

**ACQUISITION BY DRÄGER MEDICAL AG & CO KGAA OF AIR-SHIELDS
FROM HILLENBRAND INDUSTRIES INC**

Provisional findings report

Published: 5 March 2004

The Competition Commission has excluded from this published version of the provisional findings report information which the inquiry group considers should be excluded having regard to the three considerations set out in section 244 of the Enterprise Act 2002 (specified information: considerations relevant to disclosure). The omissions are indicated by [✂].

Provisional findings report

ACQUISITION BY DRÄGER MEDICAL AG & CO KGAA OF AIR-SHIELDS FROM HILLENBRAND INDUSTRIES INC

Contents

	<i>Page</i>
Executive summary	2
Provisional findings	8
1 The reference	8
2 The companies and the market	8
The market.....	10
The transaction	13
3 Jurisdiction.....	14
4 Market definition	16
Demand-side substitution	17
Supply-side substitution.....	20
Aftercare and accessories	22
Geographical market	23
Conclusion on market definition	25
5 Assessment of competitive effects of merger.....	26
Current competition	27
Tendering processes	27
Innovation and product development	29
Bidding market considerations	30
Concentration and market shares	35
Closeness of competition	38
Conclusion on competitive impact of the merger	41
Price	42
Choice	43
Quality	43
Innovation	44
Other unilateral effects	44
Coordinated effects	46
Efficiencies	46
6 Counterfactual	47
Conclusion on the counterfactual	50
7 Entry	50
Barriers to entry	53
Distribution.....	55
History of entry.....	58
Conclusions on entry	60
Buyer power.....	61
8 Conclusions on SLC	63

Appendices:

A: Terms of reference	F: Summary of the clinical choice between open and closed care
B: Dräger—financial summary	G: Description of alternative tendering processes
C: Hill-Rom—financial summary	H: Herfindahl-Hirschman indices in each of the relevant markets
D: Description of warming products	
E: Market sizes and shares	

Glossary

Executive summary

1. On 18 December 2003 the Office of Fair Trading referred the proposed acquisition by Dräger Medical AG & Co KGaA (Dräger) of certain assets representing the Air-Shields business of Hill-Rom Inc, a subsidiary of Hillenbrand Industries, Inc to the Competition Commission for investigation and report. The reference was made under Section 33 of the Enterprise Act 2002. Our terms of reference are set out in Appendix A. We are required to publish our final report by 3 June 2004.
2. This case concerns the supply of neonatal warming therapy products to UK hospitals. Neonatal warming therapy products are used in the care of newborn and premature babies, often referred to by the medical term 'neonates'. Warming therapy involves placing the baby in a thermally controlled environment. Warming therapy products are used both in labour and delivery wards and in neonatal intensive care units.
3. Dräger manufactures a full range of neonatal warming therapy products in Germany and sells them worldwide. Air-Shields likewise manufactures a full range of products in the USA and sells them worldwide. Both sell in the UK through owned distributors. Dräger proposes to acquire certain assets of Hill-Rom, Inc that represent the Air-Shields business. While there are no independent estimates of shares of UK neonatal warming therapy product markets, it is clear that both overall and in each individual product category the combined share of the merging parties exceeds 25 per cent, and that as a result of the merger the market share of the combined entity will be substantially greater than that of either party alone. The share of supply test is therefore met, we are not required to consider whether the turnover test is met, and we conclude that there is a relevant merger situation which requires investigation.

4. Total worldwide revenues from neonatal warming therapy products in 2002 have been estimated at approximately £130 million to £160 million. The USA is estimated to account for 30 per cent of worldwide sales, Europe for under 20 per cent and the UK for under 5 per cent (the parties estimated that total UK revenues in 2003 amounted to between £5 million and £10 million).

5. Although competitive conditions across the markets are similar, we determined that there are separate product markets for the four different types of neonatal warming therapy product, namely:
 - closed care incubators—incubators which provide a controlled environment for the baby within which temperature, humidity and oxygen levels in the air can be closely controlled;
 - open care warming beds—open cots warmed by an overhead radiant warmer, or by a warmed mattress;
 - transport incubators—self contained incubators attached to a trolley which are used for moving babies between departments in a hospital or between hospitals; and
 - phototherapy products—lamps which deliver light in a particular spectrum which is necessary for the treatment of jaundiced babies.

Very few of the neonatal warming therapy products sold in the UK are manufactured in the UK. However, because the availability of UK-based support and the track record of suppliers in UK hospitals are important to hospitals in buying this equipment, we concluded that the relevant geographic market for analysis of the supply of such products is the UK.

6. In each market there is at least one significant competitor to Dräger and Air-Shields. The most significant competitors are:

- Ohmeda. Ohmeda is part of Instrumentarium, a Finnish medical equipment manufacturer, which was itself bought in October 2003 by General Electric. Ohmeda manufactures and sells closed care incubators, a hybrid device which can be converted from closed to open care and vice versa, and phototherapy products, and distributes some other neonatal warming therapy products from other manufactures.
 - Fisher & Paykel. Fisher & Paykel is a New-Zealand-based company which supplies a range of open warmers under the 'Cosycot' brand.
 - Atom. Atom is a Japanese company which supplies closed care incubators through a UK distributor, Inspiration Healthcare.
7. Almost all neonatal warming therapy products supplied in the UK are bought by NHS hospital trusts. In most cases, purchase follows a formal or informal tender process. Suppliers (generally at least three) are invited either to tender against a specification or to provide a quote for a specified product category. The choice of product will generally involve the trust's clinical, bio-medical engineering and finance or procurement departments, and will often follow a trial of the equipment from at least one supplier in the hospital. Hospitals generally choose which product to buy on the basis of the 'most economically advantageous' tender, that is to say the one which best delivers the key operational requirements at reasonable cost.
8. Many hospitals told us that they seek to standardize equipment used in a ward to reduce the risk of clinical error caused by unfamiliarity with the equipment. However, while products have an effective life of, on average, ten years (and there are many in use in UK hospitals which are much older than this), new products, generally incorporating some design innovation, appear in each category more frequently than that, and a new product with enhanced design features can have a significant impact

on sales. In practice therefore many hospitals have more than one model of any type of equipment.

9. The market displays some of the characteristics of a bidding market, in which having a high market share does not confer market power because market share can easily be lost in the next bidding round. However, these are not its sole or defining characteristics. While the direct costs of switching supplier appeared low, we identified some psychological and practical barriers to switching supplier which give rise to an observable 'stickiness' in customer behaviour. Having an installed base in the hospital seems to confer advantage in tender processes (though not to the extent that customers are effectively locked in). Also, while it is important to hospitals that prices are not greatly out of line with suitable alternatives, it is clear that clinical preference is generally more important than price in the ultimate selection of a product to buy. Taken together, the existence of barriers to switching and the low level of price sensitivity among customers give us reason to suppose that market shares are a relevant indicator of potential market power.
10. In the closed care, open care and transport incubator markets the merged entity will have a market share in excess of 60 per cent (in transport incubators almost 100 per cent) based on three-year averages, and will have no more than one significant competitor in each market. In phototherapy, however, the merged entity's market share will be substantially less, and we do not think that the merger gives rise to concern in this market.
11. These high market shares would also be of limited concern if the merging parties were not currently close competitors. However, the evidence suggests that their

products are not significantly different from one another and that historically they have been each other's most frequent competitors.

12. We assess the consequences of the merger not against the current position, but against what we believe to be the most likely alternative to the merger. From our analysis of possible alternatives, we conclude that while it is possible that one or both parties might decline as a competitive force in the absence of the merger, they would not do so to the extent of ceasing to offer a competitive constraint on the other.
13. There is some history of entry into the UK market from overseas, and we concluded that there do not appear to be significant intrinsic barriers to entry. However, there is a significant barrier to expansion to sufficient scale to justify the fixed costs of distribution—the need to build a reputation. Successful entry and expansion to the level necessary to impose a competitive constraint on the merged entity thus appears possible, but only with a level of commitment and investment which might be substantial relative to the expected returns. Ultimately, we are not persuaded that the prospect of entry or expansion can be relied upon to impose a significant competitive constraint on the merged entity.
14. It might seem possible for the NHS to exercise some countervailing buyer power in the market because of its scale and its status as a virtual monopsonist. However, there are no plans for the NHS to exercise power as a single buyer in this area. Moreover, we heard from hospitals that they were very reluctant to give up any freedom to exercise clinical choice in which products to buy, which inhibited the development of joint purchasing even with neighbouring hospitals. The importance of clinical choice in the selection of products to buy imposes limits on the development of joint purchasing of equipment in the NHS. While we heard some

evidence that buyer power might increase in future through the development of purchasing consortia, of framework contracts being signed by groups of hospitals acting together to secure greater discounts than they could acting alone, and through formal and informal networking among neonatal clinicians, we do not think that at present any of these developments have advanced far enough to constitute real countervailing power in the market.

15. We therefore conclude that the merger may be expected to give rise to a substantial lessening of competition in the markets for closed care incubators, open care warmers and transport incubators, but not in the market for phototherapy products.

16. Specifically, we have grounds to believe that the substantial market share which the merged entity would hold would enable it to raise prices selectively to a significant number of hospitals and that the loss of an independent competitor and rationalization of product lines is likely to give rise to a reduction in choice of products for hospitals. We do not, however, think that the incentives on the merged parties to innovate will be any less than they are now, nor that innovations will not be introduced into the UK market. We do not think that the risks of other unilateral effects (for example, the exercise of portfolio power or of predatory pricing) or of coordinated effects are as serious as our concerns related to price and product choice.

Provisional findings

1 The reference

- 1.1 On 18 December 2003 the Office of Fair Trading (OFT) referred the proposed acquisition by Dräger Medical AG & Co KGaA (Dräger) of certain assets representing the Air-Shields business of Hill-Rom, Inc (Hill-Rom), a subsidiary of Hillenbrand Industries, Inc (Hillenbrand) to the Competition Commission (CC) for investigation and report. The reference was made under section 33 of the Enterprise Act 2002 (the Act). Our terms of reference are set out in Appendix A. We are required to publish our final report by 3 June 2004.
- 1.2 This document, together with the appendices, constitutes our provisional findings which we are required to notify to the main parties under the CC's *Rules of Procedure*.¹ Further information, including non-commercially sensitive versions of main party and third party written submissions, summaries of key third party arguments and views can be found on our web site.² We cross-refer to those documents as appropriate.

