Anticipated acquisition by Smith & Nephew plc of ArthroCare Corporation

ME/6428/14

The CMA's decision on reference under section 33(1) given on 21 May 2014. Full text of the decision published on 10 June 2014.

Please note that the square brackets indicate figures or text which have been deleted or replaced in ranges at the request of the parties for reasons of commercial confidentiality.

Summary

1. **Smith & Nephew Inc. (S&N)** is proposing to acquire **ArthroCare Corporation** (**ArthroCare**) (the **parties**) (the **merger**). The Competition and Markets Authority (**CMA**) considers that the parties will cease to be distinct, that it has jurisdiction on the basis of the share of supply test and that arrangements are in progress or in contemplation which, if carried into effect, will result in the creation of a relevant merger situation.

2. The parties overlap in the supply of surgical devices in the UK, and in particular in respect of the supply of bipolar radio frequency (**RF**) ablation devices, joint repair products, and mechanical resection, specifically handheld instruments.

3. In bipolar RF ablation products the parties have an approximate [70-80] per cent share of supply. However, as a result of its analysis of customer switching data and its market testing (which highlighted that S&N does not supply the latest technology in RF ablation), the CMA considers that the parties are not each other's closest competitors and that customers have viable alternatives, meaning that the merged entity will face significant constraints post-merger. This is corroborated by the parties' internal documents which indicate that Johnson & Johnson (**J&J**) is ArthroCare's closest competitor due to its ability to supply innovative products.

4. The CMA also notes that S&N is obliged [✂]. [✂]. By contrast, the parties' competitors in bipolar RF ablation devices, Stryker and J&J, have license agreements which will expire when the ArthroCare foundational patents expire in [✂] and both are able to use their bipolar licenses to design and manufacture their own bipolar RF systems.

5. The CMA considers that these constraints, taken together, are sufficient to ensure that no realistic prospect of a substantial lessening of competition will

arise as a result of the merger.

6. Further, the CMA considers that there is some evidence of entry, particularly by competitors in the mono-polar sector following the expiry of ArthroCare's bipolar patents in [✂], although it was not necessary to conclude whether any such entry or expansion will be timely, likely and sufficient by those competitors.

7. The CMA also considers that the merger would not give rise to competition concerns in relation to joint repair products where the parties have a combined share of [30-40] per cent in knee fixation products, a sub-segment of joint repair products, with an increment of just [0-10] per cent. The merger gives rise to a very small increment and there are several other more significant competitors.

8. With regard to shoulder repair products, another sub-segment of joint repair products, the parties' internal documents indicate that Arthrex Inc. (Arthrex) and J&J are currently market leaders for shoulder fixation devices at a global level. This is supported by an independent market report,[1] which identifies Arthrex and J&J as two of the largest suppliers, which will continue to play a key role. The CMA therefore considers it likely that the parties will continue to face strong competition after the merger from Arthrex and J&J, the existing major suppliers. There are also a number of smaller competitors which also supply shoulder fixation products. Therefore, the CMA considers that the parties will be sufficiently constrained by competing suppliers and that consequently no realistic prospect of a substantial lessening of competition will arise as a result of the merger.

9. In the handheld instrument segment within the mechanical resection sector, the parties estimate their joint share of supply to be [20-30] per cent, with an increment of [0-10] per cent. The merger would result in a reduction in competitors from seven to six plus several fringe suppliers. Therefore, since the parties will have only a moderate share of supply in the area of handheld instruments and a large number of competitors remain in the market, the CMA does not consider that a realistic prospect of a substantial lessening of competition will arise as a result of the merger.

Decision

10. This merger will therefore **not be referred** under section 33(1) of the Enterprise Act 2002 (the **Act**).

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[1] The Millennium Research Group: *European Markets for Orthopaedic Soft Tissue Solutions 2013*

Assessment

Parties

11. **Smith & Nephew Inc. (S&N)** is a wholly owned subsidiary of Smith & Nephew plc, a UK public listed company. S&N is a global medical technology company, active in the provision of orthopaedic reconstruction systems, sports medicine solutions and trauma products, among other areas. It is the S&N sports medicine business that competes with the ArthroCare product offering.

12. **ArthroCare Corporation (ArthroCare)** develops and manufactures surgical devices, instruments and implants to enhance surgical techniques and patient outcomes. Its core product areas are targeted at surgeries related to sports medicine as well as ear, nose and throat procedures. In the UK, the sole area in which both S&N and ArthroCare are present is Sports Medicine. ArthroCare's UK turnover for the year ended 31 December 2013 was £[✂].

Transaction

13. Pursuant to an agreement announced on 3 February 2014, S&N will acquire ArthroCare. Given that the Office of Fair Trading (OFT) received a satisfactory submission on 24 March 2014, the administrative deadline for a decision by the CMA is 21 May 2014.[2]

Jurisdiction

14. As a result of the merger, the enterprises of Smith & Nephew and ArthroCare will cease to be distinct. The parties overlap in the supply of bipolar RF ablation devices, with a combined share of supply in these of [70-80] per cent (increment [10-20] per cent).[3] The CMA therefore considers that the share of supply test in section 23 of the Act is met in this case. The CMA therefore believes that it is or may be the case that arrangements are in progress or in contemplation which, if carried into effect, will result in the creation of a relevant merger situation.

