwee, Dr Ho Chee Khun, FHC and Raffles Hospital.

Source: Parties' submissions

CCS' assessment

45. Based on patient numbers provided by the Parties, CCS finds that the merged entity will have a market share of between 70% to 90% [✂] and that the post-merger combined market shares of the three largest firms ("CR3") is 70% or more[✂]. This is illustrated in Tables 2 and 3[58]:

Table 2

	HD Treatment excluding VWOs	ARC and FMC (Purchaser)	KTC and Orthe (Target)	Post-Merger (Merged Entity)	Others*	Total**
2009	Number of Patients	[✂]	[✂]	[✂]	[✂]	[✂]
	Market Shares (%)	[60-80%]	[0-20%]	[70-90%]	[10-30%]	
	Revenue	$[✂]	$[✂]	$[✂]	$[✂]	$[✂]
	Market Shares (%)	[60-80%]	[0-20%]	[70-90%]	[10-30%]	
2010	Number of Patients	[✂]	[✂]	[✂]	[✂]	[✂]
	Market Shares (%)	[60-80%]	[0-20%]	[70-90%]	[10-30%]	
	Revenue	$[✂]	$[✂]	$[✂]	$[✂]	$[✂]
	Market Shares (%)	[60-80%]	[0-20%]	[70-90%]	[10-30%]	
2011	Number of Patients	[✂]	[✂]	[✂]	[✂]	[✂]
	Market Shares (%)	[60-80%]	[0-20%]	[70-90%]	[10-30%]	
	Revenue	$[✂]	$[✂]	$[✂]	$[✂]	$[✂]
	Market Shares (%)	[60-80%]	[0-20%]	[70-90%]	[10-30%]	

Source: Parties' submissions

* Others include private dialysis centres, restructured hospitals in joint ventures or partnerships with private dialysis service providers

** Figures do not tally due to rounding errors

[58] Data extracted from Appendix 16 of Form M1.

Table 3

Merged Entity % excluding VWOs	HD Treatment
CR3 Pre-Merger (By revenue)[59]	[70-90%]
CR3 Post-Merger (By revenue)[60]	[70-90%]
CR3 Pre-Merger (By number of patients)[61]	**[70-90%]**
CR3 Post-Merger (By number of patients)[62]	**[70-90%]**

Source: Parties' submissions

46. **Annexes A and B** of the decision provides further details of the revenue and patient numbers and market shares of the competitors in the relevant market from 2009-2011.

47. 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.[63] As the merged entities' market share will significantly exceed the threshold of 40%, there may be competition concerns arising from the Transaction. CCS proceeds to analyse other aspects of the Transaction in the following sections.

(b) Barriers to entry and expansion

Parties' submission

48. The Parties submit that the barriers to entry to set up a dialysis centre in Singapore are low.[64]

49. The Parties noted that there have been local and overseas firms that have set up operations to provide dialysis services in Singapore in recent years. In 2011, two international companies, Da Vita and B. Braun, have set up operations to provide dialysis services in Singapore. The former was awarded the tender to provide services to KDF dialysis centres, while the latter entered into a public-private partnership with Tan Tock Seng Hospital ("TTSH") and Ren Ci Hospital to set up a dialysis treatment centre in Singapore.[65]

50. Three local companies, Asia Kidney Centre, FHC Dialysis Centre and Renal Life Dialysis Centre have set up new clinics in 2011 and are continuing to expand. Asia Kidney Centre set up a clinic in Toa Payoh and is in the midst of

[59] FMC, Orthe and NUH.
[60] The Parties, NUH and SGH.
[61] FMC, Orthe and Immanuel Dialysis Centre ("Immanuel") + Advance Renal Therapy ("ART"). Immanuel and ART are under the same management.
[62] The Parties, Immanuel + ART, and NUH.
[63] Paragraph 5.15 of *CCS Guidelines on Substantive Assessment of Merger*
[64] Paragraph 28.2 of Form M1.
[65] Paragraph 18.12 of Form M1.

opening a further three clinics in Bedok, Tampines and Woodlands. FHC Dialysis Centre opened a clinic in Kovan while Renal Life Dialysis Centre opened a dialysis centre in Jurong West and is in the midst of opening a dialysis centre in Bukit Batok.[66]

51. The Parties also noted that there are a number of companies and service providers like Visionhealthone Corporation Pte Ltd and Renaltrust Pte Ltd, and established healthcare providers such as Parkway Hospitals that have the potential and capability to enter the market. Further, existing nephrologists can make a significant impact on the operations by either setting up their own clinics or by withdrawing their support to the merged entity.[67]

52. Furthermore, the estimated time frame to obtain a licence and begin operations is not more than six weeks from the date of applying for a licence.[68]

53. The Parties also quoted CCS' 2010 decision, where CCS rejected the view that competition in hiring doctors and medical staff could amount to a barrier to entry as there will be competition for doctors and medical staff so long as any existing dialysis providers choose to expand their capacity beyond their current capacity. A medical director i.e. nephrologist has to be appointed in order to operate a dialysis centre. The Parties claimed that although the Ministry of Health Guidelines for dialysis centre is to have a 1:150 doctor-to-patient ratio in Singapore, there are enough nephrologists in Singapore to cater to the needs of HD patients here.[69] There are 60 nephrologists in Singapore.[70] Given that there are 4,513 HD patients in 2011, this means that only 31 nephrologists need to be available at any point in time.[71]

54. The Parties submitted that there are 17 nephrologists in Singapore that are in the private practice and that there have been at least four doctors who have moved to the private practice over the last three years. These are Dr Ho Chee Khun, Dr Ng Tsun Gun, Dr Tan Choon Hian Roger and Dr Yang Wen Shin.[72] 7 out of the 60 nephrologists are currently medical directors of the dialysis centres operated by ARC SEA and Orthe Group respectively. The Sellers, Dr Lye and Dr Leong are among these 7 nephrologists. The 5 other nephrologists are Dr Tan Seng Hoe, Dr Chen Tsung Mong Beatrice, Dr Ku Kwok Tai Gordon, Dr Sivaraman Pary and Dr Wu Yik-Tian Akira.[73] As a general rule, the nephrologist