2 The companies and the market

- 2.1 Dräger is a company incorporated in Germany. On 1 July 2003 Dräger became a joint venture between Drägerwerk AG (holding a 65 per cent shareholding) and Siemens AG (holding 35 per cent). Dräger had previously been a wholly-owned subsidiary of Drägerwerk AG. Drägerwerk AG also has a safety equipment business which manufactures breathing apparatus and electronic sensors.

¹ *Competition Commission: Rules of Procedure* (CC1).

² www.competition-commission.org.uk.

- 2.2 Dräger develops, manufactures and sells products and services for acute medical care and home care, including products used in emergency care, anaesthesia, critical and perinatal care. In 2002 Dräger had turnover of around €850 million (over half of the turnover of Drägerwerk AG). Dräger manufactures neonatal warming therapy products at its factory in Lubeck, Germany, and sells them through sales operations in countries around the world (though roughly three-quarters of Dräger's sales are made in Europe).
- 2.3 Dräger Medical UK Ltd (Dräger UK) which is operationally controlled by Dräger, has around 160 employees in the UK responsible for sales and service of Dräger products, including neonatal warming therapy products. In 2003 Dräger UK had turnover of approximately £22 million (under 5 per cent of Dräger's total turnover). Neonatal warming therapy product sales in the UK accounted for around £[redacted] million in 2003. Summary financial details for Dräger are in Appendix B.
- 2.4 The Air-Shields business is wholly owned by Hill-Rom, itself a wholly-owned subsidiary of Hillenbrand, a US company, quoted on the New York Stock Exchange. Hillenbrand's activities include the manufacture of coffins and cremation products, the provision of financial services related to funeral planning, and the manufacture of hospital beds and related equipment through its Hill-Rom subsidiary. Hill-Rom bought the Air-Shields business from Vickers plc in 1997. The Air-Shields business manufactures neonatal warming therapy devices for infant care at Hill-Rom's factory in Hatboro, Pennsylvania.
- 2.5 Air-Shields' neonatal warming devices are sold in the UK through the UK offices of Hill-Rom. Hill-Rom UK had sales of approximately £22 million in 2002, of which Air-Shields accounted for just over £[redacted] million. Worldwide, the Air-Shields business

had sales of over £[X] million in 2002, so the UK accounts for around 10 to 15 per cent of its business (over half of Air-Shields' business by turnover is in the USA). Summary financial details for the Air-Shields business are in Appendix C.

The market

- 2.6 Neonatal warming therapy products are used in hospitals for the care of newborn and premature babies, often referred to by the medical term 'neonates'. Babies who are born significantly prematurely are often unable to regulate their own body temperature, and require external warming to avoid hypothermia and other body temperature problems. Very premature babies also require protection against loss of bodily fluids through their skin. Warming therapy involves placing the baby in a thermally controlled environment. Warming therapy products are used both in labour and delivery wards and in neonatal intensive care units (NICUs).
- 2.7 Different kinds of neonatal warming therapy products perform different functions in neonatal care. The principal types of equipment are:
- closed care incubators—incubators which provide a controlled environment for the baby within which temperature, humidity and oxygen levels in the air can be closely controlled;
 - open care warming beds—open cots warmed by an overhead radiant warmer, or by a warmed mattress;
 - transport incubators—self contained incubators attached to a trolley which are used for moving babies between departments in a hospital or between hospitals;
- and

- phototherapy products—lamps which deliver light in a particular spectrum which is necessary for the treatment of jaundiced babies.³

More detail on each of these products is in Appendix D.

- 2.8 It has been estimated that total worldwide revenues from neonatal warming therapy products in 2002 were approximately £130 million to £160 million, and that Europe accounted for less than 20 per cent of this figure. It has been further estimated that the USA accounts for about one-third of worldwide sales of neonatal warming therapy products.
- 2.9 It has been estimated that total UK revenues from neonatal warming therapy products (including service and spare parts) in 2003 were between £5 million and £10 million. We were told that there are currently around 1,400 closed care incubators, 1,500 open care warming beds and 260 transport incubators in hospitals in Great Britain. We did not receive any similar estimate for phototherapy. However, we were told that a hospital would generally have sufficient phototherapy devices to cover at least six cots, though one light might serve more than one baby. We have seen no other estimates, but our own investigations suggest that these figures are broadly accurate.
- 2.10 Very few of the neonatal warming therapy products sold in the UK are manufactured in the UK. Although there is one UK-based manufacturer of closed care incubators, it appears to manufacture primarily to design specifications appropriate to certain export markets and told us that it sells almost exclusively overseas. We are not aware of any UK manufacturer of transport incubators, open care warmers or phototherapy devices.

³Phototherapy equipment is not used for warming, but is frequently used with incubators or open care warming beds. Our terms of reference classify phototherapy products as warming devices, and for convenience we have done likewise.

- 2.11 The market for neonatal warming therapy products is essentially a stable replacement market. Products have an effective life of around ten years; NHS hospital trusts (trusts) replace them as they reach the end of their life, as funds become available, or in response to the availability of new or improved products. Historically, neonatal warming products have been bought either with trusts' own funds or with funds from charitable donation or fundraising. BLISS, the principal charity operating in this area has spent £7.5 million on neonatal equipment since 1979, and reports that it has provided equipment to nearly every neonatal unit in the country. Local 'Friends of the Hospital' and other charities also raise funds for this purpose.
- 2.12 Following a 2003 *Review of Neonatal Intensive Care Services*, the NHS has begun to implement changes designed to increase levels of specialization in neonatal care and to reduce the number of infants transferred from one hospital to another. Hospitals have joined together in neonatal networks, with one hospital in each network taking on the role of specialist unit (and caring for the sickest and most premature babies) and the others generally having smaller units capable of caring for less sick and premature infants. Specialist ambulance trusts have also been established for the transport of premature babies (although part of the intention of the reform has been to reduce the number of babies transported, because transport over a long distance has been shown to increase certain risks for premature infants).
- 2.13 Neonatal warming therapy products are generally bought by individual NHS trusts.⁴ The NHS is seeking to improve its procurement practices in order to secure better value for money, in line with recommendations from Audit Commission studies in

⁴We have been told that very few private hospitals care for premature babies. The only other procurement route is where a PFI hospital provider (rather than the hospital trust itself) buys all the equipment for a hospital; this remains a relatively unusual procurement mechanism.

1996 and 2002. The NHS Purchasing and Supply Agency (PASA) purchases some medical products on behalf of the NHS as a whole, and encourages good procurement practice at the level both of individual trusts and confederations—local groups of trusts seeking to pool their expertise and buying power. PASA has no direct role in purchasing neonatal warming therapy products. It is planning to produce guidance to trusts offering points to consider when buying this kind of equipment, but has no current plans to coordinate trusts' purchases of such equipment.

The transaction

2.14 Dräger is seeking to buy from Hillenbrand assets which make up the Air-Shields business. This is not currently a stand-alone unit within Hill-Rom, but it has been defined for the purposes of the sale. It includes the research and development and manufacturing facility at Hatboro, Pa, other fixed assets, inventory, certain intellectual property rights and the goodwill of the business. Approximately [X] employees worldwide (including [X] in the UK) are expected to be transferred. Dräger has agreed to pay \$[X] million for the business, and the parties intend to complete the deal, subject to regulatory clearance,⁵ in the first half of 2004.

2.15 Dräger told us that it had been keen to break into the US market for some time. The USA represents one-third of the worldwide market for neonatal warming therapy products, and was seen as important both for securing economies of scale and as the driver of innovation in the market. [

X

]

⁵The Spanish and Austrian authorities have cleared the merger; the Portuguese and Brazilian authorities are currently considering it. We were told that these are the only jurisdictions in which notification was required.

[



] The

possibility of acquiring the Air-Shields business provided the opportunity to gain the access to the US market and thus the greater scale which Dräger desired.

- 2.16 Hillenbrand told us that it had bought the Air-Shields business, together with four other businesses, from Vickers plc in 1997. (We note that this was the third time this business had changed hands in 15 years.) At that time Hill-Rom had been seeking to develop a neonatal incubator, but lacked the skills and technology to do so successfully in-house. However, it subsequently became clear that the synergies between neonatal warming therapy products and the rest of Hill-Rom's product portfolio were limited. [



] Hillenbrand decided late in 2002 that

it had higher priorities for investment elsewhere in its portfolio of businesses, and decided to sell the Air-Shields business.

- 2.17 Following due diligence and the submission of a binding offer, Dräger was given preferred bidder status and following further negotiations the transaction was agreed on 15 September 2003 and made public on 29 September 2003. The parties intended to complete the merger in February 2004 but have now agreed to delay completion to allow time for regulatory scrutiny, including our inquiry, to be completed.

3 Jurisdiction

- 3.1 Under our terms of reference (see Appendix A) we are required to investigate and report on whether arrangements are in progress or in contemplation which, if carried

into effect, will result in the creation of a merger situation qualifying for investigation. Under the Act there are two considerations relevant to determining whether there is a relevant merger situation:

- (a) whether two or more enterprises cease to be distinct; and
- (b) whether either the turnover test or the share of supply test is satisfied.

3.2 Dräger's acquisition through its US subsidiary, Dräger Medical Infant Care Inc, of certain assets of Hill-Rom Inc (which comprise the Air-Shields business) in accordance with the Purchase Agreement between Hill-Rom Inc, Hill-Rom Manufacturing Inc, Hill-Rom Services Inc, Dräger Medical Infant Care Inc, and Dräger Medical AG & Co KGaA dated 15 September 2003 (the Purchase Agreement) will result in 'two or more enterprises ceasing to be distinct'.

3.3 There are no independent estimates of shares of the UK market for neonatal warming therapy products. Moreover, because of the nature of the market, market share figures for particular products can fluctuate markedly over a period of years. Dräger and Hillenbrand provided the OFT with estimates of market shares from 1999 to 2002, and subsequently revised and updated them in their evidence to us following more detailed investigation. Others have also provided us with estimates of market shares. Our best estimates of market sizes and shares based on these data are in Appendix E. It is clear that both overall and in each individual product category the combined share of the merging parties exceeds 25 per cent, and that as a result of the merger the market share of the combined entity will be greater than that of either party alone.

