3 Franking machines and other mailroom equipment

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Introduction

3.1. The operations of Neopost and AMS overlap in the supply of certain mailroom equipment: franking machines, mail folding and inserting machines, letter openers and extractors, scales and mailroom furniture. The companies also overlap in the provision of maintenance and servicing of mailroom equipment, consumables for franking machines and lease finance for mailroom equipment.

3.2. In this chapter, we describe the product and geographic markets that are relevant to the acquisition of AMS by Neopost. The companies and the details of the transaction are discussed in Chapter 4. Our analyses of market definition, and our assessment of the competitive forces in the relevant markets, are set out in Chapter 5.

3.3. This chapter begins by discussing the overlap of the product and service ranges of Neopost Limited and Mailing Systems Limited (MSL, the UK arm of AMS). It then describes franking machines; the structure of the franking machine industry; relevant regulations; the demand for franking machines; and the provision of maintenance and consumables. A similar but briefer review is then given for other relevant products. Finally, the chapter considers production and distribution methods, pricing and technological developments in franking machines. This information is used as background for an analysis of the relevant markets in Chapter 5.

Overlap of sales

3.4. The value of sales of the two companies for each type of product (franking machines, scales, folding and inserting machines, letter openers, mailroom furniture, consumables, service (including maintenance and repair) and recrediting) is shown in Tables 4.2 and 4.9. As can be seen from the data in these tables, the primary area of overlap is in the sale of franking machines. These account for [✂] per cent of Neopost's UK revenues in the financial year to end January 2002, and a somewhat higher figure of [✂] per cent of MSL's revenues in 2001. Both companies have considerable business in scales, but MSL is much smaller than Neopost in the sale of folding and inserting machines, letter openers and furniture. Much of the revenue of these companies arises from the after-sales market, primarily through servicing and maintenance ([✂] per cent of Neopost's revenues, and [✂] per cent of MSL's), but also from consumables, postal rate-changes, and the relicensing and recrediting[1] of machines ([✂] per cent of Neopost's revenues and [✂] per cent of MSL's revenues).

Franking machines

3.5. The function of a franking machine is to print a franked impression on an envelope or label to validate it for posting, and to record the amount of postage used.

3.6. A franking machine consists of a meter and a base. The meter, which is designed to be tamper-proof or 'tamper evident', securely records the amount of postage used, the credit left on the machine, the price of each item and the date sent. It is reset each time the machine is recredited. All meters are kept secure via secure software or electromechanical features such as a key, smart card or personal identification number (PIN).

3.7. A printing mechanism applies the frank to an envelope or label. The printing mechanism will be one of three types: ink and die stamp (the traditional type, requiring occasional refilling of the ink reservoir or replacement of a disposable ink cartridge); thermal ribbon (slower and more expensive, but quieter than ink and die systems); and inkjet (the newest and quietest technology, which has the advantage of being able to print clearly on poor-quality and uneven surfaces, and which can print a variety of slogans or logos, and potentially a variety of franking marks (see paragraphs 3.92 to 3.98).

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[1]See paragraphs 3.53 to 3.56 and Appendix 3.1 for an explanation of these terms.

3.8. The base handles the passage of envelopes through the meter. It can vary from a small platform to a complex system of feeders, sealers and stackers allowing very rapid franking of large volumes of mail.

3.9. Meters and bases are also likely to have some supplementary features, such as automatic envelope feeders, stackers, integrated scales, and accounting features which may have a computer interface. These are described in more detail in Appendix 3.2.

3.10. The maximum number of impressions a franking machine can, theoretically, make in an hour under optimum conditions is measured by the cycle speed. However, in practice the machine's capacity will be limited by the speed at which mail can be loaded, the mix of postage, and the capacity of any auto-feeders and stackers. As it is usual for mail processing to be concentrated at particular times of the day, most users will need a machine with a much higher cycle speed than their expected average rate of usage over the day (and indeed may need to cope with monthly or quarterly peaks, for example invoice runs), although some are able to spread mail processing over the course of the day. Most manufacturers recommend a maximum monthly usage for their machines, which is usually well below the equivalent maximum hourly cycle speed.

3.11. In order to recredit franking machines, payment is made by direct debit to Royal Mail or by reducing credit balance in advance to the machine manufacturer, which holds funds in trust and passes them on to Royal Mail. The method used for remote recrediting differs between manufacturers, but may involve a smartcard sent through the post, PIN codes or automatic recrediting by modem. For reasons discussed in paragraph 3.34, Royal Mail now requires that all new machines allow remote meter resetting, for example by modem. The systems used by the various manufacturers, and the charges levied for recredits, are described in Appendix 3.1.