[66] Paragraph 18.12 and 18.13 of Form M1.
[67] Paragraph 30.1 of Form M1.
[68] Paragraph 18.8 of Form M1.
[69] Paragraph 34.5 of Form M1.
[70] Parties' response to question 7 of CCS' Request for Information on 4th December 2012 at 7.2
[71] Paragraph 34.5 of Form M1.
[72] Parties' response to question 7 of CCS' Request for Information on 4th December 2012 at 7.3 and 7.4.
[73] Parties' response to question 7 of CCS' Request for Information on 4th December 2012 at 7.5.

currently employed as medical directors of the Parties' dialysis centres are restricted from operating as medical directors for other competing dialysis centres.[74]

55. It is understood that a nephrologist practicing in a restructured hospital cannot be appointed a medical director for a privately operated dialysis centre. Whilst there is no legal prohibition against this, the practice appears to be such. It is further understood that nephrologists practicing in a restructured hospital can, however, be appointed as medical directors of a joint-venture in which the restructured hospital is a party.[75]

56. The Parties also shared that retired nephrologists can be appointed as dialysis centre medical directors so as long as they still have a practicing license.[76] There has also been an increase in the number of doctors opting for a specialisation in nephrology and the number of nephrologists entering into private practice.[77]

CCS' assessment

57. CCS is of the view that the barriers to entry and expansion are not high. Respondents[78] shared that there are various ways to expand capacity. Where space is available at an existing dialysis centre, new beds or chairs can be added to increase the number of patients who can be treated at the dialysis centres.[79] Where there are space constraints, dialysis service providers will consider increasing the number of treatment shifts and extending treatment hours. As each treatment seating is about 3 to 4 hours, additional treatment shift can be added to increase the treatment capacity at centres with 1 or 2 treatment shifts per day. The maximum number of shifts per day (from 7 a.m. to 10 p.m.) is 3.[80] One Respondent noted that it is unlikely to run a 24 hour dialysis centre as there is current difficulty in recruiting and retaining renal-trained nurses.[81]

58. Where dialysis centres run out of capacity, operators will consider adding new centres. Respondents estimated that it will take 2 to 6 months to start a new dialysis centre.[82] Respondents noted that the regulatory barriers to entry are low as it does not take more than 2 months to get the requisite licence from the

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[74] Parties' response to question 7 of CCS' Request for Information on 4th December 2012 at 7.6.
[75] Parties' response to question 7 of CCS' Request for Information on 4th December 2012 at 7.4.
[76] Notes of Meeting with Parties on 22nd Nov 2012 at page 5.
[77] Paragraph 34.5 of Form M1.
[78] [✂].
[79] [✂].
[80] [✂].
[81] [✂].
[82] [✂].

relevant authorities.[83]

59. Existing competitors to the Parties have not experienced difficulty increasing patient numbers. These competitors' patient numbers and revenue increased by 61% and 55% respectively from 2009 to 2011.[84]

60. The entry of multiple new private operators of dialysis centres supports the finding that barriers of entry to this market are low. In particular the number of competitors to the Parties doubled from 5 to 10 from 2010 to 2011.[85] CCS notes that the merged entity's combined market shares fell in 2011 from 2010 (Table 2) as a result of the entry of these private operators. Two Respondents, [✂], are planning to enter the market[86] and do not see any difficulty in doing so, while other Respondents are looking to expand capacity.[87]

61. Private nephrologists are also entering into partnerships to set up new dialysis centres in Singapore and they have the incentive to refer patients to dialysis centres where they have a share of the ownership.[88] [✂].[89] [✂].[90] Respondents further note that these private nephrologists are well placed to compete in the market as they have a ready pool of patients who value a "continuity of care" i.e. seeking medical consultation and dialysis treatment from the same nephrologist who also provides dialysis services.[91]

62. The Parties and Respondents noted that the standard of HD treatment services provided by private operators is fairly similar from one provider to another.[92] Furthermore, patients are able to switch and seek HD treatment from another dialysis centre. CCS understands that patients who are looking to switch dialysis centres will only need to bring along a recent copy of their dialysis chart to their new dialysis centre of choice. The Parties further noted that, "*even if a patient does not have a dialysis chart, the attending nephrologist at the dialysis centre will be able to create a dialysis regime for him by doing an evaluation of his condition through a few blood tests.*"[93]

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[83] [✂].
[84] See **Annex A**: "% increase column" (2009-2011) for "Merged Entity" and "Competitors to Merged Parties" rows.
[85] See **Annex A**: 5 entrants, TTSH (B. Braun), Dr Ho Chee Khun, Asia Kidney Centre, Raffles Hospital and FHC entered the market in 2011.
[86] [✂].
[87] [✂].
[88] [✂].
[89] Based on ACRA searches of Immanuel Dialysis Centre (Woodlands) Pte Ltd and Renal Life (Hougang) Dialysis Centre Pte Ltd.
[90] [✂]
[91] [✂].
[92] Notes of Meeting with Parties on 22nd Nov 2012 at page 3, [✂].
[93] Notes of Meeting with Parties on 22nd Nov 2012 at page 5, [✂].

63. Respondents indicated that a key barrier to entry is having adequate manpower, namely, the recruitment of nephrologists and nurses to run the dialysis centres.[94] CCS understands that nephrologists working for restructured hospitals are typically not allowed to work at private dialysis centres as medical directors, except when restructured hospitals are involved in the dialysis centres.[95] As the Parties acknowledged, there are only 17 nephrologists available for any entrant into the relevant market.[96] Another Respondent noted that the Transaction will further increase competition for medical nursing staff, given the current shortage of medical nursing staff in Singapore.[97]

64. CCS is of the view that access to nephrologists and trained nurses are not a significant entry barrier for private nephrologists and restructured hospitals. CCS notes that a nephrologist may be the medical director of more than one dialysis centre. [✂].[98] Nephrologists practicing in a restructured hospital can be appointed as medical directors of a joint-venture in which the restructured hospital is a party.[99] Nephrologists from the restructured hospitals are appointed as the medical directors of the restructured hospitals' dialysis centres.[100]

65. Based on [✂], there are currently [✂] nephrologists working as the medical directors for [✂] dialysis centres in Singapore.[101] [✂].[✂].[102]

66. Furthermore, where any of the existing dialysis providers choose to expand their capacity or set up new dialysis centres, there will also be competition for the doctors and medical staff to join them.

