THE MONOPOLIES AND MERGERS COMMISSION

Rockware Group Limited
United Glass Limited
Redfearn National Glass Limited

A Report on the Proposed Mergers

Presented to Parliament in pursuance of
Section 83 of the Fair Trading Act 1973

Ordered by The House of Commons *to be printed*
3rd May, 1978

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Introduction

1. The Department of Prices and Consumer Protection sent to the Commission the two following references respectively on 22 September and 31 October 1977:

Whereas it appears to the Secretary of State that it is or may be the fact that arrangements are in progress or contemplation which, if carried into effect, will result in the creation of a merger situation qualifying for investigation, as defined in section 64(8) of the Fair Trading Act 1973, in that:

(a) enterprises carried on by or under the control of Redfearn National Glass Limited (a body corporate incorporated in the United Kingdom) will cease to be distinct from enterprises carried on by or under the control of Rockware Group Limited; and

(b) as a result, the condition specified in section 64(2) of that Act will prevail to a greater extent with respect to the supply in the United Kingdom of glass containers; and

(c) the value of the assets which will be taken over exceeds £5 million.

Now, therefore, the Secretary of State in exercise of his powers under section 75 of the said Act hereby refers the matter to the Monopolies and Mergers Commission for investigation and report within a period of six months beginning with the date of this reference.[1]

D N Byrne

An Under Secretary of the Department of Prices and Consumer Protection.

22 September 1977

[1]See footnote on page 2.

Whereas it appears to the Secretary of State that it is or may be the fact that arrangements are in progress or in contemplation which, if carried into effect, will result in the creation of a merger situation qualifying for investigation, as defined in section 64(8) of the Fair Trading Act 1973, in that:

(a) enterprises carried on by or under the control of Redfearn National Glass Limited (a body corporate incorporated in the United Kingdom) will cease to be distinct from enterprises carried on by or under the control of United Glass Limited; and

(b) as a result, the condition specified in section 64(2) of that Act will prevail or will prevail to a greater extent with respect to the supply in the United Kingdom of glass containers; and

(c) the value of the assets which will be taken over exceeds £5 million.

Now, therefore, the Secretary of State in exercise of his powers under section 75 of the said Act hereby refers the matter to the Monopolies and Mergers Commission for investigation and report within the period beginning with the date of this reference and ending on the 21 March 1978.[1]

D N Byrne

An Under Secretary of the Department of Prices and Consumer Protection.

31 October 1977

2. The Chairman of this Commission acting under section 4 of the Fair Trading Act 1973 and paragraph 10(1)(a) of Schedule 3 thereto, directed on 30 September 1977 that the functions of the Commission in relation to the first reference and on 8 November 1977 in relation to the second should be discharged through a group consisting of six members of the Commission, with Mr E L Richards as Chairman. The composition of the Group is indicated in the list of members which prefaces this report.

3. In a letter dated 22 September 1977 to Rockware Group Limited, and a letter dated 31 October 1977 to United Glass Limited, the Office of Fair Trading informed each company of the Secretary of State's decision to make the reference in question and that he had not felt it necessary to make an order under section 74 of the Act, pending the outcome of the Commission's inquiry. Each letter asked for assurances that, until such time as the Secretary of State had announced his final decision after receipt and consideration of the Commission's report, Rockware Group Limited and its associates or United Glass Limited and its associates, as the case might be:

[1]On 14 March 1978 the Secretary of State announced that he was satisfied that there were special reasons why our report could not be made within the time specified in the original references. Accordingly, he decided to allow a further period to 15 April 1978 for the making of this report.

(i) would not directly or indirectly acquire more shares of, or interest in shares of, Redfearn National Glass Limited;

(ii) would otherwise refrain from taking steps which would or might result in enterprises carried on by, or under the control of, Redfearn National Glass Limited ceasing to be distinct from enterprises carried on by, or under the control of Rockware Group Limited or United Glass Limited;

(iii) would not undertake any action which might prejudice the reference or impede the taking of action under the Act which might be warranted by the Commission's report on the reference.

4. In response, Rockware Group Limited and United Glass Limited gave assurances which were accepted by the Office of Fair Trading on the understanding that in the event of the assurances being modified or withdrawn the Secretary of State would need to consider afresh, in the light of circumstances then existing, whether an appropriate Restriction of Merger Order should be made and laid before Parliament.

5. On 22 September 1977 the Department of Prices and Consumer Protection also referred to the Commission a proposed merger between Rheem International Incorporated and Redfearn National Glass Limited. On 9 February 1978 Rheem International Incorporated notified the Commission of its intention not to proceed with this merger. The Secretary of State for Prices and Consumer Protection on 16 February 1978 authorised the Commission to lay aside this reference.

6. Notices inviting interested parties to submit evidence to the Commission in relation to the references were placed in:

The Times
Daily Telegraph
Sunday Times
Investors Chronicle
Economist
International Bottler and Packer
Packaging News

7. In addition, we sought evidence from several Government departments, the Confederation of British Industry and Trades Union Congress. We also obtained evidence and views from a number of companies and organisations listed in Appendix 1. We held 17 hearings, three with Redfearn National Glass, three with Rockware Group Limited, and two with United Glass Limited; one each with representatives of the Trades Union Congress, Emhart (UK) Limited and with seven companies and organisations. These are indicated with an asterisk in Appendix 1.

8. Some of the evidence obtained in the course of the inquiry was of a commercially confidential nature; our report contains only such information as we consider necessary for an understanding of our conclusions.

9. We wish to express our gratitude to all those who helped us in our inquiry and particularly to the three companies principally concerned upon whom we made heavy demands for evidence.

CHAPTER 1

The proposals of Rockware Group Limited and United Glass Limited to acquire Redfearn National Glass Limited

10. On 21 September 1977 Rockware Group Limited (Rockware)[1] announced, through Kleinwort Benson Limited, its intention of making an offer for the whole share capital of Redfearn National Glass Limited (Redfearn)[1]. The terms were to be 13 Rockware shares and £7·66 cash for every eight Redfearn shares.

11. On 22 September the Secretary of State for Prices and Consumer Protection referred the proposed merger between Rockware and Redfearn to the Monopolies and Mergers Commission, under section 75 of the Fair Trading Act 1973. Upon this the bid lapsed in accordance with the City Takeover Code.

12. On 31 October United Glass Limited (United Glass)[1] announced, through S G Warburg & Company Limited, its intention to make an offer for the entire share capital of Redfearn. On the same day the Secretary of State for Prices and Consumer Protection referred this proposed merger to the Monopolies and Mergers Commission.

13. The references relating to the proposed mergers of Rockware and Redfearn and of United Glass and Redfearn are given in paragraph 1.

[1]Henceforth Redfearn National Glass Limited will be referred to as Redfearn, Rockware Group Limited as Rockware and United Glass Limited as United Glass.

CHAPTER 2

The United Kingdom Glass Container Industry

14. Redfearn is engaged solely in the manufacture and supply of glass containers. Although Rockware and United Glass also manufacture other related products the main business of both of these companies is also the manufacture and supply of glass containers. Our inquiries have therefore been concerned with the glass container industry.

The manufacturing process

15. The first fully automatic glass bottle-making machine was produced in the United States by Michael Owens in 1903. Automatic machines have since been increasingly used to produce glass containers required in large numbers and are now used by the United Kingdom industry to produce all types of glass containers.

16. The manufacturing process begins with the mixing of the raw materials in a batch plant. The materials are then fed into a furnace where they are heated to about 1500° Centigrade to form liquid glass which is fed as gobs into the moulds of a forming machine. When the container has been formed it travels through a long annealing chamber, or lehr, which cools the container at a controlled rate to minimise the internal stresses in the material. At what is called the 'cold end' of the production line the containers are inspected and packaged.

17. The raw materials from which glass is produced are almost entirely indigenous. Rather more than half by weight consists of sand, the other main constituents being soda ash and limestone. In addition, a batch usually contains a proportion of waste glass known as 'cullet' which reduces the temperature at which the mix melts to form glass. Among the other raw materials employed may be a small amount of 'decolouriser' used to produce colourless, or 'white flint', containers. The manufacture of white flint glass requires sand of a low iron content. Other colours of glass are produced by using sand of a higher iron content and by the addition of certain chemicals in the batch.

18. With the exception of soda ash, where the Alkali Division of Imperial Chemical Industries Limited is the only United Kingdom supplier, the industry purchases its raw materials from a number of sources. Sand of the necessary quality can be obtained from a number of sources and at least one container manufacturer owns its own quarry. There are also various suppliers of limestone. The industry does not expect any difficulties in obtaining adequate supplies of all the raw materials needed although considerable difficulties were caused in 1974 when an industrial dispute reduced supplies of soda ash.

19. The batch is fed into the furnace by a conveyor. Furnaces are now usually fired by natural gas or by oil, although some can be fuelled by either and some furnaces, especially those of a smaller size, are fuelled by electricity. Modern

furnaces are significantly larger than those constructed some years ago and have higher efficiency in the use of fuel. Improvements in the quality of refractory materials have increased the life of furnaces and so reduced capital costs per tonne of glass melted[1].

20. A large furnace can serve a number of forming machines producing containers of the same colour. The molten glass leaves the furnace by the forehearth and drops in gobs (approximately sausage-shaped pieces of molten glass cut by shears to the weight required to produce the bottle) into the moulds of the forming machine. The larger machines currently used in United Kingdom glass container factories are mostly of the individual section type produced by the Emhart Corporation of the United States (Emhart). In this machine each mould is stationary and successive gobs are fed to different moulds on the machine. In some machines (double-gob) two gobs are produced at the same time and fed to parallel moulds on the machine; it is similarly possible to have triple-gob machines with almost correspondingly higher output. Eight is the largest number of sections on any machines currently in use in the United Kingdom. 8-section double-gob machines are available with either 4¼in, 5½in or 6¼in distance between the centre of the moulds on each section. There is also available a triple-gob machine with centre distances of 4¼in between the moulds. The greater centre distance between the moulds permits the production of large containers by the double-gob process. 10-section double-gob machines are available in either 4¼in centre distance or 6¼in centre distance design. At least one will be installed in the United Kingdom in 1979.

21. The inspection of containers after they have left the lehr is of considerable importance for high-speed lines at filling plants where costly disruptions can be caused by faulty bottles. They are checked for flaws in the material, height, capacity and other critical dimensions. Automatic inspection devices are being increasingly used for this work but sorters are still necessary on such lines to check against certain visual defects. Containers found to be defective are discarded and melted down in the furnace as cullet.

22. At the end of the production line the containers are packed. On most of the faster and some of the slower production lines there are machines which place containers on standard-size pallets that are then mechanically shrink-wrapped. Where customers prefer to have their glass containers packed in their own cartons or fibreboard cases these may be packed manually or mechanically. Because of the nature of the production process and seasonal factors many containers are not delivered to the customer immediately but are stored in the manufacturer's warehouse.

23. The manufacturing process is continuous. During the life of up to seven years furnaces are operated continuously except when they are being repaired. Machine lines operate on a 24 hour basis for seven days a week. There is therefore little scope for varying output to match fluctuations in demand.

[1]The term 'melted tonne' refers in this report to one tonne (equalling 2,204 lb) of glass produced from a furnace. 'Good tonne' refers to an output of containers of a satisfactory quality weighing one tonne.

Furnace output can be varied to a limited extent; it is possible to run furnaces below rated output but the savings in costs are minimal; equally it is possible to increase furnace output somewhat above the rated level by boosting (ie heating by electricity to supplement the normal heating process). The emptying of furnaces for short periods is impracticable as the refractory material is likely to be damaged in the process. As the forming machines are normally run continuously at as high an efficiency as possible their output cannot be increased to meet abnormally high demand. If the demand should fall, machines can be taken out of production and the rate at which glass is melted in the furnaces reduced accordingly. However, we have been told by one manufacturer that a supplier's initial reaction to a fall in demand would usually be to maintain production and allow stocks to rise to a level he regards as the maximum he can carry (see paragraph 37).

Recent history of the industry

24. In the years between the wars the United Kingdom glass container industry consisted of a large number of small manufacturers, some of which were owned by bottlers. For a large part of this period the industry experienced severe competition from overseas manufacturers. In 1932, at a time when the five largest glass container manufacturers were reported to be working at 60 per cent capacity, a 20 per cent import duty was imposed on glass containers imported from non-Commonwealth countries, and in 1934 this was increased to 25 per cent for most types of glass container.

25. In 1938 an association, the Glass Container Association (the name of which was subsequently changed to the British Bottle Association) was formed by a number of manufacturers and established a system of minimum prices for glass containers. This system continued until the Restrictive Practices Court found it to be against the public interest in 1961. The Association was wound up in the same year.

26. The Glass Manufacturers' Federation, which was established in 1926, is the central organisation representing the glass manufacturing industry (other than flat glass). It is not concerned with prices. Among its current activities on behalf of the glass container industry are its 'Get it in Glass' campaign to promote sales of glass containers and the pilot 'bottle bank' scheme to encourage the collection and re-cycling of used containers.

27. In 1961, when the British Bottle Association's agreement came before the Restrictive Practices Court, there were over 20 manufacturers of glass containers compared with 12 now. There was a contraction in the number of manufacturers during the 1950s and the 1960s when Rockware and United Glass made the acquisitions described in paragraphs 69, 70 and 105, and Redfearn was itself formed by the merger in 1967 of its two constituent companies.

28. The three largest manufacturers are now:

United Glass

The company had about 27 per cent of the United Kingdom market (by volume) in 1977. It is particularly strong in the wines and spirits sectors and has high

sales in soft drinks containers. It also produces containers for a wide range of other products.

Rockware

The company's share of the United Kingdom market amounted to about 26 per cent (by volume) in 1977. It is strongest in dairy products, foods and beer and cider, but also produces containers for other uses, including soft drinks and wines and spirits, as well as specialised containers for toiletries and cosmetics, including opal ware.

Redfearn

The company had about 16 per cent of the home market (by volume) in 1977. It is strongest in the soft drinks, beer and cider and food sectors but also produces for other uses except toiletries and perfumery.
Further information on the companies' market shares of individual product sectors are given in Appendix 2.

29. In 1977 imports accounted for almost 10 per cent of containers sold in the United Kingdom. The balance of about 20 per cent was supplied by other manufacturers, three accounting for most of this amount. The principal companies were:

Albion Bottle Company Limited

Mainly supplying the soft drinks and food sectors.

Beatson, Clark & Company Limited

The largest producer of containers for pharmaceuticals.

Canning Town Glass Limited (a subsidiary of Arthur Bell & Sons Limited, whisky distillers)

Mainly supplying the soft drinks, wines and spirits, dairy products, beers and ciders sectors.

Co-operative Wholesale Society Limited

Supplying other groups within the CWS and also outside customers, its production being primarily in the milk, food and soft drinks sectors.

Gregg & Company (Knottingley) Limited

Supplying mainly the food and pharmaceutical sectors.

Lax & Shaw Limited (a subsidiary of Associated British Foods Limited).

Supplying the spirits, soft drinks, food, medical and household sectors.

Lewis & Towers Limited

Supplying bottles mainly for pharmaceuticals, laboratory chemicals and agrochemicals.

Economics of the industry

30. The industry has become progressively more capital intensive in recent years. At each stage of production labour input per unit of output has fallen as a result of the introduction of new, more productive plant. At present over-

all labour costs, in production, stocking and distribution account for about 30 per cent of sales revenue compared with 20 per cent for raw materials and about 14 per cent for furnace fuel. A comparison of paragraphs 38 and 50 shows the average number of units produced per employee increased from 377,000 in 1973 to 400,000 in 1976.

31. As a result of advancing technology in furnace design, forming machines, lehrs, and inspection and packaging machinery the minimum economic size of a new one-furnace plant for mass-producing glass containers has been estimated by one manufacturer at a daily melting capacity of 300 tonnes (some 4 per cent of current United Kingdom capacity). Such a plant, it is estimated, would cost about £15 million to put up on a green field site and would have to operate at about 85 per cent capacity to break even.

32. The large United Kingdom producers can obtain considerable savings from economies of scale throughout the manufacturing process.

33. An increase in the size of furnaces can lead to a reduction in the amount of fuel consumed per tonne of glass melted provided the furnace can be operated at something approaching maximum capacity.

34. Appendix 3 shows the higher rates of output of the eight-section double- and triple-gob machines and ten-section machines (see paragraph 20) which may make them capable of producing containers at significantly lower unit costs. However, to make it economic to install the larger, faster machines it is necessary to use them on production runs of adequate length. The cost of time lost in setting up the production of a container on such a machine and the subsequent running-in time to attain optimum production of 'good containers' has to be spread over a longer period than for a slower machine.

35. With the greater output from a larger, faster machine it may become more economic to introduce automatic inspection and packaging equipment giving rise to further savings.

36. The advantage of a reduction in unit costs to be gained from the installation of large furnaces and large forming machines has to be balanced against certain disadvantages. The first is a reduction in flexibility. A furnace and all the machines it serves can produce only one colour of glass at a time. To have an adequate length of run the large, faster machine must produce greater numbers of each container than a small machine. In order to provide greater flexibility a manufacturer will therefore also have a number of smaller machines and smaller furnaces. A second disadvantage is that any disruption to production in a larger plant may have more serious consequences in reducing supplies to customers. A third disadvantage is that large production runs may entail the manufacturer holding larger stocks (to meet customers' needs until the next production run of the container) than if he ran shorter and more frequent runs on smaller machines. These considerations lead manufacturers to adopt their own mix of furnaces and machines to meet the needs of their customers as flexibly and as efficiently as possible.

37. The level of stocks of containers held by the industry is of significance in considering the economics of manufacture. By allowing the level of stocks to fluctuate with changes in demand (letting them increase when demand is low and drawing on them to meet peak requirements) it is possible to maintain a more even level of production which is suited to the manufacturing processes of the industry (see paragraph 23). Manufacturers are however constrained in the size of stocks that they can hold by the costs of financing them and of storage (see paragraphs 77, 125 and 151).

Labour

38. With the installation of more productive machinery, there has been a decline in the numbers employed in the industry:

Year	*Estimated average number of employees (excluding management and office staff)*
1973	17,859
1974	15,912
1975	14,151
1976	15,611

Source: Glass Manufacturers' Federation.

The reduction was greatest in 1974 and 1975 when, after a period of high demand, there was a slackening of home demand. A number of manufacturers then instituted voluntary redundancy and early retirement schemes.

39. The workers in the industry are represented by a number of trades unions (those recognised by the three largest manufacturers are set out in paragraphs 81, 129 and 155).

Technology

40. Technological developments are of importance in the industry. These affect all processes of production, including for example the automatic batch-mixing equipment feeding the furnaces, technology in furnace design and construction, electronic machine timing, mould-coatings and developments in automatic inspection and packaging equipment. Improvements in the manufacturing processes have, for example, allowed a reduction in the weight of milk bottles from 18 oz of the pre-war bottle to a current figure of 12 oz, with the increasing use of a 9 oz bottle. This has helped to reduce the effect of inflation on the price of this bottle and also gives advantages in its use.

