

CHAPTER 10

Conclusions

The 'Conditions'

372. The terms of reference require us to report whether conditions to which the 1948 Act, as amended¹, applies prevail as respects the supply in the United Kingdom of indirect electrostatic reprographic equipment. We have shown in paragraph 37 that in 1975 Rank Xerox's share of supply in the United Kingdom of equipment covered by the reference was 93 per cent as measured by the numbers of copies made and 89 per cent as measured by the numbers of machines in the field. The corresponding figures for 1974 were 96 per cent and 92 per cent. We conclude therefore that conditions to which the 1948 Act applies prevail as respects the supply in the United Kingdom of indirect electrostatic reprographic equipment because at least one-third of all such equipment supplied in the United Kingdom is supplied by Rank Xerox.

Market Power

373. Rank Xerox expressed the view that, in terms of economic and commercial realities, the plain paper copier market could not be considered in isolation and that the only relevant market to be taken into account was the reprographic market as a whole. The company argued that the reprographic market was indivisible and could not be broken down into sub-markets according to the different processes used. In so far as alternative processes are used over almost the whole range of copy volumes for which indirect electrostatic machines are used (as Rank Xerox has demonstrated), we accept that it is not possible to identify the various processes with their own distinct and exclusive sub-markets.

374. Nevertheless, the different processes have features that determine the parts of the market in which they can be most effectively used at prevailing prices and terms of supply. For example there is a distinction between duplicating processes, notably stencil and offset, which require the preparation of a master, and the copying processes, both plain paper and coated paper, which do not require the preparation of a master and which make a copy of an existing document. The former are specially suitable where substantial numbers of copies have to be made. The distinction between duplicating and copying also turns on the fact that duplicating may require trained staff, whereas copying normally does not. Stencils tend to be regarded with disfavour by typists, and the increased cost of copy typing has added to the advantage of copying processes. Copying machines have considerable advantages as regards convenience.

¹Since the reference was made before the commencement of the Fair Trading Act 1973, we are required (by paragraph 7 of Schedule 11 to that Act) to make our report in accordance with the enactments under which the reference was made, that is the 1948 Act as amended.

375. For the purpose of our inquiry we have found it useful to analyse the market in terms of the number of copies required by a user per month (copy volume). Another factor—the number of copies required from each document (the run length)—is in practice positively correlated with copy volume: users who make long runs tend to have a large copy volume and vice versa. Machines embodying different processes are not equally suitable for meeting different copy volume requirements. Their suitability depends in part on the quality of copying required and the variety of the copying requirements of a particular establishment. But in spite of these considerations copy volume is of central importance.

376. We believe that the monthly copy volume at which the currently available equipment using the offset process (the most important of the various duplicating processes) begins to enjoy a cost advantage over plain paper copiers is around 50,000 copies a month. We note that a small proportion of users of the Rank Xerox 3600 (until very recently the fastest plain paper machine) produce more than 50,000 copies a month on that machine. The recent introduction of the faster Rank Xerox 9200 may extend the copy volume range in which plain paper copiers can match duplicating, especially offset processes and more particularly the smaller in-house offset installations.

377. Rank Xerox's slower machines such as the 660, and many of the other plain paper copiers currently available, are suitable for users with lower copy volume requirements and users who typically make copies in short runs. The evidence suggests that it is for these users that coated paper machines are in a relatively strong position at present. Notwithstanding the relatively high price of coated paper compared with plain paper, the relatively low prices or rentals of coated paper copiers mean that they have a cost advantage at low copy volumes. This advantage diminishes with increases in copy volume. The evidence suggests that for copy volumes below 3,000 per month the cost advantage of even the slow coated paper machine may be significant. Even for copy volumes up to 5,000 copies a month, coated paper machines are at present regarded by many users as preferable to plain paper copiers. Again, however, the situation is not static. The success of Rank Xerox has spurred the manufacturers of machines using other processes to improvement and innovation. It appears, for example, that the development of faster coated paper machines is extending the copy volume range over which users can be attracted.

378. We are satisfied that in general plain paper copiers at present offer significant advantages over reprographic equipment incorporating other processes in meeting users' requirements in the copy volume range of approximately 5,000 to 50,000 copies per month. The indicated copy volume range therefore constitutes a distinct segment of the wider reprographic market. Rank Xerox has been and still is the dominant supplier of plain paper copiers, and in this distinct segment of the market Rank Xerox has had and still has a marked degree of market power. It is evident, on the other hand, that Rank Xerox has much less market power in other segments of the reprographic market in which its machines are also used.