67. One Respondent noted that there are no significant operating economies of scale from having a large network of dialysis centres in Singapore and this does not constitute a significant barrier to entry and expansion in the market.[103] Another Respondent noted that the only significant savings from operating at a large scale pertains to cost savings from bulk purchase of equipment.[104] CCS notes that for each dialysis centre, an operator will need to incur separate costs for setting up the operations, purchase of dialysis equipment and employment of medical staff.

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[94] [✂].
[95] [✂].
[96] Parties' response to question 7 of CCS' Request for Information on 4th December 2012 at 7.6.
[97] [✂].
[98] [✂].
[99] Parties' response to question 7 of CCS' Request for Information on 4th December 2012 at 7.4. Dr Lina Choong (SGH) is the medical director for Renal Health which is a joint venture between SGH and FMC.
[100] Dr Titus Lau (NUH) is the medical director for the NUH satellite dialysis centre at the SLF Building.
[101] [✂].
[102] [✂].
[103] [✂].
[104] [✂].

68. In view of the above, CCS agrees that the barriers to entry and expansion are not high.

(c) Countervailing buyer power

Parties' submission

69. The Parties noted that the consideration of countervailing buyer power is not applicable with regard to the merger assessment.[105]

CCS' assessment

70. CCS agrees with the Parties that countervailing buyer power does not apply with regard to this Transaction as the customers of the Parties are individual patients seeking HD treatment.

VII. COMPETITION ASSESSMENT

(a) Non-Coordinated Effects

71. 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. Other firms in the market may also find it profitable to raise their prices because the higher prices of the merged entity's dialysis services will cause some patients to switch to dialysis services provided by its competitors, thereby increasing demand for the competitors' dialysis services.[106]

Parties' submission

72. The Parties submit that non-coordinated effects are unlikely to arise as a result of the Transaction for the following reasons:

(i) Patients have alternative providers of HD dialysis services and can switch to them easily: While the Parties are the main providers of HD services in the private sector, it is notable that patients are able to switch to other private sector providers or even to restructured hospitals or VWOs without incurring cost and time. As such, it is difficult to say whether patients would view the Parties' services as the "next best alternative".[107] Furthermore, there are no restrictions preventing a

[105] Paragraph 31.1 of Form M1.
[106] Paragraph 6.3 of *CCS Guidelines on Substantive Assessment of Mergers*.
[107] Paragraph 33.1 of Form M1.

patient to switch from one dialysis service provider to another.[108]

(ii) Barriers to entry and expansion are low: Since 2010, there have been various new providers of HD services in Singapore, and various providers in both the public and private sectors have expanded their capabilities.[109] Although the Ministry of Health Guidelines for dialysis centre is to have a 1:150 doctor-to-patient ratio in Singapore, there are enough nephrologists in Singapore to cater to the needs of HD patients here.[110]

(iii) No change in market structure: NKF and the merged entity will remain the two largest HD service providers in Singapore, with a combined market share of more than 70%, while the merged entity will have more than 20% market share. This position was already the case for NKF and the Purchaser pre-merger, i.e. the merger does not change the overall structure of the market. Whilst the merged entity will see an increase in its overall market share this increase is incremental and does not radically change the structure of the market either, i.e. the merged entity remains the second largest provider of HD services in Singapore, far behind NKF, which has 52% market share as of 2011.[111]

73. As such, the merged entity will not be able to raise prices, as the patients would, as a consequence, turn to HD services provided by the VWOs which own the largest number of dialysis centres, or restructured hospitals or even to other private dialysis centres. Patients may also turn to PD treatment where their condition allows (which is generally the case but in limited situation). There are therefore sufficient competitive constraints on the merged entity to prevent any lessening of competition, let alone a substantial lessening of competition. The countervailing buyer power (in the form of patients) is a critical factor to ensure that the competitive scene remains.[112]

CCS' assessment

VWOs do not compete with the merged entity and other dialysis operators for non-subsidised patients

74. As noted in the market definition assessment, VWOs do not form part of the relevant market as they do not compete to provide HD treatment to non-subsidized patients.

[108] Paragraph 34.7 of Form M1.
[109] Paragraph 34.6 of Form M1.
[110] Paragraph 34.5 of Form M1.
[111] Paragraph 34.3 of Form M1.
[112] Paragraph 34.9 of Form M1.

Limited HD treatment service differentiation across HD service providers

75. Respondents noted that the quality of HD treatment services are generally considered to be fairly similar and do not differ much across the three categories of HD service providers (VWOs, restructured hospitals and private operators). Furthermore, there is limited HD treatment service differentiation amongst private dialysis service providers. [113] Respondents further noted that the main differentiating factors are the locations of the dialysis centres and the centre's affiliation to the patient's attending nephrologists.[114]

76. On the importance of location, this is not a significant barrier to entry and expansion as any existing operator or entrant can locate their centres to meet patients' demand.

77. On the importance of a centre's affiliation to the patient's nephrologist, this has limited effect for the following reasons. First, as most patients are diagnosed at restructured hospitals, a large proportion of patients at private dialysis centres come from restructured hospitals. According to the Parties,[✂]% of the Sellers' patents come from restructured hospitals and only [✂]% of their patients are the nephrologists' own patients.[115] One of the Respondents (a private operator of dialysis centres) provided the same proportions for the patients at its centres.[116] Given that dialysis centres are not heavily dependent on referrals, the effect from patient referrals is limited. Second, as the Purchaser already owns 30% of the Target pre-merger, and the Sellers own a minority stake in the Purchaser and are already medical directors at the Purchaser's dialysis centres, the effect of the Sellers referring their patients to the Purchaser's dialysis centres already occurs pre-merger. Furthermore, nephrologists can partner one another to set up dialysis centres. There appears to be limited scope for the Parties to leverage on these two differentiating factors to gain any competitive advantage.

78. Given the similar quality of HD treatment services offered across all HD service providers in the relevant market, the intensity of competition between the Parties do not appear to be greater than with other competing dialysis centres.