Industry structure

History of the sector

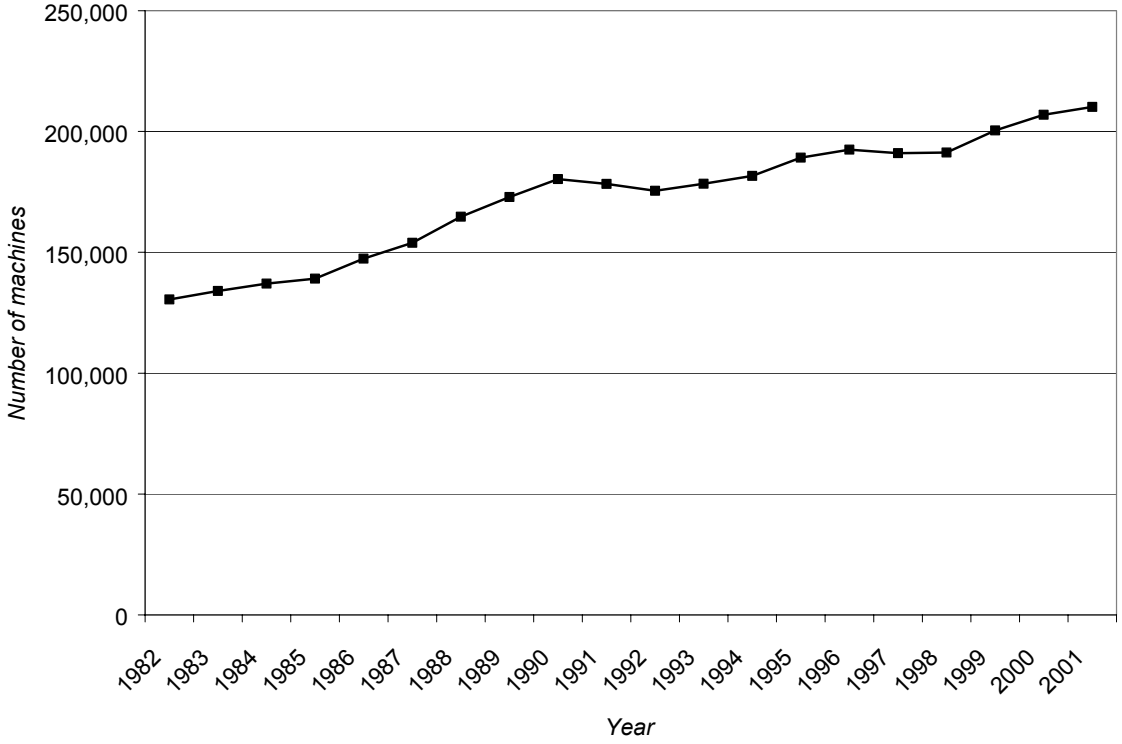
3.12. The first franking machine was introduced by Pitney Bowes in 1920 in the USA, and the first machines were sold in the UK in 1922 by Pitney Bowes' agent, UPF Ltd. In 1924/25 British Neopost Ltd was set up to market a new machine. Since then, the largest market shares have been in the hands of the successors of these two companies. Until 1969 Pitney Bowes and Roneo Alcatel (then owner of Neopost) were effectively the only suppliers of franking machines in the UK, and had roughly equal market shares. Hasler (Great Britain) Ltd entered the market in 1969 with the products of its Swiss parent, Hasler AG (now Ascom), although there was some prior availability of its products through an independent distributor. Scriptomatic entered the market in 1983 selling machines produced by Frama of Switzerland, and Envopak also entered in 1983 selling machines produced by Francotyp in Germany. By 1984, these three entrants accounted for 12 per cent of sales in the UK by number, and 10 per cent of sales by value. Many of these machines went to the public sector as Hasler succeeded in gaining a contract to supply HMSO.[1] Secap, a French producer, entered the UK market in 1988, under the name of its UK distributor ASI, but was acquired by Pitney Bowes in 2001.

3.13. Royal Mail collects data on the installed base of franking machines, that is the number of approved machines installed in the UK (although some of these may not be in regular use). Figure 3.1 shows the total number of registered machines in the UK. This has risen from around 130,000 in 1982 to 210,000 in 2001, although there have been two periods of little or no growth in population, between 1990 and 1993, and 1996 and 1998.