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[2] The Competition and Markets Authority was established on 1 October 2013. By virtue of the Enterprise and Regulatory Reform Act 2013 and the Enterprise and Regulatory Reform Act 2013 (Commencement No 6, Transitional Provisions and Savings) Order, No 416 of 2014, the Office of Fair Trading's functions were transferred to the CMA on 1 April 2014.

[3] The parties estimated that their combined share of supply was [50-60] per cent, increment [0-10] per cent. The data used to estimate shares for the bipolar sector is derived from a third party report – The Millennium Research Group: *The European Market for Arthroscopy Devices 2013*, September 2013 – and the parties' own internal estimates.

Product frame of reference

15. The CMA considers that market definition provides a framework for assessing the competitive effects of the merger and involves an element of judgement. The boundaries of the market do not determine the outcome of the analysis of the competitive effects of the merger, as it is recognised that there can be constraints on merging parties from outside the relevant market, segmentation within the relevant market, or other ways in which some constraints are more important than others.[4]

16. The parties overlap in the supply of arthroscopic surgical devices.[5] Most arthroscopic surgeries deal with knees and shoulders, and to a lesser extent hip and smaller joints (wrist, ankle). These arthroscopic procedures require component products that can be divided into two areas: products used to repair the joint in question; and so-called 'enabling technologies', which are tools that enable the surgeon to perform the particular arthroscopic procedure.

17. Joint repair/fixation products are tools used in arthroscopic procedures to repair the joint in question. They are used to fasten or join soft tissue (such as ligaments, cartilage or tendons) to the bones in the joint. These products include anchors, screws and implants. Enabling technologies are products allowing surgeons to perform the necessary joint repair. These include:

    - Mechanical resection devices used for tissue resection (removal) and bone debridement[6] during arthroscopic surgery. These devices are typically either powered shaver blades (used to cut soft tissue) or powered burrs (used to shave the bone). Mechanical resection also encompasses low-tech handheld instruments such as forceps, graspers, scissors, suture passers and punches, which are used in various combinations in every arthroscopic procedure to assist surgeons in gaining access to the joint under repair and in the removal of soft tissue.

    - RF ablation devices (or probes) are energy devices mainly used in arthroscopy procedures to cut, ablate or remove tissue, or control bleeding in the joint. RF ablation devices consist of a controller system connected to a disposable probe (also referred to as wands). RF energy involves the rapid oscillation of electro-magnetic fields that cause the movement of charged particles. In contact with soft tissue,

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[4] Merger Assessment Guidelines, paragraph 5.2.2.
[5] S&N is a reseller of ArthroCare's bipolar devices.
[6] Debridement involves the removal of dead, damaged or infected tissue to improve the healing potential of the remaining tissue.

this movement either generates temperatures sufficiently high to result in tissue modification (traditional RF technology), or generates a plasma layer that breaks the molecular bond of the tissue (bipolar RF technology).

18. The parties overlap in (i) RF ablation, (ii) joint repair/fixation and (iii) mechanical resection.

RF ablation

Mono-polar vs. bipolar technology

19. The parties submitted that RF ablation devices can be either mono-polar or bipolar. The bipolar devices generate less temperature and are less likely to cause damage to surrounding tissue relative to mono-polar devices. ArthroCare supplies only bipolar RF ablation devices, whereas S&N supplies both bipolar and mono-polar RF ablation devices.

20. The parties state that surgeons have a strong preference for bipolar RF ablation devices where available, due to their perceived superiority in terms of precision and safety. However, the parties also noted that some demand remains for mono-polar RF ablation devices, as a result of surgeon preferences.

21. The majority of hospitals contacted by the CMA considered that mono-polar and bipolar RF ablation devices were not substitutes, but did not express a clear preference for bipolar RF ablation devices. Although some hospitals did indicate a preference for the bipolar technology (referring to increased safety due to less collateral damage for example), other hospitals commented that use depended on clinical needs or surgeons' preferences.

22. The result of the CMA's market testing suggests that hospitals lean toward bipolar technology, although there remain surgeons who have personal preferences for specific mono-polar devices. Overall, since most hospitals do not consider mono-polar and bipolar RF ablation devices as substitutes, the CMA considers that mono-polar and bipolar devices should be examined separately.

RF ablation devices vs mechanical resection devices

23. The parties submitted that RF ablation devices and mechanical resection devices are not substitutable. Although mechanical resection devices serve the same surgical purpose as a RF ablation device, that is to remove tissue, and there are certain procedures where a surgeon might be able to use either a

mechanical resection device or an RF ablation device to carry out the procedure, they are based on a different technology and, in the UK, the RF ablation devices are approximately twice as costly as mechanical resection devices. Additionally, the parties submitted, mechanical and RF ablation devices are often used during the same procedure illustrating their complementarity. This view is supported by the CMA's market testing, which indicated that customers do not consider mechanical resection devices as a substitute for bipolar RF ablation devices.

24. Therefore, based on the different product characteristics and the results of its market testing, the CMA considers RF ablation devices and mechanical resection devices to form part of separate frames of references.

