



**Dräger Medical AG & Co KGaA and Hillenbrand
Industries, Inc.**

A report on the proposed acquisition of certain assets
representing the Air-Shields business of Hill-Rom, Inc., a
subsidiary of Hillenbrand Industries, Inc.

May 2004

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Note by the Competition Commission

The Competition Commission has excluded from this 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. The omissions are indicated by [✂].

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Glossary

Executive summary

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 published our provisional findings on 5 March 2004, and 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. The Air-Shields business 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 that represent the Air-Shields business. Based on our best estimates of shares of the UK market for neonatal warming therapy products, 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 merged entity will be greater than that of either party alone. Since the share of supply test is 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 and Europe for under 20 per cent. The parties estimated that total UK revenues in 2003 amounted to between £7 million and £10 million.
5. Although there are similarities between them, 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 part of the spectrum which is necessary for the treatment of jaundiced babies.

We also concluded that aftercare and product specific accessories should be regarded as part of the same market as the original purchase of a product. 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. Dräger and Hillenbrand identified three other significant competitors selling one or more of the different types of neonatal warming therapy product. These 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 care warming beds 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 in the hospital of equipment from at least one supplier. Trusts generally choose (in the light of clinical and other considerations) which product to buy on the basis of a judgement as to which will best deliver the key operational requirements at reasonable cost.
8. Many trusts told us that they seek to standardize equipment used in a unit 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 do not appear to be high, we identified some psychological and practical barriers to switching supplier which give rise to '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 customers 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 has declined significantly in recent years to relatively low levels, and we do not think that the merger gives rise to concern in this market.
11. These high market shares might 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 these product markets in the absence of the merger, they would not do so to the extent of ceasing to provide a competitive constraint on each other for the foreseeable future.
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 the exercise of buyer power might increase in future through the development of purchasing consortia, through framework contracts being signed by groups of hospitals acting together (in the hope of securing greater discounts than are available to them individually), through formal and informal networking among neonatal clinicians and through the issue of good practice guidance by PASA, we do not think that at present any of these developments have advanced far enough to constitute real countervailing power in these markets.
15. We therefore conclude that the merger may be expected to give rise to a substantial lessening of competition (SLC) in the markets for closed care incubators, open care warming beds and transport incubators, but not in the market for phototherapy products.

16. Specifically, we have grounds to believe that the substantial market power which the merged entity would hold would give it the ability and the incentive 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 believe, given the global nature of research, development and manufacturing, that innovation at a global level will continue (though the reduction in significant suppliers might slow the rate of innovation) and that new products will continue to be available in the UK market. We explored whether the merger might give rise to other detrimental effects (for example, predatory pricing), but we did not find enough evidence to form an expectation that any such effects would follow from the merger.
17. In considering remedies to the adverse effects of the SLC we found, we bore in mind a number of particular features of the markets which we thought were relevant to the consideration of effectiveness of possible remedies (including the elements of a bidding market identified, the history of market entry and the latent buyer power, the role of product development and the relatively small size of the market). We also judged that, given the global nature of this merger and the fact that manufacturing takes place overseas, it is likely that prohibition of the merger would be impractical, even if we found it to be an appropriate remedy.
18. We identified the potential for market entry and for increasing the exercise of buyer power, and that these factors had the potential to act as a competitive constraint on the parties, but could not be relied upon to develop spontaneously. Following consultation with the four UK Health Departments and their procurement agencies, we have made recommendations to them. These are that:
 - in order to strengthen the exercise of buyer power within the NHS, they should establish, for the benefit of trusts, framework agreements for the supply of neonatal warming therapy products which would create a set of maximum prices; they should pursue the potential for achieving economies in purchasing, and they should promote the provision to procurement agencies of information on prices paid by trusts, and its dissemination by them, in anonymized form, to trusts;
 - in order to encourage market entry, they should investigate potential new entrants to the market, share information with them on the UK market and on potential distribution options and facilitate their participation in tender exercises and framework agreements, and they should encourage buyers to consider and trial a range of potential products when considering purchases; and
 - they should facilitate the development of a stakeholder network so that, professional associations of neonatal clinicians and others can contribute to the development of procurement planning and practice.
19. We have been encouraged by the positive response of the departments and agencies to our recommendations and by their agreement in principle to implement them.
20. We expect these recommendations, if fully implemented, to remedy the adverse effects of the SLC on price and choice in the long term. But we expect them to take up to a year to implement and at least two further years to take effect, and in the meantime we think it is necessary in addition to take more direct action to remedy these adverse effects in the short term.

21. Accordingly, we will require undertakings under the Act from Dräger and its UK subsidiary that they will maintain their current ranges of products and accessories, and the ranges they will acquire from Hillenbrand, in the UK until the end of 2007. In order for trusts to have confidence in these products, we think it is also necessary for Dräger to give undertakings related to training and to the continuing availability of spares and servicing for these products and accessories. Dräger will be required to publish details of these undertakings to customers and potential customers. We are confident that such undertakings can be secured.
22. We will also require undertakings from Dräger and its UK subsidiary which control the price of the products, accessories, training, spares and servicing supplied. These would guarantee that UK trusts will be offered these products at no more than the list prices prevailing in 2003, and that the average level of discount given by the merged entity to all trusts is no less in any year of the control than it was in 2003. We think this control should last until the end of 2007. Dräger will also be required to publish information on the structure of the price control to customers and potential customers. We are likewise confident that such undertakings can be secured.
23. We considered whether a structural remedy (for example, requiring the merged parties to sell one or both ranges of products through an independent distributor), might better remedy the adverse effects of the SLC by maintaining competition at the distributor level and creating a market in sales by manufacturers to distributors. However, we had doubts, notably over both the effectiveness and the practicability of such an approach, and concluded that the risk that it would not be effective, combined with its complexity, costs and burden on the parties, outweighed its theoretical advantages.
24. We therefore conclude that the most comprehensive and appropriate remedies to the adverse effects of the SLC in the short and the long term can be achieved by a package of actions comprising:
 - recommendations to UK Health Departments and their procurement agencies designed to encourage market entry from overseas and the increased exercise of buyer power by trusts;
 - time-limited commitments by the merged entity to continue to supply a full range of products, accessories and aftercare in the relevant markets; and
 - a time-limited retail price control on the merged entity's products, accessories and aftercare in the relevant markets.

Findings

1 The reference

- 1.1 On 18 December 2003 the OFT referred the proposed acquisition by Dräger of certain assets representing the Air-Shields business of Hill-Rom, a subsidiary of Hillenbrand to the CC for investigation and report. The reference was made under section 33 of 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 final report, which we are required to publish under section 38 (1) of the Act. Further information, including non-commercially sensitive versions of main party and third party written submissions, summaries of key third party arguments and views, the responses to a questionnaire that we sent to customers and the replies to additional questions put to those who responded can be found on our web site,¹ as can our Provisional Findings, published on 5 March 2004 and our Notice of Possible Remedies, published on 10 March 2004. 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.
- 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 Lübeck, 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 £[~~2~~] 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.

¹www.competition-commission.org.uk.

- 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 £[§] million. Worldwide, the Air-Shields business had sales of over £[§] 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 part of the spectrum which is necessary for the treatment of jaundiced babies.²

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

- 2.8 Estimates put to us indicate 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. We have been told that the USA accounts for about one-third of worldwide sales of neonatal warming therapy products.
- 2.9 On the basis of estimates put to us, we believe that total UK revenues from neonatal warming therapy products (including service and spare parts) in 2003 were between £7 million and £10 million. Open and closed care products account for about 40 per cent of this figure each, transport incubators for about 15 per cent and phototherapy for about 5 per cent. 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

²Phototherapy 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.