[1]Source: The Monopolies and Mergers Commission report, *Postal Franking Machines: a report on the supply, maintenance and repair of postal franking machines in the United Kingdom*, HMSO, Cmnd 9747, March 1986 (referred to hereafter as the 1986 MMC report). See Appendix 3.3 for a summary of that report's conclusions and recommendations.

FIGURE 3.1

Installed base of franking machines in the UK, 1982 to 2001



Source: Royal Mail.

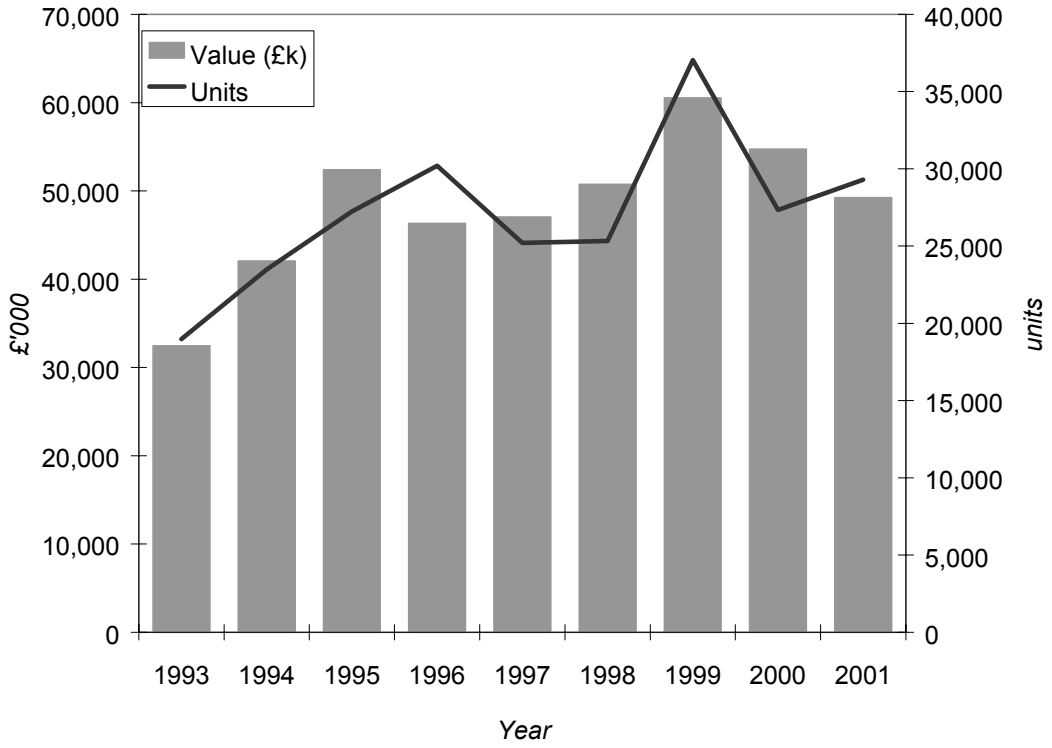
3.14. The Federation of the Electronics Industries (FEI, the industry body to which all franking machine producers selling in the UK belong) collects data on sales of new franking machines in the UK by value and by number of units: see Figure 3.2. The number and value of sales have shown similar patterns: sales have been on a rising trend since the early 1990s, although they have fallen in some years. The number of sales peaked in 1999. AMS told us that this was due to Pitney Bowes, Neopost and Francotyp introducing new low-volume entry products (namely the PersonalPost, IJ25 and T1000 respectively—the T1000 is more expensive than the other two machines but Francotyp also expects shortly to introduce the Mymail low-cost machine). The average unit cost of a machine is quite variable from year to year; this may well be a reflection of changes in the manufacturers' product ranges (see paragraph 3.74) and hence in the mix of sales. AMS told us that FEI data might not be exact, for example in some cases AMS itself submitted to FEI estimated rather than actual sales data, and included sales of second-hand machines.