Different sizes, forms and other features of RF bipolar devices

25. There are a range of different RF bipolar devices. The parties submitted that while the core functions of the different generations of RF bipolar ablation devices are essentially identical, new generations added new features to the product, such as bipolar temperature feedback, hand controls, and more bendable probes.

26. RF ablation probes are also available in different forms/angles and sizes for procedures involving different joints and each type of probe is licenced for use on one or several joints. The parties submitted that many of the RF ablation devices developed for the shoulder are substitutable for those used in the knee. Moreover, with the exception of additional shaft length, some of the RF ablation devices used for the shoulder or knee procedures can also be used in hip arthroscopy. The parties further stated that it would be relatively simple and non-costly for a manufacturer of RF devices for one of the three major joints[7] to begin manufacturing RF devices for another of the joints. The parties also note that there are several competitor products for each particular type of surgery.

27. The CMA considers that RF bipolar ablation devices are differentiated in various dimensions including technological features, different sizes and forms and other physical aspects like malleability of the wand. Within a group of wands that are licenced for the same types of procedures, demand-side substitutability is possible, however customer feedback indicates that surgeon's clinical preferences exist.

[7] Knee, shoulder and hip.

28. The CMA notes that all manufacturers of bipolar RF ablation devices supply a range of products and have devices available for all types of procedures. Through its market testing the CMA assessed customer procurement practices as to whether they source specific products (for example wands for a specific joint) from particular suppliers or all RF ablation wands from one supplier. The majority of hospitals (or hospital groups) that responded order all or the majority of their ablation products from one supplier. Of the 18 hospitals that responded, seven hospitals purchase their bipolar RF ablation devices only from one supplier, while five noted that they have a preferred supplier for the major part of their purchases but will also procure minor volumes from other suppliers. Only three noted that they use probes from particular manufacturers for specific joints or types of procedures.

29. The CMA notes that a minority of customers may have specific preferences or consider certain manufacturers to have particular strengths in specific products.[8] However, overall, all manufacturers of bipolar RF ablation devices supply a range of products and have devices available that are licenced for all types of joints and procedures. The majority of the hospitals that responded order all or the majority of their RF ablation products from one supplier. Therefore, the CMA considers the conditions of competition for different types of RF ablation devices as similar and that a further segmentation according to type of joint, procedure etc. is not necessary in this case.

Conclusion on product frame of reference for RF ablation

30. Therefore, on a cautious basis, the CMA has assessed the merger on the basis of the supply of all bipolar RF ablation devices. The CMA also considered the supply of RF ablation devices (including mono-polar devices) as a possible frame of reference. However, the CMA does not consider it necessary to conclude on the precise product scope given that, on the evidence presented to it, no competition concerns arise on any reasonable frame of reference.

Joint repair/fixation

31. Within the area of joint repair, the parties overlap primarily in regard to shoulder repair. There is also a small overlap in knee repair devices and a marginal overlap in hip devices. Due to the marginal nature of the overlap, the hip

[8] For example Johnson & Johnson was mentioned several times in relation to surgeries in small joints (wrist/ankle).

devices segment has not been assessed further.[9]

32. The CMA has assessed whether such a sub-segmentation is necessary for the purposes of its analysis. In particular, the CMA considered to what extent joint devices are specific to particular joints or can be used on other joints as well, and additionally, considered whether joint repair devices should also be segmented according to the different types of products, such as anchors and sutures.

33. Joint repair procedures make use of various anchors, sutures and screws to fasten or join together soft tissue (such as ligaments, cartilage or tendons) to the bones of the joint. Collectively, these products are often referred to as fixation products. The parties submitted that there is a high degree of demand-side substitutability between the various joint repair devices. For example, many shoulder fixation devices can also be used in the hip. Some knee fixation devices (such as interference fixation screws) can also be used interchangeably in other joints, although some, such as cortical or suspensory fixation devices, are specific to the knee and cannot be used in other joints.

34. The CMA's market testing showed mixed results regarding the demand-side substitutability of fixation devices. Some customers indicated that substitution – at least between certain joints – is possible. Others stated that fixation devices are joint and pathology specific.

35. As a result the CMA considers that demand-side substitutability is – at least to some extent – limited. Therefore, on a cautious basis it has assessed the main overlapping segments, that is, repair devices for shoulder and knee, as frames of reference in its competitive assessment below.

Mechanical resection devices

36. Mechanical resection devices are a category of enabling devices used by surgeons during arthroscopy procedures. Mechanical resection devices can be further subdivided into powered devices like powered shaver blades and handheld instruments like scissors, forceps, or graspers.

37. The parties only overlap in handheld instruments, which includes a number of comparatively low-tech products, for example scissors and forceps, and, the parties submitted, which are sold separately from powered mechanical resection devices. The parties submitted that handheld instruments should not be grouped according to the arthroscopic procedure for which they are used because the underlying technology is well understood and widely used within

[9] In FY 2013, ArthroCare's annual UK sales values with respect to hip repair products were £[✂].

general surgery as well as arthroscopic procedures. Further, the majority of procedures can be performed with a standard range of instruments, as only some instruments are tailored for a specific use, and that in addition, these products are reusable and consequently sales are relatively limited.