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 have not identified any UK manufacturer of transport incubators, open care warmers or phototherapy devices.
- 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 trusts³ (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. Some 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 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 1996 and 2002. We took evidence from the NHS Purchasing and Supply Agency (PASA⁵), which purchases some medical products on behalf of the NHS in England, 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, however, currently investigating the possibility of establishing a framework agreement for the purchases of such equipment by a network of 12 trusts in Yorkshire.

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

³The term trusts is used here and elsewhere in the report to include Health and Social Services trusts in Northern Ireland (see glossary).

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.

⁵PASA's responsibilities cover only England, but PASA told us that there are bodies with similar roles in Scotland (Scottish Healthcare Supplies), Wales (Welsh health Supplies) and Northern Ireland (Northern Ireland regional Supplies Service), and that PASA takes the lead in coordinating their activities across the whole of the UK.

defined for the purposes of the sale. It includes the research and development and manufacturing facility at Hatboro, Pennsylvania, 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,⁶ 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 represented 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] 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. [X] 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 (and reflected in the CC's guidance⁷) 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 (which comprise the Air-Shields business) in accordance with the Purchase Agreement between Hill-Rom, Hill-Rom Manufacturing, Inc., Hill-Rom Services, Inc., Dräger Medical Infant Care, Inc., and Dräger dated 15 September 2003 (the Purchase Agreement) will result in 'two or more enterprises ceasing to be distinct'.

⁶The Spanish and Austrian authorities have cleared the merger; the Portuguese authority concluded on 5 April 2004 that the merger should be cleared conditional upon Dräger's acceptance of certain conditions and obligations intended to safeguard effective competition. The Brazilian authorities are currently considering the merger. We were told that these are the only jurisdictions in which notification was required.

⁷*Merger References: Competition Commission Guidelines (CC2)*, paragraph 1.14.

- 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 G. 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 main parties. In this instance, for a number of reasons, they had only 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 and on visits we undertook to hospitals.

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 could readily demand, or suppliers readily 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.⁸ In addition to evidence from the main parties, their competitors and others, we also drew on responses to a questionnaire we sent to just over 200 trusts with neonatal care units. We received answers to the questionnaire from 45 trusts, that is, around one in five. We subsequently asked those trusts that had responded to our questionnaire an additional set of questions, and 26 of them replied. Dräger and Hillenbrand expressed doubt on the reliance which could be placed on the responses to the questionnaire because of the sample size and the potential for different interpretations of the results. We place what we think is appropriate weight on this evidence, alongside evidence from other sources. In particular, we have placed greater weight on the survey where there is a high response rate or a high degree of consistency of responses than in areas where the survey yielded less clear responses.
- 4.2 The parties’ submissions identified the following products:

⁸Merger References: Competition Commission Guidelines (CC2).

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

In the following paragraphs we consider whether to define the market as for all of these products taken together, for each individually, or as separate markets for subsets of some products. We also consider whether aftercare support is a separate relevant market or part of a wider market for neonatal warming therapy 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 E, 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 E, 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 warming bed in a labour and delivery ward, 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, 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 warming beds in areas where closed care incubators have traditionally been used—Fisher & Paykel told us that it does 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 warming bed over a closed care 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 care warming beds and closed care incubators 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 care warming bed and a closed care incubator 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 warming bed, trusts told us that they would not consider using hybrids in place of their entire fleet of open care warming beds and closed care incubators (mostly because of the cost). Indeed, manufacturers of hybrids told us that they would not expect a hospital to use only hybrid incubators. In the light of this evidence, 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 (Dräger, for instance, does not) 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 warming beds. The principal variation is between those 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 warming beds. 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 warming beds, 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 warming bed (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 warming beds made by the main parties and, for example, the Kanmed product. Evidence from trusts indicates that the Kanmed product 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 warming beds.
- 4.8 Thus there seems to be some scope for demand-side substitution within open care, and that scope may be increasing over time. Moreover, given the potential for supply-side substitution within open care (see paragraph 4.11), we consider that all open care warming beds are part of a single market. The scope for demand-side substitution at the margins between open and closed care seems much less, suggesting that those should be treated as separate markets. In any event, 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 warming device 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 8). However, our definition of supply-side substitution (for the purpose of market definition) is more demanding.⁹ 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.¹⁰ Open care warming beds, 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 some manufacturers told us was increasing, could in the future create greater potential for supply-side substitution between different devices. Dräger also put it to us that, as the manufacturing of these products is essentially an assembly process with many components bought in (including some bought 'off the shelf'), the cost to a manufacturer of starting production of a new category of equipment is modest. However, this did not appear to us to reflect the general weight of evidence from manufacturers which suggested a high level of spending on product development in relation to the expected production run, to ensure that products are suitable for the market's requirements. It seems to us at present unlikely that a supplier of one product 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 warming beds used in labour and delivery units and in NICUs 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 warming beds 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 is possible that reputational barriers could be overcome, and that supply-side substitution within open care could be possible.
- 4.12 We therefore conclude that the potential for supply-side substitution within open care is consistent with the view of open care as a single market. However, there is significantly less potential for supply-side substitutability between the main groups of

⁹The definition is in CC2, paragraph 2.21.

¹⁰The level of investment deemed significant has to be judged in relation to the size of the market and the prospective return.

neonatal warming therapy products identified in paragraph 4.2. We therefore do not regard them as supply-side substitutes.

Aftercare and accessories

- 4.13 Suppliers offer spare parts, maintenance and servicing ('aftercare') 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 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. On the basis that nearly two-thirds of trusts which responded to our questionnaire said that they purchased aftercare separately from the original product, Dräger argued that aftercare services should be seen as a separate market from the original equipment.
- 4.14 If aftercare were regarded as 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 or use a third party, market shares of the merging parties for the provision of aftercare would be likely to be relatively low (less than 40 per cent of trusts responding to our questionnaire told us that they bought after sales service together with the original purchase). However, in order for servicing, for example, to be part of the same market as the original purchase it is not necessary for all servicing to be bought together with the original purchase. We have been told that customers are sophisticated purchasers and would generally take into account whole life costs of competing products, including the cost of after sales servicing, when choosing which equipment to buy. Moreover, self provision of servicing or the use of a third party still depends critically on the participation of the original equipment supplier, which must provide training for this to be effective. There are also some elements of servicing—notably the provision of spares—that are likely to be available only from the manufacturer (such that no trust would buy the equipment if the supplier were not offering aftercare). For these reasons, while we recognize that there are some additional competitive forces in the aftercare market, we believe that self provision and third party provision of servicing are at best a weak competitive constraint on the original equipment manufacturer, whether servicing is bought at the same time as the original equipment or not. We therefore consider that aftercare should be regarded as part of the same market as the original purchase.
- 4.15 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; we were told that 95 per cent of these accessories were bought at the same time as the original piece of equipment. The pricing of accessories at the time of main purchase is also variable, sometimes forming part of a deal at an agreed overall price. We understand that these product-specific accessories enable the purchaser to add to the basic product to meet their specific requirements. Therefore we treat product-specific accessories as in the same market as the product to which they belong. Generic accessories (those which are not specific to a particular make of neonatal warming therapy product or even to neonatal warming therapy products generally) can be supplied by many others, are not generally purchased when the product is bought, nor is their purchase relevant to the initial purchase decision. We think they belong in a separate market and we do not consider them further.¹¹

¹¹Hereafter all references to accessories should be taken to refer to product-specific accessories.