379. However, the market power currently enjoyed by Rank Xerox as by far the major supplier of plain paper machines is not unlimited in the segment of the

market we have identified in paragraph 378. Equipment employing other processes is certainly used to some extent in the copy volume range of 5,000 to 50,000 per month; and plain paper copiers other than Rank Xerox's are available, although so far they have secured only a very small share of the business in that copy volume range. Evidence of the availability to some users of feasible alternatives to Rank Xerox machines was given to us by the company in analyses of the ways in which the copying requirements of certain large organisations among its customers are currently met. Rank Xerox's customers are in the main commercial, financial and industrial concerns and public authorities, and at least half of Rank Xerox's revenue is from large concerns who are likely to be conscious of costs and to be in a position to make accurate comparisons of the costs and advantages of available equipment embodying the various processes. The extent to which Rank Xerox machines are used differs between apparently similar organisations. The company gave us an example of one large customer which depends substantially more on other systems and less on Rank Xerox machines than another comparable customer. This does not demonstrate how many users are in a similar position; but it does show that, at current prices and terms of supply, some users have realistic alternatives to Rank Xerox machines, and that the company is not without competition in that segment of the market in which it is the dominant supplier.

380. The conclusion that Rank Xerox has had and still has considerable market power within the identified segment of the reprographic market is borne out by major features of the company's pricing. Rank Xerox has operated a system of differential or discriminatory charging which is not compatible with the absence of market power. It has charged users differentially broadly according to what users with requirements in different segments of the reprographic market have been prepared to pay, given the alternatives available to them. It has done so by following (until recently) a policy of not selling its machines, and by operating a rental system which has for example had the effect of yielding much larger net revenues per machine from heavier users (with large copy volumes per machine) than from less intensive users of the same machines (see paragraphs 108-113).

381. Machines which incorporate other reprographic processes were, of course, available when Rank Xerox entered the market with its machines in an attempt to establish itself in competition with them. Although it is unlikely that competition from machines using other processes will increase, particularly in the segment of the market in which Rank Xerox is dominant, it can be expected that it will continue to exist, especially in view of improvements in the quality of coated paper copies, advances in coated paper technology (to which Rank Xerox drew our attention) and also the development of improved stencil cutting methods. Nevertheless it seems likely that in, say, the next decade the relative importance of coated paper copying and of stencil in the expanding total reprographic market will decline. Competition from offset seems unlikely to diminish in that segment of the market in which its advantages are currently in evidence.

382. It is difficult to form a firm view about the likely developments of competition in the field of plain paper copiers. We have identified thirteen companies, most of them large international organisations with substantial resources,

which have in recent years begun to supply plain paper copiers; all but one are marketing imported machines. The continued presence of existing companies in the field of plain paper copiers and the extent to which new entrants will appear in it will be affected by many factors including the dominant position which Rank Xerox has established, the fact that the name 'Rank Xerox' has become so well known and also the fact that the company markets a wide range of plain paper copier machines. Any company developing a copier is faced with considerable outlay on research and development. The capital outlay involved in establishing facilities for producing, marketing and servicing copiers is also substantial, though economies arising from large scale production are probably not great. Although competitors drew attention to the cost of breaking into the United Kingdom market in the face of Rank Xerox's dominant position and of its pricing policies (to which we refer later), a number of them gave us forecasts of their medium-term expectations of market share. Even if some of these forecasts are not achieved and if some of the competitors drop out of the market, it appears possible that appreciable competition will develop, particularly if our recommendations in connection with Rank Xerox's pricing policy are implemented. This competition would largely take the form of imports.

383. It is necessary to consider whether Rank Xerox's policy has contributed to the emergence and preservation of its monopoly power. We have found its patent policy and its pricing policy to be relevant in this respect.

Patents

384. Since it first entered the xerographic field, the Xerox group has engaged in research and development on a substantial and increasing scale and its inventions have been protected by patents. Details are set out in paragraph 133 and Appendix 9. The rate at which patents have been applied for in the United Kingdom has increased over the years, and at the beginning of 1975 the stock of patents and patent applications amounted to rather more than 2,250 of which 1,000 or more could be regarded as relating to indirect electrostatic reprographic equipment. A high proportion of these patents are not used. The company told us at a late stage of the inquiry that it had decided to allow a substantial number of its patents and patent applications to lapse (see paragraph 135), but it is clear that Xerox and Rank Xerox at present hold a large number of patents relating to the indirect system.

385. Within the large total of patents, Xerox and Rank Xerox have substantial numbers of patents which protect particular important processes required in indirect electrostatic reprography. It is true that other companies have been able to develop photoreceptors (for securing the image of the material to be copied) which do not involve the use of selenium; but one example was quoted to us of a vital process protected by several Xerox and Rank Xerox patents, namely the fusion of toner to plain paper. Although Rank Xerox disputed the point, witnesses said that this process was of particular importance in the development of faster machines and that alternatives were not easily found.

386. Apart from the fact that the group owns a substantial number of patents (both in total and in particular fields), it was suggested to us that the group had discouraged potential competitors not only by taking out patents primarily

designed to extend the protection and scope of existing patents but also by taking out patents which were open to objection on the ground of obviousness or triviality. We did not attempt the costly, detailed and time-consuming technical examination which would have been required to evaluate such suggestions. An eminent patent agent whom we consulted stated that 'an investigation into the validity of a patent is often a complex, time-consuming and expensive operation', and he estimated that a full-scale investigation into the validity of 60 Xerox and Rank Xerox patents that were drawn to his attention would not only have been very costly, but might also have taken two years to complete (see paragraph 246). In any case such an investigation would not have led to firm conclusions, since ultimately it is for the courts to determine the validity of disputed patents.