38. The CMA has assessed the merger on the basis of handheld instruments as the relevant product frame of reference. However, the CMA considers that it is not necessary to reach a final view on the product scope given that no competition concern arises on any plausible frame of reference.

Geographic scope

39. In a previous case[10] the European Commission (**EC**) considered the markets for medical devices, including joint repair and fixation products, to be national, in particular since market structures and market shares varied across countries. Furthermore, similar to other medical sectors, there are different national reimbursement schemes resulting in significant price differences between EU Member States. In addition, the EC considered hospitals' purchasing behaviour differs from one country to another and the importance of a local/national sales force as well as service was stressed. Both the OFT and the Competition Commission (CC) have previously considered the competitive effects of medical products at national levels.[11]

40. In this case, the parties submitted that there was no need to precisely delineate the boundaries of the geographic market for any of the overlapping products. There are, however, some features of the market that suggest that it may be wider than national. In particular, RF ablation devices, joint fixation products and mechanical resection/handheld instruments are all manufactured globally and transport costs low. In addition, the EU has the power to impose standards for medical devices, and the requirement that medical devices conform to EU regulations ensures that medical devices are standardised across the EU.

41. However, the CMA's market testing showed, in line with the EC's findings in previous cases, that customers consider local sales teams and distribution centres as important. The CMA also considered whether a narrower geographic scope than the UK would be appropriate, given that there are separate health administrations within the UK. Having consulted with relevant procurement

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[10] See EC *Johnson & Johnson*, COMP/M.6266, 18 April 2012.
[11] OFT, Completed acquisition by Coloplast A/S of the Urology Business of Mentor Corporation, ME/2472/06; Competition Commission Report on Coloplast A/S and SSL International plc merger, 2002.

organisations in England, Scotland, Wales and Northern Ireland the CMA has concluded that market conditions were very similar and that there was no reason to further narrow the frame of reference.

42. Therefore, in line with the previous decisions by the EC, the OFT and the CC referenced above, the CMA has assessed this merger on the basis of a national geographic frame of reference.

Counterfactual

43. The CMA assesses the merger's impact relative to the situation that would prevail absent the merger (that is, the counterfactual). In practice, the CMA generally adopts the pre-merger conditions of competition as the counterfactual against which to assess the impact of the merger. However, the CMA will assess the merger against an alternative counterfactual where, based on the evidence available to it, there is a realistic prospect of a different counterfactual.[12] In this case, there is no evidence supporting a different counterfactual, and the parties have not put forward arguments in this respect. Therefore, the CMA considers the prevailing conditions of competition to be the relevant counterfactual.

Competitive assessment

Horizontal unilateral effects

Bipolar RF ablation devices

44. As a starting point, the CMA considers the relevant shares of supply for bipolar RF ablation devices.[13] The CMA then goes on to assess the potential risk of unilateral effects through the loss of existing competition. Unilateral effects may arise because a price increase becomes less costly when the products of the two firms are brought under common ownership or control.[14] Where products are differentiated – like bipolar RF ablation devices – unilateral effects are more likely where the parties products compete closely.[15] The CMA will therefore take into account in its assessment the closeness of substitution of the parties' products as well as other information.[16]

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[12] See *Mergers Assessment Guidelines*, paragraph 4.3.5 *et seq.*
[13] See *Mergers Assessment Guidelines*, paragraph 5.3.1 ff.
[14] See *Mergers Assessment Guidelines*, paragraph 5.4.7.
[15] See *Mergers Assessment Guidelines*, paragraph 5.4.6.
[16] See *Mergers Assessment Guidelines*, paragraph 5.4.9 – 5.4.10.

Shares of supply

45. The parties submitted their own sales revenues as well as a third party market study on the market for RF ablation devices.[17] Additionally, the CMA received turnover figures from a competitor, [✂]. A further competitor, [✂], did not respond to the CMA. The CMA combined the information from the parties, the third party and the Millennium Study to produce estimated shares of supply for RF bipolar ablation devices.[18]

Table 1: Estimated shares of supply for bipolar RF ablation devices

	FY 2011	FY 2012	FY 2013
Smith & Nephew	[0-10]%	[0-10]%	[10-20]%
ArthroCare	[60-70]%	[60-70]%	[60-70]%
Combined	**[70-80]%**	**[70-80]%**	**[70-80]%**
J&J	[✂]%	[✂]%	[✂]%
Stryker	[✂]%	[✂]%	[✂]%

46. Table 1 above shows that the parties will have a combined share of supply of [70-80] per cent in the supply for bipolar RF ablation devices. The CMA considers that shares of supply of this magnitude would usually give rise to *prima facie* competition concerns, however, the CMA considers that market shares may be less indicative of market power where customers perform infrequent tender processes, switch rarely[19] and where several credible bidders are available. As a result, the CMA has placed relatively more weight in its competitive assessment on the evidence of closeness of competition and on recent examples of customer switching.