Geographical market

- 4.16 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, the parties 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.
- 4.17 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 therapy products, nor did any respondents to our customer questionnaire 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.
- 4.18 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 8). However, for the purpose of defining the geographic market two features seemed to us compelling:
- most customers who responded to our questionnaire 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
 - three-quarters of customers who responded to our questionnaire told us that the reputation of a supplier was important to them in selecting equipment; evidence from trusts suggests that this is generally established through the existence of a track record in UK hospitals.
- 4.19 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 (discussed in paragraphs 8.22 to 8.25) confirms that it generally takes time to achieve a significant market presence.
- 4.20 We considered whether there were any national or regional markets within the UK. We received no specific evidence on this. However, we note that virtually all of the relevant products in the markets in question are imported into the UK and distributed by subsidiaries of manufacturers or by independent distributors on a UK basis

(generally including Northern Ireland). Although there are differences in the structure of the NHS between England, Scotland, Wales and Northern Ireland, we have heard nothing to suggest that they justify defining separate markets.

- 4.21 We conclude that the geographic dimension of these product markets is the UK. 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 8.

Different groups within a market

- 4.22 We considered whether different customer groups among 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 significantly different. In our view the differences are not sufficient for us to consider them separate markets.

Conclusion on market definition

- 4.23 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.

We define aftercare and accessories for each type of product as being within the market for that type of product. 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), there are also a number of similarities between these markets, for instance in the purchasing process. Accordingly, where appropriate, some of the assessment that follows refers to all of these markets together.

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 Company. Ohmeda manufactures, and sells in the UK (through

GE Medical Systems (GE)) 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 warming bed 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 conferring market power. 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 trusts, which are bound by rules governing public procurement.¹² 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 varies, but takes one of a number of basic forms:
- the trust conducts a formal tender process, which may involve advertisement in the OJEC;
 - the trust asks a 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).

¹²Where 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.

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 as to 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 F.

- 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 that 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. The preferences of the neonatal nurses and other 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 tender¹³ 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 by manufacturers that feedback on current performance of equipment from these visits and from other contacts with clinicians (at conferences, exhibitions etc) significantly influenced their 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 between five and ten years. So there is a tension in the buying process between the desire to standardize on existing products (see paragraph 5.11) 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).

¹³Here and subsequently in the main text of this document we use 'tender' to encompass the first two purchasing procedures described in paragraph 5.4.

- 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 following some initial problems with the introduction of the Caleo incubator in 2001 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 [redacted] 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, purchasers 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 and that [redacted] a large market share or installed base should not be equated with market power. 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 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 with 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 from suppliers 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. [redacted] This suggests that the characteristics of a 'relationship' market are at

least as significant here 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 the leading suppliers 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. We note, however, GE's comment that while an incumbent supplier would have the advantage of familiarity, incumbency is not an overriding factor in trusts' purchasing decisions.
- 5.14 [X] 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 tended to purchase repeatedly from the same supplier indicated that these considerations 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 (including the responses to our questionnaire) did not suggest that changes in price alone would necessarily 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 5.18) 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 (to the extent that they are held) stocks of new spares bought whenever any new product is bought. (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. However, for the supplier to be 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. 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 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 analysed above does not suggest that customers are effectively locked in, nor necessarily that switching is low by the standards of normal markets, but it does point to some 'stickiness' in customer behaviour. It thus 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. Evidence 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 questionnaire 14 per cent cited price first (63 per cent cited quality or clinical use first). 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 about 10 per cent.

- 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 the responses to our questionnaire 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 above 1,800 indicate a high level of concentration. HHIs for each of the relevant markets are presented in Appendix G.
- 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 G and summarized in Table 1. 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, [redacted], Dräger's sales fell in the closed care market and Dräger was overtaken by Ohmeda.

TABLE 1 **Market shares based on three-year cumulative sales, 2001 to 2003**¹⁴

<i>Suppliers</i>	<i>Closed care incubators</i>	<i>Open care warmers</i>	<i>Transport incubators</i>	<i>Phototherapy</i>
Air-Shields	45–50	55–60	70–75	10–15
Dräger	30–35	15–20	25–30	30–35
Combined	75–85	70–80	95–100	40–50
Ohmeda	10–15	0–5	0–5	40–45
Fisher & Paykel	–	20–25	–	–
Atom	0–5	–	–	–
Others	–	–	–	15–20
Total market size* (£'000)	[⊗]	[⊗]	[⊗]	[⊗]

Source: CC, based on material supplied by the parties and by third parties.

*This is the average yearly total market size, obtained by dividing total sales in each market over 2001 to 2003 by three.

5.24 In the closed care, open care and transport incubator markets, post-merger market shares of the merged entity 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 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. Using 2003 data the merged entity would have one-quarter of the market (with an increment of 5 per cent).

5.25 The key developments in market shares¹⁵ 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 warming beds 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 warming beds has stayed relatively constant over the last five years; in this sector it is a significant competitor.
- 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 Appendix G in order to smooth some of these effects and to give a

¹⁴This table is based on three year cumulative shares, but we recognize that they do not provide a complete picture (notably understating the position of Ohmeda, whose market share has been growing throughout the period in the closed care market, and concealing important developments in the phototherapy market discussed in paragraph 7.2). A fuller treatment of market shares is in Appendix G.

¹⁵Figures 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.

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 4.23:

- 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 [X]). The fourth player is Atom.
- In open care there are three significant players: Air-Shields is the market leader followed by Fisher & Paykel and Dräger. Ohmeda has a small presence.
- In transport incubators Air-Shields is at present the only player making any sales; Dräger has told us that it has withdrawn its transport incubator¹⁶ and 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) that collectively have one-quarter of the market on 2003 figures; 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, [X]. We have been told 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.

5.28 Dräger and Hillenbrand also told us that Atom, through its new distributor, Inspiration Healthcare, is a significant competitor in the closed care market. Inspiration Healthcare initially told us that the success of its efforts could only be measured at the end of the financial year as many trusts place orders close to the end of the financial year (depending on the extent of unspent budgets). We asked Inspiration Healthcare near the close of the inquiry about its sales of Atom incubators in the 2003/04 financial year; the information it supplied enables us to estimate that Atom had a 5 to 10 per cent share of the closed care incubator market in this year, with more than half its sales attributable to a single trust. We were told that Atom sales were originally concentrated in the North-West of England but the 2003/04 data does not suggest that sales have recently been made in that region. We discuss Atom and Fisher & Paykel as recent entrants in more detail in paragraphs 8.22 to 8.25.

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

¹⁶The particular circumstances surrounding the Dräger transport incubator are discussed in more detail in paragraphs 6.7 and 6.8.

determined by how close is the existing competition between the two. If the two ranges of products were highly differentiated, the two companies might not then be close 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, [X] appear to be at the upper end of a spectrum of prices, with [X] at the lower end. We note that it has not prevented [X] gaining significant market shares, underlining the conclusion on price insensitivity 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 note 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 the available data on 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 in the neonatal warming therapy product markets. Dräger and Air-Shields were both involved in almost all ([X] 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. A small number of trusts provided us with their ranking of suppliers in tenders; this did not show that they ranked the two close together where they competed in specific tenders, but that the main parties were often ranked first and third in tenders. However, we do not think that this evidence alone is strong enough to draw any firm conclusions on the closeness of competition between the merging parties. Indeed, we suspect that in the closed care market the fact that Dräger has not often been ranked second to Air-Shields in recent years may be attributable to [X], and thus not typical of the pattern over a longer time period. The replies to our additional questionnaire to trusts showed that, where trusts had switched supplier in the last tender process, almost half of them had switched to Ohmeda. This is consistent with the recent changes in market shares, with Ohmeda's share increasing, and Dräger's share decreasing.
- 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. 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.