79. One Respondent noted that it is difficult to expand its dialysis treatment business in Singapore due to the very competitive treatment prices from other private dialysis centres.[117] Based on the Parties' submission[118] of the average

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[113] [✂].
[114] [✂].
[115] Notes of Meeting with Parties on 22nd Nov 2012 at page 2.
[116] [✂].
[117] [✂].
[118] Appendix 16 and 34 of Form M1

monthly revenue per patient across the various dialysis service providers, the average monthly revenue per patient is fairly similar. In fact, the Parties revenue yield per patient are [✂], suggesting that they have been constrained by other competitors. This is illustrated in Table 4:

Table 4

HD Treatment 2011	Number of Patients	Revenue	Revenue per Patient per Month
The Parties			
Fresenius	[✂]	$ [✂]	$ [✂]
ARC	[✂]	$ [✂]	$ [✂]
Orthe	[✂]	$ [✂]	$ [✂]
KTC	[✂]	$ [✂]	$ [✂]
Competitors			
NUH	[✂]	$ [✂]	$ [✂]
SGH (Renal Health)	[✂]	$ [✂]	$ [✂]
TTSH (B Braun)	[✂]	$ [✂]	$ [✂]
Immanuel	[✂]	$ [✂]	$ [✂]
Advance Renal Therapy	[✂]	$ [✂]	$ [✂]
Dr Ho Chee Khun	[✂]	$ [✂]	$ [✂]
Dr Pwee	[✂]	$ [✂]	$ [✂]
Asia Kidney Centre	[✂]	$ [✂]	$ [✂]
Raffles Hospital	[✂]	$ [✂]	$ [✂]
FHC	[✂]	$ [✂]	$ [✂]

Source: Parties' submission. [✂].

80. CCS notes that Fresenius's dialysis centre, NephroCare S&J Dialysis Centre at Camden Medical Centre, charges at a significant premium over other dialysis centres in Singapore ([✂] per patient per month). The Parties explained that this is due to the fact that NephroCare S&J Dialysis Centre is catered to serve high net worth patients, and offers to its patients an overall better treatment environment, easy parking and the use of high quality products.[119]

81. CCS further notes that Orthe does not own any dialysis centres offering HD treatments to high net worth patients. Even if there is a narrower market for provision of HD treatments for high net worth patients, there is no overlap between the Parties in the narrower market.

Patients can switch dialysis centres

82. Respondents noted that price increase by the merged entity is unlikely due

[119] Parties' response to question 1a of CCS' Request for Information on 11th December 2012 at 1.4.

to the sensitivity of patients to prices and that patients are able to switch dialysis centre providers easily.[120] The Parties also noted that they have patients switching to other competing dialysis centres (typically due to the opening of a new dialysis centre closer to their home) and that there is no need for patients to get "permission" from their current dialysis service provider when switching.[121] CCS notes that HD is a treatment service for chronic patients i.e. patient are recurrent customers and patients may be less inclined to shop around because of their medical conditions. However, Respondents have noted that patients switch dialysis centres in response to differences in prices and the location of the dialysis centres.[122] Respondents noted also that they have spare capacity at present to attend to more patients, should the demand for HD treatment services at its existing centres increase.[123]

Strong competitive fringe

83. CCS also notes that there is a strong competitive fringe that is capable of sustaining sufficient levels of post-merger rivalry, given the 2 to 6 months required to set up new dialysis centres by existing and new operators. Respondents have also indicated that they are looking to starting new dialysis centres in Singapore.[124] The entry and expansion of new private operators since 2010 further supports the observation of a strong competitive fringe that is capable of sustaining sufficient levels of post-merger rivalry.[125]

84. To take into account the observation that location of dialysis centres is an important aspect through which dialysis centre operators compete, CCS has considered the locations of all dialysis centres in the relevant market.

85. Respondents noted generally that patients prefer to dialyse at a dialysis centre near their home.[126] One Respondent noted that if patients were given a choice, they would not want to travel more than two to three kilometers radius from their home. However, if there is available public transport, e.g. Mass Rapid Transit ("MRT") train service, direct bus routes, patients may be prepared to travel further.[127] Another Respondent noted that patients prefer to be as close to their homes as possible and there are patients on waiting list to be transferred to a dialysis centre near their home. The same Respondent noted that it has located its

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[120] [✂].
[121] Notes of Meeting with Parties on 22nd November 2012 at page 5.
[122] [✂].
[123] [✂].
[124] [✂].
[125] See **Annex A**: 5 entrants, TTSH (B. Braun), Dr Ho Chee Khun, Asia Kidney Centre, Raffles Hospital and FHC entered the market in 2011.
[126] [✂].
[127] [✂].

dialysis centres in the heartlands where public transportation (e.g. near bus stops and MRT stations) is very accessible.[128]

86. One Respondent noted that patients may choose a dialysis centre that is near their work place.[129] Another Respondent noted that it is difficult to generalise how patients choose their dialysis centres. Some patients who are currently dialysing at the hospitals are prepared to travel away from home while others may travel to a private dialysis centre if they are happy with the services there.[130] Yet another Respondent noted that its patients come from all four corners of Singapore to receive HD treatment.[131]

87. Based on information provided by the Parties as to the geographic spread of their patients, CCS has mapped out the locations of a sample of the Parties' dialysis centres[132]and the geographic spread of the patients dialyzing at the centres. This is documented in **Annex C**. It is observed that most patients choose to use dialysis centres close to their homes.

88. [✂]. **Annex D** maps the locations of the Parties' and competitors' dialysis centres. It is observed that across the different parts of Singapore, the Parties will continue to face competition from competing dialysis centres in the neighbourhood post-merger.

89. Specifically, CCS notes that wherever the Purchaser's and Target's dialysis centres are near each other (such that the rivalry between the Parties is lost post-merger), there is at least one competing dialysis centre located nearby.[133]

90. In view of the above, CCS is of view that the Transaction does not raise competition concerns as a result of non-coordinated effects.