47. The CMA has also considered the estimated shares of supply for a combined RF ablation devices market including mono-polar and bipolar devices.[20]

Table 2: Estimated share of supply for all RF ablation devices (mono-polar and bipolar)

	FY 2012
Smith & Nephew	[10-20]%
ArthroCare	[60-70]%

[17] The Millennium Research Group: *The European Market for Arthroscopy Devices 2013*, September 2013.
[18] The sales revenues from ArthroCare, S&N and [✂] were provided by the respective firms. To estimate [✂] revenues the CMA used the share of supply reported for the overall RF ablation market in the Millennium Study (p. 129) as well as the relative size of the bipolar and the mono-polar market in the UK in 2012. (p.101) The CMA assumed a stable share of supply for 2011 through 2013.
[19] See the section on customer switching below.
[20] For [✂] and other suppliers the shares of supply were estimated based on information from the Millennium Report and the parties.

Combined	**[70-80]%**
J&J	[✂]%
Stryker	[✂]%
Arthrex	[✂]%
Conmed	[✂]%
Others	[✂]%

Note: ArthroCare, J&J and Stryker only supply bipolar devices, whereas ConMed and Arthrex supply only mono-polar devices. S&N supplies both types of products.

Closeness of competition

48. The parties submitted that S&N, as a reseller of ArthroCare's bipolar devices, is entirely dependent upon ArthroCare. ArthroCare owns several patents in the field of arthroscopy including essential patents for RF bipolar ablation. [✂]. Under this supply agreement, ArthroCare supplies S&N older-generation bipolar RF ablation devices only. The supply agreement, in effect since 2005, will not terminate until [✂], a year later than the expiry of the foundational patents. [✂]. The parties submitted that customers view the S&N bipolar RF product line as closely tied to ArthroCare and sometimes order products using ArthroCare names.

49. The parties submitted that the older-generation models, [✂]. Overall, as a result of the supply agreement, the parties consider that S&N does not provide an effective competitive constraint or serves as a genuine independent supplier. The parties also submitted that both Stryker and J&J have license agreements in place with ArthroCare for its bipolar RF technology until the foundational patents for bipolar RF ablation expire in [✂]. The parties point out that, [✂], J&J and Stryker are both able to use the bipolar RF licenses from ArthroCare to design and manufacture their own bipolar RF systems.

50. The parties' internal documents contain an assessment of the RF ablation market and the competitive position of the various suppliers. These documents recognise ArthroCare as the market leader with J&J as its closest competitor. According to these documents S&N is also a key supplier of RF ablation devices.

51. Third party comments were mixed regarding pricing, quality and technology of the bipolar RF ablation products of the suppliers. Some considered ArthroCare as the 'market leader' with the 'latest design' and 'uncompetitive pricing'. However, one customer regards ArthroCare as 'competitively priced' but only offering 'fair quality'. Similarly, S&N and J&J were considered by some

customers as expensive suppliers and by others as competitively priced. One customer noted that S&N was similar to ArthroCare but did not offer the latest design. With regard to the remaining competitors in the bipolar RF ablation segment, customer comments were also mixed. Customer comments described J&J as very knowledgeable in technology but with a smaller product range than competitors, with two customers mentioning that J&J would not be their preferred supplier. Several third party customers commented that Stryker's product offering was inferior, either because of a lower quality or a small product range. However, several customers also regarded Stryker as a viable supplier, with competitively priced products. [✂].

52. The CMA noted that customer preferences expressed in the response to its market testing varied considerably, though many of the customers contacted had not had recent experience of running a tender process and therefore may not be aware of the competitive offering of the various suppliers. On the whole, however, the evidence available did not fully support [✂].[21] To the extent that customers were aware of all four suppliers, all were considered to be viable suppliers and as such alternatives for the supply of bipolar products.

Customer switching

53. Given that customers perform tender processes and switch relatively infrequently, the CMA considered evidence from the parties and third parties on the difficulty of switching and on examples of recent customer switching in some detail.

54. The parties provided data on customer switching with regards to RF ablation devices for both S&N (covering FY 2011-2013) and ArthroCare (covering FY 2012 and FY 2013).[22] The parties submitted that this data demonstrates that switching in absolute terms is substantial and refer to S&N' s won or lost business totalling approximately £[✂] in 2013 which they consider a significant amount of churn in the context of a small RF ablation business that generated only approximately £[✂] in revenue in 2013.

55. Based on this data, the CMA considers that switching takes place primarily between J&J, S&N and ArthroCare, and to a lesser extent between both parties and Stryker and Arthrex (the latter only supplies mono-polar devices). The CMA has noted from the switching data that more switching occurred between

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[21] Only two customers replied that they perceived S&N's devices as less up-to-date than ArthroCare's. The other customers considered the quality as good or did not specifically comment on S&N's products.

[22] It should be noted that the switching data provided by the parties resulted from interviews with sales teams, however, the switching data provided has been largely corroborated by a third party.

ArthroCare and J&J than ArthroCare and S&N. This has been supported by third parties. The evidence available from the parties indicates that the competition between ArthroCare and J&J is particularly strong since [✂] per cent of the customers lost by ArthroCare were won by J&J and [✂] per cent of the customers won by ArthroCare were lost from J&J. This was supported by references in the parties' internal documents. Based on the same data, [✂] per cent of the customers lost by ArthroCare were won by S&N, and [✂] per cent of the customers won by ArthroCare were lost from S&N. This data also suggests that J&J is a closer competitor to ArthroCare than S&N. Hospital purchases are carried out through various methods including tenders, framework agreements and informal negotiations.