387. A large portfolio of patents impedes and delays the emergence of competition. The mere cost of a technical examination of a large portfolio of patents is intimidating. As the Committee of Experts on Restrictive Business Practices of the OECD said in 1972 in their report on Restrictive Business Practices Relating to Patents and Licenses:

'A large company, or particularly a combination of large companies, holding hundreds or thousands of patents relating to important technology may be able to exercise dominance in an industry and subject it to excessive conditions or royalties. The tremendous number of patents held by large companies may, in itself, prevent a testing of the validity of patents in the courts'.

388. We are satisfied that the group's patent portfolio has impeded and delayed the emergence and establishment of competing suppliers of plain paper copiers in this country. Competitors or potential competitors have been faced with a very substantial patent barrier and, although this barrier has not been insurmountable, it has compelled competitors to expend substantial time, effort and money both on ascertaining the scope of the group's patents and on developing alternative, and sometimes inferior, processes in order to avoid infringement. In this context the reluctance of Rank Xerox to ascertain even the number of the group's patents relating to the indirect system (see paragraph 133) and its inability readily to identify which patents were used in particular machines (see paragraph 136) are, in our view, indications of the difficulties faced by competitors.

389. We note that in the 1950s and 1960s, although the group was willing to grant licences on its patents relating to the direct system, licences were not granted on patents relating to the indirect system for use in office copiers. In August 1973 the company told us that the group was 'still feeling its way' in the formulation and implementation of a patent licensing policy for the 1970s; its attitude would reflect the fact that large numbers of patents in the field of xerography, as well as in other fields of importance in the manufacture of xerographic equipment, were being granted to others, who might therefore have patent rights which would be of value to the Xerox group. There have continued to be strict limits to the extent to which the group has been prepared to grant licences. The extent to which patents are currently in use and the possibility of cross-licensing and grant-back terms have been important factors affecting the decision whether to license patents relating to the indirect process. Licences have been granted under only four such United Kingdom patents since 1970 (see paragraph 145).

390. Xerox and Rank Xerox have pursued an active policy of examining and opposing the grant of patents to others in the field of indirect electrostatic reprographic equipment on grounds of invalidity or of infringement of patents held by Xerox or Rank Xerox. Details are set out in paragraph 147.

391. Xerox and Rank Xerox are entitled under United Kingdom law to the protection which the patent system affords, and are also entitled to defend their patent rights. We have, however, had to examine whether the company's behaviour in this field has conflicted with the public interest in respect of the establishment and maintenance of Rank Xerox's market power in the identified segment of the reprographic market. In our view the company's patenting activity and its restrictive patent licensing policy have had the effect of deterring competitors and maintaining Rank Xerox's dominant position. We conclude that, in the light of the large stock of patents held, the company's restrictive patent licensing policy is a thing done for the purpose of preserving the monopoly conditions which we have found to prevail (see paragraph 372), and that it has operated against the public interest. Because of the patent licensing provisions of the United States Consent Order (see paragraph 157), however, we see no need for us to make any recommendation on this subject.

392. Additionally, under the Consent Order a licensee in the United States can require Xerox to provide know-how, but Xerox is not obliged to provide know-how to manufacturers outside the United States. We cannot predict what the effect of this limited provision concerning know-how will be on the manufacture and supply of plain paper copiers in the United Kingdom. This matter will have to be watched as the new state of affairs unfolds.

Prices and terms

393. Because of the market power ultimately achieved by the company it was possible for Rank Xerox to continue with its policy of only renting its machines (see paragraph 81). Although this policy greatly accelerated the introduction of plain paper copiers in the 1960s, it also undoubtedly contributed to the company's ability to charge users differentially. A substantial proportion of the users of Rank Xerox machines, including some large companies, indicated that they preferred to rent machines rather than buy them. It is difficult to estimate how large would have been the demand for the purchase of machines; much would have depended upon the level of selling prices set. A common attitude was that the indirect electrostatic process was relatively new, that technical advances were likely and the risk of obsolescence was considerable. But these are arguments for a rental option as an alternative to purchase and not arguments for Rank Xerox's policy of rental only.

394. The rental only policy was open to the objections that it restricted consumer choice by not offering a sale option and by preventing the development of alternative leasing arrangements by leasing companies.

395. We conclude that the rental only policy was a thing done by Rank Xerox as a result of the monopoly conditions (paragraph 372), and that having regard to the fact that the policy was practised by a supplier with substantial market power it operated against the public interest.

396. At a late stage in the course of our inquiry Rank Xerox told us that it had decided to introduce a sale option in the near future. Sale prices for most of the company's machines were announced on 5 November 1975, and the sale option became available in January 1976. Rank Xerox explained to us that its sale prices were being set so that the sale option would be likely to be financially attractive in respect of about 10–20 per cent of its machines in the field. Our own calculations broadly confirmed this. We recommend that the Director General of Fair Trading should keep under review the sale prices fixed by Rank Xerox, with a view to ensuring that these prices make outright purchase a feasible alternative to renting for a reasonable proportion of users.