(b) Coordinated Effects

91. 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

[128] [✂].
[129] [✂].
[130] [✂].
[131] [✂].
[132] Parties' response to CCS dated 10th December 2012 at paragraph 5.
[133] See **Annex C** and **Annex D**.

competitors will collude or strengthen a tendency to do so.[134]

Parties' submission

92. The Parties submitted that the risk of coordinated effects resulting from the merger, that the HD services providers in Singapore may coordinate their behaviour to raise prices, or reduce quality or output is not a real one. The Parties submit that this is because VWOs and restructured hospitals are not profit driven and thus would not have the incentive to coordinate with private service providers. Private sector service providers likewise cannot raise their prices if they want to remain competitive as the VWOs and restructured hospitals would act as an excellent competitive constraint on the private sector service providers, and vice-versa.[135]

CCS' assessment

93. While high market concentration and product homogeneity may give the ability for market players to align their behaviour, it is unlikely that market players would be able to coordinate their behaviour post-merger, due to the ease of entry by potential entrants, adding to the existing 11 players in the relevant market post-merger. Based on the Parties' submission, there are currently 43 nephrologists practising in the public sector[136], and they can switch to private practice and set up a dialysis centre business. The Parties also submit that in the last three years, at least four nephrologists (Dr Ho Chee Khun, Dr Ng Tsun Gun, Dr Tan Choon Hian Roger and Dr Yang Wen Shin) have moved into the private sector, showing that the switch from the public to the private sector is not difficult. Moreover, the time to set up a dialysis centre is relatively short, so it would be easy for public sector doctors to switch to the private sector and set up new dialysis centres to respond to market demand.

94. The ease of entry allows new entrants to destabilise any potential alignment of behaviour by the incumbent operators. This is helped by the fact that patients can switch dialysis centres without too much trouble if incumbent operators coordinate to increase prices.

95. Respondents have noted that the market for dialysis centres is expected to grow.[137] The 8th Report of the Singapore Renal Registry reported that the number

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[134] Paragraph 6.7 of *CCS Guidelines on Substantive Assessment of Mergers.*

[135] Paragraph 35.1 of Form M1.

[136] Parties' rresponse to question 7 of CCS' Request for Information on 4th Dec 2012 at 7.2 and 7.3.

[137] Mount Elizabeth Novena/Parkway Group meeting with CCS at 1.1, B. Braun's response to question 1.4 of CCS' Request for Information, Dr Lina Choong's (SGH) response to question 5.5 of CCS' Request for Information , NKF's response to question 1.4 of CCS' Request for Information and KDF's response to question 1.4 of CCS' Request for Information.

of dialysis patients increased from 2,460 in 1999 to 4,378 in 2009[138] and the intake of new dialysis patients increased from 663 in 2005 to 768 in 2009. The growth is likely to attract entrants into the HD services market and encourage existing competitors to expand capacity.

96. Restructured hospitals are unlikely to coordinate with the other dialysis service providers as they are not profit-driven.

97. In view of the above, CCS is of view that the Transaction does not raise competition concerns as a result of coordinated effects.

(c) Non-Horizontal Issues

Parties' submission

98. FMC SG which owns ARC SEA is a provider of HD products in Singapore. The Parties submit that as FMC SG is a provider of HD products, it is likely that post-merger, the merged entity will purchase products for HD treatments from FMC SG. However, this is substantially the case at present, and the merger will only marginally increase supplies by FMC SG. Generally, FMC SG manufactures and sells technologically advanced HD Products which are at the higher end of the price spectrum. The current market practices in Singapore do not currently employ such high-end advanced products and treatment modalities. As such, the merger will not therefore substantially change the competitive landscape for the supply of HD Products.[139]

99. The Parties also submitted FMC SG's market shares for the supply of HD products in Singapore[140]:

Table 5

	2011		2010	
	Market Value (S$)	Market share (%)	Market Value (S$)	Market share (%)
Total market	[✂]	100%	[✂]	100%
FMC	[✂]	[30-40]%	[✂]	[30-40]%

*The figures above include sale of HD products to all three categories of HD service providers

[138] Table 6.3 of the 8th Report of the Singapore Renal Registry "Survival by Modality 1999-2009".
[139] Paragraph 36.1 of Form M1.
[140] Paragraph 36.2 and Table 17 of Form M1.

CCS' assessment

100. CCS notes that all three categories of HD services providers VWOs, private operators and restructured hospitals purchase HD products. As such, the relevant market for assessment should include the sale of HD products to all three categories of HD service providers (VWOs, restructured hospitals and private operators).

101. One Respondent (a supplier of HD products) noted that the acquisition of Orthe allows FMC SG to convert or replace its competitors' products in Orthe's dialysis centres with its own. The Respondent expressed concerns that the Transaction would further enhance FMC SG's market position and could foreclose the Respondent and other home-grown distributors from the market.[141]

Table 6

Merged Entity % including VWOs	HD Treatment
Pre-Merger ARC and FMC (Purchaser)	[10-30%]
Pre-Merger KTC and Orthe (Target)	[0-20%]
Post-Merger (Merged Entity)	[20-40%]

102. Using the market share figures of HD treatment (across all three categories of HD providers) as a proxy for the demand of HD products, the estimated market foreclosed from the upstream competitors i.e. suppliers of HD products, due to the Transaction is approximately [0-20%]. This is illustrated in Table 6 above.

103. The Parties noted that the majority of HD products currently used by the Target's dialysis centres are sourced from other suppliers.[142] CCS understands that it is not the case that these HD products e.g. dialysis machines will be replaced immediately after the merger as they generally have a useful life of 5 years. The Target's dialysis centres will continue to use HD products from other suppliers until the end of the useful life of the non-FMC dialysis machines.

104. Furthermore, NKF, being the largest provider of HD treatment services and consequently the largest buyer of HD products has strong countervailing buyer power to constrain the merged entity. One Respondent noted that FMC SG is the largest supplier in the market because it supplies NKF primarily. The same Respondent noted that even though FMC SG has the largest market share, FMC SG has been submitting competitive tender bids for the Respondent's HD product tenders.[143]

105. CCS also considered if competing dialysis centre operators would be

[141] [✂].
[142] Notes of Meeting with Parties on 22nd November 2012 at page 5.
[143] [✂].

foreclosed from market as a result of the Transaction. CCS notes that there are competing alternative HD product suppliers to FMC SG who can supply HD equipment to competing dialysis centre operators. For example, the Parties noted that the Target's dialysis centres use majority non-FMC SG HD products from suppliers like Gambro, Nipro, B. Braun and Baxter and FMC SG's products are too expensive for the Singapore market.[144]

106. CCS is of the view that the suppliers of HD products and competing dialysis centre operators are not foreclosed from providing HD products to dialysis centres as a result of the Transaction.