56. The CMA notes that S&N's figure is likely to overstate the level of switching due to the methodology used - it considered an increase or decrease of more than [✂] per cent sales revenues automatically as an indication of switching. However, there might be other reasons for a substantial increase or decrease of sales revenues, for example bulk orders, or an increased or reduced number of procedures.

57. The CMA further notes ArthroCare's lost sales over two financial years represent on average around [✂] per cent of its annual UK sales which is suggestive of little switching in the industry.

58. The CMA considers, however, that the level of actual revenues from switching may understate the competitive pressure from the threat of customer switching. Hospitals often use framework contracts or quotes from competitors in informal negotiations as a reference point. Customers may not necessarily switch if the current supplier agrees to favourable terms. During its market testing, the CMA received evidence from the parties and third parties that many customers trial competing products and obtain quotes putting the incumbent supplier under pressure.[23]

59. Customer responses on the difficulty of switching were mixed, although most replied that switching the arthroscopic device supplier was only possible if the new products had been clinically approved by the relevant surgeons. Some hospitals stated that they considered switching difficult. They cited the surgeons' autonomy, the lengthy process of trials and the risk of possible disruptions as reasons why switching was considered difficult. In contrast, a number of hospitals mentioned that switching was fairly easy. Although several hospitals mentioned that it was important that the new supplier provided support and training during the transition phase. In case of a non-negotiable

[23] For example, the [✂]. [✂].

price rise of 5per cent, the majority of hospitals stated that they would review the price increase and consider whether there are more cost-effective alternatives available.

60. The CMA notes the limitations of the switching data,[24] however, it considers that the constraints imposed through product trials, framework contracts or quotes are likely to be stronger than the switching data suggests.

Customer concerns

61. Several customers[25] that responded to the CMA's market testing expressed concerns about potential price increases or reduction in service levels as a result of the merger. However, the CMA notes that supply contracts for RF ablation devices typically run for several years and many hospitals do not regularly tender these products. Many of the customers contacted by the CMA were not familiar with all suppliers active in the market, partly because they had not tendered or benchmarked RF ablation devices recently. In contrast, those hospitals that had recently tendered or benchmarked RF devices were aware of all available alternatives and were less concerned. Therefore, the CMA placed more weight on the responses of those customers who had tested the market recently (and were less concerned) since their responses better reflect the current market conditions.

62. The CMA also notes that a number of customers[26] supported the merger as they anticipated cost savings, more innovation or other types of efficiencies arising from the merger that might benefit costumers.

Conclusion on horizontal unilateral effects in bipolar RF ablation

63. The merger will result in a reduction of the number of current suppliers of bipolar RF ablation devices from four to three. The two remaining competitors are J&J and Stryker, although there is evidence of future entry and expansion by other third parties which is examined further below.

64. The evidence available shows that ArthroCare is currently the market leader for RF ablation devices in terms of revenues and technology. The CMA considers that J&J is the closest competitor to ArthroCare. J&J competes with innovative products which is reflected in third party feedback and the parties' internal documents. Additionally, the CMA's market testing found evidence of switching

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[24] See footnote 22.
[25] Ten out of the 51 customers that were approached by the CMA raised concerns
[26] Five out of the 51 customers that were approached by the CMA expected positive effects such as increased innovation, cost savings or an improved product portfolio.

or the credible threat to do so. This comprises several recent competitive tender processes to which several suppliers of RF ablation devices other than the parties were invited. The customer switching data bears out that ArthroCare and J&J are each other's closest competitors. In addition, ConMed, currently a mono-polar supplier, has announced its decision to launch a new bipolar RF ablation device in the second quarter of 2014 and has already participated in a tender process.[27] Therefore, the CMA considers that there is convincing evidence that customers have viable alternatives, meaning that the merged entity will face significant constraints post-merger.

65. The CMA was not able to place significant weight on the parties' view that S&N acts as a mere reseller for ArthroCare and therefore does not impose any competitive constraint on ArthroCare. Based on customer responses, the switching data as well as internal documents, the CMA considers that S&N is viewed as an independent supplier and competes with ArthroCare and other suppliers for customers. However, the customer switching data referred to above, as well as the fact that S&N does not supply the latest technology, confirm that S&N does not compete as closely with ArthroCare as J&J. Accordingly, the CMA found that the merger does not give rise to a realistic prospect of a substantial lessening of competition as a result of horizontal unilateral effects in relation to the supply of bipolar RF fixation devices.

Joint repair / fixation

66. The main overlap of the parties is in knee and shoulder repair which will be discussed in turn below.

Knee repair

67. The parties' area of overlap is in respect to knee ligament reconstruction. This segment can itself be further sub-divided into three further categories, in which the only overlap between the parties is in respect of interference fixation.[28] S&N's internal documents indicate that there are several suppliers active in this segment including J&J as the market leader. These internal documents do not mention ArthroCare as a relevant competitor.