397. We considered whether Rank Xerox was acting unreasonably in not allowing existing customers to buy at reduced prices machines they are already renting. While the introduction of such an option might seem reasonable and while it could undoubtedly be attractive to the customers concerned, we see no reason in the public interest for requiring the alteration of existing contracts in this way.

Period of leases

398. Some of Rank Xerox's customers and competitors told us that they considered that the length of time required to terminate rental agreements was too long and should be reduced (see paragraphs 193, 218 and 275). In our view the arrangement which existed before 1 May 1974, under which the standard contract was terminable by three months notice on the anniversary of the contract only, was not unreasonable and could not be considered to be against the public interest. Since 1 May 1974 there has been a generally more favourable arrangement under which the contract is terminable by six months notice which may be given at any time except during the first six months after the installation.

Pricing policy

399. We have described in paragraphs 94 to 99 the standard terms on which Rank Xerox rents its machines, as well as the modifications introduced in these terms by the Group Pricing Plan.

400. First we consider some basic features of the renting arrangements. The charges are calculated on a monthly basis and cover servicing, toner and other supplies but not paper. There is considerable variation in the terms charged for different machines as well as in those charged for the same machines under different pricing plans. There is also some difference in charges according to the length of the rental contract. The typical monthly bill consists of a fixed monthly rent (the amount of which depends on the type of machine rented) and a larger metered copy charge (the amount of which depends on the number of copies produced and the run lengths).

401. *Standard terms.* Although under the standard terms the charge per copy declines with copy volume and run length, the more intensive user of a machine pays a higher monthly bill for the use of the machine than the less intensive user, and only a small part of the difference in monthly bills can be accounted for by differences in the cost to Rank Xerox of supplying and servicing the machines of different customers (see paragraph 113). On the other hand, if Rank Xerox had

charged a uniform rather than a decreasing price per copy, the disparity in treatment between more and less intensive users would have been even greater; and in this sense the decreasing copy charges under the standard terms can be said to reduce the extent of discrimination against intensive usage of Rank Xerox machines. The recently announced alteration in standard terms by the introduction of Graduated Pricing will further reduce this discrimination. Nevertheless, more intensive users will still pay more than less intensive users and Rank Xerox recognises that its new purchase option is likely to be most attractive to the more intensive users of its machines.

402. The system of charging for rented machines also discriminates among customers according to the way in which machines are used as well as according to the intensity with which they are used. For the same monthly copy volume on a machine, the monthly billing is larger for the user who makes more single copies or shorter runs than another user. The extent of this discrimination cannot be accounted for in terms of differences in the cost to Rank Xerox of supplying and servicing machines used in different ways.

403. We do not think that the forms of price discrimination practised by Rank Xerox, as described above, are or have been against the public interest. If Rank Xerox had charged the same fixed rent to all customers, together with a small variable charge to cover the costs of servicing and supplies, the fixed rent would almost certainly have been pitched at a level which would have made Rank Xerox machines too expensive for less intensive users. The spread of the use of plain paper copiers would have been slower and the competitive impact of the technological innovation on the market for copying would have been reduced. Similarly, under a scheme of charging that did not discriminate according to the different uses of a machine but prescribed a uniform charge per copy, users of hired machines would not so effectively have exploited the versatility of the machines as under the system actually used.

404. The discrimination resulting from the rental system might be objectionable if it served to inhibit competition. The standard rental terms relate to single machines, and we are satisfied that they do not inhibit competition. For example, an efficient competitor producing a machine similar to a Rank Xerox machine could match the company's standard rental scheme even if it produced far fewer machines and a more limited range of models than Rank Xerox. Further there is no evidence that under the Standard Commercial Terms any category of user or of use of rented machines has been unprofitable to Rank Xerox; that is, there is no evidence that any category of user or of use has been subsidised, thereby undermining the competition of other suppliers. We conclude that Rank Xerox's pricing policy, in so far as it relates to individual machines, does not operate against the public interest. This conclusion relates both to the gradation of charges with a monthly copy volume per machine and also to the modal system of charging.

405. *Group Pricing Plan.* Under the Group Pricing Plan, customers of Rank Xerox with large monthly bills have the Standard Commercial Terms modified in their favour. For customers to whom the recently introduced Graduated Pricing system has been applied (see paragraph 95) the modification is generally

effected by reductions in the metered copy charges in the first tranche of Mode 1 (see paragraph 96 and Appendix 7). The fixed rent, the minimum monthly copy charge and the metered charges in the second tranche of Mode 1 and in Mode 2 are not affected by the Group Pricing Plan. The Graduated Pricing system applies to all Group Pricing Plan customers as from April 1976. The reductions will then amount to 7½ per cent of the relevant metered charges for customers whose monthly bills are between £1,651 and £2,750¹, rising in seven steps to 25 per cent for those whose monthly bills exceed £60,000.

406. Rank Xerox said that the plan had been intended to meet competition from coated paper copiers, for which suppliers were offering substantial discounts for large quantities of coated paper, and to meet pressure from large users for reductions in charges. The company also said that it was its impression that as a result of the Group Pricing Plan its machines were slightly more competitive with stencil and offset machines in the hands of large users than in the hands of small users. The company said that it could not meet the challenge from the large discounts for coated paper entirely through reduced standard charges in respect of individual machines, since large users did not necessarily employ all their machines intensively.