VIII. Efficiencies

Parties' submission

107. The Parties submitted that through the merger, the Purchaser intends to push for and achieve greater economies of scale, which will enable the Purchasers to continue to make significant investments in the operational infrastructure of the various clinics. With the implementation of a consolidated processing and operational system such as the clinical IT systems and the clinical policies, procedures and protocols, the focus can be directed towards enhancing and improving the quality of treatment provided to patients. These benefits will not be realised if the merger did not take place.[145]

108. The Parties further noted that there are no definitive statistics that can be provided to substantiate the efficiency gains.[146]

CCS' assessment

109. CCS is unable to comment on these claims as the Parties did not submit sufficient evidence of the claimed efficiencies.

IX. Ancillary Restrictions

Parties' submission

110. The Parties submitted that [✂] of the Share Purchase Agreement ("SPA") is to ensure that the Purchaser receives the full value of the business purchased and in particular, the goodwill acquired as a result of the Transaction. [✂] is a non-

[144] Notes of Meeting with Parties on 22nd November 2012 at page 5.
[145] Paragraph 23.2 of Form M1.
[146] Paragraph 42.2 of Form M1.

compete restriction and it prevents the Sellers from re-entering the market as potential competitors for the duration of the Restricted Period.[147] [✂] provides that[148]:

"[✂]."

The relevant terms defined in the Sale Purchase Agreement (to be read in conjunction with [✂]) are :

"2. The Sellers as collectively known as Vendors and individually, a 'Vendor'...

Definitions

Restricted Period means period of [✂] commencing on Completion."

111. The Parties further submitted that the Sellers are the major shareholders of Orthe and being the nephrologists in Orthe's Clinics, command substantial loyalty from their patients and staff. With all things remaining equal (i.e. the price per treatment, location and quality of premises) patients will move to alternative clinics if directed by the nephrologists. It is thus essential that ARC SEA be provided sufficient time to establish a relationship with all relevant parties.[149] The acquisition of the patients' goodwill takes time as it is important for the patients to trust the doctors and staff providing the services, and to choose against the advice of the doctor directing them to go elsewhere from the merged entity.[150]

112. New patients are likewise directed to clinics by nephrologists and so a continued commitment by the Sellers in their role as nephrologists is essential for the long term viability of the business following the merger. As ESRD patients typically live between five to seven years of commencing treatment, a continued flow of new patients is essential. [151]

113. Notably, the ARC SEA states that it is paying a very high premium to acquire Orthe and one of the reasons for the ancillary restriction is to prevent the dilution of its existing investment in Orthe and vis-à-vis its existing business. It will also need to manage a potential loss of the premium moving forward. To recoup the high premium, it is essential that the Sellers continue to direct patients to the merged entity and not to start a competing business which would ultimately dilute the operations of the merged entity's business.[152]

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[147] Paragraph 43.9 of Form M1.
[148] Appendix 7b of Form M1.
[149] Paragraph 43.2 of Form M1.
[150] Paragraph 43.5 of Form M1.
[151] Paragraph 43.2 of Form M1.
[152] Paragraph 43.3 of Form M1.

114. Without the restriction in the SPA, ARC SEA will be discouraged from investing into more clinics in Singapore and in developing first quality practices, knowing that the patients may switch to another provider recommended by the nephrologists at any point in time. As most of the patients in Orthe will continue to be the patients of the Sellers, it is critical that this continuing relationship does not impact negatively on the merged entity's business.[153]

CCS' assessment

115. Non-compete clauses, if properly limited, are generally accepted as essential if a purchaser is to receive the full benefit of any goodwill and/or know-how acquired with any tangible assets. In determining the necessity of the restriction, CCS would typically need to assess 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. [154]

116. In assessing the necessity of [✂], CCS is of the view that the subject matter and the persons subject to it are reasonable. CCS notes that the Sellers would have the ability to set up another dialysis centre post-merger to compete with ARC SEA, given that as practicing nephrologists, the Sellers can influence their patients' choice of dialysis centre.[155]

117. However, the proposed [✂] restriction period is excessive. The European Commission's Notice [156] on *Restrictions Directly Related and Necessary to Concentrations* ("EC Notice") noted that:

> *"Non-competition clauses are justified for periods of up to three year, when the transfer of the undertaking includes the transfer of customer loyalty in the form of both goodwill and know-how. When only goodwill is included, they are justified for periods of up to two years."*

118. The Parties submitted that patients will move to alternate clinics if directed by the nephrologists and it is essential that ARC SEA have sufficient time to establish a relationship with all relevant parties. The Parties have stated that only [✂]% of the patients have Orthe are the patients of the Sellers. The remaining [✂]% of patients are referred from the restructured hospitals.[157] Respondents have

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[153] Paragraph 43.6 of Form M1.
[154] Paragraph 10.15 of the *CCS Guidelines on the Substantive Assessment of Mergers*.
[155] [✂].
[156] Paragraph 20 of the EC Notice on *Restrictions Directly Related and Necessary to Concentrations*
[157] Notes of Meeting with Parties on 22nd Nov 2012 at page 2.

also noted that a nephrologist's recommendation is just one of several factors that patients take into account when choosing dialysis centres. Patients also consider the location and the cost of dialysis.[158] CCS is thus of the view that the transfer of patient goodwill as a result of the Transaction is only limited to the existing patients of the Sellers.

119. The Parties further pointed out that the average ESRD patient lives between 5 to 7 years[159] of commencing treatment and that a continued flow of new patients is essential for the long term viability of the Transaction. CCS is of the view that the transfer of patient goodwill should only pertain to existing patients and not new patients post-merger.

120. Furthermore, CCS notes that it is unlikely that ARC SEA needs to rely on the Sellers for know-how in operating dialysis centres, following the Transaction. ARC SEA already has an extensive network of dialysis centres in Singapore and the Sellers are medical directors at 10 of ARC SEA's 18 dialysis centres.[160]

121. In view of the above and to the extent that [✂] constitutes a restriction of competition, CCS agrees with the Parties that the non-compete clause is directly related to the Transaction. However, the Parties have not sufficiently justified how the [✂] restriction duration should be considered as necessary for the Transaction. CCS considers a restricted duration of 3 years as ancillary to the Transaction.