41. Each of the major United Kingdom manufacturers has its own research and development department. Each also acquires technology developed by other manufacturers. In the case of United Glass this is secured under a general technical assistance agreement with Owens-Illinois Inc of the United States. Rockware and Redfearn make specific arrangements with individual manufacturers.

42. Applied research work is carried out for the United Kingdom industry by its own association, the British Glass Industry Research Association. This is situated next to Sheffield University whose Department of Glass Technology (dating from 1916) co-operates with the glass industry in both education and in research.

The demand for glass containers

43. Nearly all the glass containers made by the companies which are the subject of this inquiry are sold to customers who then pack or bottle their own products in them. The demand for glass containers, therefore, is ultimately related to the demands for these products.

44. Alternative forms of packaging are also used for many products, but wine, spirits, and certain processed foods, eg pickles, are packaged almost entirely in glass. Most milk is delivered in glass bottles. However, other forms of packaging, in particular cans or plastics, are also used for beer, soft drinks, foods, toiletries and household goods. These latter product groups account for over half the number of glass containers produced.

45. Many factors influence the choice of packaging materials: physical suitability of the container, consumer acceptance, the relative price of raw materials and the cost of using (and installing) alternative filling lines. In recent years cans have been widely used for packing beers and soft drinks. One of the glass container manufacturers has estimated that of packaged drinks (ie excluding draught, bulk and catering sales) sold in 1976, 28 per cent of beers and ciders and 22 per cent of minerals were in cans. The remainder (72 per cent and 78 per cent) were packed in glass but since a proportion of these were returnable bottles the proportion of glass containers to cans bought by the drinks' manufacturers was substantially lower; in 1976 purchases of glass containers were estimated to account for 16 per cent of containers purchased for beers and 46 per cent of those purchased for soft drinks. Whilst there are indications that the relative costs of production have moved in favour of glass containers compared with cans, once a packer has installed a can-filling line he would have to install a separate filling line to enable him to switch to glass containers.

46. Seasonal variations in demand for products packed in glass lead to corresponding variations in demand for many types of glass containers. There is a strong pre-Christmas demand for wines and spirits, followed by lower sales in January. Demand for beer and cider increases before Christmas and also in the summer. Soft drinks consumption peaks in the summer. Seasonal variations in demand for processed foods in general are smaller, but there is a steep dip in demand in the holiday months of July and August and a peak in February and March. Apart from this general pattern of demand unexpected changes may occur because of, for example, unusual weather or a change, or anticipated change, in excise duty or VAT.

47. Although the importance packers give to price, quality, security of supply and service varies according to circumstances, security of supply ranks high. If they cannot obtain containers they cannot sell their products and may even have to close down a plant temporarily. Because of this many of the larger packers have two or three suppliers.

48. Consideration has been given in some overseas countries to the cost of containers (especially non-returnable bottles and cans) in terms of the resources necessary to manufacture and dispose of them.

49. In the United Kingdom a Government working party is at present investigating the environmental and economic impacts of returnable and non-returnable beverage containers to consider whether any action should be taken to alter the present market share of the two systems. If as a result any regulatory legislation were enacted, it might affect the level of demand for glass and other forms of packaging.

50. The level of the demand of the home market for glass containers has varied significantly in recent years. The following table shows production by United Kingdom manufacturers, their sales (in units and by value) and imports and exports for the years 1972–77:

United Kingdom market for Glass Containers 1972-77

	1972	1973	1974	1975	1976 (53 *weeks*)	1977
(a) *Millions of Units*						
Production by UK Manufacturers(*)	6,437	6,731	6,702	6,238	6,369	6,869
Total sales by UK producers (†)	6,501	7,148	6,459	6,200	6,546	6,548
Plus imports (‡)	234	361	1,249(¶)	563	427	665
Minus exports (§)	263	400	374	313	306	354
Total UK sales	6,472	7,109	7,334	6,450	6,667	6,859
Imports as percentage of total UK sales	3.6%	5.1%	17.0%	8.7%	6.4%	9.7%
(b) *Value* (£ *millions*)						
Total sales by UK producers (†)	107.40	122.61	137.40	175.36	220.62	267.43
Plus imports (‡)	3.98	6.70	44.07(¶)	18.01	15.20	30.68
Minus exports	4.73	6.06	6.47	8.80	12.22	14.86
Total UK sales	106.65	123.25	175.00	184.57	223.60	283.25
Imports as percentage of total UK sales	3.7%	5.4%	25.2%	9.8%	6.8%	10.8%

**Source:* Glass Manufacturers' Federation.

†The total sales figures given by the Glass Manufacturers Federation and used above differ slightly from Business Monitor figures because of the different coverage and accounting dates used.

‡Customs & Excise figures for imports (used above) include tubular glass containers, but it it is understood that such imports are small.

§Export figures are taken from Customs & Excise sources, and include exports of tubular glass containers. The figures provided by the Glass Manufacturers' Federation of direct exports of containers (see paragraph 57) do not include tubular containers. Using these figures would give a marginally higher figure for the size of the United Kingdom market.

¶The Glass Manufacturers' Federation estimates imports (including tubular glass containers) in 1974 to be about 950 million units valued at £33.8 million.

51. The above table shows that in unit terms home sales by United Kingdom producers were about the same level in 1977 as they were in 1972 although domestic demand had grown by nearly 6 per cent[1]. The difference is accounted for by a growth in imports. In 1973 United Kingdom producers sold about 9 per cent more containers than they did in 1977 and exports marginally exceeded

[1]There is some evidence that over the period the average size of container increased, indicating that although unit sales were similar the industry was providing packaging for a greater quantity of its customers' products (see tables in paragraphs 86, 92, and 160).

imports in units, though not in value. In 1974 domestic demand was slightly higher but manufacturers' sales were markedly lower and the share of imports in the domestic market rose to 17 per cent. In 1975 and 1976 United Kingdom demand fell away significantly and import penetration subsided from its peak in 1974. 1977 saw some increase in domestic demand but it was accounted for by a growth in imports which accounted for a share of nearly 10 per cent of the domestic market.

52. Reduced sales by United Kingdom manufacturers in 1974 and the marked increase in imports resulted from a number of factors. Manufacturers' stocks were generally low at the end of 1973 as a result of a good summer and buoyant consumer spending encouraged by tax reductions on soft drinks and alcoholic drinks. The industry was prevented from replenishing stocks by a shortage of soda ash in 1974. To try to ensure continuity of supply many customers turned to overseas (mainly Continental) suppliers. The prices were, we understand, often much higher than those of United Kingdom manufacturers and long-term orders had to be placed, some of which ran into 1975. However, imports in 1976 were not reduced to the level of 1972. Partly because of liquidity problems, there were generally insufficient stocks in the United Kingdom to meet customers' demands in full during the hot summer of 1976 and a number of customers turned to the Continent for part of their supplies. There were fears of further shortages in early 1977 as a result of increased demand and some customers again turned to the Continent for part of their supplies. We have been told that the 1977 prices were often similar to those of United Kingdom manufacturers, and this has been attributed by some manufacturers largely to overcapacity in the Continental industry.

53. Whereas before 1973 imports were largely confined to small or specialised ware, mainly for toiletries and perfumery, the shortages in 1974 (see paragraph 52) resulted in imports of standard containers. For example, 61 per cent of imports by value and 53 per cent by units were for beer, cider, wine and spirits, compared with 15 per cent and 14 per cent respectively in 1972.

54. The three largest manufacturers have imported glass containers for their customers at times when they have been unable to meet their full requirements. Figures in this report of these companies' sales do not include these containers where such sales have been of any significance.

55. Import duties on glass containers from members of the European Economic Community were finally abolished at the end of June 1977. Even with the advent of containers and roll-on roll-off ferries estimates by Rockware and United Glass show that the cost of transport from the Continent to a United Kingdom customer adds from 10 per cent to as much as 30 per cent to the cost (depending on the size of the container) compared with transport from a factory in the United Kingdom.

56. Demand for glass containers depends partly on the likely demand for products sold in such containers and this in turn depends upon the amount of available disposable income in home and export markets as well as other factors such as the taxation carried by the products. Changes in demand are likely to vary significantly between one product sector and another but for the home market as a whole the major manufacturers foresee an increase in demand of the order of 3 per cent per annum (in number of units) over the next three or four years. This figure could be affected by changes in the respective shares of glass and of other forms of packaging, in particular, for example, of glass containers and cans in the beer market, as well as by other basic assumptions such as the market growth for products. The general view appears to be that there is likely to be greater growth in the wines, spirits and soft drinks sectors than the foodstuffs and other non-beverage sectors.

57. Direct exports account for only a small percentage of the sales of United Kingdom glass container manufacturers, although it is understood that there are also some exports made by bottle merchants:

Year	*Total sales (million units)*	*Exports (million units)*
1972	6,501	220
1973	7,148	271
1974	6,459	223
1975	6,200	246
1976*	6,546	267
1977	6,548	312

Source: Glass Manufacturers' Federation.

*53 weeks

How business is done

58. Most of the industry's output is sold direct to customers who use it for packing their products. The terms on which business is done do not vary significantly between the three major manufacturers. The normal practice (especially with larger customers) is for the user to indicate the size of his requirements for a period of about a year ahead and the timing of his requirements within this period. The manufacturer then tells the customer what quantity he can supply. The understanding thus arrived at is normally regarded as committing neither party and in the event of the customer not requiring the containers or the manufacturer not supplying them, each party apparently accepts that it has no enforceable rights against the other. We have been told that such arrangements can lead to problems for the manufacturer if the customer does not take up his estimated requirements, for example, in the event of a down-turn in demand for his product, or for the customer if the manufacturer cannot supply, for example, in the event of an overall increase in the demand for his containers. Recently there have been suggestions by one of the container manufacturers for firmer arrangements.

59. Small customers requiring standard glass containers do not usually indicate their long-term requirements but place orders for deliveries as required. The manufacturers have a minimum size for deliveries which is usually a vehicle load.

The smallest users are not usually served directly by the manufacturers but by bottle merchants or wholesalers. The latter buy glass containers from manufacturers, hold stocks and supply in the small quantities required by their customers. Bottle wholesalers are particularly important (together with pharmaceutical wholesalers) in the supply of pharmaceutical bottles to independent pharmacists.

60. The prices charged by the major manufacturers include standard packaging and usually also delivery to the customer's premises. An additional charge is made for non-standard packaging.

61. Although each major manufacturer has an unpublished price list for standard bottles it is the practice for prices, especially to larger customers, to be negotiated individually. Some major manufacturers reduce their prices to larger customers by a discount on their purchases, and also add an additional charge to the orders of very small customers to contribute to the extra unit cost of meeting their small orders.

62. Whether the price is negotiated with the customer or is taken from a price list the charge for delivery by the major manufacturers is standard irrespective of the distance from the factory to the delivery point. One reason for this is apparently that some customers have factories at a number of different locations and require a standard price irrespective of the factory of origin or delivery point. Another is that in planning production it is often necessary for containers to be produced at factories which are not those nearest to the customer and in such cases the customer could not be expected to bear the cost of the extra transport involved.

63. Major glass container manufacturers deliver their products to customers' premises, some using their own vehicles and others outside contractors or a combination of both.

Recycling of used containers

64. The industry is actively investigating the possibility of extending the recycling of waste glass, and a pilot scheme operated by the Glass Manufacturers, Federation in collecting waste containers in skips, referred to as 'bottle banks" is providing experience of how the process might be operated on a larger scale.

CHAPTER 3

Rockware Group Limited

65. The turnover of Rockware for the year 1977 totalled £89·2 million, including £5·3 million exports. Profit before interest charges amounted to £9·0 million and profit before tax to £7·8 million.

66. In 1976 (the latest period for which published information is available) the company had an average of 6,238 employees (including directors), their aggregate remuneration amounting to £21·5 million.

67. The principal activity of Rockware is the manufacture of glass containers through its subsidiary company, Rockware Glass Limited (Rockware Glass), which in 1977 accounted for some 90 per cent of both turnover and profits. Other subsidiary companies produce plastic containers, moulds for the glass industry and handling and processing equipment for containers. In addition another subsidiary, Rockware International Limited, provides technical assistance to overseas companies in the manufacture and marketing of glass containers. The Group owns 20·4 per cent of the equity of The Irish Glass Bottle Company Limited which manufactures glass containers in the Irish Republic.

History and development

68. The Rockware Glass Syndicate Limited, the original company of the Group, was incorporated in 1919 to manufacture glass containers on a site at Greenford, Middlesex. The manufacturing facilities were subsequently enlarged to meet the increasing demands for the company's products and a second factory was opened at Doncaster, South Yorkshire, in 1934.

69. In 1955 the company acquired Fountain Glass Works of Liversedge West Yorkshire to provide additional manufacturing capacity. In 1958 it acquired the Portland Glass Company of Irvine, Ayrshire which was used to serve the needs of its Scottish customers in the spirits, soft drinks, dairy and food industries.

70. Rockware expanded further by acquiring the Garston Bottle Company and Forsters Glass Company, both situated in Merseyside, in 1966, and Jackson Brothers (of Knottingley) Limited, West Yorkshire, in 1968. A new factory was built at Doncaster to replace the works there and started production in 1969. The company subsequently ceased production at Liversedge in 1969, at Garston in 1970, and at Greenford in 1973.

71. The company extended its interests beyond the manufacture of glass containers in 1960 by purchasing Blewis and Shaw (Plastics) Limited which was subsequently renamed Rockware Plastics Limited. In 1964 it acquired Burwell, Reed and Kinghorn Limited, the Leeds mould-makers. The company's interests in plastics were extended in 1969 by the purchase of the Marrick Manufacturing Company Limited, now known as Rockware Plastics (Reading) Limited and in

1977 by the acquisition of Stalcon Plastics Limited of Norwich. It acquired a 20·4 per cent shareholding in The Irish Glass Bottle Company Limited of Dublin in 1976. In 1977 Rockware purchased Kingston Conveyers Limited of Hull, manufacturers of handling and processing equipment for all types of containers. To reflect the wider interests of the company its name was changed to the Rockware Group Limited at the end of 1966.

72. In 1972 Rockware approached Redfearn with the suggestion that the two companies should consider the possibility of a merger. Rockware's views on the advantages of a merger were, first, that it would produce considerable benefits in, for example, more efficient production runs, savings in the costs of warehousing and distribution and in being able to undertake research and development work more economically; secondly, the merged companies would also be in a better position to reduce manning levels, particularly at the cold-end where rationalisation would give increased opportunities for mechanisation; thirdly, there would be more scope for increasing prices of glass containers against those of competitive materials and thus opportunities for improving the existing low levels of profitability, once the temporary over-capacity in the glass container industry has ceased. The Board of Redfearn, however, did not consider that the proposed merger was in the interests of their company and, in the face of this decision, Rockware did not pursue its proposals further.

73. Pilkington Brothers Limited holds approximately 19·5 per cent of the equity share capital of Rockware which it purchased from Slater Walker Securities Limited in 1975. The announcement made on 21 September 1977 of Rockware's intention to make an offer for the share capital of Redfearn indicated that Redfearn shareholders would be offered the choice of a share exchange (plus cash) and a cash alternative. The arrangements for the cash alternative included the underwriting by Pilkington Brothers Limited of such number of Rockware shares as would increase its holding in the new company to a maximum of 25 per cent. Pilkington Brothers Limited has recently told Rockware that in the absence of major changes in circumstances it would not seek to acquire control of Rockware for at least five years and that at present it has no intention of doing so after that time.

Rockware Glass

Capacity and sales

74. Rockware Glass is by sales value the second largest United Kingdom manufacturer of glass containers. Its total, home and export sales and share of the home market in millions of containers since 1972 are given in the following table:

Year	*Total sales* m units	*Home sales* m units	*Share of home market**	*Export sales* m units
1972	2,024	1,930	29.8%	94
1973	2,239	2,139	30.1%	100
1974	1,987	1,922	26.2%	65
1975	1,791	1,741	27.0%	50
1976	1,945	1,850	27.7%	95
1977	1,898	1,771	25.8%	127

Details of the company's share of the constituent sections of the market in 1977 are given in Appendix 2.

*The share of the home market is calculated from data in the table in paragraph 50.

75. Furnace capacity has been increased by 12 per cent since the end of 1972. The efficiency of furnaces and other production plant had also been increased thus enabling production to be further increased (see paragraphs 92 and 93). Appendix 3 gives details of the forming machines operated at the end of each of the years 1972 and 1977. With the installation of higher speed machines and the withdrawal of older machines there has been little change in Rockware's basic machine capacity. However, the company has been able to achieve a general improvement in the running speeds of machines over the period thereby significantly increasing their potential output (see paragraph 92).

76. Rockware Glass has five factories producing glass containers. Their present production range is as follows:

Knottingley (Bagley)—five furnaces producing green and white containers for wines and spirits, foods and other beverages; it also produces very large containers and cosmetics ware (both coloured and white).

Knottingley (Headland)—three furnaces producing white containers for foods, spirits and other beverages.

Doncaster (Wheatley)—five furnaces producing white containers for foods, spirits and other beverages; it also produces opal glass containers.

St Helens—six furnaces producing amber and white containers for beers and ciders, soft drinks, foods and spirits.

Irvine—three furnaces producing white and green containers for spirits, other beverages and foods; it also produces half-white (ie pale green) spirits bottles.

77. The company normally holds stocks of bottles representing up to eight or nine weeks' production, the actual level varying according to seasonal and other fluctuations in demand. In 1977 the level of stocks ranged from 170 to 288 million units representing respectively a sales value of £7·4 million to £12·5 million at current average selling prices.

78. The company owns storage facilities at its factories and also at outside warehouses. These are supplemented by additional rented space when stocks are abnormally high. Its own vehicles deliver about 30 per cent of its sales to customers, the remainder being transported by hired vehicles.

Management

79. A diagram of the management structure of Rockware Glass is at Appendix 11.

Employment and labour relations

80. Employment in Rockware Glass has fallen overall in recent years as can be seen from the following table:

Year	*No. of employees (including group head office) at year-end*
1972	6,872
1973	6,634
1974	6,161
1975	5,343
1976	5,727
1977	6,021

81. Process workers are represented by the Transport and General Workers' Union and the National Union of General and Municipal Workers. The craft unions, ie the Amalgamated Union of Engineering Workers, the Electrical, Electronic Telecommunication and Plumbing Union and the Union of Construction Allied Trades and Technicians, are recognised at all factories. The Association of Scientific, Technical and Managerial Staffs and the Amalgamated Union of Engineering Workers represent certain staff.