6 Counterfactual

- 6.1 In line with the CC's guidance,¹⁷ 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 [REDACTED]
- 6.3 [REDACTED]
- 6.4 [REDACTED]
- 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. [REDACTED] Any conclusion beyond a couple of years ahead is inevitably therefore somewhat speculative. However, [REDACTED], in the absence of the merger, [REDACTED], 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. [REDACTED] 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. [REDACTED] We [REDACTED] expect that in the absence of the merger, Dräger would also continue in these markets, though it too might over time become less effective as a competitive force than it is now.
- 6.7 In the course of our inquiry, Dräger withdrew its current transport incubator from the market. The Dräger 5400 transport incubator is an old product which lacks the full range of features now required by customers. Dräger also told us that there have been technical difficulties in procuring components required to secure transport incubators to ambulances, and that testing requirements (introduced in April 2004) for transport incubators and the trolleys on which they are mounted are onerous. Dräger told us that it cannot justify undertaking the testing required to continue to offer the 5400 transport incubator in the UK given the limited size of the UK market, and the correspondingly limited potential sales revenue. Dräger asserted that the decision to withdraw the 5400 transport incubator was unrelated to the merger, that the appropriate counterfactual was its absence from the market, and that there was therefore no SLC in this market.
- 6.8 From the evidence provided by Dräger, we are not persuaded that the decision to withdraw the transport incubator in April 2004 had been made before the decision to

¹⁷CC2, paragraph 1.22.

merge, nor that the decision was wholly unrelated to the merger. We note that the 5400 transport incubator continues to be offered elsewhere in Europe (and, in the absence of the merger, could have been reintroduced to the UK had commercial circumstances changed). Moreover, we believe from evidence supplied by Dräger that the merger might hasten the planned withdrawal of the 5400 internationally, and that the possibility of introduction of a successor transport incubator, which could reasonably be expected to have formed part of Dräger's plans, is removed by the merger. Thus potential sources of competitive constraint on the transport incubators supplied by Air-Shields (which, following the merger, will have a near monopoly in the UK) are eliminated by the merger. We therefore believe that the appropriate counterfactual in the transport incubator market is the continuation of some competitive constraint from Dräger on the transport incubators supplied by Air-Shields.

Conclusion on the counterfactual

- 6.9 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 in one or more markets. We believe that given the small size of the markets and the number of suppliers currently in them, it is possible that one or both of the merging parties might 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 expect that, in the absence of the merger, the parties would not cease to provide a competitive constraint on each other in the markets for open care warming beds, closed care incubators and transport incubators for the foreseeable future. We conclude, therefore, that the continuation of such a competitive constraint is the position against which to evaluate the merger.

7 Conclusion on the competitive impact of the merger

- 7.1 In assessing the impact of mergers, it is generally appropriate to view market shares as one guide to potential market power (this is reflected in our guidelines¹⁸). 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 (see paragraphs 5.9 to 5.20) 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.
- 7.2 Having identified four markets in paragraph 4.23, we note that in the phototherapy market the merger will create a situation where the main parties have a cumulative share of 40-50 per cent over the last three years, (as does Ohmeda). However, we note that the main parties' shares have declined markedly in recent years, and in 2003 stood at less than 30 per cent with an increment due to the merger of less than 10 per cent, and that other suppliers have increased their share of the market in the same period. These figures lead us to believe that the merger gives rise to less

¹⁸Merger References: Competition Commission Guidelines (CC2).

concern in the phototherapy market than in the other product markets. Accordingly, we do not pursue further the analysis of the phototherapy market.

- 7.3 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 innovation, and any other unilateral effects), then considering potential coordinated effects and then assessing whether the effect of efficiencies deriving from the merger might offset the effects of the merger on rivalry. We then assess (in section 8) whether market entry or the exercise of buyer power might offset these effects.

Price

- 7.4 Following the merger, the merged entity will have over half of the UK market for open care warming beds, 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 warming beds [☒]). In the major product markets there is then generally one other competitor (Fisher & Paykel in open care, Atom in closed). A significant proportion of trusts which responded to our questionnaire told us that they were concerned that the merger could give rise to an increase in price.
- 7.5 Given the advantages of incumbency and the observable stickiness in customer behaviour (see paragraphs 5.11 to 5.17), 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 the incentive to raise some prices. We do not think that prices would automatically rise across the board. The existence of discounts (which vary with factors other than specification and volume), the lack of transparency in pricing and the apparent difference in competitive conditions between tenders enable customers to be charged different prices (see paragraph 5.31). We have been told that suppliers choose to offer lower prices to some customers (for example, reference hospitals). So not all customers will be charged higher prices. But in many situations, particularly those where the merged entity is a major existing supplier, we expect that prices will rise as a result of the reduction in the number of competitors and the acquisition of market power by the merged entity which will follow from the merger.

Choice

- 7.6 Of equal if not greater concern to trusts is the risk that choice will be reduced through the 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 entity. 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. The initial problems experienced by clinicians when Drager first introduced the Caleo incubator in 2001 illustrate the value of choice to clinicians, who were able to switch to alternative products available at that time. We expect the choice of suitable alternative products available to be reduced as a result

of the fall in the number of suppliers with an established reputation and the post merger rationalization of product lines.

Quality

- 7.7 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. This issue therefore seemed to us to arise out of the reduction of choice of products in the market, rather than being a direct concern about the quality of products on the market.
- 7.8 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

- 7.9 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 (though the reduction in significant suppliers might slow the rate of innovation) and that new products will continue to be available in 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

- 7.10 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, only a small percentage of respondents to our questionnaire had experienced such behaviour.

- 7.11 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.
- 7.12 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

- 7.13 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.
- 7.14 The opportunities for the parties to engage in a number of the practices identified in paragraphs 7.10 to 7.13 may already exist and may be increased by the merger. However, while we recognize these risks we do not have enough evidence to form an expectation. These considerations do not, therefore, influence our conclusions on the SLC.

Efficiencies

- 7.15 We explored whether efficiencies deriving from the merger might have a positive effect on rivalry which would offset the loss of rivalry in the market caused by the merger. 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 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 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.

8 Entry

- 8.1 Paragraphs 7.4 to 7.6 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.
- 8.2 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.
- 8.3 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.
- 8.4 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 selling in the UK expanding their range (the second category) or existing manufacturers which do not currently operate in the UK (the first category). We address each in turn.
- 8.5 The three most significant manufacturers currently selling a limited range of neonatal warming therapy products 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 (and we have been told that it is seeking a CE mark for those which it does not currently sell in the

Europe). However, Inspiration Healthcare (Atom's UK distributor) told us that transport costs from Japan represented a greater barrier for open care warming beds (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 the closed care incubator market (half of the 26 trusts that answered our additional set of questions had not heard of Atom), so we are sceptical about its ability to offer a serious competitive constraint in the other relevant markets in the medium term. The experience of Atom is analysed further in paragraph 8.24.

- 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 warming beds in the other categories, and we do not think it likely.

8.6 We considered that the most theoretically likely category of entrant would be a manufacturer currently manufacturing a range of neonatal warming therapy 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

8.7 We have considered barriers to entry in 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.

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

8.9 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.