3.4 Since the share of supply test is met, we are not required to consider whether the turnover test is met.

3.5 For the reasons set out in paragraphs 3.2 and 3.3 we conclude that arrangements are in progress which, if carried into effect, will result in the creation of a relevant merger situation.

3.6 In the sections that follow we describe the analyses we have conducted and the conclusions we draw from them. As is our usual practice, we sought a wide range of data for analysis from the parties. In this instance, for a number of reasons, the parties only had incomplete sales data. Moreover, because the neonatal warming therapy businesses of both parties are part of larger entities which conduct many other lines of business, they did not have consistent audited financial data, covering the periods of time or level of detail we would normally analyse. This has been compounded by corporate restructuring and changes in internal reporting arrangements in recent years. We have conducted our analyses on the basis of the best available data from main and third parties, and information received in hearings.

4 Market definition

4.1 In defining the market we identify first the relevant product market and then the geographical market. In defining the market we are seeking to identify the extent to which customers and suppliers could readily demand, or supply, adequate substitute products in response to a change in price imposed by a hypothetical monopolist. This so-called 'SSNIP test' is described in the CC's guidance.⁶ In addition to evidence from the main parties, their competitors and others, we also drew on responses to a questionnaire we sent to over 200 NHS trusts with neonatal care units. The questionnaire and a summary of the responses we received are published on the CC web site. Dräger and Hillenbrand expressed doubt on the reliance which could be placed on the results of this survey because of the sample size and the

⁶*Merger References: Competition Commission Guidelines (CC2).*

potential for different interpretations of the results. We place what we think is appropriate weight on this evidence, alongside evidence from other sources.

4.2 The parties' submissions identified the following products:

- closed care incubators;
- open care warming devices;
- transport incubators;
- phototherapy devices; and
- accessories.

It would be possible to define the market as for all of these products taken together, for each individually, or as separate markets for subsets of some products.

Demand-side substitution

4.3 The parties have argued that in some circumstances open and closed care can act as demand-side substitutes for one another. In some clinical situations there are significant differences of view among clinicians as to which form of warming is most appropriate. These are illustrated in Appendix F, but often come down to a clinical judgement on the relative importance of the better access to the patient offered by open care against the better control of environment, and particularly humidity, provided by closed care. In the areas where opinions differ, practice in the USA is generally to prefer open care; European practice to prefer closed care. We have also been told that, for reasons associated with their different roles in caring for a baby, doctors tend to prefer open care in certain situations and nurses to prefer closed care. Mainstream practice in the UK seems to follow European practice, but some NICUs appear to be moving towards US practice and are making greater use of open care. However, as also illustrated in Appendix F, in most situations the products are in no sense substitutes. In particular, we see no circumstances in which an incubator

would be regarded as a substitute for an open care warmer in a delivery suite, because the overriding clinical need is for access (often for a number of staff at the same time). Similarly, closed care would generally be preferred for stable premature babies in the NICU requiring monitoring but few active interventions.

4.4 We have seen no evidence that the choice of warming technique (ie whether to use open or closed care) is driven by price. When buying equipment, NHS trusts specify in their tender documentation what sort of warmer they want based on their preferred clinical practice. Clinicians' views on the most appropriate technique to use change over time, and suppliers might seek to influence them (for example, to change their view of the suitability of open care warmers in areas where closed incubators have traditionally been used—Fisher & Paykel have told us that they do this). However, suppliers do not appear significantly to influence those decisions, and we do not think that the possibility of such a switch represents a significant degree of substitutability. Moreover, we are not aware of any circumstances where a trust has chosen an open care warmer over a closed incubator (or vice versa) as a result of price difference between them, as is required for demand-side substitution.

4.5 A further possible argument for substitutability between open and closed care warmers is the development of hybrids, notably the Ohmeda 'Giraffe Omnibed' and the Air-Shields 'Versalet'. These are convertible from open to closed care and vice versa. It could be argued that this creates a possibility of substitution between open and closed care. However, the price of hybrids (generally as much as an open and a closed warmer together) makes it hard to see them as a substitute for either individually. While hybrids could act as substitutes for both an incubator and a warmer, trusts told us that they would not consider using hybrids in place of their entire fleet of open and closed warmers (mostly because of the cost). Indeed,

manufacturers of hybrids told us that they would not expect a hospital to use only hybrid incubators. It seems to us more likely that a trust might buy a few to accommodate the small number of infants who need to be transferred repeatedly between open and closed care. Not all manufacturers make hybrid products [



] and we understand that sales in the UK have been modest to date. It seems to us that, at present at least, the hybrid is better characterized as a niche product, especially suited to hospitals with particular space constraints or for infants with particular care needs.

- 4.6 There is also some variety within open care warmers. The principal variation is between warmers used on labour and delivery wards (some of which come equipped with built in resuscitation equipment) and those used in NICUs (which generally do not). A number of products are offered primarily or solely in one of these fields (Air-Shields' 'Resuscitaire' is only sold in labour and delivery wards; Dräger's 'Babytherm' is mainly sold in NICUs). However, some are potentially suitable for both—the Fisher & Paykel 'Cosycot' is one example which is wholly modular and can be customized to be suitable for either application (by the addition of either resuscitation equipment or servo temperature control). We were told that manufacturers are increasingly moving towards modular open care warmers. These developments suggest that, while there are currently differences which might cause us to treat the NICU and the labour and delivery ward as separate markets for open care warmers, demand-side substitution between them may be increasing over time.
- 4.7 There is also a variety of approaches to open care warming, from traditional radiant overhead warmers to wall mounted warmers and warming mattresses heated by gel pads or heated water. Each can have different uses in the care of infants varying from the very tiny and very sick to the relatively normal sized and relatively well. For

example, the Kanmed warmer (distributed in the UK by Central Medical Supplies Ltd), based on heated water filled mattresses, is used for larger, more stable babies who still require some warming, but would be unsuitable for smaller, sicker neonates requiring close attention and monitoring. The same appears to be the case for wall mounted radiant warmers. There are considerable and continuing differences in price between the open care warmers made by the parties and, for example, the Kanmed warmer. Evidence from NHS trusts indicates that the Kanmed warmer is rarely considered in tenders in the NICU. This suggests that it is not regarded as a clinical substitute and hence imposes little or no price constraint on other open care warmers.

4.8 Thus there seems to be some, limited, scope for demand-side substitution within open care, and that scope may be increasing over time. The scope for substitution at the margins between open and closed care seems much less, suggesting that those should be treated as separate markets. Moreover, all the evidence we have received suggests that in both cases decisions on which technology to purchase are made by clinicians and are based on judgements on the right balance of equipment for the range of patient needs experienced in the unit, and not on price.

4.9 We have seen no evidence to suggest that transport incubators or phototherapy products are demand-side substitutes for any of the other categories of product.

Supply-side substitution

4.10 The parties argued that there is potential for open and closed care products to be supply-side substitutes because the technology required to produce both is mature and easy to acquire, regulatory barriers to product introduction are low, many suppliers produce both types of warmer and it has been possible for suppliers to

enter the sector from related segments. These arguments are assessed in more detail in the section on market entry (see section 7). However, our definition of supply-side substitution (for the purpose of market definition) is more demanding.⁷ It requires it to be possible for suppliers of one product to commence production of another, and gain significant sales volume in response to an increase in price, normally within one year and without significant investment.⁸ Open care warmers, closed care incubators, transport incubators and phototherapy products are essentially distinct products with (at present) largely different manufacturing platforms. We note, however, that this may be changing. Manufacturers' use of common platforms and of modular systems across a number of warming products, which appears to be increasing, could in the future create greater potential for supply-side substitution between different devices. However, it seems to us at present unlikely that a supplier of one could move swiftly and without unrecoverable investment (for example, in tooling for specialized manufacture) to enter the market for another in response to an increase in prices.

- 4.11 Within the open care area supply-side substitutability might be greater. We understand that the differences in the warmers used in labour and delivery units and in intensive care units are not great. Where manufacturers (for example, Fisher & Paykel) are moving to common platform production they can develop both from the same core design. It appears that, increasingly, different kinds of open care warmers could be supply-side substitutes. There remain some barriers. The staff buying equipment in labour and delivery wards and in NICUs will generally be different and may have had little opportunity to experience and build confidence in a product used solely in the other unit. But it is unlikely that staff in either unit would make decisions in total isolation from colleagues in the other unit, so it seems possible that

⁷The definition is in CC2, paragraph 2.21.

⁸The level of investment deemed significant has to be judged in relation to the size of the market and the prospective return.

reputational barriers could be overcome, and that supply-side substitution within open care could be possible.

- 4.12 We therefore conclude that while there is enough potential for supply-side substitution within open care to indicate that open care is a single market, there is currently no supply-side substitutability among the main groups of neonatal warming therapy products.

Aftercare and accessories

- 4.13 Suppliers offer spare parts, accessories and maintenance following the initial purchase of a warming device. We were told that around one-half of all customers choose to maintain their own equipment (a task generally performed by NHS trusts' own biomedical engineering (BME) departments, following training from the manufacturer). Others contract the maintenance work out, usually to the original supplier or occasionally to a third party. We have been told that customers are sophisticated purchasers and would generally take into account the cost of after sales servicing when choosing which equipment to buy. It therefore appears to us that aftercare could be considered as part of the original purchase decision. Alternatively aftercare could be regarded as part of a separate market, given that a large proportion of customers do not purchase aftercare from the original equipment manufacturer but rather choose to maintain their own equipment. In that case, market shares of the merging parties for the provision of aftercare services are likely to be relatively low. Whichever view is correct, we would only analyse competitive constraints in the four product markets identified above. The sales figures we used to derive market shares in these four markets generally exclude aftercare costs, although precise definitions might vary by supplier. These costs generally form a small proportion of the overall contract cost.

4.14 Accessories come in two types—specific to a product and generic. The former are typically sold as part of the contract for the main neonatal warming therapy device. NHS trusts may choose to buy accessories later, but appear to consider that they generally get a better deal by buying accessories with the device. The pricing of accessories at the time of main purchase is also variable, sometimes forming part of a deal at an agreed overall price. Given that most are bought with the original piece of equipment and that separating out reliable sales data for accessories is difficult, we prefer to treat specific accessories as in the same market as the product to which they belong.