Competitors

3.15. In this section, we describe the manufacturers currently supplying the UK market apart from the main parties, which are described in Chapter 4. The range of machines marketed in the UK by each manufacturer, and indicative list prices, are shown at Appendix 3.4, which also describes the extent of competition between manufacturers for different sizes of machine. We identified two German manufacturers of franking machines that do not currently supply the UK, Melex and Telefrank. Melex produces one model aimed at the smaller user (up to 50 letters a day). Telefrank also appears to offer one model, which it markets in other countries, including Denmark and the Netherlands, as well as Germany. Four Italian companies are believed to have ceased production of franking machines in the past few years: Audion, Lirma, Primavira and Sima. However, these do not appear to have supplied the UK market.

FIGURE 3.2

Total UK sales of franking machines by volume and value, 1993 to 2001



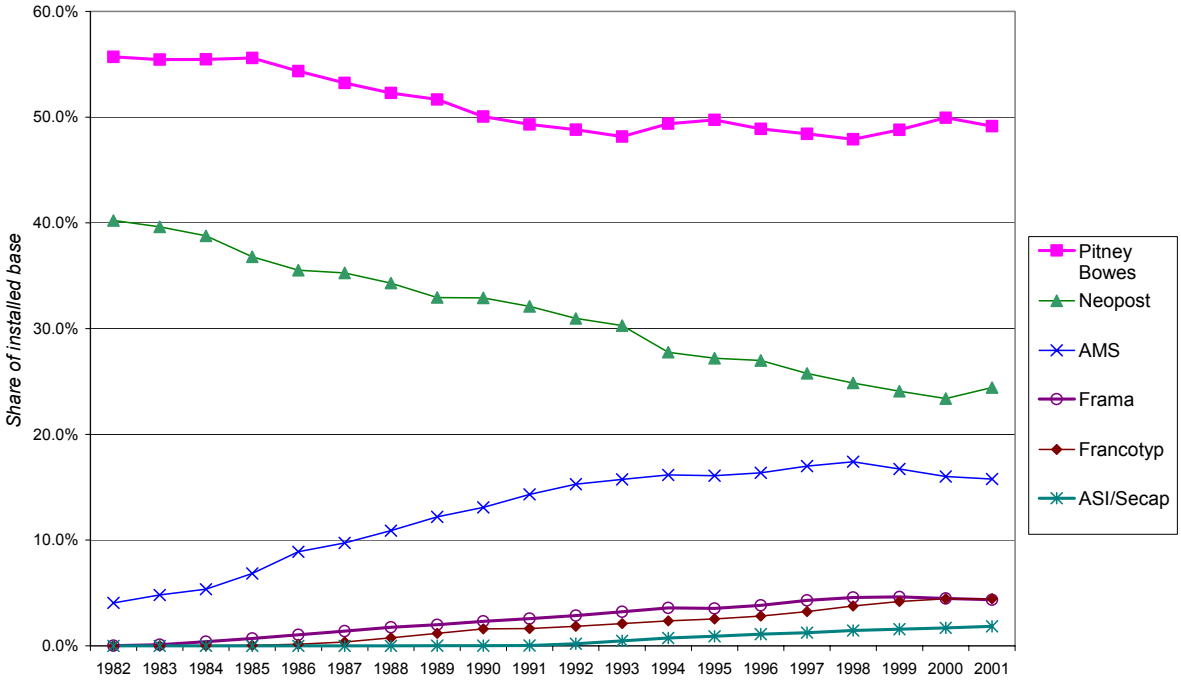
Source: FEI.

3.16. UK market shares for sales of franking machines in 2000 were estimated by *What to Buy for Business* (May 2000) as: Pitney Bowes 49.5 per cent, plus 2 per cent for ASI/Secap; Neopost 25 per cent; AMS 17 per cent; Frama 8 per cent; and Francotyp 4 per cent (see paragraphs 3.25 and 3.26 for descriptions of these companies). We calculated UK market shares of franking machine sales by value in 2001 as: Neopost 22.9%; AMS 9.1%; Pitney Bowes 55.0%; Secap 0.9%; Francotyp 7.6%; and Frama 4.5% (see Table 5.1). We note there are some differences between our estimates for 2001 based on sales value and those based on numbers for 2000 in *What to Buy for Business*; in particular, our values are higher for Pitney Bowes, and lower for AMS.

3.17. The shares of the installed base of machines in the UK, based on Royal Mail figures, are shown in Figure 3.3. Pitney Bowes' share of the installed base fell to around 50 per cent in 1990 and has stayed there or just below ever since. Neopost has seen steady erosion of share from around 40 per cent in 1982 to under 25 per cent by 2000, although there was an increase in 2001. Neopost told us that it had achieved a sales increase through increased marketing expenditure and recruitment of additional sales staff. AMS's share increased from around 5 per cent in 1982 to over 17 per cent by 1998 but has fallen slightly since then. Frama and Francotyp have each slowly built a share of around 5 per cent.