8.10 All equipment of this type sold in the EC needs to carry a CE mark. Under the Medical Devices 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.

- 8.11 There are no tariffs on these products in the UK.
- 8.12 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. We received evidence that the costs of air freight from Japan are 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 warming beds 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

- 8.13 Distribution requires significant fixed costs, which implies that there are some economies of scale. We have been told that establishing a presence in neonatal warming therapy product markets 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 trust 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 likely to be a significant cost in relation to the expected revenue, 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. It was put to us by the parties that the reputational issues affecting market entry (and the expense required for a new entrant to become established in this market) could be overcome by 'piggy-backing' on a reliable and well-known distributor established in the neonatal market in the UK. However, the evidence we received persuaded us that even a distributor with an established reputation in the neonatal market could not achieve significant sales of neonatal warming therapy products without significant effort and expenditure in promoting and trialling these products.
- 8.14 Most of the main competitors in these markets 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 Inspiration Healthcare.

- 8.15 There are other distributors selling other 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.
- 8.16 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 warming beds 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.
- 8.17 Justifying the costs of a distribution network, even where those costs are shared across a range of products, requires that a new entrant builds 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, therefore, significant.
- 8.18 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. As indicated in the discussion of switching costs (see paragraph 5.16), 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 [X].
- 8.19 For a new entrant, establishing a sufficient 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 additional 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 it had sometimes been able to use its reputation in humidifiers to promote its open care warming beds, but that this had not been straightforward and that it was still in the process of establishing a reputation for its warming 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.
- 8.20 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 (see paragraph 4.18). However, the fact that trusts would generally only purchase from a supplier with an established UK operation reinforces our view that market entry requires investment in such a UK presence, whether maintained in house or through a distributor.

- 8.21 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 neonatal units 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 a suitable distributor has proved problematic.

History of entry

- 8.22 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).
- 8.23 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 care warming beds, 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.
- 8.24 Atom originally entered the UK market for closed care incubators in the mid-1990s through an independent distributor, Electro Medical Equipment Limited (EME), a company incorporated in England and Wales. Atom subsequently withdrew from the UK market and re-entered in 2001 with a new incubator. In 2003 EME was acquired by Viasys Healthcare Inc., a company incorporated in the USA, 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 on the part of Atom; Atom's success is heavily dependent on the commitment and success of its distributor. Atom's UK sales have been modest to date (see paragraph 5.28), although the parties told us that they believed Atom was on the verge of a market breakthrough. We were told that Atom's sales were initially concentrated in the North-West of England where it established a local reputation.
- 8.25 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 assessed 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

- 8.26 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.
- 8.27 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 there is sufficient incentive for a suitable manufacturer and a distributor with the appropriate reputation and skills to combine effectively to achieve entry in the face of the barriers we have identified. 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 7.5 to 7.6. 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

- 8.28 The parties argued that their ability to exploit market power would be constrained by the exercise of buyer power in this market. In line with the CC's guidance,¹⁹ we take buyer power to mean the perception or demonstration 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.
- 8.29 The main parties told us that trusts had buyer power partly because of their limited budgets. Dräger and Hillenbrand also said that the tender process was controlled by buyers, who were free to include or exclude parties from the process. Buyers determined the scope and timing of the tender, the products required and the number of bids sought. The main parties and some trusts also told us that buyers had some negotiating strength. Individual customers took an interest in product development,

¹⁹CC2, paragraphs 3.58 to 3.59.

and many were 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 no evidence of trusts, individually or collectively, seeking to exercise buyer power as defined in the guidance. Indeed, the lack of transparency in pricing (see paragraph 5.31) seems to result in purchasers having little or no knowledge of a going rate for any product. In some cases, customers may believe they have negotiated effectively (by securing a significant discount from the originally quoted price) but may still have paid significantly more than other purchasers of the same equipment.

- 8.30 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 does not exercise power as a single buyer in this area and told us that it had no plans to do so, and developments which may to some extent influence trusts' purchasing behaviour are in the early stages. 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.
- 8.31 We received some evidence that the exercise of 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 procurement practice guidance by PASA and its equivalents, trusts may be increasing their understanding of the market. But we do not find that at present any of these developments has advanced far enough to constitute real countervailing power in the market.
- 8.32 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; coordinated efforts would be needed. We do not think we can rely on spontaneous initiatives of this kind to offset the effect of the merger on competition.

9 Conclusions on SLC

- 9.1 Our analysis may be summarized as follows:
- We have identified four product markets for analysis (see paragraph 4.23) and conclude that the geographical dimension of each market is the UK.
 - We conclude that, taking account of the characteristics of the markets, the merged entity's share of the markets is a relevant indicator of the market power it would hold following the merger (see paragraph 5.20).
 - We have identified that in the closed care incubator, open care warming bed 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 sizeable competitor. In phototherapy, however, the merged entity's market share will be substantially less (see paragraph 5.24).

- 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 (see paragraph 6.9).
- 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 (see paragraphs 8.27 and 8.31).
- We expect that the market power which the merged entity would hold would enable it, in many situations, to raise prices to customers 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 (see paragraphs 7.5 to 7.6).

9.2 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 warming beds and transport incubators, but not in the market for phototherapy products. We have therefore decided that there is an anticompetitive outcome as defined in section 35 (2) (b) of the Act.

10 Remedies

10.1 We now turn to the proposed remedies which we have identified to address the adverse effects of the SLC set out in paragraphs 7.5 and 7.6. The questions on which the CC is required to decide, having found an anticompetitive outcome, are set out in section 36(2) of the Act. We must seek to achieve as comprehensive a solution as is reasonable and practicable to the SLC and any resulting adverse effects.

Relevant customer benefits

10.2 We may also have regard to the effect of any remedy on relevant customer benefits. We describe our consideration of relevant customer benefits in paragraphs 10.3 to 10.6 before turning to consider possible remedies.

10.3 Under the Act, relevant customer benefits are limited to lower prices, higher quality or greater choice of goods or services in any market in the UK, or greater innovation in relation to such goods or services. Such benefits qualify as relevant customer benefits only if they satisfy the test set out in section 30(3) of the Act.

10.4 The main parties have cited two categories of relevant customer benefits, namely:

- price reductions as a result of the economies of scale (primarily in production) achievable through the merger; and
- improvements in innovation.

10.5 We accept that there may be economies of scale achievable through the merger which could not have been achieved otherwise (though neither the parties nor we have been able to quantify them). However, we do not expect that the benefits of

reduced costs would be passed to UK customers in the form of lower prices, because the merged entity will have less incentive to do so (see paragraph 7.5). We therefore do not consider price reductions to be a relevant customer benefit.

- 10.6 In paragraph 7.9 we considered whether the loss of a competitor at the global level might have the effect of removing a source of innovation and of reducing the incentive on the remaining competitors to innovate. We thought this was a possibility (though it was not part of our reasoning for finding an SLC). On the other hand, we accept that economies of scale in manufacturing and development activities might assist the merged entity to increase the effectiveness of its product development programme. Given that we found that in the absence of the merger, the parties' investment in innovation might decline, though not enough to remove the competitive constraint they impose on one another (see paragraph 6.9), any such increase in the effectiveness of a product development programme would be attributable to the merger. However, such evidence as we have received does not lead us to expect that either the positive or the negative effects of the merger on innovation outweigh the other. We therefore do not expect an increase in innovation. However, in our consideration of remedies we have taken care to avoid adopting remedies which would in any way restrict the parties' ability to invest in product development or to introduce new products in UK markets.