68. Third party reports do not provide market shares for knee interference fixation, however the iData Report[29] provides market share data for all the types of knee ligament fixation devices for 2013, which gives the parties a combined share of

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[27] This is set out in more detail below in the section on entry and expansion.
[28] Essentially screws to fix the tendon to the bone.
[29] iData Research Inc – *European Markets for Orthopaedic Soft Tissue Repair & Sports Medicine* – 2014.

[30-40]per cent, increment [0-10]per cent.[30] As the increment is very small, and there are several other more significant competitors, the CMA does not consider that the merger would give rise to a realistic prospect of a substantial lessening of competition in the market for knee repair devices and therefore has not considered it further.

Shoulder repair

69. The parties submitted that shoulder repair is primarily comprised of procedures to correct a dislocation in the joint and procedures to repair the rotator cuff in the joint. In both of these types of procedures, there are four types of fixation devices:

    - anchors, which are products used by surgeons to repair damaged joints
    - sutures, which are products used to attach and tighten the anchor to the targeted point of the joint
    - disposables, such as suture passers, which facilitate the function of the suture in affixing the anchor
    - capital equipment, which are re-usable products such as shoulder instruments and patient positioning devices that assist surgeons carrying out shoulder repair procedures.

70. The parties submitted that from both a demand- and supply-side perspective, there is a high degree of substitutability between the anchors, sutures, disposable and capital equipment products used in different types of procedures in the shoulder. The parties overlap and supply all four types of shoulder repair devices, as do their competitors.

71. The CMA's market testing produced mixed results regarding the demand-side substitutability of fixation devices. Some customers indicated that substitution – at least between certain joints – was possible. Others stated that fixation devices were joint and pathology specific. The CMA has therefore, on a cautious basis, assessed the segments in shoulder repair separately. However the CMA has not considered it necessary to conclude on whether these segments may constitute relevant markets as no competition concerns arise on any basis.

72. The market research reports[31] submitted by the parties both contain shares of

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[30] The size of the increment is consistent with the parties' actual sales revenue data.
[31] The Millennium Report and the iData Report.

supply for shoulder fixation devices. However, the CMA notes that these reports (for 2013 and 2013) use different market segmentations and a different methodology to generate the data. Therefore, changes in the shares of supply between 2012 and 2013 may be, at least partly, due to these differences and not to changes in the conditions of competition. Nevertheless, with respect to the parties themselves the two reports are broadly consistent with each other.

Table 3: UK share of supply shoulder fixation

Competitor	Share of Supply UK 2012 (Millennium Report)[32]	Share of Supply UK 2013 (iData Report)[33]
ArthroCare	Included in 'Other' ([0-10]%)	[0-10]%
S&N	[20-30]%	[20-30]%
Merged Firm	**[20-30]%**	**[30-40]%**
J&J	[30-40]%	[20-30]%
Arthrex	[20-30]%	[30-40]%
ConMed	[0-10]%	[0-10]%
Biomet	Included in 'Other'	[0-10]%
Other	[0-10]%	[0-10]%

73. However, the CMA notes that the market research reports are not consistent with the parties' own revenue figures. As a result the actual share of supply of the parties might be somewhat lower or higher. Therefore, on a cautious basis, the CMA has placed only a limited weight on the share of supply figures in the market reports in its competitive assessment.

74. However, only one third party expressed concerned about the merger in respect of shoulder fixation products, and the CMA considers that the parties will continue to face strong competition after the merger from the existing major suppliers Arthrex and J&J. This is corroborated by the parties' internal documents that indicate that Arthrex and J&J are market leaders for shoulder fixation devices at a global level. Additionally, there are a number of smaller competitors which also supply shoulder fixation products.

75. Based on the evidence above, the CMA considers that, even if a cautious

[32] Millennium Research Group*, European Markets for Orthopaedic Soft Tissue Solutions 2013*, September 2013.
[33] iData Research, *European Markets for Orthopaedic Soft Tissue Repair & Sports Medicine*, 2014. The iData report provides the data for shoulder repair devices in two separate segments. We aggregated the data to make it easier to compare with the Millennium report.

approach is taken regarding the share of supply, the parties will be sufficiently constrained by the competing suppliers and that consequently there is no realistic prospect of a substantial lessening of competition on any plausible frame of reference. Therefore, shoulder repair devices are not considered further.

Mechanical resection devices

Handheld instruments

76. The market research report[34] submitted by the parties contains shares of supply for handheld instruments, however the parties submitted that it overstates the sales revenues of the parties for handheld instruments. Additionally, it does not include sales of J&J which, according to the parties, is a major supplier of handheld instruments.

77. The parties estimate their joint share of supply to be [20-30] per cent, increment of [0-10]per cent, based on their actual revenue figures and the estimated market volume of handheld instruments from the market research report.

78. The CMA notes that the shares of supply contained in the market research report are not reliable for handheld instruments as they deviate significantly from the parties' revenue figures and did not mention J&J [✂]. The CMA considers the parties' approach to calculate the share of supply based on the market volume contained in the market research report as appropriate.

79. According to the market research report, significant competitors to the parties are Arthrex, ConMed, Stryker and Karl Storz. The market report further mentions several smaller suppliers including Biomet and Olympus. Therefore, the merger would results in a reduction in competitors from seven to six[35] plus several fringe suppliers.