FIGURE 3.3

Manufacturer shares of the installed base of franking machines in the UK, 1982 to 2001



Source: Royal Mail.

3.18. The installed base of machines, by absolute number of machines from each manufacturer, is also shown in Table 3.1.

TABLE 3.1 **Installed base of franking machines in the UK by manufacturer, 1982 to 2001 (at the end of September each year)**

Number of machines

Year	*Pitney Bowes*	*Neopost*	*AMS*	*Frama*	*Francotyp*	*ASI/ Secap*
1982	72,684	52,508	5,306	15	0	0
1983	74,313	53,106	6,447	152	0	0
1984	76,003	53,146	7,339	536	34	0
1985	77,336	51,194	9,529	998	84	0
1986	80,122	52,351	13,122	1,555	247	0
1987	81,988	54,318	15,000	2,146	563	0
1988	86,132	56,505	17,947	2,888	1,254	12
1989	89,312	56,948	21,106	3,459	2,042	18
1990	90,240	59,348	23,604	4,197	2,909	33
1991	87,909	57,267	25,547	4,613	2,925	57
1992	85,644	54,330	26,840	5,036	3,261	339
1993	85,925	54,040	28,081	5,779	3,768	843
1994	89,703	50,447	29,358	6,525	4,278	1,336
1995	94,106	51,460	30,444	6,701	4,799	1,702
1996	94,095	51,951	31,499	7,384	5,400	2,126
1997	92,513	49,254	32,482	8,208	6,213	2,405
1998	91,658	47,558	33,308	8,760	7,243	2,778
1999	97,826	48,258	33,543	9,266	8,417	3,153
2000	103,353	48,383	33,143	9,298	9,207	3,549
2001	103,281	51,346	33,153	9,164	9,342	3,904

Source: Royal Mail.

3.19. These six companies are the only large-scale suppliers throughout the world. The pattern of market shares varies between countries, however. Manufacturers tend to be strong in their home markets: Pitney Bowes in the USA, Neopost and Secap in France, AMS and Frama in Switzerland, and Francotyp in Germany. The market shares based on installed machine populations for the four largest franking machine markets—the USA (52 per cent of the world's installed machines), Germany (9.6 per cent), France (8.6 per cent) and the UK (6.9 per cent)—are shown in Table 3.2.

TABLE 3.2 **Installed base of franking machines by manufacturer in the USA, Germany, France and the UK, 2000**

	USA		*Germany*		*France*		*UK*	
	Number	*%*	*Number*	*%*	*Number*	*%*	*Number*	*%*
Pitney Bowes	1,260,022	80.4	60,473	21.0	6,728	2.6	103,353	49.9
Neopost	134,133	8.6	19,348	6.7	167,825	64.5	48,383	23.4
Francotyp	53,622	3.4	150,229	52.1	0	0.0	9,207	4.4
AMS	119,611	7.6	34,006	11.8	0	0.0	33,143	16.0
Secap	0	0.0	0	0.0	85,482	32.9	3,549	1.7
Frama	0	0.0	18,290	6.3	0	0.0	9,298	4.5
Telefrank	0	0.0	5,856	2.0	0	0.0	0	0.0
Melex	0	0.0	416	0.1	0	0.0	0	0.0
Total population	1,567,388	100.0	288,618	100.0	260,035	100.0	206,933	100.0

Source: USPS, Deutsche Post, La Poste, Royal Mail.

3.20. Of these four countries, the merger has the highest incremental effect on market share in the UK. In the other three countries (and in Canada, the fifth largest market), either one or both of the merging parties has a comparatively low market share; only in the UK are they both substantial players with market shares over 15 per cent on the basis of numbers of installed machines.[1]

3.21. We now describe the three other manufacturers, besides Neopost and AMS, which operate in the UK.

Pitney Bowes

3.22. Pitney Bowes was established in 1920 in the USA, and supplies mailroom equipment worldwide. It is easily the largest supplier of franking machines both in the world and in the UK, and has manufacturing operations in the UK and the USA. Franking machines account for around half of its revenues inside the USA, but rather less elsewhere. In the UK it sells via its direct sales force and a telesales operation. Around [✂] per cent of its machines supplied in the UK are leased and the rest rented or sold outright. Leases are usually arranged with its in-house leasing company. The UK turnover of Pitney Bowes Ltd was £167 million in 2000. The group's worldwide turnover in 2001 was £2,860 million, and it employed 28,500 people at the beginning of that year.