Features of the market bearing on consideration of remedies

- 10.7 In our Notice of Proposed Remedies, published on 10 March 2004, we identified a number of features of the markets for neonatal warming therapy products which are relevant to our consideration of the appropriateness of possible remedies. These include:
- that there are elements of a bidding market which suggests that the competitive influence of small suppliers may be greater than is suggested by their market shares;
 - that there is buyer power latent in the NHS which has not to date been exercised, but could become more significant in future as neonatal networks and purchasing consortia develop;
 - that there is some history of successful market entry; and
 - that new product development has been and can be expected to continue to be a stimulus to competition.
- 10.8 We also noted that there are intrinsic economic factors (notably, the level of fixed costs in relatively small markets discussed in the consideration of entry in section 8) which may limit the number of firms that will be able to operate profitably in these markets.
- 10.9 We have taken account of these market features in our consideration of the effectiveness of possible remedies in addressing the adverse effects of the merger by favouring remedies which promote pro-competitive outcomes and avoiding imposing increased costs on the parties where possible.
- 10.10 The remedial action that the CC will decide should be taken will always depend on the facts and circumstances of the case. One option that the CC will usually consider is the prohibition of an anticipated merger. In this case the global nature of the

merger and the fact that manufacturing of the relevant equipment takes place overseas makes it likely that prohibition would be impractical, even if we had found it to be an appropriate remedy.

10.11 We therefore consulted on three other types of remedies which we believed had the potential to remedy the adverse effects resulting from the SLC we identified:

- Structural remedies—that is to say remedies involving the divestment of one or more of the UK distribution operations of the merged entity, to preserve existing competition in the market at the distributor level and increase the prospects for market entry in the longer term.
- Behavioural remedies—restraints on prices charged and commitments on the range of products supplied to the UK market by the main parties, designed to address directly the adverse consequences of the SLC for prices and choice.
- Recommendations to bodies other than the merging parties designed to increase the extent to which the NHS exercises buyer power and to increase the prospects for market entry.

10.12 We received views from third parties on the Notice of Possible Remedies, which can be summarized as follows:

- Some trusts reiterated concerns about price increases and reductions in choice and supported the idea of recommendations to public bodies. Some trusts thought structural remedies would effectively address the effects of the SLC, while others did not.
- Some medical equipment distributors expressed interest in the prospect of distribution rights for Dräger and Air-Shields products being available, though none gave support to the view that this would be a good way of encouraging entry into the UK market by manufacturers that do not currently sell products in the UK.
- PASA told us that the recommendations to government bodies we had proposed were welcome, were consistent with other government purchasing initiatives, and could be readily implemented, and that it was willing to co-ordinate implementation efforts across the UK in consultation with equivalent bodies in Scotland, Wales and Northern Ireland.
- One professional body representing neonatal clinicians stressed the importance of maintaining product ranges and after sales support, and indicated that it was already enabling the provision of information by overseas manufacturers to potential buyers.

10.13 The main parties told us that structural remedies entailed many practical difficulties. Moreover, given the qualifications about the nature of the market (described in paragraph 10.7) and the fact that we had not found an SLC in all the product markets, they told us that structural remedies would not be appropriate to remedy the adverse effects resulting from the SLC. [X] The main parties also supported the idea of recommendations to public bodies of the kind we proposed.

10.14 In seeking to address the adverse consequences of the SLC on price and choice, we sought to identify the minimum set of actions which might be expected to remedy the

adverse effects of the SLC. Given the nature of this case, we began by considering the least cost, least intrusive remedy, adding to that where necessary in order comprehensively to address the SLC and its adverse effects.

Specific remedies

10.15 We found (see section 8) that there was potential for market entry and for the increasing exercise of buyer power (in the sense of countervailing pressure allowing buyers to counteract the market power acquired by the merged entity) and considered that these factors might act as a competitive constraint on the merged entity in the future. However, we do not find that either market entry or the exercise of buyer power can be relied upon to do so at present, nor that we could be confident that they would develop spontaneously (see paragraphs 8.26, 8.27 and 8.31). We therefore first consider what steps might be taken to encourage the increased exercise of buyer power to offset the market power acquired by the merged entity, and to encourage market entry.

Recommendations to bodies other than the merging parties

10.16 We believe there is scope for the buyer power latent in the NHS to be exercised more effectively than at present. In particular, we think that there is scope for more coordination in purchasing across trusts and for more exchange of information on prices paid for particular neonatal warming therapy products. Following consultation with the four UK Health Departments,²⁰ and their procurement agencies²¹ as to how best this might be achieved, we recommend that they, in consultation with other government departments and agencies such as the Office of Government Commerce (OGC), should take the following actions to strengthen the exercise of buyer power, and thereby offset the market power of the merged entity:

- establish, for the benefit of trusts in the UK, one or more framework agreements for the supply of the relevant neonatal warming therapy products,²² in which all suppliers would have the opportunity to participate. These would provide a set of standard terms and conditions of sale and would create and maintain a set of maximum prices for different quantities of such products for the lifetime of the agreements;
- as part of the preparation of the framework agreements or otherwise, evaluate, and where possible pursue, ways of realizing economies in procurement (for example, through aggregation of order quantities) and of making further use of competition where possible (for example, through using mini-competitions within the terms of the framework where permissible); and
- ensure the availability to trusts (in suitably anonymized form) of details of actual prices paid and specifications of purchases by trusts of the relevant neonatal warming therapy products.²³ This data might be secured by procurement agencies from suppliers under the framework agreement or otherwise, or from

²⁰The Department of Health, the Scottish Executive Health Department, NHS Wales and the Northern Ireland Department of Health, Social Services and Public Safety.

²¹PASA, Scottish Healthcare Supplies, Welsh Health Supplies and the Northern Ireland Regional Supplies Service.

²²Here and subsequently in this section we use this term to refer to those neonatal warming therapy products in the markets for which we have found an SLC, though we would not wish to preclude the extension of any such arrangements more widely.

²³Our remit enables us only to recommend that such action apply to the products of the merged entity, but we would not wish to preclude these arrangements from extending more widely where possible

trusts directly, and could be collated and disseminated by them, in anonymized form as noted above, to all trusts.²⁴

10.17 We recognize the importance of clinical choice in purchasing decisions at the level of individual trusts. Our recommendations in this area are not intended to detract from this essential foundation of optimal clinical performance, but rather to harness the common interests of trusts in a competitive marketplace for medical equipment.

10.18 We also think that market entry has the potential to remedy the adverse effects of the SLC on price and choice, but that barriers of reputation and access to UK distribution need to be overcome for new entrants to the market (see paragraphs 8.26 and 8.27). Following consultations with the bodies referred to in paragraph 10.16, we recommend that they should take the following actions to promote market entry:²⁵

- undertake market research and arrange discussions with potential new entrants, including both the several manufacturers of CE-marked neonatal warming therapy equipment that do not currently have distribution arrangements in the UK, and other manufacturers not currently selling in Europe;
- share information on the UK market (including information on distribution options, identified through discussions with distributors, but not including sensitive contract or price information) with potential suppliers, and publicize information on potential new entrants to the market and their products to potential purchasers;
- facilitate the participation of new entrants in tender exercises and framework agreements;
- encourage trusts to use the information provided through the development of the framework agreement and otherwise to ensure that arrangements are made to facilitate the evaluation and trial of a wide range of neonatal warming therapy products by trusts when making product selection decisions; and
- facilitate the development of a stakeholder network, so that professional associations and other key decision makers can contribute to the development of procurement planning and implementation of these recommendations. This might include the preparation of advice and guidance on product evaluation and procurement, and support for user evaluations of products. Suggested stakeholders might include the Neonatal Nurses Association and the British Association of Perinatal Medicine, along with representatives of neonatal purchasing groups.