Dealing with customers

82. The company enters into annual contracts with customers which it regards as an indication of the quantities of containers likely to be required but not as being legally binding. The customers then review their requirements monthly or quarterly and finally give call-off instructions which can still be amended at any time. Prices for non-standard containers are negotiated on the basis of the costs of production. For standard bottles the company has an unpublished list of prices (which include a standard delivery charge). There are some reductions in these prices for large customers, and some increases for very small customers which the company considers reflect the increased cost of meeting their needs. An extra charge is made for non-standard packaging.

83. Four large customers accounted for about 25 per cent of Rockware Glass's sales in 1977. However, it also has a number of small customers; in 1977 about 38 per cent of the company's customers each purchased less than £5,000 of containers.

Technical

84. The company's technical division is located at the Knottingley factory site. It has a staff of 65 which is expected to be increased to about 100 during the next year. The total cost of its research and development work, including in-factory development work amounted in 1977 to about 1 per cent of the company's turnover.

85. The company purchases know-how as required from outside sources. Examples of this are the agreement with Wheaton Industries Incorporated of the USA in 1955, which has enabled the company to manufacture small high-quality ware for the toiletry and cosmetics markets, and a recent agreement with the German Heye company for the manufacture of light-weight containers.

Financial information

(*a*) *Trading performance 1972 to 1977*

86. Appendix 4 shows figures of Rockware's average capital employed (at book values), sales and profits, from 1972 to 1976 (and interim figures for the

six months to June 1977) for its activities as a whole, ie the glass (container manufacture and Rockware International), plastics, and engineering divisions combined; and separately for glass containers. The glass division accounted for 93 per cent of group capital employed, sales, and operating profit in 1976. The division's sales in 1976 totalled £67·7 million of which glass container sales were £67·5 million and Rockware's overseas technical advice service the remaining £0·2 million[1]. The results for glass containers were as follows:

	Year ended December					*Half year to June*
	1972	1973	1974	1975	1976	1977
(i) Sales value index	100	114	122	157	201	235
(ii) Profit index	100	110	149	257	311	354
(iii) Volume produced indices:						
Good tonnes‡	100	104	100	95	101	110*
Units	100	104	99	87	92	99*
(iv) Profit rate of return:	%	%	%	%	%	%
On capital employed	11.0	11.2	13.3	18.0	19.9	(not available)
On sales	6.9	6.8	8.6	11.4	10.7	10.4†
(v) Average return on capital employed for quoted companies in manufacturing industry	14.7	16.8	16.1	14.5	17.5	(not available)

*Estimates for a full year.

†Rockware's preliminary results for 1977 show for the glass division as a whole a profit rate of return of 9.0 per cent of sales compared with 10.3 per cent for 1976.

‡See footnote page 6.

87. Rockware's return on capital employed in the whole of the group increased in each successive year from 11·2 per cent in 1972 to 19·5 per cent in 1976[2] but until 1975 was somewhat lower than the average return for quoted companies in United Kingdom manufacturing industry which, like that for Rockware, is also shown on a book value basis. Capital employed includes, in the case of Rockware, freehold and leasehold properties which have been revalued, amounting to £12·8 million out of the total group capital employed of £39·0 million at end–1976. If the surpluses arising on revaluation were excluded, Rockware's return on capital employed in 1976 on a historic cost basis would be increased by about 1 percentage point to about 20·5 per cent.

88. The value of glass sales doubled over the years 1972 to 1976 but the glass container production volume indices shown in the table in paragraph 86 indicate a lack of growth in terms of the numbers of containers produced. Rockware has, however, told us that there has been an increase in the average size of containers (see paragraph 92).

[1]Rockware's preliminary results for 1977 show glass division sales of £80.8 million, representing 91 per cent of group sales of £89.2 million.

[2]These figures are based on the average capital employed although in Rockware's published accounts the returns on capital employed are shown for the group, and for each operating division, by reference to closing capital employed.

89. Rockware told us that between 1972 and 1976 its selling prices for glass had risen proportionately less than the costs of materials, labour and services. The company attributes its ability to absorb part of its cost increases and yet to raise its profit margins, despite various difficulties experienced by the industry during the period (see paragraph 52), to a number of factors of which the following are the principal:

(i) lower labour costs due to a reduction of its labour force, following the introduction of 8-section double-gob machines;

(ii) an increase of 18 per cent in output of glass per unit of furnace fuel consumed;

(iii) savings in annual fixed costs arising from closing the Greenford factory in 1973 and from cost-saving projects; Rockware estimated these savings at £3·6 million in terms of 1972 cost levels, equivalent to 15 per cent of 1972 operating costs.

(b) *Capital investment*

90. Rockware's capital investment for glass between 1972 and 1976 is given in the following table:

	Year ended December					
	1972	1973	1974	1975	1976	*Total* 1972-6
	£m	£m	£m	£m	£m	£m
Capital expenditure	3.1	4.2	6.4	6.4	4.9	25.0
Expressed as a percentage of sales	9.3%	11.0%	15.6%	12.2%	7.3%	

Nearly half of this expenditure was on furnaces (repairs and rebuilds at existing or increased capacity) with general replacement expenditure accounting for most of the remainder.

(c) *Source and application of funds and sources of capital employed*

91. Appendix 7 shows that over the five years ended 1976 Rockware Group has financed capital expenditure totalling £27·2 million largely from its internal cash flow (retained profit plus depreciation). Appendix 4 also shows the sources of capital employed at end–1976. There were ample funds available to finance capital expenditure committed but not provided for in the 1976 accounts and the ratio of total borrowing to shareholders' interests and deferred tax liabilities, of 14 per cent[1], was well below the average of 46 per cent for quoted companies in manufacturing industry.

(d) *Glass operating ratios*

92. These ratios are set out in Appendix 10.

The unit cost of glass containers reduces with increases in machine speed (the time taken to produce an equivalent number of containers), the average length of run (see paragraph 34) and in the proportion of the output which is of a satisfactory quality. Compared with 1972 Rockware's forming machine productivity indices in 1976 were 138 in terms of tonnes of good output per machine/day, and 123 in terms of numbers of containers per machine/day, reflecting a 12 per cent increase in the average weight of container and a 21 per cent increase in the average volume per container.

(1) Before taking into account loans of £7.4 million, corresponding to bank balances of £7.4 million excluded from capital employed.

93. Production capacity (including that attributable to better furnace utilisation) increased from 1972 to 1976 by 17 per cent by tonnage (see paragraph 75) and by 6 per cent in terms of containers.

(*e*) *Future plans for glass*

94. Rockware provided us with financial details of its five year long-range plan for the glass division, as revised to June 1977, covering the years 1977–81 and before taking into account any effects of a merger with Redfearn. This plan has the following main features:

(i) capital expenditure to be applied to cost-saving projects, increases in capacity, rebuilds of furnaces, and other normal replacements;

(ii) continuing improvements in manpower productivity;

(iii) installation of higher-speed machines, coupled with some reduction in the number of machines; continued improvement in the efficiency of operating machines.

95. Rockware expects that carrying out its five year plan would lead to:

(i) an increase in its sales of containers at a rate marginally higher than that at which it expects home demand to grow;

(ii) increased profit margins with a higher return on capital employed;

(iii) significant increases in the value added per employee.

(*f*) *Merger proposals*

96. Rockware's offer to acquire Redfearn's 6,069,292 25p ordinary shares, 75,000 £1 preference shares and 96,480 £1 second preference shares involves a consideration totalling approximately £19½ million. This would be discharged, subject to underwriting arrangements[1], to the extent of £13.6 million by issuing to Redfearn shareholders 9,862,599 new Rockware 25p ordinary shares (an increase of 45 per cent in the total number of Rockware's issued ordinary shares) on the basis of 13 new Rockware ordinary shares for every 8 ordinary shares held in Redfearn, with the balance of £5.9 million payable in cash.

97. The financing by Rockware of the £5.9 million cash element of the offer to Redfearn's shareholders would be from additional medium-term loans. Rockware estimated that, after taking into account such borrowing, the borrowing ratio for the merged company would slightly exceed Rockware's own ratio of borrowing of 14 per cent at end-1976 (see paragraph 91).

98. Rockware planned to enlarge the merged company's capacity and would increase its sales substantially by replacing imports, increasing exports and by taking sales from other forms of packaging.

[1]The underwriting arrangements provide for a cash alternative to the issue of Rockware shares to Redfearn's shareholders (see paragraph 73).

99. Rockware produced forecasts of what it considered the merged company might achieve. These indicated that it should be possible to generate a cash flow adequate for the capital expenditure necessary for the increase in capacity while allowing a part of the savings in costs due to the merger to be passed on to customers.

100. Rockware accepted that the economies to be gained from merging the two companies' order books would impose additional demands on the management which it considered it could meet.

CHAPTER 4

United Glass Ltd

101. United Glass is a holding company of which the glass container division (GCD), UG Glass Containers Limited, is the largest manufacturer of glass containers in the United Kingdom. Group sales for the year 1977 totalled £125·6 million, of which £8·1 million were exports. Trading profit before interest and taxation amounted to £12·4 million and profit before taxation to £11·5 million. United Glass had an average of 10,775 employees in 1977, their aggregate gross earnings amounting to £35·9 million.

102. The principal activity of United Glass is the manufacture of glass containers which in 1977 accounted for 69 per cent of its turnover and about 84 per cent of its profits. Other subsidiary companies and operating divisions are UG Closures & Plastics Limited, which makes bottle closures and plastic containers in Bridge of Allan, Millwall and Norwich; the Ravenhead Company Limited, which produces glass tableware in St Helens; and Johnson Radley Limited, which makes moulds at factories in Pudsey and Leeds, Yorkshire.

History and development

103. The company was founded in 1913 when four bottle manufacturers in the North of England combined to form a public company under the name of The United Glass Bottle Manufacturers Ltd. The object of the merger was to raise sufficient capital to acquire rights in the first successful automatic bottle making machine which had been invented by Michael Owens, the founder of Owens-Illinois Inc, a leading United States manufacturer of glass containers. The four original companies were Cannington Shaw & Company Limited and Nuttall Company (St Helens) Limited (both of St Helens); Alfred Alexander & Co. of Leeds and Southwick-on-Wear, County Durham; and Robert Candlish & Son Limited of Seaham Harbour, County Durham. During the following three decades the company closed a number of small plants and concentrated production at a newly built factory at Charlton and the two factories at St. Helens.

104. In 1937 the company acquired four bottle works from The Distillers Company Limited (DCL) in consideration for which the latter acquired 40 per cent of the ordinary shares and 50 per cent of the preference shares in the company with rights in the appointment of directors. Since that time the company has supplied about 90 per cent of DCL's bottle requirements.

105. In 1955 the company acquired Alloa Glass Works Company Limited with works at Alloa, Clackmannanshire. Then, in, 1962, United Glass acquired Key Glassworks Limited which operated two glass works in South East England, at Harlow and New Cross. Following an appraisal of the combined manufacturing facilities the United Glass factory at Charlton was progressively run down and finally closed in 1967.

106. The Harlow works were developed further and specialised in the production of food and beverage containers for South East England. The New Cross factory was equipped as the group's specialist producer of smallware (containers of less than 3 oz weight).

107. The company's interest in bottle closures dates back to 1923 when it acquired a majority interest in Kork 'N Seal Limited (purchasing the remainder of

the equity in 1955). A second closure factory was established in Scotland during the 1939–1945 war and this has grown into the present works at Bridge of Allan. In 1970 when the Armstrong Cork Company decided to disengage from the closure industry United Glass acquired the crown cork and closures business which it transferred to its own factories.

108. In addition to closures the company also supplies customers with the machines, which are designed and assembled at Alloa, for applying closures.

109. In 1959 United Glass started the manufacture of plastic bottles through a subsidiary, United Glass (Thermoplastics) Limited. Following the acquisition of Key Glassworks, which also made plastic bottles, all United Glass's production of these products was transferred to a factory at Norwich.

110. Sales of closures and plastic containers in 1977 amounted to £20·5 million.

111. The Ravenhead Company, which has a factory at St. Helens, manufactures glass tableware. This company's sales amounted to about £15 million in 1977.

112. Johnson Radley Limited, a company manufacturing moulds for glass containers, was acquired in 1964. It has two factories in Yorkshire employing a total of about 600 workers. About one-third of the company's output is used by the glass container division of United Glass. Total sales in 1977 amounted to about £5 million. Redfearn is one of the company's outside customers.

Owens-Illinois, Inc

113. United Glass has over the years maintained its contact with Owens-Illinois, Inc (O-I) which is one of the world's leading manufacturers of glass containers with subsidiary and associated companies in many countries. In 1966, after a period of low profits United Glass concluded a ten-year technical assistance agreement with O-I. Under this United Glass received access to all of O-I's information on glass containers, tableware and moulds in consideration of a royalty representing about 1·1 per cent of its sales of these products. The agreement was extended in 1976 for a further ten years with a lower royalty payment.

114. In 1966, O-I also acquired 16⅔ per cent of the ordinary shares of United Glass. The shareholding was increased to 50 per cent in 1972 as described in paragraph 116.

The Distillers Company Limited

115. The Distillers Company Limited (DCL) became a shareholder in United Glass in 1937 (see paragraph 104). Since then United Glass has been DCL's main supplier of glass containers. In 1969 DCL, which had by then disposed of its 40 per cent shareholding in United Glass (although the DCL pension fund still held about 11 per cent), made an offer for all the preference shares and for the ordinary shares not held by O-I.

116. In connection with this offer, which was accepted by the remaining shareholders of United Glass, DCL and O-I entered into a scheme of arrangement. Under this O-I was given an option, which it exercised in 1972, to increase its shareholding to 50 per cent.

117. DCL gave certain assurances to the Board of Trade in connection with the scheme of arrangement. In particular DCL undertook to see that United Glass would be a fully competitive unit in the packaging industry, maintaining and improving its service to all customers, and that United Glass should supply bottles to all customers in quantities and at prices dictated solely by ordinary commercial judgment as though United Glass and DCL had been separate companies.

Management of United Glass

118. Under the Articles of Association of United Glass the shares held by DCL are designated A shares and the shares held by O-I B shares. The holders of the A and B shares are each entitled to appoint up to four directors. At Board meetings the A and B directors have equal votes irrespective of the number of directors actually in attendance. The executive directors are designated C directors and are jointly appointed by DCL and O-I, but have no vote at Board meetings.

119. Although DCL nominates four directors to the Board of United Glass it is not involved in the day to day management of the company, its relationship being principally that of a customer. The involvement of O-I is closer, particularly on technical matters.

120. The present management systems of the company largely originated from O-I. The latter is sent full management reports, measures the company performance against the budget performance and offers advice. Its approval (and that of DCL) has to be obtained for major items of capital expenditure.

Glass container division

Capacity and sales

121. As stated in paragraph 101, United Glass's manufacture and sales of glass containers is carried out by GCD which, with sales of £87 million in 1977, is the largest manufacturer of glass containers in the United Kingdom. Information on capital employed, turnover and profit is given in Appendix 5.

122. GCD's total, home and export sales (in millions of containers) and its share of the home market since 1972 were as follows:

Year	*Total sales m units*	*Home sales m units*	*Share of home market**	*Export sales m units*
1972	1,888	1,854	28.6%	34
1973	2,056	2,022	28.4%	34
1974	1,876	1,848	25.2%	28
1975	1,763	1,734	26.9%	29
1976	1,757	1,732	26.0%	25
1977	1,890	1,856	27.1%	34

*The share of the home market is calculated from data in the table in paragraph 50.

Details of the GCD's share of the constituent sectors of the market in 1977 are given in Appendix 2.

123. Capacity has been increased in recent years. During the period from 1972 to 1977 furnace capacity was increased by 20 per cent. With the re-commissioning of a furnace at Harlow (shut down in 1973) in the spring of 1978 the figure will rise to 26 per cent. Appendix 3 gives details of the forming machines operated at the end of 1972 and the end of 1977. Productivity increased substantially between 1972 and 1977 through the installation of larger, faster machines and the more efficient use of existing machines.

124. GCD operates eight factories:

Castleford —three furnaces producing amber and green glass, principally for wine, spirits and other beverages.

Alloa —four furnaces producing white flint and green glass for the Scotch whisky market.

Harlow —three furnaces (with a fourth due to resume production shortly) producing white flint containers for food, spirits and other beverages.

Shettleton —two furnaces producing white flint containers, principally for the Scotch whisky market.

Peasley —three furnaces producing white flint and green containers for wine, spirits, other beverages and food.

New Cross —two furnaces producing white flint specialised small-ware, principally for the spirits, pharmaceutical, toiletry and food sectors.

Kinghorn —one furnace producing green glass, principally for the Scotch whisky market.

Brimsdown —one furnace producing either white flint or green glass; the factory specialises in large ware which is made by semi-automatic processes.

125. Substantial stocks of finished bottles are maintained averaging about seven weeks of sales. The level varies considerably throughout the year, in 1977 stocks ranged between 210 and 310 million units, representing a sales value of £9·7 million and £14·3 million at current average selling prices.

126. GCD owns its own warehouses and in recent years has spent substantial amounts on improving storage and handling facilities. Over half of its deliveries are made by the division's own transport (110 tractors and 187 trailers) which are serviced at its own depots.

Management

127. A diagram of the management structure of the glass container division is at Appendix 12.

Employment and labour relations

128. The average number of employees in GCD has fluctuated in recent years as can be seen from the following table:

Year	*Average number of employees*
1972	6,445
1973	6,270
1974	6,196
1975	6,201
1976	6,247
1977	6,508

129. The division's 4,000 process workers are represented by the National Union of General and Municipal Workers, the Transport and General Workers' Union, and the Union of Shop, Distributive and Allied Workers. Craftsmen are represented by the Electrical, Electronic Telecommunication and Plumbing Union. Drivers are represented by the Transport and General Workers' Union and supervisory and clerical staff by the Association of Scientific, Technical and Managerial Staffs.

Dealing with customers

130. Requirements for containers in large quantities are usually forecast in annual contracts which are not regarded by GCD as legally binding. The contracts also provide for the customer to make periodic orders for his actual requirements and these orders are regarded by GCD as legally binding. For smaller quantities three-month contracts are made with provision for firm orders for correspondingly shorter periods.

131. For non-standard bottles individual contracts are negotiated. For standard containers GCD uses an unpublished price list which is subject to discounts for quantity. An additional charge is made for special packaging.

132. Four large customers between them take about 45 per cent of GCD's total sales. About 38 per cent of its customers each purchased less than £5,000 of containers in 1977.

Technical

133. Although United Glass considers that it obtains considerable benefit from the technical assistance agreement with O-I (see paragraph 113) it also operates its own research and engineering department which is situated at St. Albans. Research and engineering work carried out by GCD in 1977 represented about 0·7 per cent of its turnover. Among its developments is 'Cerberite', a material for handling hot glass for which it expects to issue licences to a number of overseas manufacturers. The department also receives research and engineering fees from O-I on specific projects. The technical assistance agreement allows United Glass to obtain technology from other sources than O-I and also to license the use of its own technology by other manufacturers (with O-I having non-exclusive rights to the use under licence of any such developments on payment of a royalty the rate of which, if not agreed, is determined by arbitration).