Geographical market

4.15 Dräger and Hillenbrand initially told us that in their view the market for neonatal warming therapy products was a global market. They argued that manufacturing of equipment sold anywhere in the world was concentrated in a few plants (Dräger has one plant in Germany and Hill-Rom one in the USA which supply all their neonatal warming products sold worldwide). Indeed between one-third and one-half of neonatal warming therapy products sold in the EC are manufactured in the USA, and virtually all the products sold in the UK are manufactured outside the UK. Further, they argued that tariff and regulatory barriers to sales in different countries were generally low and that transport costs represented a very small proportion (around 0.5 to 3 per cent) of the selling cost of the equipment.

4.16 However, for the market to be wider than the UK it is necessary to establish that manufacturers not currently selling in the UK could quickly and easily do so in order to deter or render unprofitable a small but significant increase in price to UK customers. Evidence gathered from customers suggests that demand-side substitution is unlikely. Neither individual trusts nor PASA has looked seriously

beyond suppliers currently operating in the UK for alternative warming products, nor did any respondents to our customer survey say that they would do so in response to a rise in prices. The parties told us that there are at least 20 manufacturers worldwide which make some or all of the relevant products but do not currently sell them in the UK, and that many exhibit at conferences and trade fairs attended by UK clinicians. However, trusts we spoke to were unaware of many of these other manufacturers, and were concerned that products not currently on sale in the UK might not meet the relevant specifications for the UK market nor be suitable for UK clinical practice, or might not be adequately supported by non-UK manufacturers.

4.17 Supply-side substitution from overseas postulates in general that new entrants could come into the market within one year with little or no unrecoverable investment. A fuller analysis of the prospects of entry is set out below (see section 7). However, for the purpose of defining the geographic market two features seemed to us compelling:

- most customers who responded to our survey told us that they would not consider buying from an overseas supplier without a UK support operation, and even those who would consider it would need to be confident of the availability and quality of UK-based support; and
- the reputation of a supplier was important to customers in selecting equipment, and was generally established through the existence of a track record in UK hospitals.

4.18 It seems to us unlikely that any overseas manufacturer could develop both a support infrastructure and a reputation sufficiently quickly to represent supply-side substitution. We note that the evidence of the history of market entry in the UK (cited in more detail in paragraphs 7.22 to 7.25) confirms that it generally takes time to achieve a significant market presence.

4.19 We conclude that the relevant geographic market is the UK (and, following discussion, Dräger and Hillenbrand appeared to accept this conclusion on the demand side). This does not preclude the existence of competitive constraints being imposed on participants in this market by the threat of entry by manufacturers not currently operating in the UK, either in present circumstances or following the merger. This issue is addressed in more detail in section 7.

4.20 We considered whether different customer groups among NHS trusts might represent different markets. The most specialist neonatal units might have different characteristics, different needs and more buying experience than district general hospitals, for example. In our evidence gathering, while we found some differences, we found no evidence either that they behaved significantly differently from one another in the way they bought these products, nor that suppliers saw them as fundamentally different. In our view the differences are not sufficient for us to consider them separate markets.

Conclusion on market definition

4.21 In conclusion, we define the relevant economic markets as the markets for the different types of neonatal warming therapy products, specifically, in the UK:

- closed care incubators;
- open care warming beds;
- transport incubators; and
- phototherapy products.

However, we recognize that there is some limited blurring of the boundaries of some of these markets given the scope for supply-side substitution in particular. Although the market shares of different suppliers differ across these markets (which is consistent with our view of them as separate), we also note and agree with the view

of the OFT that it makes little difference to much of the analysis whether or not to separate the product types into different markets, given that the competitive characteristics of the markets and the market position of the merged entity are broadly similar in each. Accordingly, much of the assessment that follows refers to all of these markets together (though where there are distinctive features, for example for transport incubators, these are identified).

5 Assessment of competitive effects of merger

5.1 Having defined the market, we move to an assessment of the current state of competition and the likely impact of the merger.

5.2 The parties told us that they have three significant competitors in the UK market at present. These are:

- *Ohmeda*. Originally a US company, Ohmeda is part of Instrumentarium, a Finnish medical equipment manufacturer which was itself bought in October 2003 by General Electric (GE). Ohmeda manufactures and sells in the UK (through GE Medical Systems) a range of incubators and warming products including the new 'Giraffe' closed care incubator and the hybrid 'Giraffe Omnibed', and the older generation of 'Ohio' warmer systems. It also distributes transport incubators and open warming beds made by other manufacturers (International Biomedical and Weyer respectively).
- *Fisher & Paykel*. Fisher & Paykel is a New Zealand company which has recently expanded its range from its original business in humidifiers to supply a range of open warming beds under the Cosycot brand. Fisher & Paykel does not supply closed care incubators, transport incubators or phototherapy products.
- *Atom*. Atom is a Japanese company which supplies closed care incubators through a UK distributor, Inspiration Healthcare. Atom is a relatively new entrant

to the market and currently only sells a closed care incubator in the UK, though we understand that it manufactures a full range of products, has a CE-marked open warmer and is expected to launch a transport incubator in the UK in the near future.

In addition, the parties told us that they compete against a number of smaller suppliers for specific product categories, notably Natus, a US manufacturer of phototherapy products whose products are distributed worldwide, and Central Medical Supplies, a UK distributor of some open warming and phototherapy products.

- 5.3 The parties submitted that the market displays the characteristics of a bidding market, in which existing market shares are of limited relevance. In this section we first describe the purchasing process, then assess the argument that this is a bidding market in the light of evidence received, and then go on to consider market shares and the likely impact of the merger on them, and on market competition more generally.

Current competition

Tendering processes

- 5.4 Almost all neonatal warming therapy products purchased in the UK are bought by NHS trusts, which are bound by rules governing public procurement.⁹ Dräger and others told us that over 90 per cent of purchases of this kind are made following a tender process of some kind. We were told that the nature of this process varied, but took one of a number of basic forms:

⁹Where the value of a tender exceeds €150,000, the purchase is governed by EC law and must be advertised in the Official Journal of the European Communities (OJEC). Where the purchase falls below that threshold it will be governed by the hospital trust's own standing orders.

- the trust conducts a formal tender process, which may involve advertisement in the OJEC;
- the trust asks the relevant supplier to provide a quote for the equipment it wants and seeks quotes from at least two other suppliers of broadly comparable products before making a purchasing decision; and
- the trust contacts the supplier of the equipment it wants (the supplier is not necessarily aware whether other suppliers are being asked to quote).

Which of these processes is chosen will depend on the size of the order (whether it exceeds thresholds laid down in EC legislation or the trust's own standing orders) and the extent to which the trust starts the process with a preference for any particular item of equipment. Whatever purchasing mechanism is used, the decision on which item to buy will generally involve representatives from the trust's medical, BME and finance (or procurement) departments, and will usually be made on the basis of the most 'economically advantageous' bid, that is the one which best delivers the key operational requirements at reasonable cost. Factors taken into account will include consistency with the prevailing clinical practices within the trust, ease of use by medical and nursing staff, and ease of cleaning and maintenance as well as initial and lifetime cost. A fuller summary of these processes is in Appendix G.

5.5 Hillenbrand told us that around four-fifths of Air-Shields' orders had come through the second and third mechanisms described above. Evidence from trusts suggested that most sought at least three quotes in the majority of cases. A significant minority of trusts would negotiate directly with suppliers and avoid formal tendering (trusts are able to waive the tendering rules in certain circumstances and some told us that they sought to do so in this area). Those who did seek quotes often used them to check that they were not missing out on a better deal elsewhere, or to gain negotiating

leverage on a preferred supplier. In many cases, the product preferred by clinicians was ultimately purchased. The preferences of the neonatal nurses and auxiliary staff who use the equipment most frequently were often cited as a particularly significant factor. For all but repeat purchases, these would almost invariably be ascertained by trialling different manufacturers' devices in the unit, generally where there is an expectation that a tender¹⁰ request will shortly be issued. We were told that the typical duration of a trial can vary from a few days to a few weeks.

- 5.6 We understand that sales forces spend considerable time in between tender exercises visiting hospitals and ensuring that the neonatal departments are aware of their products and their particular features. We were told that feedback on current performance of their equipment from these visits and from other contacts with clinicians (at conferences, exhibitions etc) significantly influenced manufacturers' approach to product development. Trusts also told us that they valued this exchange of views and the opportunity to influence product development.

Innovation and product development

- 5.7 Product development appears to be an important driver of competition in this market. Although major advances in neonatal care technology are infrequent (Hillenbrand told us that the last major technological breakthrough was approximately ten years ago), introduction of new products and refinement of design features of existing products (sometimes based on advances in clinical practice) are significantly more common. Products have an effective life of, on average, ten years (though there are many in use in UK hospitals which are much older than this). However, new products appear in each category more frequently than that. Both Dräger and Hillenbrand told us that their product development cycles were around five to ten

¹⁰Here and subsequently in the main text of this document we use 'tender' to encompass the first two purchasing procedures described in paragraph 5.4.

years. So there is a tension in the buying process between the desire to standardize on existing products and the desire to have the best product available in the market. Although the base technology for warming products currently appears stable, innovation in design and ease of use is clearly important to customers, and is occurring at a significant rate (Dräger, Atom and Ohmeda have all introduced incubators with new design features in the last five years).

- 5.8 Trends in sales and market shares indicate that new product launches can have a significant impact on sales. Ohmeda, for example, has increased its share of the closed care market since the introduction of its new Giraffe incubator in 2000 and we were told that the market penetration of Fisher & Paykel's Cosycot owes much to its distinctive technical features. However, from the data available it is not possible to assert that the latest product in the market automatically captures market leadership. The decline in Dräger's share of the closed care market [] has been matched by gains for both Ohmeda (whose Giraffe incubator is a new product) and Air-Shields (whose Isolette C2000 is not). Tried and tested products (such as the Air-Shields Resuscitaire and Dräger's 8000 incubator prior to [] 2001) have retained market share in recent years despite not being the newest product in the market.