X. Conclusion

122. For the reasons above and based on the information available, CCS assesses that the Transaction will not infringe section 54 of the Competition Act.

123. In accordance with section 57(7) of the Act, this decision shall be valid for a one year period from the date of this decision

Yena Lim
Chief Executive
Competition Commission of Singapore

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[158] [✂].

[159] CCS notes from the 8th Report of the Singapore Renal Registry that the 1 and 5 year survival rate for HD patients who survived 90 days after initiation on dialysis was 90.1% and 59.5% respectively. (Table 7.9.3.1 of the 8th Report of the Singapore Renal Registry "Survival by Modality 1999-2009" published 2012).

[160] The Sellers are medical directors at the following ARC SEA dialysis centres: RTC Bedok Reservoir, RTS Bukit Merah, RTS Jurong East, RTC Jurong East, ARC Jurong East, RTC Ang Mo Kio, RTS Ang Mo Kio, RTC Toa Payoh, RTS Yishun Ring and RTC Hougang. Information is derived from: Table 8 of Form M1 and [✂].

ANNEX A

Revenue and number of patients of dialysis centre operators in the relevant market	2009		2010		2011		% Increase (2009-2011)	
	Revenue	Patients	Revenue	Patients	Revenue	Patients	Revenue	Patients
Purchaser								
Fresenius	$ [✂]	[✂]	$ [✂]	[✂]	$ [✂]	[✂]		
ARC	$ [✂]	[✂]	$ [✂]	[✂]	$ [✂]	[✂]		
Purchaser Total	$ [✂]	[✂]	$ [✂]	[✂]	$ [✂]	[✂]	[✂]	[✂]
Target								
Orthe	$ [✂]	[✂]	$ [✂]	[✂]	$ [✂]	[✂]		
KTC	$ [✂]	[✂]	$ [✂]	[✂]	$ [✂]	[✂]		
Target Total	$ [✂]	[✂]	$ [✂]	[✂]	$ [✂]	[✂]	[✂]	[✂]
Merged Entity	$ [✂]	[✂]	$ [✂]	[✂]	$ [✂]	[✂]	[✂]	[✂]
Restructured Hospital								
NUH	$ [✂]	[✂]	$ [✂]	[✂]	$ [✂]	[✂]	[✂]	[✂]
Restructured Hospital in Joint Ventures with Private Operators								
SGH (Renal Health)	$ [✂]	[✂]	$ [✂]	[✂]	$ [✂]	[✂]	[✂]	[✂]
TTSH (B Braun)	$ [✂]	[✂]	$ [✂]	[✂]	$ [✂]	[✂]	[✂]	[✂]
Centres operated by Private Nephrologists and Private Operators								
Immanuel	$ [✂]	[✂]	$ [✂]	[✂]	$ [✂]	[✂]	[✂]	[✂]
Advance Renal Therapy	$ [✂]	[✂]	$ [✂]	[✂]	$ [✂]	[✂]	[✂]	[✂]
Dr Pwee	$ [✂]	[✂]	$ [✂]	[✂]	$ [✂]	[✂]	[✂]	[✂]
Dr Ho Chee Khun	$ [✂]	[✂]	$ [✂]	[✂]	$ [✂]	[✂]	[✂]	[✂]
Asia Kidney Centre	$ [✂]	[✂]	$ [✂]	[✂]	$ [✂]	[✂]	[✂]	[✂]
Raffles Hospital	$ [✂]	[✂]	$ [✂]	[✂]	$ [✂]	[✂]	[✂]	[✂]
FHC	$ [✂]	[✂]	$ [✂]	[✂]	$ [✂]	[✂]	[✂]	[✂]
Competitors to Merged Parties	$ [✂]	[✂]	$ [✂]	[✂]	$ [✂]	[✂]	55%	61%

Source: Parties' submissions

ANNEX B

Market shares of dialysis centre operators in the relevant market	2009		2010		2011	
	% Revenue	% Patients	% Revenue	% Patients	% Revenue	% Patients
Purchaser						
Fresenius	[0-20%]	[0-20%]	[0-20%]	[0-20%]	[0-20%]	[0-20%]
ARC	[40-60%]	[50-70%]	[40-60%]	[50-70%]	[40-60%]	[50-70%]
Purchaser Total	[60-80%]	[60-80%]	[60-80%]	[60-80%]	[60-80%]	[60-80%]
Target						
Orthe	[0-20%]	[0-20%]	[0-20%]	[0-20%]	[0-20%]	[0-20%]
KTC	[0-20%]	[0-20%]	[0-20%]	[0-20%]	[0-20%]	[0-20%]
Target Total	[0-20%]	[0-20%]	[0-20%]	[0-20%]	[0-20%]	[0-20%]
Merged Entity	[70-90%]	[70-90%]	[70-90%]	[70-90%]	[70-90%]	[70-90%]
Restructured Hospital						
NUH	[0-20%]	[0-20%]	[0-20%]	[0-20%]	[0-20%]	[0-20%]
Restructured Hospital in Joint Ventures with Private Operators						
SGH (Renal Health)	[0-20%]	[0-20%]	[0-20%]	[0-20%]	[0-20%]	[0-20%]
TTSH (B Braun)	NA	NA	[0-20%]	[0-20%]	[0-20%]	[0-20%]
Centres operated by Private Nephrologists and Private Operators						
Immanuel	[0-20%]	[0-20%]	[0-20%]	[0-20%]	[0-20%]	[0-20%]
Advance Renal Therapy	[0-20%]	[0-20%]	[0-20%]	[0-20%]	[0-20%]	[0-20%]
Dr Pwee	[0-20%]	[0-20%]	[0-20%]	[0-20%]	[0-20%]	[0-20%]
Dr Ho Chee Khun	NA	NA	NA	NA	[0-20%]	[0-20%]
Asia Kidney Centre	NA	NA	NA	NA	[0-20%]	[0-20%]
Raffles Hospital	NA	NA	NA	NA	[0-20%]	[0-20%]
FHC	NA	NA	NA	NA	[0-20%]	[0-20%]
Competitors to Merged Parties	[10-30%]	[10-30%]	[10-30%]	[10-30%]	[10-30%]	[10-30%]