Financial information

(*a*) *Trading performance* 1972–1977

134. A statement of capital employed, sales and profit for the 6 years ended December 1977, is given at Appendix 5. Separate results are given for GCD and for United Glass as a whole. The following table summarises results for GCD:

	Year ended December					
	1972	1973	1974	1975	1976	1977
(i) Sales value index	100	112	125	154	189	230
(ii) Profit index	100	100	96	128	137	230
(iii) Volume produced indices:						
Good tonnes*	100	104	105	94	96	105
Units	100	102	101	96	94	105
(iv) Profit rate of return:	%	%	%	%	%	%
On capital employed	23.4	22.2	17.3	17.3	16.5	26.0
On sales	12.1	10.9	9.3	10.2	8.8	12.2
(v) Average return on capital employed for quoted companies in manufacturing industry	14.7	16.8	16.1	14.5	17.5	(not available)

*See footnote on page 6.

135. During the period in question there was a continuous annual growth in the value of its turnover. However, the tonnage and units of glass produced by GCD were at reduced levels in 1975 and 1976, but increased in 1977 to the higher levels of 1973 and 1974. In 1974 and 1975 GCD was affected by the difficulties of the industry as set out in paragraph 52, and in addition there were industrial disputes affecting deliveries of fuel oil and materials to its Scottish factories. These prevented GCD from raising its output to meet the increased demands of its customers. In addition, increases in costs because of inflation were partly absorbed by GCD, causing profit margins to fall. There was a marked improvement in 1977 with profit margins returning to pre–1974 levels. This was due not only to a buoyant market but also to its success in bringing its major new plant at Alloa up to target production efficiency after earlier delays.

(*b*) *Capital investment*

136. Capital employed in GCD more than doubled between 1972 and 1977, the major part of the increase being in fixed assets, particularly at Alloa. Capital expenditure increased from £3 million to £5·6 million over this period, as is shown in the following table:

Calendar Year	1972	1973	1974	1975	1976	1977	*Total* 1972-77
	£m	£m	£m	£m	£m	£m	£m
Capital Expenditure	3.1	5.9	8.0	8.4	3.1	5.6	34.1
As a percentage of sales	8%	14%	17%	14%	5%	6%	

The large expansion of the Alloa plant included: the construction of a new furnace unit, including buildings, machinery, and all supporting equipment, at a cost of £9.1 million; the construction of a new batch plant to service the new facility and the existing furnaces at a cost of £1·1 million; and the construction of an on-site warehouse costing £1 million.

(*c*) *Source and application of funds and sources of capital employed*

137. A statement of source and application of United Glass's funds for the six years to December 1977 is set out in Appendix 8. It shows that cash funds generated from earnings were very nearly sufficient to finance the considerable investment in fixed assets (£40 million) and increased working capital (£14 million), although the earlier years required some recourse to medium loan finance which was subsequently largely repaid.

138. The joint shareholders of United Glass, Owens-Illinois Inc and DCL had at December 1977 provided 89 per cent of the group's capital employed, partly by forgoing dividends. The balance, representing borrowed capital, included various medium and long-term loans of £4·0 million, and bank overdrafts and short-term loans of £3·4 million.

(*d*) *Glass container division operating ratios*

139. The ratios set out in Appendix 10 show value added and the effective use of manpower for the six latest years by GCD. Between 1972 and 1974 the number of GCD's employees fell by 4 per cent, but by 1977 had risen above the 1972 level because of expansion at Alloa (see the table in paragraph 128). Value added per employee increased relatively slowly, and labour productivity in terms of tonnes produced per employee remained fairly static. GCD has told us that it was unable to implement productivity arrangements during the two years to August 1977 because of the national incomes policies then operative.

(*e*) *Future plans for the glass container division*

140. United Glass provided us with trading forecasts covering the three years to 1980 before taking into account the effects of a merger with Redfearn. These forecasts provide for GCD's existing investment programme to continue, at a rate at least as high as that maintained in recent years.

(*f*) *Merger proposals*

141. We understand from United Glass that it has not formally approached Redfearn with proposals for a merger but, if the merger proposal is allowed to proceed, it intends to make a cash offer for the entire share capital of Redfearn. For illustrative purposes only, the effects of a purchase consideration of the same order as Rockware has proposed (see paragraph 96) has been assumed by United Glass. Based on the published accounts of United Glass for the year ended 3 December 1977, and of Redfearn for the year ended 2 October 1977, the percentage of total borrowing to shareholders' funds of United Glass would, in its view, increase from 12 per cent before the acquisition, to a maximum of 50 per cent after the acquisition.

CHAPTER 5

Redfearn National Glass Limited

142. The sole activity of Redfearn National Glass Limited is the manufacture and sale of glass containers for the food, soft drinks, brewing, wine and spirits and pharmaceutical industries.

143. For the year ending 2 October 1977 the company's turnover amounted to £41·2 million including £0·4 million exports. The trading profit was £4·8 million and profit before taxation £4·6 million. Net assets at the end of the financial year amounted to £17·2 million. The average number of employees during the year was 2,702 and their gross remuneration £10·8 million.

History and development

144. The company was formed by the merger of Redfearn Brothers Limited of Barnsley and National Glass Works (York) Limited in 1967. The origins of the two constituent companies go back more than a century. National Glass Works (York) Limited was incorporated as a private company in 1930 as the successor to the York Flint Glass Company, which had been founded in 1835, and which carried on production at the Fishergate site in the centre of York. It became a public company in 1948. In 1963 increased throughput and the limitations of the Fishergate site required the removal of warehousing facilities to a new complex built at Tadcaster.

145. Redfearn Brothers Limited was formed in 1910 as a private company to take over the glass container manufacturing business that had been carried on by the Redfearn family and their associates since 1862. Redfearn Brothers Limited became a public company in 1935. The original factory was at Old Mill Works, Barnsley, but in 1947 a new factory was erected on a green-field site at Monk Bretton, two miles from Barnsley.

146. In 1967 Redfearn Brothers Limited was approached by National Glass Works (York) Limited to discuss a merger between the two companies. There were considered to be substantial advantages to be gained from a merger. The kinds of glass containers produced by the two companies were largely complementary: Redfearn Brothers had a new factory at Monk Bretton but lacked successors for its existing management; National Glass Works (York) Limited had little scope for expansion at its site at Fishergate (although it had a new site at Poppleton) but had a young management team.

The two factories were sufficiently close together to be controlled by a single management. The merger was agreed and Redfearn National Glass Limited was formed at the end of 1967.

147. In 1972 Rockware approached Redfearn with the suggestion that the two companies should consider the advantages of merging. After some discussions between directors of the two companies, the Board of Redfearn decided that such a merger would not be of advantage to their company at that time and Rockware was informed that Redfearn was not interested in pursuing the matter further.

Capacity and sales

148. The company is the third largest manufacturer of glass containers in the United Kingdom with about 16 per cent of the United Kingdom market. Its total, home and export sales (in millions of containers) and share of the home market since 1972 are given in the following table:

Year	*Total sales m units*	*Home sales m units*	*Share of home market**	*Export sales m units*
1972	1,062	1,052	16.3%	10
1973	1,192	1,174	16.5%	18
1974	1,166	1,147	15.6%	19
1975	1,140	1,119	17.3%	21
1976	1,133	1,119	16.8%	14
1977	1,130	1,115	16.3%	15

*The share of the home market is calculated from data in the table in paragraph 50.

Details of the company's share of the constituent sectors of the market in 1977 are given in Appendix 2.

149. Redfearn has increased its capacity in recent years. This has been achieved primarily by increasing furnace capacity although there have also been improvements in the efficiency of the production processes. The company's maximum furnace capacity was increased by 40 per cent between the end of 1972 and the end of 1977 (after allowing for the closure of a small furnace which permitted the expansion of the adjoining furnaces). Appendix 3 gives details of the forming machines operated at the end of each of the same two years. Higher speed machines were installed during the period. With the withdrawal of older machines there was some small increase in basic machine capacity but in addition the general improvement in running speeds of Redfearn's machines over the period resulted in an increase in their potential output.

150. The company has two factories with the following present range of output:

Barnsley —six furnaces producing white, amber and green containers for soft drinks, beer and cider, foods, wines and spirits and pharmaceuticals.

York —two furnaces producing white containers for soft drinks, foods and pharmaceuticals.

The company also owns a site at Poppleton near York which was originally purchased by National Glass Works (York) Limited with a veiw to eventual expansion of its manufacturing activities (see paragraph 146). The site has not yet been developed.

151. The company expects to maintain stocks of bottles amounting to about four weeks sales, although the actual level varies according to seasonal demand. Stocks in 1977 varied between 53 million and 102 million units representing respectively a sales value of £2·1 million and £3·9 million at current average selling prices.

152. Redfearn both owns and rents warehousing space for its stocks of bottles. The company uses outside transport for deliveries although for this purpose it employs a number of its own drivers.

Management

153. A diagram of Redfearn's management structure is at Appendix 13.

Employment and labour relations

154. As can be seen from the following table there has been some reduction in the number of the company's employees in recent years although the decline has been irregular:

Year at April	*Total number of employees*
1972	2,948
1973	3,002
1974	2,954
1975	2,929
1976	2,573
1977	2,673

155. The process workers at the company's factories are represented by the National Union of General and Municipal Workers and the Transport and General Workers' Union. Other hourly-paid workers are represented by the Amalgamated Union of Engineering Workers, the Electrical, Electronic Telecommunication and Plumbing Union and the United Road Transport Union. Some of the company staff are represented by the Association of Scientific, Technical and Managerial Staffs and the Amalgamated Union of Engineering Workers.

Dealing with customers

156. A contract is agreed by Redfearn with customers covering their requirements for a period of up to a year ahead with estimates of when the call-off will be required. According to Redfearn this is regarded as an indication of firm intention, however, rather than a binding contract and neither party would consider it as enforceable.

157. Prices for containers are negotiated with individual customers on the basis of standard product costings, which are calculated from the costs incurred in manufacturing, storing and delivering the bottles. This includes an element providing for overheads and profit. Prices normally include standard packing and delivery. There are no discounts for larger customers but the price charged to small customers for standard bottles reflects the additional cost associated with, for example, variations in demand and the longer storage periods expected. Special charges are also made to cover extra costs arising from, for example, particularly short runs, special storage arrangements and special packaging.

158. Redfearn's four largest customers took about 45 per cent of its output in 1977. 21 per cent of its customers each bought less than £5,000 from it during the year.

Technical

159. Redfearn attaches importance to technical developments and spent about £550,000 (representing about 1.3 per cent of total turnover) on development work in the financial year 1976–77. A total of 49 personnel were employed on this. The company purchases know-how from outside sources when this is required. Examples are light-weight bottles (produced under an agreement with Veba Glas of West Germany) and the company's new batch-mixing plant (under an agreement with Brockway of the United States).

Financial information

(*a*) *Trading performance* 1972–1977

160. A statement of capital employed, sales and profit for the six years ended September 1977, is given at Appendix 6 and summarised in the following table:

	Year ended September					
	1972	1973	1974	1975	1976	1977
(i) Sales value index	100	120	140	178	229	270
(ii) Profit index	100	137	114	145	271	398
(iii) Volume produced index:						
Tonnes	100	116	119	120	120	126
Units	100	116	120	117	117	119
	%	%	%	%	%	%
(iv) Profit rate of return:						
On capital employed	19.0	22.7	16.5	17.1	26.6	32.0
On sales	7.9	9.3	6.5	6.6	9.5	11.7
	Year ended December					
(v) Average return on capital employed for quoted companies in manufacturing industry	%	%	%	%	%	%
	14.7	16.8	16.1	14.5	17.5	(not available)

161. The value of sales rose almost three fold over the 6 year period but this was partly the result of inflation. From 1974 to the early part of 1976 was a difficult period for the industry as a whole as described in paragraph 52. This resulted in an inability by Redfearn to recoup cost increases which was a major factor in the general narrowing of its profit margins. Results for the remainder of 1976 and for 1977 show a substantial improvement in sales, profits and margins. The rate of return on capital employed has been consistently better than the average of quoted companies in manufacturing industry. The marked improvement shown latterly took place at a time when a major new investment was being undertaken and before the new plant could make a reasonable contribution to profit.

(*b*) *Capital investment*

162. The years between 1972 and 1977 saw a continuous annual growth in capital employed. Increases were particularly great in 1976 and 1977 when major new investment took place (£6.4 million in the latter year) principally at the Barnsley factory where reconstruction of one of the furnaces with new supporting equipment was so designed that total glass output of the furnace could be doubled. The new plant came on stream early in 1977. A new batch mixing plant is also under construction, the first phase of which is now in operation. Redfearn's capital expenditure totalling £17.0 million over the last six years is given in the table below. Although some part of this related to plant and furnace replacements, the major proportion consisted of investment which increased capacity and improved the quality of products. The former applied particularly to furnace rebuilds which in most cases included not only the replacement of the existing furnace but also an increase in output and improvement in thermal efficiency.

Year to September	1972	1973	1974	1975	1976	1977	*Total*
	£*m*	£*m*	£*m*	£*m*	£*m*	£*m*	£*m*
Capital expenditure	1.0	1.1	2.8	3.3	2.4	6.4	17.0
As a percentage of sales	8%	6%	13%	12%	7%	16%	

(*c*) *Source and application of funds and sources of capital employed*

163. A statement of sources and uses of funds for six years to September 1977 is set out in Appendix 9. It indicates that cash funds generated from earnings more than doubled during the last two years, the increased amount being largely used for new investment. Over the six years as a whole the company invested £17 million on fixed assets, over 50 per cent of this amount in the last two years with some increase in working capital necessary to sustain the higher level of business activity.

164. Apart from a £1.5 million debenture (10½ per cent secured repayment 1992-97) and a small bank overdraft, capital employed at September 1977 was provided largely by the shareholders and the ratio of total borrowing to shareholders' equity was 12 per cent, a low figure like that of Rockware (see paragraph 91) and of United Glass (see paragraph 141). During 1977 the company made arrangements for a 9 year term loan of £2 million from Finance Corporation for Industry to cover further expansion.

(*d*) *Glass operating ratios*

165. The ratios set out in Appendix 10 show value added and the effective use of manpower from 1971–72 to 1976–77. Redfearn has reduced the number of its employees by 9 per cent over 6 years (see paragraph 154) and significantly increased labour productivity, the value and volume of output per employee increasing 2¾ and 1⅛ times respectively, during the same period. The tonnage of glass produced has increased more than the number of containers and Redfearn considers that this shows the average size of containers produced to have become somewhat larger over this period.

166. As can also be seen from Appendix 10 the amount of investment per employee more than trebled during the last six years although a large part of this increase took place in 1977.

(*e*) *Future plans*

167. Redfearn regularly prepares five year forecasts which set out in detail the company's marketing prospects and investment strategy. The latest plan covering a period from 1977–78 to 1981–82, part of which has yet to receive final approval by the Board, shows that it intends to increase its capacity during this period by developing Poppleton. This envisages the company obtaining at least its 'full share of the growing market including a reduction of import penetration'. Redfearn's plans are aimed at increasing profitability and provide for an acceptable rate of return in normal circumstances. It is satisfied that adequate finance will be available.

CHAPTER 6

Evidence of other parties

United Kingdom glass container manufacturers

168. Other United Kingdom manufacturers of glass containers were invited to give their views of the proposed merger. The evidence submitted by these manufacturers covered many aspects of the proposed merger. Some considered that the resources available to a merged company would enable it to increase capacity more quickly than the two manufacturers could do independently and so alleviate what they considered to be the present shortage of capacity; this would be in the interest of its customers and that of the public as consumers. It was, however, pointed out also that the merged company might achieve a near monopoly position in some sectors of the market and the suggestion was made that it should not be allowed to supply more than half of the total home market for glass containers. One manufacturer, moreover, did not think that any benefit to the public interest was likely to arise from the mergers and that the merged company would have greater scope for increasing its prices.

169. One manufacturer considered that a merger could be of benefit to the smaller producers if the merged company were to place more emphasis on long runs from larger forming machines. This would give the smaller manufacturers a greater share of the business from shorter runs to which their production was geared. Another manufacturer, however, thought that a merger could be to the disadvantage of the smaller producers as a merged company might be able to secure more advantageous terms from its suppliers.

170. The manufacturers listed in paragraph 29 provided us with information about their plans to increase capacity over the next three years.

Suppliers

171. Two companies supplying packaging items to the industry told us that in their opinion a merger would not be in the public interest as the range of output and price of glass containers, and service to customers were all likely to be prejudiced. They also considered that the risks to their business from losing the custom of a major glass container manufacturer would be significantly increased by the merger.

Customers

172. We have receivevd a considerable amount of evidence from the industry's customers, in all about 50 companies and trade associations, including producers of wines and spirits, beers, ciders, soft drinks, foodstuffs and pharmaceuticals, as well as a number of bottle wholesalers.

173. According to the evidence supplied by most of the customers and their trade associations their primary concern was continuity and reliability in the supply of glass containers; without this they might suffer disruption to their production lines. For this reason some of them as a matter of policy spread their orders among a number of glass container suppliers.

174. We were told that since 1973 there had been shortages. These had taken the form either of shortfalls in actual deliveries or the inability of manufacturers to undertake to supply against forward estimates. Whilst that of 1974 had been due to a shortage of soda ash for glass container manufacture there had been shortages in other years, such as the very hot summer of 1976, when demand was unexpectedly high. This affected not only the users of the types of containers in greatest demand but others as manufacturers rearranged production schedules in an attempt to meet all their customers' needs. There had also been occasions when scheduled furnace rebuilds or break-downs resulted in a shortage of containers; this could produce particular problems on amber or green bottles where the industry's capacity was limited by the relatively small number of furnaces. We were also told of a number of occasions when supplies had been disrupted by industiral stoppages. There were some complaints concerning reliability of supply against all three of the major manufacturers.

175. A number of customers told us that in the face of shortages they had imported containers from the Continent and would continue doing so unless they became confident that shortages would not recur.

176. The general view of customers seemed to be that although a merger might lead to greater efficiency through the installation of larger, faster machines and the adoption of long runs, such rationalisation would increase the risks of any disruption to supplies caused, for example, by industrial stoppages.

177. A number of customers told us that to help ensure continuity and security of supply they would in the event of a merger look to Continental suppliers for part of their requirements or were thinking of doing so. This would continue at least until adequate capacity had been built up by smaller manufacturers in the United Kingdom industry.

178. Some customers told us that modern filling-lines operated at very fast rates and so a high standard of quality in the glass containers was required. We received few complaints about the quality of containers supplied by any of the three major producers.