Bidding market considerations

- 5.9 Where most orders are placed following a tender process, this could be evidence of the existence of a bidding market, in which having a high share of sales over a period of time is not indicative of market power because most or all sales could easily be lost to a competitor in the next bidding round. Dräger and Hillenbrand told us that the market for neonatal warming therapy products was, in essence, a bidding market in which the majority of purchases follow an open tender process, purchasing

authorities are required to seek a number of quotes and products are generally trialled before purchase; it should therefore be relatively easy for non-incumbents to win contracts. In a pure bidding market, the obstacles to switching from one supplier to another are low and customer sensitivity to price is high. We assess the evidence for each of these characteristics of the market in turn.

5.10 Obstacles to switching come in two types—financial costs incurred in switching supplier and psychological barriers inhibiting switching. The parties (and some customers) argued that there are few financial switching costs. The principal cost of switching from one supplier to another is the training associated with how to use the new machine (training is often included in the price of the device). Trusts gave varied responses on the extent of training costs associated with switching suppliers, but few argued that the time and money involved were very significant. None argued that there were other significant financial switching costs (for example, in holding of spares).

5.11 However, some trusts argued that there are other barriers to switching, which may be significant. Several cited as an important consideration a desire to standardize the equipment used in a unit for clinical governance reasons. If all devices in a unit are of the same type the risk of human error through unfamiliarity with the use of the equipment is reduced. This is a particular concern with transport incubators (which are used by nurses alone, infrequently and in stressful and sensitive situations, all of which factors increase the risk of error) and labour and delivery ward warming equipment (where quick action is often important), but the concern extends to all products. This would tend to lead to repeat purchase of the same model or brand. However, we also note that sales evidence suggests that many hospitals end up 'mixing and matching' different products.

5.12 Confidence in a brand, and in the levels and quality of after sales service and support provided by a familiar supplier also has the potential to inhibit switching. Suppliers told us that they work hard to build relationships with customers and that reputation matters. [



] This suggests that the characteristics of a 'relationship' market here are at least as significant as those of a bidding market in which every tender is a new contest to be won solely on the merits of the bid.

5.13 Being an incumbent supplier also confers other advantages. All parties told us that their salespeople seek to visit all hospitals on a regular basis. It seems likely that it is easier to arrange and conduct those visits where the supplier already has equipment installed in the neonatal unit and after sales service visits to busy clinical staff can provide opportunities for sales activity as well. Moreover, the imminence of a tender exercise is likely to be known to an incumbent supplier, which is then able to prepare effectively for the tender process.

5.14 [



] Our own analysis of the parties' sales records indicated that both were more likely to win a tender from a customer who had previously purchased at least one of their products than from one who had not.

- 5.15 Trusts which favoured standardization and demonstrated some brand loyalty indicated that these would not be a barrier to purchasing a better new product brought to the market by another supplier. However, the evidence submitted to us by trusts did not suggest that changes in price alone would overcome such incumbency advantages. Data we saw showed no statistically significant differences between the discounts offered to existing and to new customers, which could be an indication that switching costs are low. However, it is also consistent with the evidence (discussed in paragraph 5.19) that clinical factors are more important than price in determining product choice.
- 5.16 We note that some switching costs apply at the level of a product, and others at the level of a supplier. Staff need to be retrained and new spares stocks bought whenever any new product is bought (and it is likely given the product life cycle that if a ten-year-old machine is replaced by another from the same supplier, the replacement will not be the same model, but its successor). These costs are therefore incurred whenever a new product is bought, regardless of the identity of the manufacturer. When the supplier is changed, additional reputational issues (such as confidence in reliability and levels of after sales support) need to be overcome.
- 5.17 We concluded that while actual switching costs are not high (and to some extent apply whenever a new model is bought, regardless of the supplier), there are nonetheless additional barriers to switching which give rise to an observable 'stickiness' in customer behaviour. Having an installed base in the hospital seems to confer advantage in tender processes. The existence of a continuous relationship between incumbent suppliers and hospital staff enables the development of levels of familiarity and trust between them which seem to us to have elements of a what we might term 'relational contracting' as well as of episodic bidding (and the incentives

on suppliers to develop such relationships are clear). The evidence does not suggest that customers are effectively locked in, nor necessarily that switching is low by the standards of normal markets. However, it significantly weakens the case that this is a bidding market in which existing market positions are irrelevant.

5.18 In a bidding market, we might expect demand to be highly sensitive to changes in relative prices. However, the analysis above suggests that, while price is not irrelevant, a number of other factors weigh heavily in the decision-making process, notably the clinical preferences of the unit staff. In a limited sample of actual tenders, one in three were won by the higher priced bid. Data from customers confirmed that price was quoted as the most important factor in decision-making in only a minority of cases. In a survey of [redacted] customers, 18 per cent cited price as a reason for choice of supplier (78 per cent cited clinical preference); of the respondents to our customer survey 17 per cent cited price first (61 per cent cited quality or clinical use). We heard of one case where it was said that a very substantial discount (in excess of 20 per cent) had recently influenced a trust's decision. However, 27 per cent of the customers who responded to our questionnaire indicated that they would only switch supplier in response to non-price factors; only 27 per cent told us that they would switch suppliers following a price increase of 10 per cent or less.

5.19 Our assessment is that it is important to customers that prices are not greatly out of line with suitable alternatives. Budgetary constraints may further influence the attention paid to price differences. However, where prices for a variety of products which are all broadly acceptable fall within realistic and affordable ranges, clinical preference is more important than price in the ultimate selection of a product to buy.


5.20 Overall, it is clear that while the market displays some of the characteristics of a bidding market, these are not its sole or defining characteristics. They influence our thinking on the weight we can give to market shares (especially annual market shares). We recognize that the competitive influence exercised by small suppliers may be to some extent greater than indicated by their market shares. These characteristics may also facilitate entry by providing opportunities for new suppliers to bid in tender processes (although our survey suggested that it is difficult for companies without a well-established reputation in the UK to win bids). However, the existence of barriers to switching and the low level of price sensitivity among customers give us reason to suppose that market shares are nonetheless a relevant indicator of potential market power.

Concentration and market shares

5.21 The Herfindahl-Hirschman Index (HHI) is a measure of concentration which takes into account all firms in the industry and their relative size. It is generally considered that HHIs below 1,000 indicate a low level of concentration, and HHIs above 2,000 indicate a high level of concentration. HHIs for each of the relevant markets are presented in Appendix H.

5.22 In all four UK markets, HHIs indicate a high level of concentration before and after the merger. Increments in HHIs following the merger are also high. The markets for transport incubators, for closed care incubators and open care warming beds are likely to become very concentrated following the merger.

5.23 Market share figures for each of the relevant markets are shown in Appendix E. Concentration in each of the relevant economic markets is very high: there are only three to four significant players in each market, and the merging parties were the two

largest suppliers in three of the relevant markets up to 2002 (in phototherapy they ranked second and third). In 2003, [

] Dräger's sales fell in the closed care market and Dräger was overtaken by Ohmeda.

5.24 In the closed care, open care and transport incubator markets, post-merger market shares range from around 60 per cent to 100 per cent using 2003 sales data, and from around 70 per cent to nearly 100 per cent using cumulative shares over 1999 to 2003, and increments are also high generally well above 10 per cent. In the phototherapy market post merger market shares are lower. Using 2003 data the merged entity would have one-quarter of the market (with an increment of 5 per cent). Using five-year cumulative shares to 2003 the merged entity would have one-half of the market (with an increment of 15 per cent), but we note that these figures have declined since 2001.

5.25 The key developments in market shares¹¹ over time are:




- Air-Shields' market share has stayed relatively constant in closed care over the five years for which we have data, it has increased in open care warmers and transport incubators and declined in phototherapy products.
- Dräger's market share has declined significantly in all categories since 1999, and particularly in 2003.
- Ohmeda has grown market share steadily (and overtaken Dräger) in both closed care and phototherapy products.
- Fisher & Paykel's share of open warmers has stayed relatively constant over the last five years.

¹¹Figures for 2003 presented here should be treated with caution as they are based on part year data and there is evidence of a seasonal pattern in sales in the markets, with significant sales volumes being recorded in the last few months of the year.

- Atom has taken time to build its current share of the closed care market, (and we do not think that its current market share is such as to impose a significant competitive constraint on the larger suppliers).

Market shares tend to fluctuate from year to year because of the nature of the market—a few large tender wins or losses can have an impact on the overall position. We have shown three- and five-year cumulative market shares as well as annual figures in order to smooth some of these effects and to give a sense of the different suppliers' shares of the base of installed equipment, which is relevant given the discussion of switching costs above.

5.26 The market shares of the parties differ in the four different markets which we identified in paragraph 4.21:

- In closed care there are four players; Air-Shields is the market leader; Ohmeda has taken over from Dräger in second position (probably reflecting the success of the Ohmeda Giraffe incubator) []. The fourth player is Atom.
- In open care there are three players; Air-Shields is the market leader followed by Fisher & Paykel and Dräger.
- In transport incubators Air-Shields and Dräger are at present the only players making any sales; though we have been told that [] Atom is expected to launch one.
- In phototherapy Ohmeda is the market leader, followed by Dräger. There are a number of others in the market (including Natus) []; Air-Shields has a very small market share.

Thus although the position varies by market, in all cases bar phototherapy (which is much the smallest of the four markets) the merger will combine two of the three largest suppliers in the market.

5.27 Dräger and Hillenbrand told us that a simple analysis of market shares risked underestimating the position of Ohmeda, which was gaining strength and was likely to continue to do so following its acquisition by GE, [



]. We note that Ohmeda is the market leader in the US market, has a strong recent track record in bringing new products to market, and clearly has ambitions to grow in the UK market. Moreover, the fact that it now has a significant market share in two of the four markets and a wider presence and reputation in hospitals suggests that it is likely to benefit increasingly from the advantages of incumbency in the future. Dräger and Hillenbrand also told us that both Fisher & Paykel and Atom were becoming more significant competitors in the markets in which they operate. We discuss these two as recent entrants in more detail in paragraphs 7.22 to 7.25.

5.28 The market demonstrates both static and dynamic competition. Suppliers seek to attract new customers with existing offerings (and conversely to defend their existing shares), but also innovate in an attempt to capture market share with new products.