407. The Group Pricing Plan, by reducing the copy charges made on such larger users as are also intensive users, may be said to lessen discrimination against them since it reduces the charge per machine for any given number of copies. However, the Group Pricing Plan provides no relief from such discrimination for such customers as are not eligible for Group Pricing Plan terms but who use some or all of their machines as intensively as do many customers who are on Group Pricing Plan terms. And in so far as different Group Pricing Plan customers pay different copy charges regardless of the intensity of use of individual machines, customers using the same machine with the same intensity (copy volume) receive different monthly billings for its use.

408. Some of Rank Xerox's competitors told us that it was difficult for them to break into the market where the Group Pricing Plan was in operation. They were particularly concerned about cases where a user might fear that the introduction of one or a few of their machines would cause him to fall into a lower band of the Group Pricing Plan and so pay higher copy charges on all his Rank Xerox machines. The views expressed in this connection are summarised in paragraphs 192, 201, 210 and 218.

409. As indicated in paragraph 192, competitors of Rank Xerox complained that the grouping of establishments allowed for pricing purposes was sometimes artificial. In particular the grouping of hospitals and of universities was mentioned. Rank Xerox's practice is set out in paragraphs 91 and 92. The difference in view point can in part be expressed by saying that Rank Xerox allows grouping of units that could purchase as a group whereas competitors would wish at the least to see grouping restricted to cases where group purchasing in fact takes place. A rather different point is the concession of Tariff Z to certain public bodies without any required minimum monthly billing (see paragraph 102).

¹ For customers coming on to the Group Pricing Plan for the first time the lowest qualifying revenue band will be from £2,751 to £6,600 and the reduction in the relevant charges will be 10 per cent.

410. In our view the Group Pricing Plan has an inhibiting effect on competition. A user may be deterred from switching to another supplier's machines to meet some part of his copying requirements which is being met by some Rank Xerox machines because, if he does so, he may have to pay higher charges on all remaining Rank Xerox machines. We recognise that the qualifying revenue bands for reductions of charges under the Group Pricing Plan are relatively broad (and as from 1 April 1976 somewhat broader), and that there is thus scope for some switching without any increase in charges. But for a customer near the lower end of a band even limited switching could result in a significant increase in his copying costs; and, correspondingly, for a customer near the upper end of a band even limited switching to Rank Xerox machines could result in a significant reduction in his total copying costs. As one moves from one band to another the size of the reduction in the metered charges concerned (see paragraph 405) is $2\frac{1}{2}$ per cent (though typically somewhat less than $2\frac{1}{2}$ per cent of the monthly billing). The size of the reduction for customers coming on to the Plan for the first time is particularly large—10 per cent of the metered charges concerned (though somewhat less than 10 per cent, typically 7 to 8 per cent, of the monthly billing). The inhibiting effect of the Group Pricing Plan on competition is pronounced because of the wide range of machines on which Rank Xerox can base its decreasing charges, because of the company's dominant position in a major segment of the reprographic market and because of the scope for the grouping of establishments. Where a user has a number of machines and is paying substantially reduced charges under the Group Pricing Plan, a competitor trying to introduce his own machines is at a disadvantage in that in certain circumstances he may have to compensate the user for increased charges on all his remaining Rank Xerox machines. Other suppliers of plain paper copiers or of other reprographic equipment can also relate their charges to the aggregated use of more than one machine, but none has at present the same wide range of machines and none, therefore, can effectively match Rank Xerox's Group Pricing Plan. This is particularly so because of the aggregation of the usage of Rank Xerox's slower machines (against which other suppliers of plain paper copiers are primarily competing) with that of the company's faster machines.

411. In view of its anti-competitive effects we conclude that the present form of Group Pricing Plan is a thing done by Rank Xerox for the purpose of preserving the monopoly conditions and that it operates, and may be expected to operate, against the public interest.

412. We recognise that Rank Xerox may require some time before it is able to propose acceptable new discount or pricing arrangements in place of the present Group Pricing Plan. We recognise also that it might impair Rank Xerox's competitive position to the public detriment if, without having had the opportunity to discuss proposals, the company were to be placed in a strait-jacket as regards its discounts and pricing arrangements. We therefore recommend:

- (i) that Rank Xerox be required to terminate its present Group Pricing Plan within six months;
- (ii) that any new discount or pricing arrangements (whether or not these involve the aggregation of charges on more than one machine) proposed by Rank Xerox in place of its present Group Pricing Plan should not be brought into operation without the approval of the Director General; and

(iii) that the Director General should withhold approval unless he is satisfied that the proposed arrangements are unlikely to have serious anti-competitive effects.

413. As indicated in paragraph 407, the Group Pricing Plan reduces the charge per machine for any given number of copies. A lessening of this discrimination in favour of larger users might be expected, at any rate at the outset, to increase Rank Xerox's revenue. We would expect the Director General to examine the position over-all and to have regard to the likely effects of any new arrangements on the profits of Rank Xerox.