179. Many customers told us that the merger, in their opinion, would result in a reduction in competition between manufacturers which would be likely to lead to higher prices and also to a deterioration in service, particularly to smaller customers. Some customers considered that the merger could lead to greater manufacturing efficiency but most of them still considered that this would not compensate for the reduction in competition. Customers also were concerned lest the adoption of longer production runs by a merged company would lead to a further reduction in the range of containers produced.

180. Some customers told us that in the event of a merger between Redfearn and United Glass they might suffer disadvantages from more favourable treatment given to DCL. They did not give us any evidence of such treatment being accorded to DCL by United Glass in the past.

181. In the course of our inquiry we obtained information from a number of bottle wholesalers on their role in meeting the needs of smaller customers. Some of them also gave us their views on the proposed merger. Most referred to difficulties that they had experienced in obtaining supplies of bottles and considered that the service given by manufacturers had fallen, and the range of containers available had been reduced, following past mergers. One company however thought that a merger between Redfearn and one of the other manufacturers would strengthen its manufacturing capacity.

Trade Unions

182. With the assistance of the Trades Union Congress we obtained the views of five unions representing workers in the industry. In the opinion of these unions industrial relations in the industry were reasonably good. They considered, however, that Redfearn's were better despite recent improvements in the industrial relations of both Rockware and United Glass.

183. One of the reasons for Redfearn's better industrial relations given by the unions was its more direct management control. This enabled union representatives to have contact at all levels of management both on consultation about future plans and in discussing particular problems. In the experience of the unions Redfearn was also the most ready to discuss future developments such as the introduction of new machinery.

184. Redfearn was regarded by the five unions as being in the forefront of the industry in improving pay and conditions. The company was the first in the industry to introduce a job evaluation system into its wages structure. It had good pensions and sick pay schemes, and also had a good record on training.

185. The unions expressed fears that a merger with Rockware or United Glass could lead to redundancies. This arose partly from the possibility that because of the large concentration of production in West Yorkshire a merged company might close either the York factory, the site of which allowed no scope for expansion, or possibly one of the Barnsley furnaces. It was also feared that rationalisation would result in the redundancy of some of the Redfearn staff.

Emhart (UK) Limited

186. Emhart (UK) Limited has provided us with information on the performance of forming machines and the economics of their operation which has been of considerable assistance to us in considering the technical matters which have been put to us by the parties.

Pharmaceutical Services Negotiating Committee
National Pharmaceutical Association Limited

187. The Pharmaceutical Services Negotiating Committee represents chemists in negotiations with the Department of Health and Social Security regarding their terms of service and remuneration. The National Pharmaceutical Association Limited is a trade association representing the proprietors

of about 9,000 pharmacies in the United Kingdom. Both the Committee and the Association told us that pharmacists had in recent years suffered at times from shortages of glass containers for making up prescriptions. British Standard medicine bottles were only available from United Kingdom manufacturers and Redfearn was one of only two manufacturers currently producing them. The Association and the Committee feared that a consequence of a merger might be that the merged company would be less active as a producer of these containers than Redfearn, and so shortages might be made worse.

Ministry of Agriculture, Fisheries and Food

188. The Ministry of Agriculture, Fisheries and Food[1] told us that in some sections of the food and drinks industry glass containers represented an important item in manufacturers' packaging costs. The Ministry considered that too great a dominance of the market by the merged company (which it believed with the remaining large company would have 90 per cent of the food and drink market) would be undesirable, especially in view of the concentration already existing in the competing metal can industry.

Department of Health and Social Security

189. The Department of Health and Social Security told us that it was concerned that there should be an adequate supply of British Standard medicine bottles. These were now made by only two manufacturers (Redfearn and Beatson Clark) and the Department considered it important that in the event of a merger with either Rockware or United Glass the merged company should continue to produce these bottles. Subject to this reservation the Department foresaw no disadvantages in the proposed mergers.

Department of Industry

190. The Department said that although there was no Sector Working Party or Economic Development Committee for the glass container industry it regarded the sector as of considerable importance. It considered that there seemed likely at some stage to be a need for the structure of the glass container industry to develop further in response to the basic trend towards increasingly large-scale production. But arguably the present structure of the industry seemed about right, with Redfearn acting as both a stimulus and a counterpoise to its two larger competitors. The Department was not convinced that a clear case existed now for further major changes in the structure of the industry. It considered therefore that neither merger appeared likely in the present circumstances to lead to industrial advantages sufficiently great as to override all other considerations.

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[1]The Ministry also gave us information on trends in packaging for foodstuffs and the tentative projected requirements of various sectors.

CHAPTER 7

Views of the Main Parties

1. THE PROPOSED MERGER BETWEEN ROCKWARE AND REDFEARN

Competition faced by the industry from Continental manufacturers

Rockware's views

191. In giving us its reasons in support of a merger with Redfearn Rockware explained that, although it had made its present proposals for a merger because of its belief that Rheem International Inc might acquire control of Redfearn (see paragraph 5), it had considered for some time that a merger would not only be of advantage to the two companies but also to the glass container industry and to the national interest. It referred to its unsuccessful approach to Redfearn in 1972 over a possible merger (see paragraph 72).

192. Since 1972 the growth in competition from glass container manufacturers on the Continent had strengthened Rockware's view that a merger between the two companies was desirable. It was the shortage of domestic supplies, a consequence of the soda ash shortage (see paragraph 52) that led to the industry's customers importing large numbers of containers in 1974, sometimes at much higher prices. With the return to normal of supplies of domestic containers the level of imports had fallen in subsequent years but not to that of before 1974. However, in 1977 the share of imports had risen unexpectedly to about 10 per cent of the United Kingdom market. Rockware considered that with the abolition of tariff barriers and the advent of containerisation and roll-on roll-off ferries Continental suppliers would become a significant competitive force. Some of these suppliers were much larger than United Kingdom glass container manufacturers and had substantial financial resources. They could afford major in-house research and development work and could provide comprehensive technical services for customers and undertake major promotional exercises.

193. Rockware did not consider that in the shorter term the level of imports would rise above that of 1977. That level had been above what was required to offset any shortfall in United Kingdom production and had mainly been due to fears by customers about shortages, possibly because they expected another exceptionally hot summer. On the other hand, Continental suppliers had discovered the existence of a market in the United Kingdom for kinds of glass containers not traditionally imported. Some customers were inclined to purchase abroad in order to help assure continuity of supply and currently there was over-production on the Continent.

194. Rockware considered, however, that without a merger imports from Continental manufacturers would rise to pose a serious long-term threat to the existence of a viable glass container industry in the United Kingdom.

Continental manufacturers already used 8-section triple-gob and 10-section double-gob machines, neither of which had been installed in any United Kingdom plant.

195. Rockware told us that a comparative productivity analysis provided by Emhart for the years 1974 to 1976 (the latest available) showed that, although Rockware's productivity on comparable machines was above the average levels of international manufacturers (mainly European), its overall machine productivity was generally below the international average. Rockware attributed this to the size of its machines and the length of its runs, both being below the international averages.

196. Rockware told us that without a merger it would not be possible for it to install the new, larger machines on an adequate scale to enable it to be competitive with Continental manufacturers. This was because the company would not have the long runs necessary to operate them economically (see paragraph 34). Such runs could be secured only by combining the order books of Rockware and Redfearn. Without a merger the industry would, in the long term, have difficulty in competing effectively with imported glass containers (see paragraph 192). This would reduce its sales base and necessitate a reduction in the service offered to customers and in the capital expenditure it could afford.

197. Many of Rockware's larger customers were also customers of Redfearn. On a merger the order books of the two companies could be combined to provide longer runs, although these opportunities were limited to some extent by the seasonal demand for some containers. Longer runs would enable the economic utilisation of larger, high-speed machines, particularly the high-speed machines such as the 8-section triple-gob and 10-section double-gob machines (see Appendix 3), than are currently used by either company, thereby bringing about significant savings in production costs per unit.

198. These advantages would come not merely from the total size of the order books of the two companies but because they were both strong in the same product sectors. This would enable a merged company to rationalise production and obtain more of the long runs necessary to justify such machines. The two sectors to which this particularly applied were food (where Rockware had 34 per cent of the market by quantity and Redfearn 21 per cent) and soft drinks (where Rockware had 26 per cent of the market and Redfern 31 per cent) (see Appendix 2).

199. Rockware provided information about the larger, high-speed machines that it would install following a merger with Redfearn, and the cost-savings resulting from their use on long runs (see paragraph 34). Rockware calculated such savings on the basis of pilot runs carried out by the machine manufacturer, Emhart, which assumed improvements in efficiency and longer runs over and above those that would arise directly from combining order books. On the basis of these figures there would be a higher return on capital and higher profit margins than Rockware could achieve on its own. Part of the

increased margins could be passed to customers. There would also be an adequate cash flow to meet the needs for further capital expenditure.

200. Rockware accepted that some customers might have indicated that they would buy part of their requirements from aboard in the event of a merger because they wished to maintain a second or third supplier (see paragraphs 177 and 204). It did not consider, however, that such imports would be substantial. Most of the customers who felt it desirable to safeguard supplies by importing were doing so already and the merger would be unlikely, therefore, to have much effect in such cases. The merged company, however, would be better able to convince its customers that it could be relied upon to maintain supplies. This would be done by such means as having moulds available for the production of certain containers at more than one factory. In the longer term, with the new machines enabling the merged company to offer more competitive prices customers would, in Rockware's view, find that it was in their interests to buy from it rather than import.

Redfearn's views

201. Redfearn did not consider that the long-term viability of the United Kingdom glass container industry was threatened by competition from the Continent. Continental manufacturers had been offering containers to United Kingdom customers at marginal prices because of the over-capacity which existed on the Continent. Some United Kingdom customers for their part lacked confidence that the United Kingdom industry could meet all their demands. But the situation would change. There were now indications that Continental manufacturers were reducing their over-capacity and, with increases in the United Kingdom capacity of the kind that Redfearn intended to provide, the demand on Continental manufacturers should be reduced.

202. Experience on the Continent and in the United States had moreover shown that the smaller glass container manufacturers were able to keep up technologically with the largest producers in the significant new production developments which had been introduced over the past thirty years. There was no reason why the relatively small manufacturers on the Continent or in the United Kingdom should not similarly be able to maintain their position in the future.

203. Redfearn knew of no cost-reducing machinery currently available which was not already installed in its factories and, from the machine performance analysis compiled by Emhart, considered that its manufacturing efficiency was as good as that of Continental manufacturers. It doubted if substantial savings could be made by increasing run-lengths from combining the two companies' order books. Its own runs on 6- and 8-section machines were longer than the average of United Kingdom and Continental manufacturers on similar machines and were adequate to enable the larger, high-speed machines to be used. Redfearn now had one such machine on order.

204. There were doubts whether Rockware could in practice combine the order books of the two companies as it expected, since a number of Redfearn's

customers had indicated that if it merged with Rockware (or United Glass) they would as a consequence purchase some of their requirements from the Continent. A number of its customers would seek supplies abroad because it was their policy to have a number of suppliers. Others would do so to obtain better security of supply after a merger. Many had had satisfactory experience of the quality and service provided by Continental manufacturers in recent years.

205. Redfearn's view of the competitiveness of its products compared with Continental glass containers (and with other forms of packaging) was reflected in its plans for future development, which envisaged winning back ground from both of these competitors.

Competition faced by the industry from other forms of packaging

Rockware's views

206. The industry faced competition not only from Continental manufacturers, but from producers of other forms of containers. These were manufactured from various materials although it was cans that had made the greatest impact in recent years. The main producer, Metal Box Company Limited, was a very efficient company with large resources enabling it to undertake extensive development and promotional work. One reason for the increased use of cans for beers and soft drinks had been their lower price. Prices of cans had, however, recently increased more than those of glass containers, but to capitalise on this it was necessary for the glass container industry to operate large, efficient furnaces and high-speed machines. With this equipment (see paragraphs 199 and 210) the merged company would be able to compete successfully with the can, like the glass container manufacturers in the United States of America who in recent years had increased their share of the beer container market from 26 to 31 per cent.

Redfearn's views

207. Redfearn considered that the industry was in a position to compete with alternative forms of packaging. New developments, such as the wide-mouthed ring-pull containers, had made glass more attractive while its competitive advantage over cans had continued to increase. Redfearn's plans for future development envisaged gaining ground from alternative forms of packaging (see paragraph 205).

The industry's ability to meet the needs of United Kingdom customers

Rockware's views

208. Rockware acknowledged that in recent years the United Kingdom industry had not at all times been able to meet the demands of its customers in full. However, there had been exceptional circumstances such as the unusually hot summers and the disruption in supplies of soda ash. Rockware thought that in normal circumstances the industry was able to meet the demands of its customers. The industry's sales in 1973 were greater than the total United Kingdom demand in any year since 1974 (see table in

paragraph 50), and for a considerable period of time in 1975 and 1976 about 20 per cent of the industry's capacity had been shut down because of lack of demand.

209. Rockware's record of investment was good. The expansion that it had undertaken in recent years and its own plans for future expansion demonstrated that the company was on its own willing to play a full part in meeting expected growth in the market. Moreover, it believed its estimate of future growth was similar to that of Redfearn.

210. However, the prospects of having increased capacity available to meet future demand would be considerably improved by a merger, especially if, as was hoped, it could reduce imports and break into new markets for glass containers. Because of the significant reduction in unit costs that could be obtained from a merger (see paragraph 199) the merged company would have greater confidence, than each company separately, in its ability to take full advantage of market opportunities. In particular, the merged company would be able to install considerably greater new furnace capacity and a larger number of high-speed machines. Rockware gave us details of what this new capacity would be.

211. The enlarged order book and consequent improvement in market intelligence of the merged company would enable it to forecast changes in demand more accurately. It would also be able to react more quickly to changes in demand because of the ability to control larger stocks and larger production capacity. In addition it would have the ability to phase furnace closures for repairs and so reduce risks of shortages (see paragraph 174).

Redfearn's views

212. Redfearn on balance thought that although there had been times when the industry had had a substantial amount of idle capacity there was overall a shortage of capacity. It considered that its continued independent existence was the best means of ensuring that capacity was further increased to meet the future needs of the market. Its record in recent years showed that it had been prepared to invest in additional capacity and that it had successfully increased its share of United Kingdom output. Its plans for further development would provide the capacity necessary to play its part in providing for the extra business which it estimated would be available, and which included the supply of a large proportion of the glass containers at present being imported. A merger with Rockware would give rise to a company with about 42 per cent of the domestic market. The dangers to its profitability of creating over-capacity would be much greater. The merged company would, therefore, be expected to be more concerned with avoiding over-capacity than in meeting the demands of its customers.

213. A merger would not improve the ability of the companies to react to changes in market demand. In Redfearn's experience major manufacturers already supplied a sufficiently large proportion of customers' needs to ensure that they received adequate information on the future trends of their require-

ments. It considered that each company could plan its own furnace repairs so as to alleviate any consequent shortages. There was in any case limited scope for phasing such repairs given the seasonal demands for glass containers and the seasonal availability of the necessary skilled labour.

Service to customers

Rockware's views

214. Rockware claimed that a merger would result in improved service to customers in such areas as the range and quality of containers, the quality of technical service available to customers and the service provided to small customers. Its past record on the large range of bottles produced was good. It had always melted more colours of glass than any other United Kingdom manufacturer and intended to continue to do so. Although there was a general tendency for the range of containers to be reduced by standardising containers in some product sectors, Rockware's policy had always been to negotiate with the customer and offer alternatives. There would be more opportunities in a merged group for design innovation which could assist in the development of new markets and also of more economic ranges of standard containers. With the additional technical resources available to a merged company it would be possible to improve further the quality of bottles produced. This would be of great importance to customers, enabling them to improve the speed and efficiency of filling lines.

215. The large number of its customers who bought only small quantities of containers (see paragraph 83) was evidence of Rockware's ability to meet the needs of small customers.

216. Rockware saw the future role of the glass manufacturer as not merely providing the container but as assisting the customer in using it and even as advising him on marketing his products. For this reason Rockware offered customers plastic crates and had recently moved into the manufacture and supply of processing equipment. The merged company, through its larger resources and greater volume of business, could better afford to develop such service activities along the lines adopted by Metal Box Company Limited for customers of its cans.

Redfearn's views

217. Redfearn told us that, as might be expected with a smaller company, it did not produce as wide a range of standard bottles as Rockware. It did not consider, however, that it had been either unwilling or incapable of producing the designs that its customers required. Redfearn told us that its customers were generally satisfied with its standard of service which was at least equal to that of the other two large manufacturers. Redfearn considered that it had given small customers good service and doubted if they would be as well catered for by a merged company. The existence of competition was, in Redfearn's view, a prime incentive to a manufacturer to meet his customers' needs, and a merger with either Rockware or United Glass would tend to reduce such an incentive.

Cost reductions

Rockware's views

218. Rockware considered that a merger with Redfearn would reduce unit costs for its products (see paragraph 199). Part of the savings would be passed on to its customers. It also considered that the merger should bring some economies in purchasing such items as raw materials and packaging, in mould utilisation, in warehousing and in transport and distribution, but thought that these would not be material in relation to the other savings.

Redfearn's views

219. Redfearn considered that it had the most efficient production equipment currently available. If Rockware were to introduce production runs markedly longer than Redfearn already had introduced, this would be likely to lead to loss of flexibility and a consequent deterioration in the service provided to the customer.

Balance of payments (other than imports)

Rockware's views

220. As mentioned above (see paragraphs 194–199), Rockware believed that the merger would benefit the United Kingdom's balance of payments. It would be able to ensure the existence in the long term of a viable and prosperous industry to match competition from Continental manufacturers. However, there would be other gains to the country's balance of payments. With the use of more productive machinery unit costs would be reduced as a result of which it should be possible for the merged company to find new opportunities to export, including the export of standard bottles to the Continent in competition with producers there.

221. There would be greater earnings from the export of 'know-how' through Rockware International Limited with the additional personnel available from Redfearn. Rockware would, for example, be able to undertake major 'turn-key' projects which it did not have the resources to carry out at present.

Redfearn's views

222. Redfearn did not believe that a merger offered prospects of increasing exports of 'know-how'. This was an area in which Redfearn itself was increasingly active and it believed there would be greater benefit from having two British companies engaged in this work in future rather than one.

Employment

Rockware's views

223. Rockware told us that it did not intend to close any of Redfearn's or its own factories as a result of the merger. Any rationalisation of staff functions would be carried out in the long term. The merger would not affect the present trend to reduce levels of employment in the industry in the interests of increasing productivity. However, the greater prosperity of the

industry resulting from the merger was likely to result in a higher level of employment than would be achieved by the two companies separately.

Redfearn's views

224. Redfearn did not accept that the merger would lead to greater prosperity for the merged company, but rather the reverse. It also thought that in the event of a merger a number of its customers would seek alternative sources of supply which would reduce employment (see paragraph 204).