Closeness of competition

5.29 Whether or not the significant increment in market shares which follows from the merger of Dräger and Air-Shields is indicative of a reduction in competition is in part determined by how close is the existing competition between the two. If the two sets of products were highly differentiated, the two companies might not then be very direct competitors.

5.30 We analysed this issue through looking at price and sales data, including customers' assessments of whether the two main parties' products are close competitors or not. Looking at prices offered by all the principal competitors, [



]. We note that it has not prevented Ohmeda gaining significant market shares, underlining the conclusion on price sensitivity in paragraph 5.19.

5.31 For a variety of reasons, price comparisons are difficult in this area. Suppliers do not publish price lists, and discounting and negotiation of prices are common. Both main parties told us that salespeople had discretion to offer discounts of up to [X] per cent, and both main parties and customers told us that discounts were expected and given for volume. Analysis of data on volume discounts demonstrated that higher volume sales do indeed attract higher discounts. We also heard anecdotal evidence from customers of much wider ranges of discounts than the [X] per cent cited by the parties. Moreover, there is significant variation in the precise specification of otherwise similar products. Dräger told us, for example, that customers' choice of accessories to buy with the product can influence the price of the product by up to [X] per cent. We were also told that discounting can take the form of provision of accessories at no additional cost. We have not therefore analysed pricing further. We note, however, that given the lack of transparency on prices there is considerable scope for setting different prices to different customers, with the price on any given contract reflecting a range of circumstances (volume, hospital budgets, previously installed equipment etc) but also the negotiating skills and efforts of those involved. Our analysis of prices and discounts showed wide variation in the prices paid by different customers for apparently similar products.

5.32 Analysis of tender data shows that Dräger and Air-Shields are each other's most frequent competitors. Dräger and Air-Shields were both involved in almost all ([redacted] per cent) of the tenders for which data is available (Ohmeda was involved in about two-thirds of them). The typical tender competition would have been Dräger, Air-Shields and one other, the identity of the other depending on the product sought or the previous experience of the hospital. Our own analysis of hospitals' data did not show that hospitals ranked the two close together where they competed in specific tenders, but we have heard nothing which suggests that the two sets of products are very significantly different. [

[redacted]

]

5.33 If we thought that the main parties had highly differentiated products, and that sales lost by either party would therefore be more likely to go to a third party than to the other merging party, it would be possible to argue that the increment in market shares would not be indicative of a reduction in competition. We found some evidence (from limited data) that where Dräger lost tenders, Air-Shields won roughly the proportion of tenders consistent with its market share. Dräger and Hillenbrand presented evidence (again based on limited data) that [redacted] per cent of the tenders lost by each party were lost to the other one. This pattern was common across all four markets, though the proportion appears to have been diminishing over time. Responses to our questionnaire showed that the main parties were often ranked first and third in tenders, but we do not think that this evidence alone is strong enough to draw any firm conclusions. We have seen no compelling evidence for the proposition that the parties are not close competitors; such evidence as there is (in particular the evidence on frequency of competition between them and oral evidence given to us by

the parties themselves that their products are, in most important respects, similar) suggests that they impose significant competitive constraints on one another.

Conclusion on competitive impact of the merger

5.34 In assessing the impact of mergers, it is generally appropriate to view market shares as one important guide to potential market power (this is reflected in our guidelines¹²). In certain circumstances (for example, bidding markets or situations where high market shares mask highly differentiated products) this assumption can be misleading, and it has been put to us that this is the case in this instance. We have therefore investigated whether there are reasons to think that the high market shares created by the merger are not a true reflection of the impact of the merger on competition. Although our investigations have shown that some of the characteristics of a bidding market exist here, we consider that these do not outweigh the otherwise normal characteristics of the market. Accordingly, we consider that the combined market share that the merged entity will have is a relevant indicator of potential market power.


5.35 Having reached this conclusion, we recognize that if there is no competitive concern deriving from the parties' share of a given market, then we are unlikely to pursue our analysis of competition in that market further. Accordingly, we do not pursue further the analysis of the phototherapy market where the main parties' market shares are lower than in all of the others, and appear to be falling over time.

5.36 In the other three markets, we assess the risk that market power might be exercised to the detriment of customers by first considering potential unilateral effects (the impact on price, the impact on customer choice, the impact on quality, the impact on

¹²*Merger References: Competition Commission Guidelines (CC2).*

innovation, and any other unilateral effects), then considering potential coordinated effects and then assessing the effect of efficiencies on rivalry.

Price

5.37 Following the merger, the new combined entity will have over half of the UK market for open care warmers, closed care incubators and transport incubators (based on 2003 shares). The increment from the merger is in excess of 10 per cent in each case. The principal competitor across the board would be Ohmeda (though the strength of that competition varies—Ohmeda has a relatively small presence in open care warmers []). In the major product markets there is then generally one other competitor (Fisher & Paykel in open care, Atom in closed). A significant number of trusts which responded to our questionnaire told us that they were concerned that the merger could give rise to an increase in price.

5.38 Given the advantages of incumbency (see paragraphs 5.11 to 5.14), the relative insensitivity of customers to price changes (see paragraphs 5.18 and 5.19), and the lack of transparency in pricing (see paragraph 5.31), which we have identified, we think that the merged company would have the ability and may have the incentive to raise some prices. We do not think that prices would automatically rise across the board—there are some competitive forces in the market—but we think that it is likely that there will be opportunity to reduce discounts selectively to hospitals. The incentives to do so will vary from hospital to hospital and with the nature of competition (especially from Ohmeda) for each order. Competition in the market might cause these incentives to decline over time, and the lack of transparency in pricing, while facilitating this approach, also makes it risky. But we think that the opportunity and the incentive will exist following the merger.

Choice

5.39 Of equal if not greater concern to trusts is the risk that choice will be reduced through reduction in the number of suppliers with an established reputation which could participate in tenders, and through rationalization of the product line by the merged party. Trusts were concerned that the loss of an established and significant competitor would reduce the number of options they had when choosing a product that best met their needs as well as their ability to secure good value for money in tendering exercises. Nearly half of the trusts which responded to our questionnaire expressed this concern, and, given that we have grounds for believing that there will indeed be some rationalization of product lines following the merger, we think these concerns are well founded.

Quality

5.40 We heard no concerns that the quality of the products available on the market would decline as a result of the merger. However, in the context of rationalization of product lines, trusts were concerned that availability of spares or after sales service might be affected. The parties told us that it is standard practice in the industry to continue to supply spares and after sales service support for seven years after a product is no longer sold. However, we note that many products remain in hospitals for long periods of time; if products were to be withdrawn from the market earlier than might have been the case in the absence of the merger, that might force trusts to replace products which could no longer be supported earlier than they would have planned. Concerns were also expressed that the standard of after sales service might deteriorate in the absence of competitive pressure. The parties told us that their concern for their broader reputation in hospitals would prevent them from reducing service standards, and we have seen no evidence that service standards would decline.

Innovation

5.41 We have seen evidence that in the past these markets have been characterized by a degree of turbulence (changing market shares, successful and unsuccessful product launches and other innovations). We would be concerned if the loss of a significant established competitor were to reduce the incentives to continue to innovate. Some trusts told us that they were worried that the merger might reduce the incentives on the merged party to introduce new products in the UK and to take account of needs expressed by UK clinicians in doing so. Given the importance and sensitivity of this area of medicine, we take these concerns very seriously. However, we believe, given the global nature of research, development and manufacturing, that innovation at a global level will continue and that new products will continue to be available in the UK market (though the reduction in significant suppliers from three to two might slow the rate of introduction of innovations into the UK market). We do not consider that there are any unique features of the UK neonatal care market which would be less likely to be taken into account in innovation or product development as a result of the merger, and we are confident that UK clinicians will continue to be as influential in international forums in which manufacturers participate as they are now.

Other unilateral effects

5.42 It has been argued that the ability of the parties to offer a full range of neonatal warming therapy products might enable them to exercise portfolio power, by offering preferential terms to tie in customers to buying a broad range of equipment (possibly extending beyond neonatal warming therapy products). This seems unlikely, since customers always appear to specify the particular types of equipment required at any given time, and we have seen no evidence that clinicians would accept equipment with which they are not wholly satisfied solely because there was a better price on offer. We note that although Dräger, Hill-Rom and GE are all already in a position to

offer a wide range of equipment within and beyond the neonatal care field, no respondents to our questionnaire had experienced such behaviour.

- 5.43 A further possibility which was put to us is that where equipment manufacturers also enter into contracts to manage an entire hospital's BME or facilities management, they might exercise undue influence on the trust's equipment choice. We have heard no evidence that this is likely. Moreover, we think it unlikely at present that an outsourced BME department would be able to exercise that degree of influence over clinicians who might be justifiably suspicious of its motives, and there appears limited incentive for manufacturers to act in this way, given the low prospects of success and the risks of jeopardizing valuable customer relationships. It may be that if outsourcing of this nature were to become more common, this risk might increase over time, but we do not believe that this merger has any great bearing on the level of risk.
- 5.44 We consider that predatory pricing to encourage exit is unlikely, for two reasons. First, for this to be successful the barriers to re-entry must be high. We think that in this market they are low—a market reputation would not immediately disappear with a company exiting the UK market; re-entry as prices rise would be relatively easy for a company with such a reputation. Second, the same parties compete with one another in several different markets; any predatory practices in one market would be likely to attract retaliation in another. It has been suggested to us that Ohmeda and the merged entity might lower prices to the extent that it would be difficult for smaller players to compete profitably, and we think that action of this kind short of predation is possible. However, we have seen no firm evidence that this type of pricing behaviour is likely, and we do not believe there is a sufficient basis to consider it a risk.

Coordinated effects

5.45 Although the market would be highly concentrated following the merger, we also think that coordinated effects are unlikely. The incentives to undercut a prevailing level of prices to win a high-value tender would be high and, due to the lack of transparency in the market and the infrequency of purchases, the threat of retaliation low. Moreover, the fact that the merged party would have such a large market share even by comparison with its nearest competitor leads us to believe that the risk of this type of coordination of pricing is not high.

5.46 Although the opportunities for the parties to engage in a number of the practices identified in paragraphs 5.42 to 5.45 may already exist and may be increased by the merger, we regard the risks as less serious than those identified in paragraphs 5.37 to 5.39, and we do not think that these considerations add materially to our conclusions on the SLC.