414. *Her Majesty's Stationery Office (HMSO)*. Save in the case of HMSO, whose business with Rank Xerox is many times bigger than that of any other customer, Rank Xerox does not offer special terms to individual customers. Indeed, some large customers regarded this as a cause of complaint. The special terms which HMSO has secured are no doubt in some measure attributable to cost savings enjoyed by Rank Xerox in dealing with a large centralised buying organisation and HMSO told us that in the ordinary course of business it expected to be able to negotiate quantity discounts with its suppliers. The agreement which HMSO has negotiated with Rank Xerox might nevertheless be open to some of the objections applicable to the Group Pricing Plan inasmuch as there are substantially reduced charges and the grouping of organisations is to some extent artificial. An additional feature, which is also open to objection, is that the charges for the smaller machines, which are more subject to competition from other suppliers, are reduced significantly more than those for the larger and faster machines, in respect of which the company enjoys much greater market power (see paragraph 100 and Appendix 8).

415. The agreement is not, however, related to any specified level of business with Rank Xerox and the business is so important to Rank Xerox that the level of business would probably have to fall quite substantially before HMSO would be unable to secure a renewal of equally favourable terms from Rank Xerox. HMSO assured us that it examined other machines and, if they were satisfactory and the terms reasonable, introduced them into Departments.

416. We are impressed by the importance of HMSO as a user of reprographic equipment, including plain paper copiers. Its total requirements are large, and its suppliers are likely to have relatively low marketing costs because of the centralised buying. HMSO is therefore particularly important to new competitors in the market who have not yet built up a large-scale marketing and servicing organisation or who have not the resources to do so, and who may wish to rent or sell machines at first to the largest user rather than to users in general.

417. We recognise that HMSO has a duty to get the best terms it can, but we think that the effects of its policy on competition in the industry is an appropriate matter for discussion between the Director General of Fair Trading and HMSO.

418. *Complexity of pricing*. Finally on the subject of Rank Xerox's pricing, we considered the general complexity of the company's pricing arrangements.

Although large organisations among Rank Xerox's existing and potential customers are no doubt well able to cope with this complexity, we think it likely (and indeed we have some evidence) that smaller customers have difficulty in estimating what their copying costs will be if Rank Xerox machines are rented. This is in principle undesirable, particularly because it inhibits the comparison of Rank Xerox's terms of supply with those of other suppliers, both of plain paper copiers and of other equipment. We do not, however, think that any specific action on our part is called for solely for the purpose of reducing the complexity of the company's pricing arrangements. The complexity may be in some degree reduced by the introduction of Graduated Pricing.

Service and ancillary supplies

419. As we have said in paragraph 400, the rent for a Rank Xerox machine covers servicing, toner and other supplies, but not paper. Since 1967 the supplies covered, other than toner, are developer, filters, webs, drums and all spare parts (see paragraph 119), though customers not on Group Pricing Plan terms may arrange to buy toner separately, in which case they are allowed a credit against the rent. The general objection to an all-in pricing arrangement of this kind, operated by a seller with market power, is that it gives him an advantage in the supply of the tied products, which may be unrelated to efficiency and which, by impeding the development of independent sources of supply, may add to the difficulties of entering the market faced by new suppliers of the main product.

420. So far as servicing is concerned, we accept that, because rented machines remain the property of Rank Xerox and their continued earning capacity must depend on efficient servicing, it is not unreasonable for the company, if it so wishes, to retain machine servicing in its own hands.

421. As regards consumable materials and replacements of parts, we are satisfied that Rank Xerox should be allowed to control the provision to rental customers of those materials and parts where the use of unauthorised supplies could materially affect the performance of the machines rented. However, toner does not appear to be in this category. Rank Xerox recognises that toner, other than its own, may be used. Substantial quantities of toner are used in Rank Xerox machines in the aggregate, and significant competition in the supply of toner might develop if there were no restrictions. At present the 'toner-out' option is available only to customers on Standard Commercial Terms and not to those on Group Pricing Plan terms, so that a very substantial part of the market for toner is closed to competing suppliers.

422. We conclude that Rank Xerox's policy for the supply of toner is a thing done as a result of the monopoly conditions and that it operates, and may be expected to operate, against the public interest. We recommend that the company should charge for toner separately and not include the charge for toner in the rent for machines.

Copy bureaux

423. The number of copy bureaux operated by Rank Xerox is small—six in London and five in other towns—and its share of the total business done by all

copy bureaux is very small. However, a few complaints were made to us about the operation of Rank Xerox's bureaux (see paragraph 261). A supplier in Rank Xerox's dominant position could subsidise its copy bureaux. This would be objectionable in principle because it could result in less efficient copy bureaux displacing more efficient bureaux, and also because it could increase the difficulties of competitors in the supply of reprographic equipment in that the copy bureau market available to them might be reduced. Rank Xerox assured us that its bureaux were now to acquire their machines, accessories, supplies and paper on the terms that would apply if they were not part of Rank Xerox, and that they would be required 'to stand on their own feet commercially'. Provided that the company does not subsidise its copy bureaux, we do not find any aspect of the operation of Rank Xerox's copy bureaux to be against the public interest. However, we draw attention to a minor matter. We note that the bureaux do not exhibit price lists, and we think it is desirable that they should do so.