Technology

Rockware's views

225. Rockware considered that there were a number of advantages for the merged company, and its customers, from combining the research and development work of Rockware and Redfearn. Scarce resources (including skilled technologists of which there was a shortage in the United Kingdom industry) would be used more effectively because of the elimination of duplication of work between the two companies. There were many areas where such resources could be effectively used and the benefits would be spread across the larger, merged company. The combined research and development unit would have greater financial and staff resources which would enable it to install improved facilities.

226. A merged company would be in a better position than the present companies to take advantage of future technical developments which, although economically attractive, would be either expensive to install or require a larger manufacturing base to be applicable. Examples of such developments were new raw material mixing methods and the application of computer control to various parts of the process.

Redfearn's views

227. Redfearn considered that it had been able in the past to take advantage of all technological developments in glass container production and would continue to do so. Its own development and research work was of a high order and in addition when necessary it acquired 'know-how' from outside sources. It did not think that a larger group would necessarily be more successful in developing its technology. Indeed, as competition was a stimulus to technical development, it considered a merger would be more likely to lead to a decline rather than an improvement in technical development.

Competition

Rockware's views

228. Rockware did not consider that a merger would lead to a concentration of production and reduction in competition that would have any significant adverse effect on such matters as, for example, price or reliability of supplies.

229. The merged company would face considerable competition from other sources. There was in the first place competition from the Continental glass container industry (see paragraph 192).

230. Secondly, there would be considerable competition from other United Kingdom glass container manufacturers, including not only United Glass Limited, but also Beatson, Clark Limited and Canning Town Glass Limited.

231. Thirdly, glass containers formed part of a wider packaging market and manufacturers had to face competition in several sectors from other forms of packaging, in particular metal, plastic and cardboard/paper (see paragraph 44–45).

232. In addition to these sources of competition, the merged company would face the market power of the industry's larger customers who were responsible for a substantial part of its sales (see paragraphs 83, 132 and 158).

Redfearn's views

233. Redfearn saw no reason to suppose that a merger with Rockware would not result in the detriments traditionally associated with a reduction of competition: a lack of adequate constraints on profit margins; a lack of impetus in marketing; less pressure to provide the best service to customers; a lower level of technical inventiveness; and a greater pressure for customers' wishes to be subordinated to a disproportionate extent by the dictates of production.

234. Redfearn pointed out that a merged company would have about 42 per cent of the total market for glass containers (by volume) and over 50 per cent of particular sectors; it would have only one main competitor in the United Kingdom. Competition would, however, be reduced more than these figures suggested because the merger would eliminate the fastest-growing supplier as a competitor. Redfearn's business had grown faster than its main competitors (its market share had increased to 16 per cent from 14 per cent in 1968) and this was an indication that its customers wished to have a greater choice of suppliers. Redfearn did not believe that adequate competition would be provided by other manufacturers of glass containers. The smaller United Kingdom manufacturers would be unable to supply the volume and range of containers required and for United Kingdom customers there would be many disadvantages in being dependent on Continental suppliers.

Management

Rockware's views

235. Rockware gave us some information on how Redfearn's activities would be incorporated in its management structure. It pointed out that it had in recent years carried through a number of mergers successfully and was confident that this would be the case in the present instance.

Redfearn's views

236. Redfearn believed that integrating the company into Rockware's system of management would harm its business because it would replace

direct control and short lines of communication (of particular importance in areas such as customer and labour relations) by a more complex system with longer lines of communication.

Maintenance of an independent British glass container industry

237. In Rockware's view the proposed merger with Redfearn offered the best means to ensure the continuance of an independent British glass container industry. Without the merger Rockware believed that the United Kingdom market would be increasingly dominated by imports and by manufacturers under foreign control.

238. Redfearn agreed that it was desirable to maintain British control of as large a sector of the industry as was possible but did not consider that a merger would help to achieve this object.

2. THE PROPOSED MERGER BETWEEN UNITED GLASS AND REDFEARN

Origins of the proposed offer

239. United Glass told us that it had had the possibility of a merger with Redfearn under consideration for some time. In 1974 it made a detailed study of the company on information available to it but did not proceed further in view of the uncertain economic climate. It was likely that in the absence of other developments, United Glass would have made an offer for the company within the next few years. However, the possibility that Rockware or Rheem International Inc (see paragraph 5) might secure control of Redfearn led United Glass to announce its intended offer for Redfearn at this time.

Capacity of the United Kingdom glass container industry

United Glass's views

240. One of the reasons advanced by United Glass in support of the merger was that it would assure adequate capacity to meet the future needs of its customers.

241. The present capacity of the United Kingdom glass container industry was sufficient to meet the normal demands of its customers, and such shortages as had occurred in recent years were attributable to exceptional circumstances such as the soda ash strike in 1974 and the unusually hot summer of 1976.

242. In common with other glass container manufacturers United Glass expected a continuing increase in demand for its products over the next three or four years. This demand, it told us, could in part be met by what it termed 'stretching' capacity, that is increasing the output of existing

plant by such means as rebuilding furnaces to a larger size, boosting the capacity of furnaces, and replacing existing bottle-forming machines by those of greater capacity. Such 'stretching' could not, however, provide enough capacity to meet the future needs of its customers. It also told us that 'stretching' existing capacity was not necessarily as economic as putting up a new factory. 'Stretching' often involved increasing the capacity not only of the forming machines and furnaces but of other equipment such as the batch-making plant, 'cold-end' equipment and warehousing. In planning a new factory all of these facilities could be planned with concomitant economies of scale.

243. United Glass considered it would be necessary for the industry to establish a new plant to provide additional capacity needed by 1981 or 1982. Such a project would take about three years to carry through to the production stage. A plant of economic size would call for a substantial investment of some £17 million. It would moreover represent a significant increase (United Glass put the figure at about 5 per cent) in the capacity of the industry. The company told us that its management had under consideration plans for expansion of this kind but that there would be considerable risks for any of the present companies undertaking such a project (although United Glass was probably in the best position to do so): there could be delays in the plant coming on stream, or major technical problems when it came into production; there might be a down-turn in demand or there might be serious over-capacity in the industry if another manufacturer also undertook a major expansion project.

244. A merged company would be able to undertake such a project with much greater confidence. The actual size of the plant would be of much the same size as United Glass already had under consideration; it might, possibly, be somewhat larger. Without a merger there was a risk either that none of the present manufacturers would undertake such a project or that it would be considerably delayed. In either case the industry would not be able to meet the growing needs of its customers who would be forced to turn to imports or to alternative forms of packaging. A merger would also reduce the likelihood of two manufacturers undertaking expansion projects at the same time (see paragraph 243), which might lead to price-cutting, unprofitability in the industry, and inability to invest on an adequate scale. It might also lead to plant closures and a contraction in the capacity of the industry from which it would take some time to recover.

Redfearn's views

245. Redfearn accepted that as a general principle a large company was likely to be in a better position than a smaller company to bear the financial risks arising from a large development programme. However, its own plans for expansion which it outlined to us (see paragraph 167) had taken adequate account of such risks and it was confident that they could be carried out successfully. Its willingness to expand its capacity should be a strong incentive to other manufacturers to invest in new capacity to avoid loss in their market shares. A merger would make it less likely that the capacity of the industry would be increased. Redfearn's existing plans were ready to

be carried out but would at best be delayed by a merger. In Redfearn's view United Glass's concern at the risks of over-capacity did not augur well for the industry's meeting future needs if the two companies were merged. It drew our attention to the recent report of the Price Commission that had considered United Glass to be cautious in its investment policy.

Savings arising from the merger

United Glass's views

246. United Glass estimated that a merger with Redfearn would produce savings in a number of areas, part of which could be passed on to its customers. The annual savings for the enlarged group would amount to approximately £800,000, equivalent to 2 per cent of Redfearn's present annual sales value:

	£'000
Manufacturing costs	845
Transport and warehousing	265
Operating expenses (estimated at ¼% of sales)	100
	1,210
Less: additional fee payable under the technology agreement with Owens-Illinois Inc. which on the basis of the existing structure would initially be	370
Net annual savings	840

247. The savings in manufacturing costs would arise in a number of areas. There would, in particular, be improvements in efficiency from access to each company's research and technology, including energy savings from achieving greater melting efficiency in the furnaces. There would also be reductions in the costs of purchasing raw materials, fuel oil and packaging; the rationalisation of moulds between factories; and greater run lengths.

248. The greater run length possible from the combined order books of the two companies would give rise to savings in the development of a number of machine lines for the continuous, or very long-run production of one type of container, which it described as PAT lines. United Glass gave us examples of these. In its experience considerable savings could be achieved from PAT lines. They were equipped with high-speed machines operated at a high efficiency. Specialisation in output enabled the manufacturer to mechanise the entire inspection and packing operations. United Glass gave us by way of example figures for labour productivity in producing the same bottle on a PAT line and on a normal line.

249. Although PAT lines gave cost advantages United Glass did not consider that it could, by quoting lower prices and without a merger, obtain the necessary business at its competitors' expense to justify installing new lines. Its competitors could be expected to react to such a move by offering even lower prices and a price war might ensue that could deprive the glass container industry of the profitability needed to enable it to invest adequately. United Glass stated that the Price Commission's Report had confirmed that profitability did not ordinarily leave much more surplus than was required to sustain the heavy capital expenditure needed for investment. Lower prices to PAT line customers would result therefore either in higher prices being

charged to other customers or a failure to invest adequately in the capacity necessary to meet the future requirements of its customers generally.

250. In describing its pricing policy United Glass told us that it did not have smaller profit margins on items supplied to its larger customers as was suggested by the report of the Price Commission. Its pricing structure was based not on the total size of the customer's orders but the cost of the product, job or item supplied. A smaller margin was in its view justified on a large order because of the consequent cost savings. Large volume orders also enabled it to plan ahead with confidence and so improve the utilisation of its capacity. In addition, high volume orders were necessary to justify the installation of high productivity machines and other advanced facilities which helped it to contain the costs of large and small orders alike.

251. United Glass told us how a merger would bring savings in distribution costs and warehousing costs. With the wider spread of manufacturing plants available it would be possible to manufacture some bottles at factories nearer to the customer with consequent savings in transport costs. Other savings would arise from the re-scheduling of deliveries for those containers made by either company which could not be produced at the factory nearest to the customer.

252. United Glass also envisaged that the complementary product ranges of the two companies with their peak demands at different times of the year would enable it to make some reduction in the level of stocks it would need to hold with consequent savings in storage and finance charges. There would also be savings in warehousing arising from the lower relative capital costs and greater operating efficiency of the larger units which could be operated by the merged company.

253. The savings in operating expenses would arise from reduction in the cost of providing common services, including marketing and administration, in the merged company.

Redfearn's views

254. Redfearn did not consider that any further substantial economies could be achieved by increasing the length of its production runs or installing new equipment (see paragraph 203). It doubted whether in practice the savings in transport costs which could be made by re-locating the manufacture of bottles would be substantial. This was because the production of a container could be switched satisfactorily to another factory only if it had the machines and other plant suitable to manufacture the container and the operators skilled in making that type of bottle. In practice it would be possible to secure only small savings by re-scheduling transport.

Security of supplies to customers

United Glass's views

255. The merged company would provide greater security of supplies for its customers in that, having larger production facilities than the two existing companies, it would be better able to meet unexpected fluctuations in demand.

The risk of interruption to supplies from breakdowns in plant would be less as the merged company would have more plants to make up the shortfall. Risks of disruption would also be reduced because furnace repairs and rebuilds could be better phased (see paragraph 174). The merged company would also be better able to maintain the required production of glass of each colour without changing the colour output of furnaces; such changes entailed a significant loss of production.

256. The two companies had seasonal peak demands at different times of the year for their major products, and the capacity of the merged company could be more advantageously deployed to meet these periods of high demand without shortages arising.

257. We told United Glass of the fears of independent distillers that DCL would enjoy preferential treatment in its business with the merged company (see paragraph 180). United Glass told us, however, that when DCL took a major shareholding in the company in 1969 a number of independent distillers had also been concerned lest DCL be then given preferential treatment. However, United Glass had continued to do business with them, and this demonstrated that their fears on this score had been allayed. The company did not consider that after a merger the link with DCL would, any more than in the past, give DCL an undue advantage over other customers.

Redfearn's views

258. Redfearn considered that the merger would result in greater security of supplies for the industry's customers only if it brought about a significant increase in the industry's capacity. In Redfearn's view (see paragraph 245) this was unlikely to be the case.

Balance of payments

United Glass's views

259. A merger would benefit the balance of payments. Without a merger the industry might fail to install the additional new capacity needed to meet the future requirements of its customers who would then have to import glass containers or use alternative forms of packaging which, unlike glass, were not made almost entirely from indigenous materials.

260. Whilst some large Continental producers had higher labour productivity, their labour costs were higher. They would also face significantly higher transport costs in supplying United Kingdom customers and could not give the intimate service provided by domestic manufacturers to such customers.

261 A merger with Redfearn would not be likely to lead to any significant increase in imports by firms seeking the assurance of an additional supplier. Although it was natural for some customers to want to have a number of suppliers to whom they could turn, in the event of a merger they would buy their requirements from the manufacturers who could offer reliable supplies of competitive, good quality products. United Glass would, after a merger, be able to convince Redfearn's existing customers of its reliability

as a supplier. The present low prices of some types of glass containers from the Continent were the result of temporary over-capacity there.

262. The merger with Redfearn was unlikely to lead to any significant increase in exports of containers.

263. The technical assistance agreement with Owens-Illinois did not prevent United Glass from selling overseas technology it had developed independently of O-I (see paragraph 133). Such business would continue and, in the event of a merger, any similar arrangements which Redfearn had in respect of its developments could also continue.

264. One result of a merger would be payments to Owens-Illinois in respect of Redfearn's turnover under the technical assistant agreement. (This is covered more fully in paragraphs 246 and 273.)

Redfearn's views

265. In Redfearn's view the merger would result in an increase in imports as a number of the industry's customers would seek the assurance of an overseas manufacturer as an additional source of supply (see paragraph 204).

Competition

United Glass's views

266. Although the merged company would have about 43 per cent of the United Kingdom market it would not possess the competitive power that figure suggested, and fears of the exercise of such power were unfounded.

267. There would still be a considerable amount of competition from the other United Kingdom manufacturers of glass containers with Rockware in particular as an effective competitor having a strong market share in the beverage and food sectors (see paragraph 28 and Appendix 2).

268. There would be competition from manufacturers of glass containers on the Continent.

269. There would also be competition from the manufacturers of other packaging materials, which would be greatest in two of the three product sectors in which the merged company would have the largest share of the market, namely foods and beverages (beer, cider and soft drinks) (see Appendix 3). Such competition would effectively limit any market power the merged company might otherwise possess in these sectors.

270. Spirits was the third sector in which the merged company would have the largest share of the market. United Glass had specialised in this area for many years and had 54 per cent of the wines and spirits market. The merger would make little difference as Redfearn had only about 8 per cent. Although there was no competition from other forms of packaging United Glass had been able to retain the business of its customers only by giving them satisfaction in price, quality and service.

271. In assessing the competitive power which the merged group might have United Glass considered that the countervailing power of its customers should also be taken into account. A large percentage of its sales and those of Redfearn were to a few large customers (see paragraphs 132 and 158) who themselves had significant market power.

Redfearn's views

272. In Redfearn's opinion there was no reason to suppose that this merger, like that with Rockware, would not lead to the detriments normally associated with a reduction in competition (see paragraph 233).

Technology

United Glass's views

273. United Glass told us that its technical assistance agreement with O-I Inc (see paragraph 113) was of considerable benefit to the company. It was not because O-I was a 50 per cent shareholder in United Glass that the decision to renew the agreement in 1976 had been taken by the United Glass Board but simply because of the benefits to be obtained. It was confident that Redfearn would also secure similar benefits, well worth the royalty payable on sales.

Redfearn's views

274. Redfearn did not consider that a merger would improve its technological performance. It had held its own technically against the other manufacturers through its own research and development work and the purchase of technical knowledge from other companies when this was considered necessary.

Employment and productivity

United Glass's views

275. United Glass did not intend to close down any of the existing factories of either company as a result of the merger. It expected, however, that the trend towards the introduction of higher productivity plant and equipment would continue whether or not a merger took place.

276. In so far as the merged company was more successful in developing the market and attracting capital for expansion employment prospects would be improved.

277. United Glass and Redfearn were both members of the National Joint Industrial Council which dealt with basic wages of the process workers. It considered that as there were basic similarities of principle between the wage payment structures of the two companies these could be readily integrated into a comprehensive and improved structure.

Redfearn's views

278. A merger would not improve employment prospects. Redfearn doubted whether a merged company would be able to retain the present business of the constitutent companies (see paragraph 204) and considered that in the

longer term an independent Redfearn offered the better prospect of providing increased capacity and higher employment. It also thought that redundancies in administrative staff might be necessary if there were savings in overheads from the merger of the kind that United Glass thought possible (see paragraph 253).

279. A merger would be detrimental to industrial relations. These were good in its own factories, partly because of the compact nature of the company's operations. As its factories were widely scattered United Glass had to adopt a different personnel management structure from Redfearn and it would be difficult to preserve the present system at Redfearn within a merged company. United Glass faced problems on wage differentials because of the differences in general wage levels in the different areas where its factories were located. These problems would be exacerbated by the inclusion of Redfearn's work force in the merged company as it appeared to be more highly paid than United Glass workers at nearby factories.

Implementing the merger

United Glass's views

280. United Glass gave us information on how it intended to carry the proposed merger into effect and this was made available to Redfearn. It stated that in its view Redfearn's management organisation was broadly similar to its own.

Redfearn's views

281. The long period envisaged by United Glass for study and review of Redfearn's business before final decisions would be made on management structure would be unsettling for employees and harmful to the operations of both companies. Redfearn would also suffer from the delay (or curtailment) to its present expansion plans.

CHAPTER 8

Conclusions

THE MERGER SITUATION

282. Under the terms of each reference and of the provisions of section 69(1) and of section 75(2) and (4) of the Fair Trading Act 1973 we are required to investigate and report whether arrangements are in progress or in contemplation which, if carried into effect, will result in the creation of a merger situation in which section 64(1)(*a*) and (*b*) will be satisfied.

283. By virtue of section 64(8) a merger situation qualifying for investigation exists if two or more enterprises have ceased to be distinct enterprises in the circumstances described in section 64(1). Under section 75(2) we are required to proceed in relation to a prospective merger as we could proceed if it had taken place immediately before the reference.

284. Although the offer to acquire the ordinary share capital of Redfearn, made by Rockware on 21 September 1977, has lapsed, it is clear that unless prevented from doing so under the Act Rockware intends to make a new offer for the ordinary share capital of Redfearn. United Glass has not announced any offer to acquire the capital of Redfearn; but it has told us that it intends to do so unless prevented under the Act (see paragraph 141). Arrangements are therefore in contemplation which, if carried into effect, will result in enterprises carried on by or under the control of Redfearn ceasing to be distinct from enterprises carried on by or under the control of Rockware or, alternatively, of United Glass.