Efficiencies

5.47 We explored whether efficiencies deriving from the merger might offset the loss of rivalry. For legal reasons, Dräger is unable to examine Air-Shields' operational and financial data until the merger is cleared, so estimates of efficiencies are somewhat speculative. Dräger told us that the combined entity would be more likely to be able to devote resources to research and development than would either company absent the merger, and might be able to secure economies of scale through concentrating research, development and manufacturing in a single location. The main parties also told us that some economies should also be possible in distribution in the UK market. In the absence of data, we have no means of judging the merits of these arguments. We have no reason to doubt that some efficiencies could be achieved. However, we

have no basis to conclude that they are likely to have a positive effect on rivalry which would offset the loss of rivalry in the market caused by the merger.

6 Counterfactual

6.1 In line with the CC's guidance, we assess the consequences of the merger not against the current position, but against what we believe to be the most likely alternative to the merger (the counterfactual).

6.2 [



]

6.3 [



]

[



]



6.4 [




]

6.5 Our expectation is, therefore, that Air-Shields remains a viable business and, in the absence of the merger, would continue to offer reasonably effective competition to Dräger in the short and medium term. Beyond a couple of years the position is harder to predict. [






] Any conclusion beyond a couple of years ahead is inevitably somewhat speculative. However, [] in the absence of the merger, []

[] there is no reason to suppose that it would cease to be a competitive force in these markets.

6.6 It is also appropriate to look at the prospects for Dräger in the absence of the merger.

Dräger has suffered a decline in market share in the UK since 1999. [

] and we understand that it has been reflected in other European countries, []

[Dräger told us that the merger was essential to enable it to secure the global scale necessary to meet the market's quality and price expectations. []

] We [



] expect that in the absence of the merger, Dräger would also continue in the market, though it too might over time become less effective as a competitive force than it is now.

6.7 [



]

[



]

Conclusion on the counterfactual

6.8 Analysis of the counterfactual could alter our conclusion on the existence of an SLC if we believed that, in the absence of the merger one or both parties would cease to provide effective competition. We believe that given the small size of the market and the number of suppliers currently in it, it is possible that one or both parties may decline over time as a competitive force, and that in the medium term further rationalization in the industry, which might give rise to a further reduction in the number of suppliers, is possible. However, we do not believe that, in the absence of the merger, either party would cease to provide a competitive constraint on the other in the foreseeable future. [



]

7 Entry

7.1 Paragraphs 5.37 to 5.39 set out our concern that, on the basis of our assessment of competition in the market today, the merged entity would be able to use its market power to raise prices and restrict choice. We now turn to the possibility that either the threat of entry into the market substantial enough to impose a competitive constraint on the merged entity, or the exercise of countervailing buyer power, might alleviate that concern.

7.2 The parties argued that entry into the market is relatively easy for an overseas supplier. They cited at least 20 non-UK suppliers which manufacture one or more of the categories of neonatal warming therapy products but do not currently sell them in the UK, and cited the recent history of entry into the UK market by both Atom and Fisher & Paykel. We were told that, even without new entry, the merger would allow existing suppliers to increase their competitive impact so as to substitute for the competition between the merging parties. In this section we analyse the barriers to entry and expansion in the UK market and consider the history of entry in the UK and to a limited extent elsewhere.

7.3 The potential entrants to the UK market for neonatal warming therapy products would be:

- foreign manufacturers of neonatal warming therapy products entering the UK;
- manufacturers of one category of neonatal warming therapy products moving into another category;
- manufacturers of other medical equipment moving into the supply of neonatal warming therapy products; and
- completely new entrants.

7.4 The parties told us that there were companies which do not currently operate in this field which could readily develop neonatal warming therapy products (the third and fourth categories mentioned above), because the technology is mature and stable, and not protected by patents. However, we believe they are less likely entrants than manufacturers currently operating in the UK expanding their range (the second category) or existing manufacturers who do not currently operate in the UK (the first category). We address each in turn.

7.5 The three most significant manufacturers currently selling a limited range in the UK are Fisher & Paykel, Atom and Natus. Taking each in turn:

- Fisher & Paykel does not currently produce a closed care or transport incubator. Developing one would be a major product development challenge. In addition, Fisher & Paykel told us that philosophically it believes that there is more scope for use of open care than in current practice. While this may be merely a reflection of its current business strategy, we have seen no evidence to suggest that Fisher & Paykel is likely to expand its range of manufacture into closed care in the foreseeable future.
- Atom manufactures a full range of warming products in Japan. However, Atom's UK distributor told us that transport costs from Japan represented a greater barrier for open care warmers (which are bulkier but sell for less than the closed care incubators it currently sells, so transport represents a higher proportion of selling cost). We note also that Atom still has a relatively small market share and a low profile in this market (half of a sample of trusts we asked had not heard of Atom), so we are sceptical about its ability to offer a serious competitive constraint in other markets in the medium term (the experience of Atom is analysed further in paragraph 7.24).
- Natus at present makes and sells only phototherapy products. We received no evidence from Natus, but it would be a considerable step for it to develop and market incubators or warmers in the other categories, and we do not think it likely.

7.6 More likely, in our view, would be entry by a manufacturer currently manufacturing a range of neonatal warming products but not currently selling in the UK. The extent of tendering in the market might facilitate such entry (provided entrants could secure

information on tender opportunities). In the section below we analyse the barriers to entry such an entrant might face and assess the history of entry into the UK market.

Barriers to entry

7.7 Barriers to entry fall into three categories:

- Intrinsic barriers—the costs of entering at all, for example regulatory barriers.
- Economies of scale—the costs of achieving minimum efficient scale in the market.
- Barriers to expansion preventing rapid growth to that minimum efficient scale.

7.8 Intrinsic barriers to entry fall into four categories, product development, regulation, transport and distribution. We address each in turn.

7.9 Product development costs may be significant for a manufacturer which does not currently make these products, but are unlikely to be significant for one which does. Most manufacturers make products for all world markets at a single facility; the principal modifications required for different national markets are different electrical connections, different language manuals and the like. The costs associated with these are unlikely to be significant.

7.10 All equipment of this type sold in the EC needs to carry a CE mark. Under the Medical Device Directive (93/42/EEC), manufacturers must demonstrate compliance by preparing relevant technical documentation and the EC Declaration of Conformity. These need to be made available on request for inspection by a relevant competent authority (in the UK the Medicines and Healthcare products Regulatory Agency). Certain control functions need to be inspected by an assessor acting as a 'notified body' to the competent authority. Once certified, the equipment can be sold

anywhere in the EC. The parties told us that the certification process overall costs around [] per product, although we note that many of these costs are incurred in-house and hence may vary significantly from one manufacturer to another. We were also told that any product currently meeting the relevant standards in any developed economy would be likely to secure a CE mark without significant modification. For an existing manufacturer this cost does not seem insurmountable (and for one already selling in Europe there would be no additional cost). The exception might be transport incubators where testing requirements appear to be more onerous.

7.11 There are no tariffs on these products in the UK.

7.12 Transport costs are incurred by all manufacturers shipping from outside the UK (so need to be borne by incumbents as well as new entrants). Most of the evidence we have received suggests that they represent a small fraction (around 0.5 to 3 per cent) of the total costs of the product. This is illustrated by the fact that almost all of the products sold in the UK are manufactured in other parts of the world. Transport costs can be lessened if sea freight is used rather than air. This is possible if the timing of order requirements can be readily predicted or if the volumes sold justify local warehousing. If it is necessary to ship to order to a demanding timescale, air freight may be required. The costs of air freight from Japan have been estimated at nearer 7 per cent of the price, which might make transport costs a more significant barrier for a new entrant from outside Europe. However, Fisher & Paykel has remained competitive despite transporting warmers from New Zealand, and transport costs from the USA or Europe are lower than from the Pacific Rim, so we do not think transport costs constitute a significant barrier to entry.

Distribution

- 7.13 Distribution requires significant fixed costs, which implies that there are some economies of scale. We have been told that establishing a presence in the market requires sales effort directed at a number of hospitals. The need to visit a number of hospitals implies a number of sales people with knowledge of these markets (to cover the geographical spread), the capability to provide after sales service across the whole of the UK, and a stock of demonstration equipment to enable hospital staff to try out equipment. Both the parties and trusts told us that (save in the case of repeat orders) hospitals would almost invariably trial equipment for a period of up to one month before considering buying it. For a supplier to sell to a hospital which has not previously bought its equipment, the provision of demonstration stock is therefore effectively a precondition of making a sale. A new entrant with no installed base of equipment would in practice need to supply demonstration equipment for all significant tenders (though not necessarily at the same time). This is a significant cost, particularly bearing in mind that without an established reputation it would be likely to take a new entrant significant time to build up a substantial installed base.
- 7.14 Most of the main competitors in this market have their own distribution networks in the UK (though they operate through independent distributors in other EC countries) which vary in size from [X] to [X] sales staff (plus servicing and other support). The principal exception is the Japanese company, Atom, which operates through an independent distributor (Inspiration Healthcare).
- 7.15 There are other distributors selling medical equipment into hospitals in the UK. Some are vertically integrated with equipment manufacturers (most of these do not appear to offer third parties' products); others are independent. Independent distributors offer products from a variety of manufacturers though few appear to offer

more than one manufacturer's product of any given type. Not all distributors are able to maintain and service equipment on site, and many appear to specialize in equipment that requires little maintenance or servicing. Few large distributors appear to operate to any significant extent in the neonatology field.

7.16 Because of the advantages of scale in distribution, most distributors (whether owned or independent) sell more than one product, generally into the same clinical area. For example, Fisher & Paykel's salespeople sell humidifiers as well as incubators to neonatal units. There appear to be advantages in salespeople building relationships with a limited number of groups of clinicians in a hospital and understanding their particular clinical areas, rather than seeking to sell equipment across the full range of clinical disciplines.