10.19 We understand from discussions with PASA that the first steps in these areas have either been taken or are in train. The purpose of our recommendations is to encourage rapid progress and to help ensure, given the anticipated effects of this merger, that this area of medical equipment is given high priority. In addition, we note that taken together these measures may go beyond those taken in other medical equipment areas and therefore may form a useful pilot project for improving competition where supply is or becomes concentrated. More generally, we believe

²⁴The effective implementation of the recommendations on buyer power also requires an undertaking from Dräger to support the implementation of the recommendation on pricing transparency by not imposing (through commercial confidentiality clauses) any restrictions on trusts' ability to disclose the prices paid for neonatal warming therapy products to other trusts or to the relevant public authorities.

²⁵This might, but need not be, coupled with the development of the framework agreements described in paragraph 10.16.

that our recommendations are consistent with the recommendations of the OGC Report, *Increasing Competition and Improving Long-Term Capacity Planning in the Government Market Place*, which reinforces our confidence that they will be effectively implemented.

- 10.20 It has been suggested to us by the main parties and by PASA that professional associations working in the neonatology field may wish to participate in the implementation of these recommendations. In our view this would be very helpful in ensuring that all action taken is efficient and effective; such participation is suggested in paragraph 10.18 but need not be confined to this specific role.
- 10.21 We recommend that the steps described are set in train as soon as possible and in such a way as to be given effect within, at most, 12 months. We have been encouraged by the confirmation we have received from Health Departments and their procurement agencies that they intend to implement these recommendations.
- 10.22 We note that the success of these recommendations as a remedy depends on their being fully implemented. While we can recommend to relevant bodies that they take action (and we have been encouraged by the positive response we have had from the procurement agencies we have spoken to) we cannot oblige them to do so. Moreover, the effectiveness of such action depends on effective action not only by the UK Health Departments and their procurement agencies to whom we are making recommendations, but also by the individual trusts.
- 10.23 Nonetheless, we expect that this set of recommendations, if fully implemented, would enable trusts to exercise to a greater extent the buyer power latent within the NHS and thus to reduce the potential for price increases deriving from the SLC. We also expect that they would help to overcome some of the barriers to market entry and barriers to expansion which we identified in section 8, and thus facilitate entry into the market as far as practicable, given the constraints imposed by the size and nature of the market identified in paragraphs 10.7 and 10.8, and thus help to increase choice for clinicians.
- 10.24 PASA has told us, and we accept, that these remedies will take time to take effect. We expect that the implementation of framework agreements, for example, could take up to one year, and that even if new entrants were attracted to enter the UK market immediately, they would take some time—we estimate at least two years—to build a position which would impose any competitive constraint on the merged entity. We think it would be helpful if, as part of its responsibility for monitoring remedies, the OFT could conduct an investigation in approximately three years' time to assess the extent to which these recommendations have been implemented and proved effective. The OFT told us that it agreed with this suggestion.
- 10.25 We conclude that while we expect these recommendations to remedy the adverse effects of the SLC on price and choice in the medium to long term, on their own they are not sufficient to do so in the short term. We therefore considered additional measures with a more direct effect in these areas.

Action to be taken by the CC

Commitments on product range and aftercare

- 10.26 In order to remedy the adverse effects of the SLC on price and choice until the recommendations described above become effective, we believe it is necessary to

prevent the merged entity from reducing choice by rationalizing its product range and from raising its prices.

(a) Product range

10.27 Many of the concerns raised with us by trusts related to the risk of reduction of choice resulting from rationalization of product lines following the merger. We expected such a reduction of choice to be an adverse effect of the SLC (see paragraph 7.6). In the long term, we believe that encouraging market entry through the recommendations set out above represents the best guarantee of continued choice for buyers. However, in the short term we believe that trusts should have a guarantee that the range of products currently available to them will not be reduced as a result of the merger.

10.28 In practice we think that this would be best achieved by requiring undertakings as permitted under section 82 of the Act from Dräger and its UK subsidiary that both would continue the supply of their current range of products and accessories,²⁶ and the range of products they would acquire from Hillenbrand, in the markets in which we found an SLC. We make exceptions for two products in respect of which it is clear to us that arrangements are already underway to withdraw a product (the Dräger 5400 transport incubator and the Dräger Resus). The Air-Shields Versalet, the future of which Dräger has told us it intends to review on a global basis, will be included only as long as it remains available elsewhere in the European economic area. [✂] We understand that Dräger has agreed in principle to give similar undertakings to the Portuguese competition authorities.

(b) Aftercare

10.29 In order for trusts to have confidence in the products that they buy, it will also be necessary for Dräger and its UK subsidiary to give undertakings relating to the availability of aftercare²⁷ for the products and accessories which it is undertaking to continue to sell. Were trusts to be unsure of the availability of servicing under current terms, or of the availability of spares, we believe that in practice the undertaking on product range would not be effective. Given that we did not find that a reduction in the quality of service was a likely consequence of the SLC, we are not seeking undertakings on service quality. Rather, we are seeking assurances that aftercare should continue to be available for all Dräger and Air-Shields products in the UK market on no less favourable non-price terms than now, and for a period of seven years from the last UK sale of the products concerned, in order to ensure a genuine continuation of choice.

10.30 We think this commitment to the availability of aftercare should also extend to products and accessories discontinued since 1999 but still in service (which will include those specifically mentioned in paragraph 10.28), since the merged entity's market power might otherwise reduce the incentive on it to support such products. If the merged entity could withdraw spares or servicing for such products, that might hasten trusts' replacement decisions, potentially expanding the replacement market in which the merged entity could exercise market power.

²⁶This commitment implies the requirement to provide the full range of products and accessories for user evaluation, and the requirement to include in any bid or proposal the most appropriate products and accessories from the combined range for the customer's requirement.

²⁷We include training in maintenance of equipment for trusts' own engineers or their nominees as well as direct servicing by Dräger engineers.

- 10.31 We would not wish to deter Dräger from seeking alternative (and potentially cheaper) sources of accessories or spare parts. It would therefore be possible for Dräger to substitute replacement accessories or spare parts of equivalent or improved functionality for existing ones where customers agree.
- 10.32 In order that potential customers are aware of the commitments that Dräger has made, we think that Dräger should also inform customers and potential customers of the implications of these undertakings for them.

Price controls

- 10.33 Commitments on range would address the concerns relating to choice but not those relating to the ability of the merged entity to raise prices (see paragraph 7.5). Given that we do not think that this will be addressed in the short term through the exercise of buyer power or through market entry, we believe that some form of temporary price control is necessary.
- 10.34 A retail price control could be used to address concerns about the merged entity's ability to raise prices. In our Notice of Possible Remedies we consulted on two possible approaches: a mechanism which controlled list prices and discounts, and a mechanism allowing hospitals the right to buy products on the same terms as previous purchases. Following consultation, we think that the latter approach is not well suited to the characteristics of this market (notably the infrequency of purchases and the wide range of specifications purchased) and would present significant implementation challenges without providing any substantial benefits over a simpler approach.
- 10.35 We therefore favour a simple retail price control which would have two elements.
- first, it would guarantee that all products and accessories (subject to the specific exceptions in paragraph 10.28) in the markets where we found an SLC, and associated aftercare (see paragraph 10.29), would be offered at no more than the list prices prevailing in 2003.²⁸ This would ensure that no individual trust suffered an excessive price increase; and
 - second, there would also be a control (applied retrospectively) on the average discount offered to all customers of items subject to the price control over the year. If the average discount fell below the 2003 average of [] per cent the control in the next year would be adjusted to compensate (in the last year of the control Dräger would donate any revenue earned from overshooting the control to a charity supporting neonatal services in the UK). This second control would ensure that actual prices do not rise beyond 2003 levels for trusts as a whole.