285. Section 64(1)(*a*) is satisfied if as a result of the merger the condition referred to in section 64(2) prevails, or prevails to a greater extent with respect to the supply of glass containers. In other words, we have to consider whether as a result of a merger of Redfearn with Rockware, or of Redfearn with United Glass, a higher proportion of the supply of glass containers in the United Kingdom than is already supplied by one of them would be supplied by the merged enterprises and that higher proportion would be at least 25 per cent. In Appendix 2 are set out figures which show what proportion of the United Kingdom market for glass containers was supplied by each of the three companies in 1977. According to these figures Redfearn had 16 per cent of the market, Rockware 26 per cent and United Glass 27 per cent. It follows that if Redfearn merged with either of the other two companies the condition specified in section 64(2) would prevail to a greater extent as a result of the merger. Section 64(1)(*a*) is therefore satisfied.

286. We have shown in paragraph 143 that the assets of Redfearn exceed a value of £5 million. The condition set out in section 64(1)(*b*) is therefore satisfied by either merger.

287. We conclude that a merger situation qualifying for investigation will be created if the arrangements in contemplation for the merger of Redfearn

either with Rockware or with United Glass are carried into effect. We now consider whether either merger may be expected to operate against the public interest.

THE PUBLIC INTEREST

288. We have to consider separately whether the merger situation under each of the two references operates, or may be expected to operate, against the public interest. In doing so we must take into account the structure of the United Kingdom glass container industry which constitutes the entire business of Redfearn and most of that of Rockware and United Glass. In 1977, which was broadly typical of the last five or six years, Rockware and United Glass each supplied between 25 and 30 per cent of the domestic market for glass containers and Redfearn about 16 per cent. About 10 per cent of the market was accounted for by imports and most of the balance, about 20 per cent of the market, was supplied by three of the smaller producers. In recent years the share of imports has been above historic levels and Redfearn has increased its share of what has been supplied by domestic producers. Although each of the three main producers supplies each major sector of the market, their shares of these sectors vary; for example United Glass, reflecting its long-established links with DCL, is the main supplier of the wines and spirits sector, and Redfearn and Rockware are the main suppliers of the beverages sector (beers, ciders and soft drinks).

Competition

289. A merger of Redfearn with either Rockware or United Glass would materially raise the level of concentration in an already highly concentrated industry. It would leave the glass container market supplied by only two major United Kingdom companies, and remove a company that in recent years has proved itself to be an effective competitor. There would be a significant reduction in competitive pressure. The immediate effect would be greatest in sectors of the market in which each of the merging companies at present has a large share. In addition the pressure of potential competition would be reduced in sectors in which one or other of the merging companies at present has only a small share.

290. Rockware and United Glass have pointed out that there are other sources of competition outside the United Kingdom glass container industry. These sources are Continental glass containers and alternative forms of packaging (see paragraphs 229, 231, 268 and 269). However, we do not consider that they would, for reasons given below, provide adequate competition in the market after a merger.

291. Imports have in recent years been at a historically high level, mainly because of shortages in domestic supply. For reasons given in paragraph 296 we believe that imports are likely to continue at a relatively high level in the next few years. We do not consider, however, that imports can be relied on as a competitive force in the market. If present apparent over-capacity on the Continent disappears, transport costs are likely to keep import prices

above domestic prices (see paragraphs 193, 201, 261 and 55). Import prices also depend on the value of sterling. There must, in any case, be serious doubts whether Continental producers could, in times of high demand, supply more than a small part of the United Kingdom market.

292. In many, but not all sectors of the market, customers of the glass container industry have the opportunity of using other forms of packaging. Whether they do so depends partly on the relative costs to the bottler or packager of the alternative types of container (see paragraph 45). These costs can change over time. Moreover once a filling line has been installed for glass containers, a change, say, to cans can be made only at the expense of installing a separate filling line.

293. We are therefore satisfied that a reduction from three to two main domestic producers would constitute a significant loss of competition between suppliers of glass containers (see paragraph 28) and that there would be a serious risk of adverse effects on the reliability of supply and on other kinds of service to customers, on the range of containers provided, and on prices. From the information available to us (see paragraph 170) it appears that the smaller producers would not, in the foreseeable future, be able to serve as effective alternative sources of supply on any substantial scale.

Security and continuity of supply

294. The customers of the industry cannot sell their own products without containers so security and continuity of supply are of crucial importance to them. For this reason many of the large customers of Redfearn, Rockware and United Glass spread their orders among two or more suppliers. Some customers told us that if either merger took place they would obtain part of their requirements from Continental suppliers and others said that they would consider doing so (see paragraph 177).

295. Rockware and United Glass each argues that in the event of its merger with Redfearn any increase in imports would be shortlived as the merged company would be able to demonstrate its reliability as a source of supply (see paragraphs 200 and 261). However, we consider that customers would be more likely to have confidence in obtaining their supplies from United Kingdom sources if there were three major suppliers in the industry rather than two, and if each of them were to proceed with its individual plans to extend capacity.

296. Although past shortages have in part been due to exceptional circumstances, we consider that customers fear recurrences and that these fears will not easily be allayed. In these circumstances a merger would be likely to increase the placing of orders on the Continent, in the short term at least, even if Continental prices were higher (see paragraph 52).

The industry's future ability to meet demand

297. Over the past few years Redfearn, Rockware and United Glass have each invested heavily, and broadly in porportion to its sales. They have similar views about the future growth of the domestic market and are prepared as

independent suppliers to continue to invest substantially in order to meet it. They are all profitable, with adequate financial resources to undertake this investment.

298. Redfearn has told us that it intends to finalise plans for increasing its capacity over the next five years and considers that, as a result, it will be able to play its full part in meeting not only existing demand, but also the growth in the market that it expects, thereby reducing imports towards traditional levels (see paragraph 167). United Glass has told us that its management had proposals of a similar kind under consideration, proposals which, in its view, would not be substantially changed in the event of a merger (see paragraphs 243 and 244). Rockware has told us of its existing plans to increase its capacity as an independent company over the next five years and of its separate proposals for increases in capacity in the event of a merger (see paragraphs 94 and 210).

299. The only serious complaint made to us by customers of the industry was of shortages that had occurred from time to time since 1973. Some of them at least feared their recurrence (see paragraph 175). We consider this fear of shortage of capacity to be of particular importance for the future of the industry and for its customers.

300. Owing to the nature of the productive process and the economics of this business each supplier of glass containers could suffer seriously if its capacity were under-utilised (see paragraphs 23 and 30–37). There is therefore a natural tendency to be cautious in making additions to capacity. We believe that this would be reinforced if the number of major competitors were reduced from three to two and Redfearn disappeared as an independent competitor. We are fortified in this belief by the knowledge that Redfearn has increased its capacity significantly in recent years (see paragraph 149). Moreover, any misjudgments of future requirements would, in our opinion, be less serious in their effect if there were three rather than two major suppliers each making independent estimates of future demand and of stocks to be carried.

301. Among the benefits which, it has been claimed, would result from the mergers there are three of particular significance for the industry's ability to meet demand. First, it was put to us by Rockware (see paragraph 211) that a merged company would be better able to forecast demand because it would have a wider knowledge of customers' intentions. We consider that little advantage is likely in this respect, because each of the three companies has close contacts with many customers and so already has the benefit of their views on their possible requirements. Second, both Rockware and United Glass told us (see paragraphs 211 and 255) that a merged company would, by virtue of its greater size, be able to arrange such matters as furnace repairs more conveniently than its two constituent companies working separately. Third, it was put to us by United Glass (see paragraph 244) that the merged company, again by virtue of its greater size, would be better able to shoulder the financial risks involved in major investments.

302. We see some force in the second claim although we think that the ability of a merged company to phase furnace closures more conveniently

may not be so great as has been claimed (see paragraph 213). We also see some force in the third claim although, as we have said (see paragraph 297), we think that all three companies have the resources to invest on the scale necessary. In any case we consider that in present circumstances capacity to meet demand would be more likely to be made available if there were three rather than two major United Kingdom manufacturers.

Cost savings

303. United Glass and Rockware each gave us estimates of cost savings that could result from its merger with Redfearn (see paragraphs 199, 218 and 246). The estimates of each varied in amount and in the main areas where savings would be obtained.

304. The savings were to be derived mainly from rationalisation of production and transport and from economies of scale, as well as from the longer production runs expected to become practicable when the order books of the two merging companies were combined.

305. We have examined the estimates and consider that in some respects the amounts of the savings have been over-estimated. We also consider that some at least of the assumptions on which these estimates were based might not be fully realised and that insufficient allowance has been made for obstacles to achieving these savings in practice. Moreover we consider, from the evidence that we have received, that some of the savings expected from either merger might be obtained, in part at least, by each of the three companies independently. In particular we consider that the length of runs that could be achieved by each should enable them to install some new higher-speed forming machines which would, we understand, provide significant savings in unit costs (see paragraphs 199, 247 and 248). We therefore accept that cost savings might be derived from either merger, but not on the scale claimed.

306. There has to be set against such savings the disruption likely to be caused by either merger. Furthermore rationalisation of production as well as the achievement of longer production runs might reduce flexibility of supply. Despite precautions which might be taken to allay customers' concern, rationalisation and other changes could intensify their fears over security of supplies (see paragraph 176). It could accentuate any tendency for customers to divert their business to other suppliers, particularly to those on the Continent, thus reducing the benefits expected from combining order books.

Foreign competition and the long-term future of the United Kingdom glass container industry

307. In our view the present level of imports is due not so much to competitive advantages on the part of Continental manufacturers as to the experience of past shortages by customers and to the fear that United Kingdom industry will be unable to meet their requirements (see paragraph 175). We have also to consider whether, as Rockware argued, its merger with Redfearn was desirable because without it large efficient Continental manu-

facturers would, in the longer term, succeed in obtaining a substantially greater share of the United Kingdom market, with disastrous results for the United Kingdom glass container industry (see paragraphs 194–196).

308. Some Continental producers apparently have higher levels of machine productivity and of output of glass per employee, partly because they have access to larger markets for standardised containers than their United Kingdom counterparts (see paragraphs 195 and 260). But they also apparently have higher wage rates, higher transport costs in supplying United Kingdom customers, and greater difficulties at present in providing a range of service to such customers as full as that provided by domestic producers (see paragraphs 55 and 260). For these reasons and, for the reasons given in paragraph 291 we do not regard it as likely that the Continental manufacturer would in normal circumstances be able to compete in the United Kingdom market against domestic producers. Therefore we do not accept that Continental suppliers threaten the United Kingdom glass industry in the foreseeable future. But, even if there were such a threat, we judge that the industry is as well equipped in present circumstances to meet the threat with an independent Redfearn as it would be if either of the proposed mergers took place.

Management

309. Because Redfearn is both a smaller and geographically a more close-knit company than either United Glass or Rockware its structure and style of management are somewhat different. We have considered what problems might arise if either merger was permitted. We conclude that, although there might be some short-term problems, there would be no cause for concern in the longer term.

Industrial relations and employment

310. From the evidence of representatives of the Trades Union Congress and unions concerned (see paragraphs 182–185), and in the light of other information given us, we see no advantage from either merger to industrial relations in Redfearn, Rockware or United Glass.

311. Rockware and United Glass have told us that they do not intend to close down any factories, nor do they intend to reduce employment, as a result of a merger with Redfearn, and Rockware stated that any rationalisation of staff would be carried out over a long period (see paragraph 223). Security of employment would therefore appear to depend mainly on how either merger would affect the long-term prosperity of the glass container industry. We consider that its prosperity in present circumstances is at least as well assured by Redfearn's continuing independence as a competitor in the market as by its merging with either Rockware or United Glass.

Balance of payments factors other than imports

312. Under a merger with Rockware there might be a greater effort to increase exports, particularly to Continental Europe. But this would be due, in our opinion, mainly to Rockware's own interest in exporting rather than

to any competitive advantage given by a merger. For reasons given in paragraph 305 we do not think that the merged company could count on reducing its unit costs so as to be able to export standard containers to Continental markets in competition with major producers there. In our view the merger would not result in any significant increase in exports.

313. Under a merger with United Glass there would probably be some increase in expenditure of foreign exchange on technical assistance, as a result of the royalties paid to Owens-Illinois (see paragraphs 159 and 246). Earnings from providing technical assistance overseas would not be significantly changed (see paragraph 263).

314. We consider that neither merger would significantly affect foreign exchange earnings or payments on the part of any of the three companies.

Technology and quality of products

315. Technical skill and innovation are important in manufacturing glass containers. However, although United Glass has access to Owens-Illinois technology it does not appear that either Redfearn or Rockware suffers any handicap from having to rely on its own efforts and on buying technical knowledge from whatever source seems best in the event. Nor do we accept that Rockware and Redfearn, or their customers, would necessarily gain, as Rockware believes (see paragraph 225), from the sharing of technical resources. There appears to be as much to be said for each pursuing its own solution to technical problems in competition with the others. We therefore consider that the industry's technical skills or inventiveness would have nothing to gain by either merger. We consider that the quality of their products would not be affected by a merger of Redfearn with either Rockware or United Glass.

Conclusions

316. Our conclusion is that a merger of Redfearn with either United Glass or Rockware would be contrary to the public interest because it would have the following adverse effects. It would lead to diminished competition, to the risk of less adequate provision of capacity in the United Kingdom to meet market demand, and, in the short term at least, to the risk of increased imports. We do not consider that the cost reductions that might be achieved under either merger would counterbalance these disadvantages. No other possible consequences of either merger appear to us to be significant.

317. We therefore conclude that, if the enterprise carried on in the United Kingdom by or under the control of Redfearn National Glass Limited ceased to be distinct from either the enterprise carried on by or under the control of Rockware Group Limited or that carried on by or under the control of United Glass Limited, that fact may be expected to operate against the public interest. We are unable to recommend any action which would remedy or prevent the adverse effects that might result if either merger were permitted.

We therefore recommend that neither merger should be permitted.

E L RICHARDS (*Chairman*)
J S COPP
C T H PLANT
J S SADDLER
H STREET
B S YAMEY
MISS Y LOVAT WILLIAMS (*Secretary*)
28 March 1978

APPENDIX 1

(referred to in paragraph 7)

List of bodies and individuals who provided us with views and information

1. The Glass Container Industry and its Suppliers

Albion Bottle Company Limited*
Beatson, Clark & Company Limited
Canning Town Glass Limited
Co-operative Wholesale Society Limited
Emhart (UK) Limited*
Glass Manufacturers' Federation
Gregg & Company (Knottingley) Limited
Lax & Shaw Limited
Lewis & Towers Limited
2 Suppliers to the Industry
1 Manufacturer of Closures

2. Customers of the Industry

Allied Breweries Limited*
Beecham Group Limited*
Colin Campbell & Son Limited*
National Pharmaceutical Association Limited*
Pharmaceutical Services Negotiating Committee*
Robertson Foods Limited*
George Wood & Sons (M/C) Limited*
40 Other Manufacturers of foodstuffs, drinks and pharmaceuticals
17 Bottle Wholesalers
4 Trade Associations representing food and drink manufacturers

3. Trade Unions

Amalgamated Union of Engineering Workers*
Association of Scientific, Technical and Managerial Staffs*
Electrical, Electronic Telecommunication and Plumbing Union*
National Union of General and Municipal Workers*
Trades Union Congress*
Transport & General Workers', Union*

4. Government Departments

Ministry of Agriculture, Fisheries and Food
Department of Environment
Department of Health & Social Security
Department of Industry

*Hearings were held with these parties

APPENDIX 2

(referred to in paragraphs 28, 74, 122, 148 and 198)

The market shares of Rockware Group Limited, United Glass Limited and Redfearn National Glass Limited by product sectors, 1977

Product Sector	*Total United Kingdom sales (million units)*	*Percentage of product sector supplied by each company*		
		Rockware	*United Glass*	*Redfearn*
Wines and spirits	1,589	23	54	8
Beers and ciders	328	37	20	24
Soft drinks	1,447	26	14	31
Dairy products	457	38	25	5
Food	1,867	34	21	21
Chemicals and pharmaceuticals	657	3	20	5
Toilet and perfumery	380	18	17	nil
Household	176	14	14	9
Total	6,901	26	27	16

Sources: Glass Manufacturers' Federation: Total sales by United Kingdom manufacturers and estimates of imports by product sectors calculated from Customs & Excise figures of total imports. The total figure differs marginally from the figure for the total sales in the table in paragraph 50; (for reasons given in note 4 of that table). This does not have any significant effect on the above table.

Rockware, United Glass and Redfearn: Sales figures for 1977.

APPENDIX 3

(referred to in paragraphs 34, 75, 123, 149 and 198)

Forming machines operated by Rockware, United Glass and Redfearn at end-1972 and end-1977

Machine type		*Index of relative production speeds*	*Number of forming machines*					
			Rockware		*United Glass*		*Redfearn*	
			1972	1977	1972	1977	1972	1977
5-section	single-gob	83	9	7	10	3	2	
	double-gob	142	17	3	8	8	9	
6-section	single-gob	100	12	11	7	8		1
	double-gob	170	29	30	33	28	20	16
8-section	double-gob	227	1	9	2	13	1	10
	triple-gob	318						
10-section	double-gob	280						
Other machine types			6	3	15	6		
Total			74	63	75	66	32	27

Source: Information provided by the companies.

Note: The production speeds of the above types of forming machine have been generally increased over the period 1972 to 1977.