Profits

424. The rate of return on capital employed in respect of reference goods supplied by Rank Xerox in the United Kingdom is considered in paragraphs 295 and 296. On a historic cost basis the rates for each of the eleven years from 1965 to 1975 were as follows:

| | |
|------|---|
| | % |
| 1965 | 20.4 |
| 1966 | 33.6 |
| 1967 | 33.9 |
| 1968 | 38.0 |
| 1969 | 44.3 |
| 1970 | 47.8 (16 months adjusted to annual basis) |
| 1971 | 43.2 |
| 1972 | 40.5 |
| 1973 | 36.5 |
| 1974 | 32.8 |
| 1975 | 26.8 |

Over this period the rate of return averaged 36 per cent, but for four consecutive years (1969 to 1972) it was over 40 per cent and in 1970 it reached a peak of 47.8 per cent. These figures must be regarded as high, when compared with the rate of return for United Kingdom manufacturing industry as a whole. However, the company's profit rates have declined since 1970, and the company expected a further decline in 1976. We have described in paragraph 298 the extent to which we obtained information concerning Rank Xerox's profitability making adjustments for the effects of inflation.

425. The mere fact that the company's profit rates have been, and still are, substantially higher than the average for manufacturing industry does not necessarily mean that they are to be regarded as excessive or against the public interest. It is necessary, in considering Rank Xerox's profits, to take account of the circumstances in which these profits have been earned.

426. At the time when Rank Xerox began to market plain paper copiers in this country, the Xerox group had already undertaken a great deal of costly research and development which had been by no means assured of success; and even when a commercially marketable machine had been developed there was no certainty that it would be commercially and technically successful. In its

early days the production and marketing of plain paper copiers must therefore be regarded as having been a high risk industry. On this account alone relatively high profits could be justified for a period to allow adequate reward for the risks accepted. However, Rank Xerox has now become firmly established and, although new techniques and new machines are still being developed, the period of particularly high risk and the need to compensate for such risk have in our view passed. In making this point we do not imply that the industry is now free from risk. An example of continuing risk is the fact that a recently introduced machine has not achieved the targets set for it. There must also be some risk involved in the launching of the company's latest machine, the 9200. But such risks are in our view not risks of the severity involved in the original development and marketing of plain paper copiers.

427. The business expanded at an exceptional rate and renting on a large scale was necessary if the company was to make a rapid impact with its new products. Considerable funds had to be found to finance the renting of equipment.

428. Appendix 14 shows that in the eleven-year period 1965 to 1975 the total amount of capital required by the business was £946m, of which £171m was for net additions to fixed assets (other than rental equipment) and £565m for investment in rental equipment. Funds from profits in the same period, after charging taxation of £395m, totalled £434m, of which a total of £254m (or 59 per cent) was retained for investment in the business and contributed 27 per cent of the total requirements of capital. Without substantial profits and a fairly conservative dividend policy, funds on the scale required would not have been readily available. A significant part (27 per cent) of the total capital requirements was met by borrowing, and it may well be that this loan capital would not have been forthcoming if the company had not demonstrated its success by making such profits or if, on account of inadequate reinvestment of profits in the business, the gearing ratio had been unduly high. In our view therefore the rapid expansion of the company could not have taken place without relatively high profits.

429. Although the success of the business may have exceeded expectations and the profits being made in the late 1960s and early 1970s may have been higher than could have been expected, such profits would not have been made if the company had not been as efficient as we judge it to have been. Moreover the policy of broadly charging what the market would bear, with different revenues received from different users and from different uses, expanded rather than restricted its output. This policy has contributed materially to the company's profits.

430. As regards the future, any increase in competition would strengthen the pressure upon Rank Xerox's profits. Competition which exists at present is greater than it was, say, ten years ago, and Rank Xerox's market power, while it is still considerable in the segment of the market we have identified in paragraph 378, is less than it was. Competition may be further increased as a result of the Federal Trade Commission's Order on patents and of our recommendation concerning the Group Pricing Plan. For these reasons, we consider that no specific action is called for to reduce or regulate Rank Xerox's profits.

Exports

431. Rank Xerox's achievements in exporting have been substantial. In the ten-year period from 1965 to 1974, the company's revenue from exports of indirect electrostatic equipment totalled over £412m. Export revenue increased steadily until 1974, when it reached £74m; in 1975, however, there was a sharp fall. As we have shown in paragraph 304, the company has made a substantial contribution to the United Kingdom balance of payments. In the four years 1971 to 1974 the net favourable currency flow was £178m.