For the purposes of the price control, new variants which are intended to supersede existing accessories or spares will be included within the control on the same basis as the items they replace (assuming such replacement is permitted by the range control, for example in the circumstances described in paragraph 10.31). Products which replace existing products will be subject to the price control and may be subject to variation of the undertakings, and new products which do not replace existing ones will not be subject to the control.

²⁸Broadly, those listed in the Dräger 2003 price list and the Air-Shields 2002 price list and associated documents. We proposed in the Notice of Possible Remedies to require that a minimum discount be offered reflecting actual discounts recently achieved, but analysis of sales data provided by the parties demonstrated that the application of a cap at list price was more appropriate in the light of recent pricing practice.

10.36 We think that this represents a practicable safeguard against across-the-board price rises and against excessive price rises for individual trusts, even though it does not provide every customer with a guarantee that its prices would not rise (some might rise, some might fall and the cap would still be met). It should also ensure that commitments on range cannot be circumvented by continuing to supply products but doing so at very high prices.

10.37 We considered two possible drawbacks to this approach:

- To the extent that the markets have some of the characteristics of bidding markets (see paragraph 10.7) a retail price control might restrict their operation. We think the fact that the price control we have devised does not affect the ability of trusts to conduct bidding contests and of all suppliers to bid competitively avoids this risk.
- A retail price control would not stimulate entry, and if set too tightly it might militate against it. However, we do not believe that the control proposed would be too tight. We believe that the nature of the control proposed and the other measures we are putting in place to promote entry more than offset any risks of this kind.

Duration of range commitments and price controls

10.38 We consider that the commitments on range of products and accessories and the control on price should last from the date of agreement of undertakings until the end of 2007 (or three years from the date of acceptance of undertakings, whichever is the later) and that the commitments on aftercare should last for seven years after the last sale of the products or accessories with which they are associated (where this occurs before the end of 2007). We expect that the recommendations set out in paragraphs 10.16 to 10.18 will, over time (see paragraphs 10.24 and 10.25), have the effect of improving the prospects of new entry or expansion and the development of the exercise of buyer power on the part of the NHS such that, by the end of this period, price controls and range commitments will no longer be appropriate. We also believe that imposing a longer time period would become increasingly restrictive on the merged entity's ability to withdraw outdated products and replace them with new ones (see paragraphs 10.6 and 10.7), and create increasing difficulties in applying to new products a price control regime based on historic price lists. It would theoretically be possible to link the end of these regimes to particular events (for example, the establishment of a certain market share by rival companies) but we do not think that the additional complexity associated with such arrangements is justified. We prefer the simplicity and certainty of a time limited price cap.

10.39 Compliance with the price control will be monitored by an independent monitoring trustee who will provide annual reports to the OFT on the basis of data supplied by Dräger. As with the commitments on range (see paragraph 10.32) we think it right that Dräger should publish information to customers and potential customers outlining the structure of the price control regime.

10.40 Dräger argued that it needed to be able to secure changes to the undertakings in certain circumstances (notably where there was no demand for a product, where a product, accessory or spare part became unavailable or following an increase in its costs). We have provided (see paragraph 10.31) for substitution of spare parts or accessories of equivalent or better functionality. It will also be open for Dräger under the Act to make a case to the OFT that because of change of circumstances the

undertaking is no longer appropriate. The OFT is then obliged to advise the CC on whether any variation or revocation is appropriate.²⁹ We do not think that it is desirable or possible to define in advance every such circumstance. However, our view is that cases of verifiable independent collapse of demand or genuine unavailability of bought in spare parts or accessories, despite best endeavours to find a suitable substitute, might be regarded as relevant changes of circumstances. We think it less likely, however, that increases in costs could be similarly regarded, because in a competitive market Dräger would have an incentive to absorb them to remain competitive, and will have some ability to do so through improved sourcing, through efficiencies achievable through the merger or (in the case of costs attributable to exchange rate changes), through hedging.

Structural remedies

10.41 We considered whether a structural remedy, either alone or in addition to those set out above would be more effective in addressing the adverse effects of the SLC. Our analysis and consultation showed that the structural remedy most likely to be practicable was the one set out as option 2 in our Notice of Possible Remedies, which involves:

- requiring the merged entity to sell one range of products (probably the Air-Shields range) through an independent distributor in the UK (which might involve the divestment of assets comprising the Air-Shields UK distribution business); and
- controls on the terms (including the wholesale price) on which the merged entity supplied products to this independent distributor.

10.42 We saw significant theoretical benefits in a structural remedy of this kind:

- by maintaining competition at the distributor level it would be likely to promote choice and restrict the potential for price increases at that level;
- by creating more of a market in sales by manufacturers to distributors with experience of selling neonatal warming therapy products in the UK, and potentially establishing a distributor with a long-term incentive to seek products from overseas manufacturers, it might help to promote entry; and
- it has the potential to be simple and avoid many of the monitoring challenges presented by behavioural remedies

Some responses to our consultation (including that from the British Association of Perinatal Medicine) advocated a remedy of this kind on these grounds.

10.43 However, on closer analysis:

- it was far from clear that this remedy would have the desired effect. Its effectiveness would depend on the long-term viability of an independent distributor and on the attractiveness of that distributor as a vehicle for new entry at the manufacturer level and we had very substantial doubts on each of these points;

²⁹Enterprise Act, section 92(2).

- we were concerned that changes at the distributor level would create uncertainty for trusts in the short term;
- we had significant doubts over the practicability of this approach, notably whether a viable and attractive package of assets could be identified, whether a suitable buyer would come forward, and whether satisfactory commercial terms could be negotiated;
- further doubts over practicability arose from the overseas location of the parties and their manufacturing facilities; and
- we considered that such a structural remedy could not in any event be relied upon to work alone, and the arrangements which would need to be put in place to make this work (in particular a control on the wholesale price charged by the merged entity to the independent distributor and the 'Chinese wall' arrangements necessary to ensure that the independent distributor was not at a significant disadvantage in relation to its integrated competitor) would be complex and potentially burdensome, and would be likely to negate the theoretical benefit of simplicity cited in paragraph 10.42.

10.44 We concluded that the risk that in practice this approach might not be effective, coupled with its complexity, costs and burdens on the parties, outweighed its theoretical advantages.

Conclusion

10.45 We therefore conclude that the most comprehensive and appropriate remedies to the SLC in the short and the long term can be achieved by a package of actions comprising:

- recommendations to UK Health Departments and their procurement agencies designed to encourage market entry from overseas and the increased exercise of buyer power by trusts (see paragraphs 10.16 to 10.21);
- time-limited commitments by the merged entity to continue to supply a full range of products, accessories and aftercare in the relevant markets (see paragraphs 10.27 to 10.32); and
- a time-limited retail price control on the merged entity's products, accessories and aftercare in the relevant markets (see paragraphs 10.33 to 10.40).