APPENDIX 4

(referred to in paragraphs 86, 87 and 91)

Rockware Group Ltd

Capital employed,[1] sales, and profit[2]

	1972	1973	1974	1975	1976	*Half year to June* 1977
Rockware Group Ltd—Glass, plastics, and engineering divisions, combined						
	£m	£m	£m	£m	£m	£m
Average capital employed	22·4	25·4	29·1	35·8	39·5	(not available)
Sales	35·8	41·1	44·8	56·5	72·6	43·4
Operating profit	2·5	2·7	3·6	5·8	7·5	4·6
Add: Interest receivable and dividend from associated company					0.2	0.4
Profit	2·5	2·7	3·6	5·8	7·7	5·0
Profit as return on:	%	%	%	%	%	%
Average capital employed	11·2	10·6	12·4	16·2	19·5	
Sales	7·0	6·6	8·0	10·3	10·6	11·5[3]
Quoted companies in manufacturing industry						
Profit as return on:						
Average capital employed	14·7	16·8	16·1	14·5	17·5	(not available)
Rockware glass division—glass	£m	£m	£m	£m	£m	£m
Average capital employed	21·0	23·3	26·4	33·4	36·2	(not available)
Sales	33·5	38·2	40·9	52·5	67·5	39·4
Operating profit	2·3	2·6	3·5	6·0	7·2	4·1
Operating profit as return on:	%	%	%	%	%	%
Average capital employed	11·0	11·2	13·3	18·0	19·9	(not available)
Sales	6·9	6·8	8·6	11·4	10·7	10·4

Average capital employed and profit—financial year 1976 (53 weeks to 2 January 1977)

	Rockware Group Ltd	*Glass*[5]
Capital employed	£m	£m
at 2 January 1977:		
Net current assets	9·1	
Fixed assets and investments	29·9	
Total capital employed	39·0[4]	34·6
Total capital employed at 28 December 1975	39·9	37.7
Average capital employed	39·5	36·2
Profit—financial year 1976		
Operating profits	7·5[4]	7·2
Interest receivable	0·2	
Profit	7·7	

Sources of capital employed at 2 January 1977

	Rockware Group Ltd	
	£m	£m
Share capital and reserves	22·5	
Deferred tax	11·4	
Minority shareholders' interests	0·2	34·1
Bank overdrafts and short-term loans	1·8[6]	
Loan capital	3·1	4·9
Total sources of capital employed		39·0
Per cent of total borrowing to shareholders' interest and deferred tax		14%

[1]Average of opening and closing capital employed at book values including company revaluations of fixed assets. Sources of capital employed include loan capital and bank overdrafts except to the extent that, for Rockware, loans of £7·4 million at end-1976 have been excluded from sources of capital employed corresponding to bank balances of £7·4 million excluded from capital employed.

[2]Profit including interest receivable before deducting interest payable and tax.

[3]Rockware's preliminary results for 1977 as a whole show group profit of £9·0 million representing a return of 10·1 per cent on group sales of £89·2 million.

[4]Shown in 'Rockware Group Limited Annual report and accounts 1976' including glass division capital employed £36·2 million, sales £67·7 million, and operating profit of £7·0 million.

[5]The figure under 'Glass' cover the results of Rockware Glass Limited and other minor subsidiaries but do not include those of Rockware International.

[6]Excluding loans of £7·4 million, corresponding to bank balances of £7·4 million excluded from capital employed.

APPENDIX 5

(referred to in paragraph 134)

United Glass Ltd

Capital employed,[1] sales, and profit[2]

	1972	1973	1974	1975	1976	1977
	£m	£m	£m	£m	£m	£m
United Glass group						
Group Results						
Average capital employed	31·6	37·4	46·2	55·1	59·5	63·7
Sales	54·4	61·0	72·2	87·2	100·9	125·6
Profit	5·5	6·3	6·5	7·4	8·3	12·4
	%	%	%	%	%	%
Profit as return on:						
Average capital employed	17·4	16·8	14·1	13·4	13·9	19·5
Sales	10·1	10·3	9·0	8·5	8·2	9·9
Quoted companies in manufacturing industry						
Profit as return on:						
Average capital employed	14.7	16.8	16.1	14 5	17.5	(not available)
Glass division[3]						
	£m	£m	£m	£m	£m	£m
Average capital employed	19·7	20·7	25·4	34·2	38·1	40·8
Sales	37·8	42·3	47·4	58·1	71·6	87·0
Profits	4·6	4·6	4·4	5·9	6·3	10·6
	%	%	%	%	%	%
Profit as return on:						
Average capital employed	23·4	22·2	17·3	17·3	16·5	26·0
Sales	12·1	10·9	9·3	10·2	8·8	12·2

Average capital employed—financial year 1977

Capital employed	*Group*	*Glass division*
Capital employed at December 1977:		
	£m	£m
Net current assets	26·7	15·5
Fixed assets	42·1	31·0
Total capital employed	68·8	46·5
Capital employed at December 1976	58·6	39·9
Average capital employed	63·7	43·2

Sources of capital employed at December 1977	*Group*	
	£m	£m
Shareholders' interests		61·4
Medium and long-term loans	4·0	
Bank overdrafts and short-term loans	3·4	7·4
Total sources of capital employed		68·8
Total borrowing as per cent of shareholders interests		12%

[1]Average of opening and closing capital employed at book values, with fixed assets at historic cost less depreciation

[2]Profit before deducting interest payable, extraordinary items and taxation.

[3]The results for the glass division are adjusted to a comparable 52 weeks period.

APPENDIX 6

(referred to in paragraph 160)

Redfearn National Glass Limited

Capital employed,[1] sales, and profit[2]

	Year to September					
	1972	1973	1974	1975	1976	1977
Redfearn	£m	£m	£m	£m	£m	£m
Average capital employed	6·3	7·5	8·5	10·5	12·4	15·0
Sales	15·2	18·3	21·4	27·1	34·9	41·2
Profit	1·2	1·7	1·4	1·8	3·3	4·8
Profit as return on:	%	%	%	%	%	%
Average capital employed	19·0	22·7	16·5	17·1	26·6	32·0
Sales	7·9	9·3	6·5	6·6	9·5	11·7
Quoted companies in manufacturing industry						
Profit as return on: Average capital employed	14·7	16·8	16·1	14·5	17·5	(not available)

Capital employed	£m	*Sources of capital employed at September 1977*	£m	£m
Capital employed at September 1977				
Net current assets	3·4	Shareholders' interests[3]		15·3
Fixed assets	13·8	10½% debenture loan	1·5	
Total capital employed	17·2	Bank overdraft	0·4	1·9
Capital employed at commencement of year	12·8	Total sources of capital employed		17·2
Average capital employed	15·0			
		Per cent of total borrowings to shareholders' interests		12%

[1]Average of opening and closing capital employed at book values with fixed assets at historic cost less depreciation
[2]Before interest payable, extraordinary items and taxation.
[3]Including the transfer of deferred taxation.

APPENDIX 7

(referred to in paragraph 91)

Rockware Group Ltd

Source and application of group funds

	1972 £m	1973 £m	1974 £m	1975 £m	1976 £m	*Total* £m	*Per cent of total*
Sources							
Profit before interest charges and taxation	2·5	2·7	3·6	5·8	7·7	22·3	56
Deduct: Interest charges, taxation and dividends	−2·1	−0·8	−1·8	−2·2	−2·3	−9·2	−23
Balance of profit	0·4	1·9	1·8	3·6	5·4	13·1	33
Add: Depreciation	2·1	2·2	2·4	2·8	3·3	12·8	33
Internal cash flow	2·5	4·1	4·2	6·4	8·7	25·9	66
Funds from other sources:							
Shares issued	3·0			0·1	0·6	3·7	9
Medium-term loans		0·6	0·4	4·8	−1·5	4·3	11
Proceeds on disposal of Greenford site					5·7	5·7	14
Other items, net	0·1	−0·6	−0·4	0·6	0·2	−0·1	
Totals	5·6	4·1	4·2	11·9	13·7	39·5	100
Application							
Capital expenditure	3·5	4·8	6·8	6·9	5·2	27·2	69
Acquisition of investments				0·1	0·6	0·7	2
Increase/—decrease in working capital	1·7	−1·0	1·6	1·9	−0·1	4·1	10
Other items					0·1	0·1	
Increase in liquid funds[1]	0·4	0·3	−4.2	3·0	7·9	7·4	19
Totals	5·6	4·1	4·2	11·9	13·7	39·5	100

[1]Comprising bank balances less short-term loans.

APPENDIX 8

(referred to in paragraph 137)

United Glass Ltd

Source and application of group funds

	1973 £m	1974 £m	1975 £m	1976 £m	1977 £m	*Total* £m	*Per cent of total*
Sources							
Trading profit	6·3	6·5	7·4	8·3	12·4	40·9	67
Interest charges	−0·7	−0·9	−1·7	−1·4	−0·9	−5·6	−9
Extraordinary item		−0·1		−0·3		−0·4	−1
Profit before tax	5·6	5·5	5·7	6·6	11·5	34·9	57
Non-cash items:							
Depreciation	1·9	2·4	2·6	3·0	3·3	13·2	22
Other items				−0·2		−0·2	
Funds generated from earnings	7·5	7·9	8·3	9·4	14·8	47·9	79
Tax recovery		0·2	0·5			0·7	1
Medium-term loans	0·8	1·0	5·5			7·3	12
Grants received		1·1	1·8	0·6	0·9	4·4	7
Other items		0·2	0·1			0·3	1
Totals	8·3	10·4	16·2	10·0	15·7	60·6	100
Application							
Purchases of fixed assets	6·5	10·3	10.5	4·5	7·7	39·5	64
Medium-term loans repaid				4·5	2·0	6·5	11
Other items		0·1	0.1	0·5	0·4	1·1	2
Increase/—decrease in working capital	−1·0	6·8	4.3	−2·5	6·7	14·3	24
Increase/—decrease in cash and short term funds	2·8	−6·8	1·3	3·0	−1·1	−0·8	−1
Totals	8·3	10·4	16·2	10·0	15·7	60·6	100

APPENDIX 9

(referred to in paragraph 163)

Redfearn National Glass Limited

Source and application of funds

	Year to September							
	1972 £m	1973 £m	1974 £m	1975 £m	1976 £m	1977 £m	*Total* £m	*Per cent of total*
Sources								
Profit before interest charges and taxation	1·2	1·7	1·4	1·8	3·3	4·8	14·2	73
Interest charges, taxation and dividends	—0·8	—0·5	—0·9	—0·3	—0·2	—0·8	—3·5	—18
Balance of profit	0·4	1·2	0·5	1·5	3·1	4·0	10·7	55
Add: Depreciation	0·7	0·8	1·0	1·3	1·5	2·0	7·3	38
Internal cash flow	1·1	2·0	1·5	2·8	4·6	6·0	18·0	93
Debenture issue less expenses	0·3	1·1					1·4	7
Totals	1·4	3·1	1·5	2·8	4·6	6·0	19·4	100
Application								
Capital expenditure	1·0	1·1	2·8	3·3	2·4	6·4	17·0	88
Increase/—decrease in working capital	0·7		–0·4	1·1	–0·5	1·1	2·0	10
Increase/—decrease in liquid funds	–0·3	2·0	–0·9	–1·6	2·7	–1·5	0·4	2
Totals	1·4	3·1	1·5	2·8	4·6	6·0	19·4	100

APPENDIX 10

(referred to in paragraphs 92, 139, and 165)

Glass operating ratios

Rockware—glass division[1]

		1972	1973	1974	1975	1976
(i) Value added:[2]						
Value added per employee	(£)	2,674	3,029	3,645	4,913	5,759
Employees' remuneration[3] as per cent of value added	(%)	76	76	73	70	69
(ii) Sales value per employee	(£)	4,817	5,702	6,727	9,188	11,967
(iii) Fixed assets per employee[4]	(£)	2,300	2,768	3,620	4,883	4,800
(iv) Employee productivity indices:						
Good tonnes produced per employee[5]		100	108	115	117	130
Units (numbers of containers) produced per employee		100	108	114	108	117
(v) Ratio of sales to average capital employed		1·6	1·6	1·5	1·6	1·9

United Glass—glass division

		1972	1973	1974	1975	1976	1977
(i) Value added:[2]							
Value added per employee	(£)	2,700	2,924	3,304	4,168	4,713	5,658
Employees' remuneration[3] as per cent of value added	(%)	65	66	69	69	68	63
(ii) Sales value per employee	(£)	5,865	6,738	7,645	9,361	11,462	13,368
(iii) Fixed assets per employee	(£)	2,158	2,669	3,602	4,405	4,507	4,583
(iv) Employee productivity indices:							
Good tonnes produced per employee[5]		100	106	108	98	98	104
Units (numbers of containers) produced per employee		100	105	105	100	98	104
(v) Ratios of sales to average capital employed		1·9	2·0	1·9	1·7	1·9	2·1

Redfearn National Glass

		Year to September					
		1972	1973	1974	1975	1976	1977
(i) Value added:[2]							
Value added per employee	(£)	2,538	3,046	3,368	4,583	6,044	7,012
Employees' remuneration[3] as per cent of value added	(%)	75	74	78	76	70	64
(ii) Sales value per employee	(£)	5,164	6,180	7,150	9,682	13,423	15,248
(iii) Fixed assets per employee	(£)	1,566	1,620	2,227	3,053	3,640	5,100
(iv) Employee productivity indices:							
Good tonnes produced per employee[5]		100	116	118	126	137	138
Units (numbers of containers) produced per employee		100	115	119	123	132	129
(v) Ratio of sales to average capital employed		2·4	2·4	2·5	2·6	2·8	2·7

[1]Figures relate only to glass containers and exclude Rockware International Limited.

[2]Representing sales value less the total of bought-in goods and services.

[3]Inclusive of employees' pensions and national insurance contributions by the employer.

[4]For Rockware group as a whole.

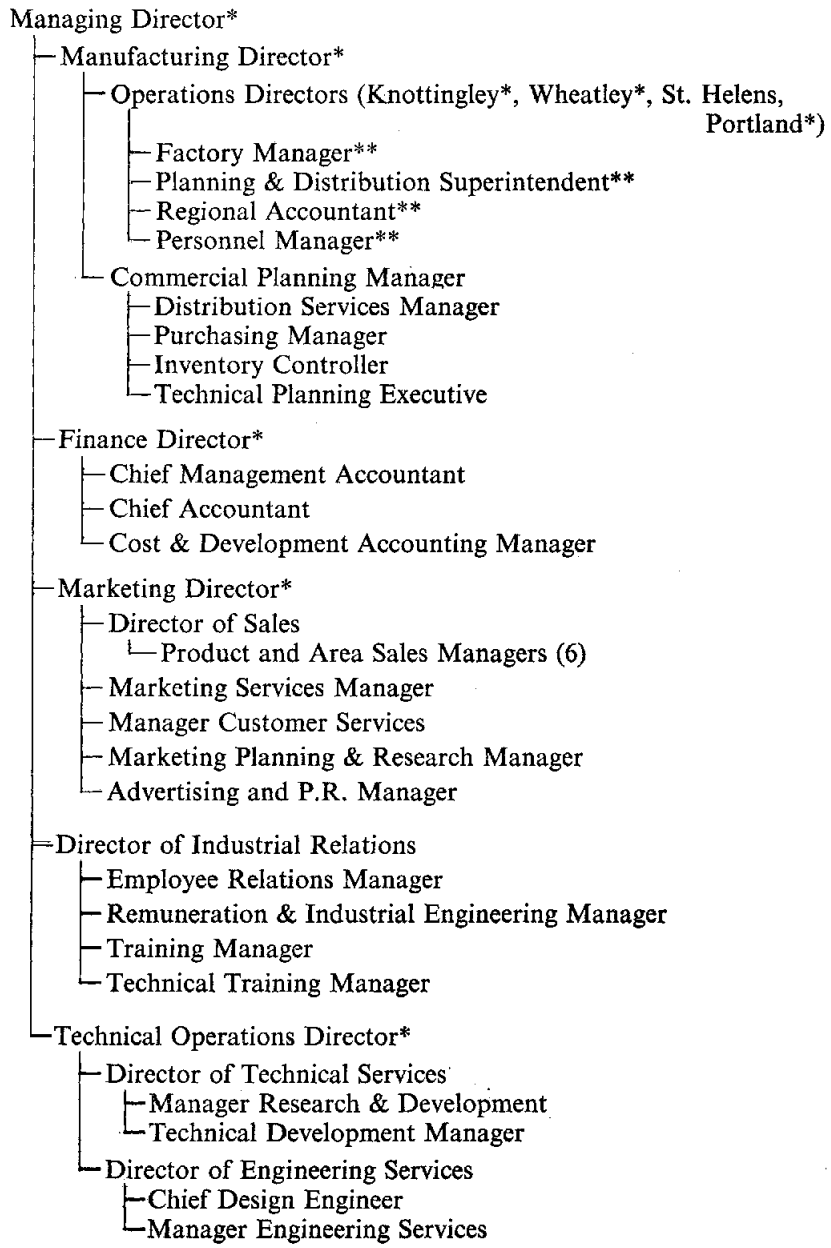
[5]See footnote on page 6.

Note: Caution is necessary in making comparisons between the companies' ratios because of differences in the product mix and the extent of the companies' activities, eg goods, or services such as transport, which may be provided internally or by an outside contractor.

APPENDIX 11

(referred to in paragraphs 79, 235 and 236)

Rockware Glass Limited—Management structure



*Members of Glass Board (The Board also includes the Group Personnel Director and 7 non-executive Directors).
**Organisation and titles vary slightly at the two Knottingley factories.

Product and Area Sales Managers are specifically:

Sales Manager Foods & Milks
Sales Manager Wines, Spirits, Beer & Soft Drinks
Sales Manager Toiletries, Cosmetics, & Special Products
Field Sales Manager
Sales Manager Scotland
Sales Liaison Manager

APPENDIX 12

(referred to in paragraphs 127, 280 and 281)

United Glass—Glass container division—Management structure

- Managing Director
  - Finance Director
    - Chief Accountant
    - Financial Planning Manager
    - Systems Administration Manager
    - Pricing Manager
    - Purchasing Manager
    - Inventory Administration Manager
  - Manufacturing Director
    - General Factories Manager (England)
    - General Factories Manager (Scotland)
    - General Technical Manager
    - Design Development Manager
    - Quality Assurance Manager
    - Industrial Engineering Manager
  - Planning Director
    - Production and Inventory Control Manager
    - Facility Planning Manager
    - Packaging Manager
    - Mould Control Manager
    - Distribution Manager
    - Environment Manager
  - Sales and Marketing Director
    - National Sales Manager—Wines and Spirits
    - National Sales Manager—Beverages
    - National Sales Manager—Foods
    - National Sales Manager—Pharmaceutical and Toiletries
    - Marketing Manager
    - Sales Administration and Export Manager
  - Manpower Manager
    - Personnel Manager
    - Supervisory Training Manager
    - Research and Statistics Assistant
  - Operations Evaluation Manager

APPENDIX 13

(referred to in paragraphs 153, 235, 236, 280 and 281)

Redfearn National Glass Limited—Management structure

- Managing Director
  - Manufacturing Director
    - Manufacturing Manager (York)
    - Manufacturing Manager (Barnsley)
    - Company Mould Manager
    - Company Quality Manager
    - Company Head of Production Development
  - Engineering and Technical Development Director
    - Works Engineer (Barnsley)
    - Works Engineer (York)
    - Head of Engineering Development
    - Head of Scientific Services
  - Personnel Director
    - Company Staff Manager
    - Company Industrial Relations Officer
    - Personnel Manager (York)
    - Personnel Manager (Barnsley)
    - Training Officer (York)
    - Training Officer (Barnsley)
  - Commercial Director
    - Commercial Manager (Barnsley)
    - Company Production Control and Planning Manager
    - Computer Services Manager
    - Company Purchasing Manager
  - Marketing Director
    - Sales Manager
    - Marketing Manager
    - Packaging Development Manager
  - Financial Director and Company Secretary
    - Chief Accountant
    - Management Accountant
    - Insurance Manager
    - Secretarial Assistant (Pensions)

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