80. In light of the evidence above, and in particular given that the parties will have only a moderate share of supply in the area of handheld instruments, a large number of competitors remain in the market, and that no specific concerns were raised by third parties in respect of the hand held instrument segment, the CMA considers that there is no realistic prospect of a substantial lessening of competition in relation to the supply of handheld instruments as a result of the merger.

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[34] The Millennium Research Group: *The European Market for Arthroscopy Devices 2013*, September 2013.
[35] The CMA considers Arthrex, ConMed, Stryker and Karl Storz (as mentioned in the market research report) as relevant competitors, as well as J&J [✂].

Barriers to entry and expansion

81. Entry, or expansion of existing firms, can mitigate the initial effect of the acquisition on competition, and in some cases may mean that there is no substantial lessening of competition. In assessing whether entry or expansion might prevent a substantial lessening of competition, the CMA considers whether such entry or expansion would be timely, likely and sufficient. In terms of timeliness, the CMA's guidelines indicates that the CMA will look for entry to occur within two years.[36]

Timeliness and likeliness of entry

82. The parties submitted that ConMed will begin the international launch of its own bipolar RF technology in the second quarter of 2014. Additionally, they stated that Arthrex is reportedly developing bipolar RF technology which it will be able to introduce once ArthroCare's essential technology patents expire in [✂].

83. An internal document of S&N indicates that [✂]. [✂].

84. There are publicly available statements from ConMed confirming the parties' statement that it plans to start its international launch in the second quarter of 2014. In addition, a third party advised the CMA that ConMed had already started bidding in tenders for bipolar RF ablation devices.

85. The Millennium Report, as well as the parties internal documents, indicate that both ConMed and Arthrex are major players in the field of arthroscopy and supply many arthroscopic devices to hospitals and surgeons. Additionally, ConMed and Arthrex both currently supply mono-polar RF ablation devices. The CMA considers that the existing sales infrastructure and customer relationship would facilitate a market entry. As a result of the CMA's market investigation two customers commented that they were aware of a potential entry by ConMed and one of Arthrex. Almost all customers indicated that they would be willing to purchase from a new entrant, however, some indicated that this was subject to fulfilment of all specifications, successful trials and clinical approval as well as support from the new supplier.

86. Overall, the CMA considers that there is some evidence that the market entry of ConMed is timely and likely, particularly given that third parties have commented that ConMed has participated in a tender invitation.[37] With regards to Arthrex's entry, the evidence is less clear cut, however the CMA considers that there is convincing evidence that barriers to entry will be considerably

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[36] Merger Assessment Guidelines, para. 5.8.1 ff.
[37] [✂].

lower when ArthroCare's patent expires in [✂] and that this offers an attractive business opportunity particularly for Arthrex as an established player in the field of arthroscopy.

Scale of market entry

87. The parties submitted that customers' readiness to switch illustrates that Arthrex and ConMed will be able to enter on a scale sufficient to prevent any realistic prospect of a substantial lessening of competition. The parties' internal documents, as well as external market studies, show that Arthrex and ConMed are well-established suppliers in the wider field of arthroscopic devices and have dedicated sales teams for arthroscopic devices and existing relationships with surgeons which enables them to be considered for competitive tenders or start trials and informal negotiations with customers.

88. However, the CMA has not had to conclude on the sufficiency of entry or expansion as no competition concerns arise on any basis.

Vertical effects – RF ablation devices

89. The CMA also considered whether the proposed merger may give rise to vertical effects, that is, whether the parties might engage in anti-competitive foreclosure after the completion of the merger, for example by terminating their licence agreement for the bipolar RF ablation technology or increasing the royalty payments. To this effect, the CMA assesses the parties' ability and incentives to foreclose their competitors, as well as whether any detriment is likely to result.

90. The parties submitted that ArthroCare will have no ability to foreclose competitors in the UK [✂], since the essential patents held by ArthroCare are US patents. Additionally, the parties submitted that the merged firm will not be able to foreclose the other licensees of ArthroCare's patents – Stryker and J&J – [✂]. [✂]. Neither licensee raised any concern with regards to a potential foreclosure of the licence for bipolar RF ablation. Therefore, the CMA considers that the merged firm will not have the ability to foreclose the existing licensees as a result of the merger.

Third party views

91. The CMA contacted 51 customers, six competitors and four procurement organisations, and received responses from 18 hospitals, three procurement organisations and one competitor in response to its market testing. Ten customers raised concerns regarding a possible increase in price post-merger, while two customers raised concerns regarding a possible reduction of the

parties' service levels post-merger. However, the market investigation did not confirm these concerns. The CMA received five responses from hospitals supporting the merger.

92. Third party comments have been taken into account where appropriate in the competitive assessment above.

Assessment

93. Consequently, the CMA does not believe that it is or may be the case that the merger has resulted or may be expected to result in a substantial lessening of competition within a market or markets in the United Kingdom.

94. This merger will therefore **not be referred for** a Phase 2 investigation by the CMA under section 33(1) of the Act.

Nelson Jung
Director of Mergers
Competition and Markets Authority
21 May 2014