7.17 Justifying the costs of a distribution network, even where those costs are shared across a range of products, requires that a new entrant build scale in the market quickly to secure an acceptable return on its initial investment. Because of the specific requirements for selling in this market, we do not accept that a new entrant into this sector could simply 'free ride' on an existing distributor's infrastructure. The barriers to building scale are, however, significant. As discussed in paragraph 5.12, the reputation of a product has a significant influence on the propensity of clinicians to buy it. We have been told by the parties and by trusts that clinicians discuss the relative merits of different equipment when considering what to buy. The development of neonatal networks encouraging cooperation between local trusts and the existence of neonatology networks on the Internet facilitate this, and informal networks of friends and colleagues may be even more important. This indicates that while a good (or bad) reputation can be readily disseminated, the absence of a reputation may raise barriers for new entrants.

7.18 As indicated above in the discussion of switching costs, some elements of reputation attach to the manufacturer, and some to the product. This is illustrated by the experience of the Caleo, Dräger's new closed care incubator, which initially secured sales based in part, we were told, on Dräger's reputation in the market, [



].

7.19 For a new entrant, establishing enough of a reputation for quality, reliability and service with clinicians first to gain a foothold in the market and then to build scale is not straightforward. The responses to our questions to trusts showed poor awareness of potential entrants to the UK market from overseas (and even of a current supplier with low market share), and a reluctance to consider foreign firms without assurance of the availability of adequate service and support. We have heard that establishing a reputation is difficult even for a new entrant with a presence in NICUs. Fisher & Paykel told us that they had sometimes been able to use their reputation in humidifiers to promote their open care warmers, but that this had not been straightforward and that they are still in the process of establishing a reputation for their products nine years after introducing them into the UK market. These findings are consistent with our observations about reputation as a barrier to switching in paragraph 5.12.

7.20 One way of addressing this problem is to establish a relationship with a distributor with a strong reputation and to use the reputation of the distributor to promote acceptance. There is some evidence from trusts that they would be prepared to try an unknown foreign device if it was promoted and supported by a known distributor with a good reputation, especially if that distributor were a substantial company in its own right.

7.21 For an overseas manufacturer, the most logical route into the market therefore appears to be to find a distributor which has the capability to sell and support equipment of this type and has a good reputation in NICUs but does not currently carry a competitor's product. We have identified very few distributors in the UK which meet these criteria and might want to add neonatal warming therapy products to their existing product lines, and some overseas suppliers have told us that finding the right distributor has proved problematic.

History of entry

7.22 There are two recent examples of entry into the UK market which show that it has proved possible to enter the UK market in recent years in two different ways, a high-cost/high-impact strategy pursued by Fisher & Paykel and a lower-cost/lower-impact strategy pursued by Atom. We also have some limited evidence from the successful entry of Atom into the Italian market (where we have been told that it has built a market share in excess of 30 per cent).

7.23 Fisher & Paykel was known in the UK market as a supplier of humidifiers. In 1994 it set up its own distribution operation (having previously sold through an independent distributor) and in 1995 introduced its Cosycot range of open warmers which it sold through the same distribution operation. Fisher & Paykel attributes the significant market share it has achieved to the reputation gained through its humidifier business, which sold into the same units of hospitals. Fisher & Paykel also told us that building a reputation was crucial in the UK market, which was one in which clinicians preferred to buy from known companies. The best way to secure a reputation was to sell to hospitals used by others in the field as reference hospitals, and securing access to these hospitals could take some years.

7.24 Atom originally entered the UK market for closed care incubators in the mid-1990s through EME, an independent distributor, Atom subsequently withdrew from the UK market and re-entered in 2001 with a new incubator. In 2003 EME was acquired by Viasys, and Atom incubators are now distributed through Inspiration Healthcare, a new company set up by former employees of EME. Atom sells incubators to Inspiration Healthcare, which told us that it bears all the sales and marketing costs and the risks associated with not making a sale. This suggests a low-commitment, low-risk approach to the UK market; Atom's success is wholly dependent on the commitment and success of its distributor. Atom's UK sales have been modest to date. We were told that they were initially concentrated in the North-West of England where Atom established a local reputation. We understand that Atom has built a more substantial market share (over 30 per cent) in Italy, despite having a relatively high-priced product. This has been attributed to the high quality of its product and of the after-sales service provided by its Italian distributors, [



]. We have been told that distribution arrangements in Italy are somewhat different to those in the UK, and may be more conducive to new entry.

7.25 The limited experience of entry into the UK may be a reflection as much of the small size of the market, the strong position of the incumbents and therefore the limited prospective returns as of any insuperable barriers to entry. We modelled the potential business case for entry from the perspective of an overseas manufacturer and it is clear that to justify the investment required an entrant would need to secure significant market share. It is of course possible that the effect of the merger might be to make entry more attractive than it currently appears. It could certainly create opportunities for a new entrant to bid where trusts continued to seek three quotes in the more concentrated market after the merger (though there is some evidence that

not all trusts would do so). On the other hand, potential entrants might be deterred by the existence of powerful incumbents in the market.

Conclusions on entry

7.26 There do not appear to be significant intrinsic barriers to entry to the UK market. But there is a significant barrier to expansion: the need to build a reputation to achieve sufficient scale to justify the fixed costs of distribution. We note that this might itself deter entry. The experience of Atom in the UK suggests that without substantial effort and investment, a competitive product will still struggle to achieve market penetration to the level necessary to impose a competitive constraint. By contrast, the experience of Fisher & Paykel in the UK suggests that, with sufficient effort, successful entry and market penetration is possible, but it requires a level of commitment and investment which might be substantial relative to the expected returns.

7.27 We understand that some overseas manufacturers have expressed interest in the UK market, but have found difficulty in identifying a suitable distributor. We have no firm evidence, so no means of judging how serious the prospect of entry by any of these manufacturers might be at present, nor whether the merger itself might be seen as an opportunity. The history and success of new product introductions suggest that the possibility of successful new entry cannot be entirely discounted. But it is not clear to us that the effective combination of a keen manufacturer and a distributor with the appropriate reputation and skills is more likely than not to be found. Ultimately, we are not persuaded that the prospect of entry can be relied upon to impose a significant competitive constraint on the merged entity and offset the adverse effects of the merger on current competition in the market which we identified in paragraphs 5.37 to 5.39. For the same reason, and because of the

'stickiness' effects described earlier, we do not believe that the expansion of existing smaller suppliers can be relied on to offset the competitive deficit.

Buyer power

7.28 The parties argued that their ability to exploit market power would be constrained by the exercise of buyer power in this market. We take buyer power to mean the exercise of a credible threat not to buy, either through delay or through establishing alternative supply arrangements, sufficient to counteract the market power of suppliers. We might also expect that the NHS might be able to use its position as effectively the sole buyer of this kind of equipment to offset the market power of the merged entity.

7.29 The main parties told us that trusts had buyer power partly because of their limited budgets. The main parties and some trusts also told us that they had some negotiating strength. Individual customers take an interest in product development, and many are informed and (increasingly) skilled purchasers operating under tight budgetary constraints. Indeed the use of multiple alternative bidders in a tender exercise to impose competitive pressure on a preferred supplier appeared to be common practice. However, we saw little evidence of the exercise of buyer power beyond what would normally be available in a competitive market. Indeed, the lack of transparency in pricing seems to result in purchasers having little or no knowledge of a going rate for any product. This gives rise to the possibility that customers may believe they have negotiated effectively (by securing a discount from the originally quoted price) but may still have paid significantly more than other purchasers of the same equipment.

7.30 It might seem possible for the NHS to exercise some countervailing influence in the market because of its scale and its status as a virtual monopsonist. The parties argued that such countervailing influence existed and was increasing. However, as indicated in paragraph 2.13, PASA has no plans to exercise power as a single buyer in this area, nor to act to regulate or influence purchasing behaviour to any significant extent. Moreover, we heard from trusts that they were very reluctant to give up any freedom to exercise clinical choice as to which products to buy, which inhibited the development of joint purchasing even with neighbouring trusts. The importance of clinical choice in their selection distinguishes products of this kind from the more generic products that are centrally bought, and we believe that this imposes limits on the development of joint purchasing of equipment in the NHS.

7.31 We heard some evidence that buyer power might increase in future. The development of purchasing consortia may encourage the spread of joint purchasing in the NHS. We have seen evidence of a small number of framework contracts being signed by groups of trusts acting together (and some evidence that this may secure them discounts that might not be available to individual trusts, and that this trend may be increasing). Moreover, through formal and informal networks of neonatal clinicians, and through the issue of good practice guidance by PASA, trusts may be increasing their understanding of the market. But we do not think that at present any of these developments has advanced far enough to constitute real countervailing power in the market.

7.32 It seems to us that buyers could most productively counteract any threat of the exercise of market power by the merged parties by encouraging entry into the market. No individual trust seems likely to be able to do so. Some coordinated effort (perhaps facilitated by PASA) to encourage assessment and trial of overseas

equipment might help overcome the barriers to entry and expansion associated with reputation which we identified above, and thus facilitate profitable entry into the market, and thus increased competition. But it is unclear to us how such encouragement might be effected, and we do not think we can rely on spontaneous initiatives of this kind to offset the effect of the merger on competition.

8 Conclusions on SLC

8.1 Our analysis may be summarized as follows:

- We have identified four product markets for analysis (see paragraph 4.21) and conclude that the geographical dimension of the market is the UK.
- We conclude that although the markets display some of the characteristics of bidding markets, these are not sufficient to invalidate our conclusion that the merged entity's share of the markets appears to be a relevant indicator of the potential market power it would hold following the merger.
- We have identified that in the closed care, open care and transport incubator markets the merged entity will have a market share in excess of 60 per cent (in transport incubators almost 100 per cent) based on three-year averages, and will have no more than one significant competitor. In phototherapy, however, the merged entity's market share will be substantially less.
- We think that the market power which the merged entity would hold would enable it to raise prices selectively to a significant number of hospitals and that the loss of an independent competitor and rationalization of product lines is likely to give rise to a reduction of choice of products for hospitals.
- We conclude that while it is possible that one or both parties might decline as a competitive force in the absence of the merger, they would not do so to the extent of ceasing to offer a competitive constraint on the other.

- We conclude that while there is some prospect of successful market entry and of buyers increasing their exercise of buyer power over time, neither prospect is sufficient to outweigh the loss of rivalry in the markets affected by the merger.

8.2 We therefore conclude that the merger may be expected to give rise to a substantial lessening of competition in the markets for closed care incubators, open care warmers and transport incubators, but not in the market for phototherapy products.