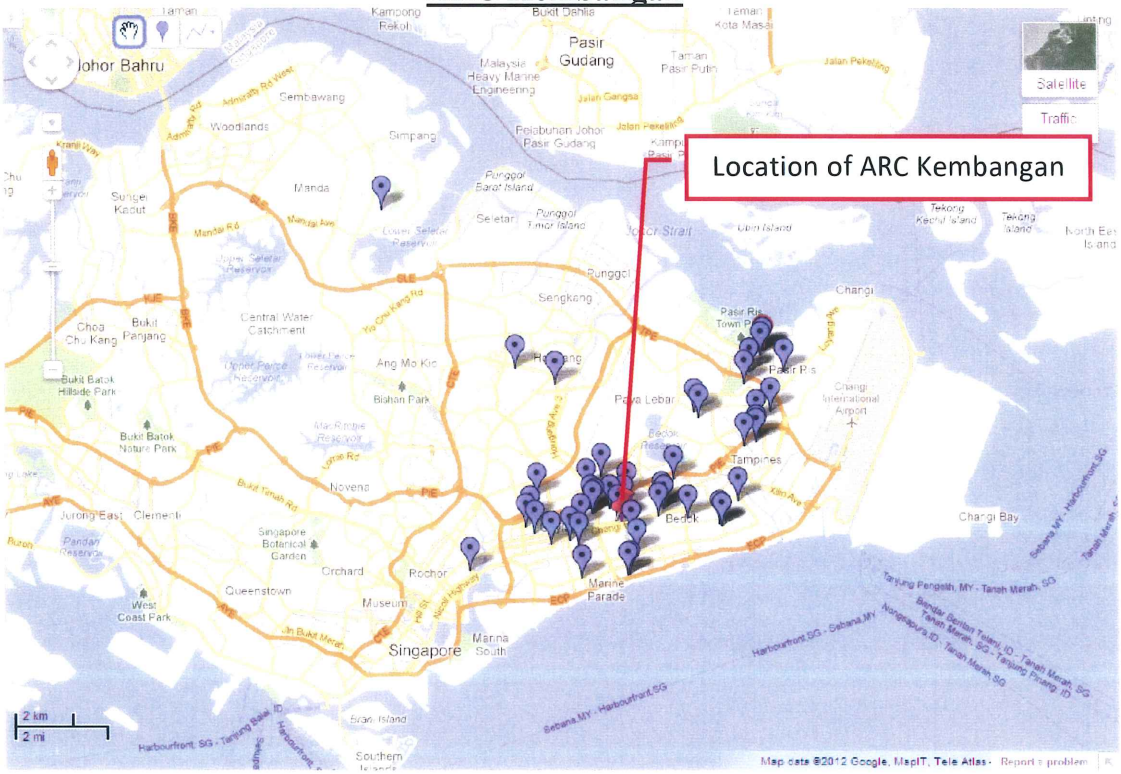
Source: Parties' submissions

ANNEX C

The Blue Pin Icons on the maps document the geographic spread of patients who are currently treated at the respective dialysis centres run by the Parties. The location of the dialysis centre of interest is marked by a Red Pin Icon. The sample of dialysis centres operated by the Parties was chosen to reflect different regions within Singapore. Note that, apart from Orthe Lucky Plaza, which is well connected by public transport given its central location, each of the other dialysis centres have most patients residing close to the centre.

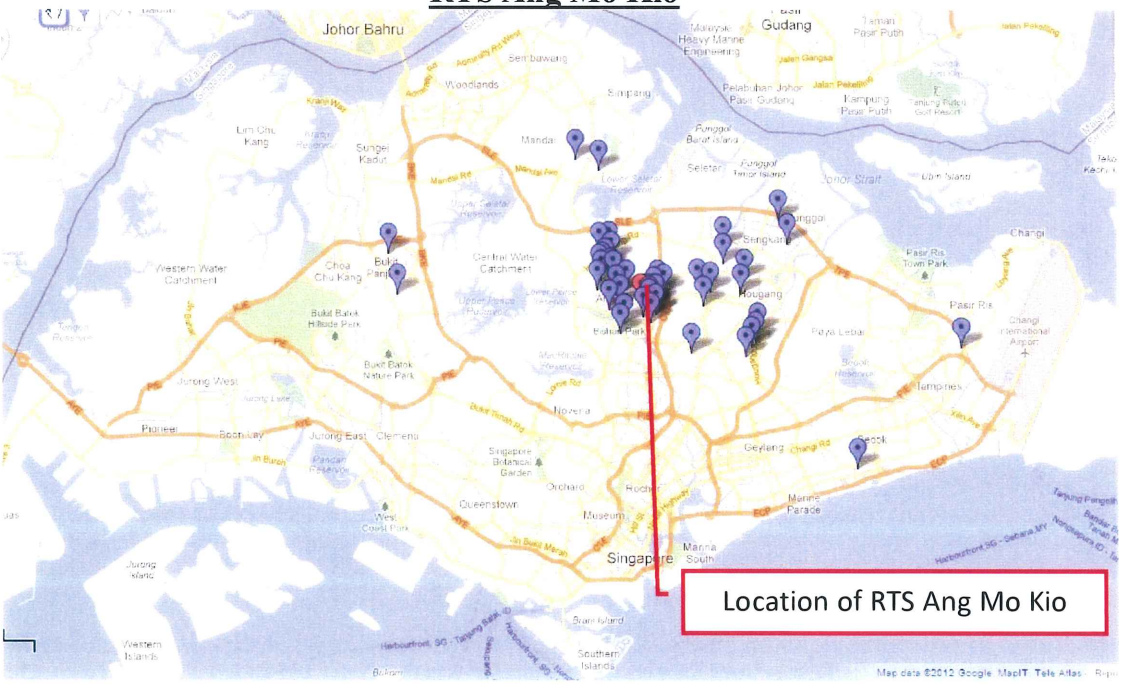
Renal Therapy Centre Jurong

ARC Kembangan



Orthe Lucky Plaza

RTS Ang Mo Kio



KTC Marsiling

ANNEX D

[✂]