Conclusion

432. Rank Xerox has undoubtedly possessed and exercised substantial market power. This does not necessarily mean, however, that its monopoly position is itself against the public interest, or that retention of its monopoly position is itself likely to operate against the public interest in the future. It is difficult to assess the position of Rank Xerox at the present time, since although competition has emerged in the plain paper copier market, it is not easy to see how quickly it will continue to develop or how strong it will become. On the world scene there have been entrants into the indirect electrostatic field and others are in prospect; but the extent of the eventual success of their efforts is difficult to forecast. Although competition within the indirect electrostatic field is at present weak and its development must still be regarded as uncertain there is nevertheless the threat of competition. Competition from other systems of reprography, although it does impose some constraint on Rank Xerox's prices and profits, is limited in its effects in that segment of the market in which Rank Xerox is dominant, and it is not likely to increase. Rank Xerox has modified its pricing arrangements and has decided to abandon its rental only policy, and evaluation of the likely effects of these recent policy changes is difficult. In addition, there is the Consent Order, made in July 1975 by the Federal Trade Commission in the United States, which may significantly affect the position of Xerox, Rank Xerox and Fuji Xerox. Finally, competition may be facilitated by our recommendation concerning Rank Xerox's Group Pricing Plan (paragraph 412). On the other hand, the development of new and superior machines by Rank Xerox, while desirable, could have the effect of increasing its market power for some years. What follows has to be read with all this in mind.

433. Rank Xerox did not achieve its dominant position by elimination of competitors. When the company placed its first machine, the 914, on the market in 1961 it was introducing an effective system of plain paper copying for the first time in this country. Since Rank Xerox was first in the field, it follows that, until competitors were in a position to market alternative plain paper copiers, Rank Xerox had a complete monopoly of this particular process.

434. Rank Xerox, together with Xerox Corporation and The Rank Organisation, can take credit for the successful development of a new invention to the point at which it could be commercially exploited and, in view of the real possibility of failure, for having accepted the substantial risk involved. The company cannot at the same time be criticised for being in a monopoly position which was an inevitable result of its success.

435. Rank Xerox has been well managed, and the group's technological achievements have been valuable. The group's record of innovation and the fact that it has established a new industry in the United Kingdom may be regarded as factors which are positively in the public interest. Rank Xerox told us that research and development work on ideas originating in the United Kingdom would normally be carried on here (see paragraphs 370 and 371); we consider this appropriate.

436. The substantial contribution to the United Kingdom balance of payments which the company has made and continues to make through exports is a further factor which is positively in the public interest.

437. In all the circumstances we conclude that the conditions which we have found to prevail as respects the supply in the United Kingdom of indirect electrostatic reprographic equipment by reason of Rank Xerox's share of the market (paragraph 372) do not operate, and may not be expected to operate, against the public interest. We have explained in paragraph 382 how difficult it is at this particular point of time to predict how competition is likely to develop; and if the incipient competition which now exists were to fall away the position might have to be re-examined

438. As we have explained in paragraphs 384 to 391, we think that the development of competition has been restricted and delayed by the patenting activity of Rank Xerox and by its restrictive patent licensing policy. We conclude that the company's restrictive licensing policy is a thing done for the purpose of preserving the conditions and that it has operated against the public interest. In view of the recent Consent Order in the United States Federal Trade Commission's proceedings against Xerox, we see no need to make any recommendation in this connection.

439. In paragraphs 393 to 417 we have considered various aspects of Rank Xerox's terms and prices. There are certain objections to the company's policy of rental only and to its pricing arrangements. We conclude that (a) the rental only policy is a thing done by Rank Xerox as a result of the conditions, and that it operated against the public interest, and (b) the Group Pricing Plan is a thing done by Rank Xerox for the purpose of preserving the conditions and that it operates, and may be expected to operate, against the public interest.

440. In paragraphs 419 to 422 we have considered service and ancillary supplies and in particular the supply of toner. We conclude that the company's policy for the supply of toner is a thing done by Rank Xerox as a result of the conditions and that it operates, and may be expected to operate, against the public interest.

441. In paragraph 423 we have considered certain possible objections concerning the operation of Rank Xerox's copy bureaux, but we are satisfied that no aspect of their operation is against the public interest.

442. In paragraphs 424 to 430 we have considered Rank Xerox's profits. These have been high, but for a number of reasons we consider that no specific action to reduce them or to regulate them is necessary.

Recommendations

443. We recommend that:

- (a) the Director General of Fair Trading should keep under review the sale prices fixed by Rank Xerox with a view to ensuring that these prices make outright purchase a feasible alternative to renting for a reasonable proportion of customers (paragraph 396);
- (b)
 - (i) Rank Xerox be required to terminate its present Group Pricing Plan within six months;
 - (ii) any new discount or pricing arrangements (whether or not these involve the aggregation of charges on more than one machine) proposed by Rank Xerox in place of its present Group Pricing Plan should not be brought into operation without the approval of the Director General;
 - and
 - (iii) the Director General should withhold approval unless he is satisfied that the proposed arrangements are unlikely to have serious anti-competitive effects (paragraph 412).
- (c) Rank Xerox should charge separately for toner and not include the charge for it in the rent for machines (paragraph 422).

ALEXANDER JOHNSTON (*Chairman*)

G F ASHFORD

T BARNA

J GRATWICK

RITA STEPHEN

B S YAMEY

Y LOVAT WILLIAMS (*Secretary*)

25 March 1976