3.23. Pitney Bowes has been seen as a technology leader in the development of franking machines, and it has a substantial patent portfolio applicable to current and prospective franking technologies (see paragraph 3.111). Pitney Bowes introduced the low-cost PersonalPost machine in 1999, opening up a new range of SoHo (small office/home office) low-volume users, and it told us that [✂] of its sales by volume were now to that segment, for which it used direct marketing and telesales rather than a direct sales force. Pitney Bowes is also the largest producer of folding and inserting machines worldwide and, following its recent acquisition of Bell & Howell, is now active in both the lower- (desktop and office machine) and higher-volume (production mail) segments (see paragraph 5.39).

3.24. Pitney Bowes acquired the French franking machine manufacturer Secap in 2001. It told us that it did so in order to gain access to the French market where it had failed to build up a significant market share itself (see Table 3.2). Consequently, Pitney Bowes has inherited Secap's distribution and servicing systems which made some use of independent dealers. The acquisition of Secap has given it co-ownership with AMS of the two new products developed jointly by AMS and Secap (see paragraph 3.109). It has also gained share in the folding and inserting machine market.

[1]AMS noted that its installed base had fallen further since September 2000, and if unused machines which were not compliant with meter migration (see paragraph 3.35) were discounted, its share of installed base fell to [✂] per cent.

Frama

3.25. Frama (UK) Ltd is a wholly-owned subsidiary of Frama AG, a Swiss company. Founded in 1970, Frama AG manufactures franking machines, stamp-vending machines, postal counter systems and similar postal equipment and systems. It is estimated to account for 3 per cent of installed franking machines worldwide, selling primarily in Europe—it does not market in the USA for various reasons including the patent rights situation there. It entered the UK market in 1983, initially through a distributor, Scriptomatic. It sells both via a direct sales force and through nine regional dealers in the UK. The dealers are allocated territories (although Frama told us there were some cross-sales between these), while Frama's direct sales force covers areas not served by the dealers. Around [✂] of Frama's machines are leased and [✂] sold outright. There is no in-house leasing company, although Frama places around 80 per cent of its business with two particular leasing companies. Dealers maintain Frama machines under Frama's bond and approval from Royal Mail. [

Details omitted. See note on page iv.]

Francotyp

3.26. Francotyp, founded in Germany in 1923, is a wholly-owned subsidiary of Röchling, an international German conglomerate whose major activities are metal and plastics engineering and manufacturing, and communications, measurement and control systems. Francotyp produces a variety of mailroom equipment in Germany and the USA. It is reported to account for around 10 per cent of installed franking machines worldwide. It has supplied franking machines in the UK since 1983. It has 14 regional franchises and a franchise dedicated to dealing with public sector customers, each of which also undertakes maintenance. The regional franchises are allowed to seek customers in each other's territories. Maintenance is provided by Francotyp's own engineers (although this is subcontracted in Scotland and the South-West) rather than by the franchised dealers. Around [✂] per cent of its machines are leased (although there is no in-house leasing company), the rest are outright sales. Francotyp's product range is shown in Appendix 3.4. It is developing a low-cost entry-level franking machine, the MyMail, which is expected to be launched very soon. It has no very-high capacity machine to compete with the Pitney Bowes Paragon, AMS Automail or Neopost SM95. It was, however, the first company to develop a digital inkjet machine and introduce it to the UK. Two Secap dealers told us that they also resold the larger Francotyp machines, purchased from UK franchises, in order to provide a fuller range of machines. Francotyp's UK turnover fell some 23 per cent in the financial year 2000, but has recovered some 3 per cent in 2001 to around £5.1 million.

Categories in the market

3.27. Franking machines can be grouped into categories based on processing capacity. Neopost, in common with *What to Buy for Business* (a business purchasing magazine, which conducts an annual review of the franking machine market), distinguishes between three categories—low-, medium- and high-volume machines:

(a) Neopost divides the low-volume category into two segments: entry-level machines, typically sold to customers processing around ten letters a day; and small machines, with a higher daily usage of up to 100 letters. Low-volume machines are usually located in offices rather than specialized post rooms. Traditional ink and die printing uses relatively noisy imprint technology and is being superseded in this category by the quieter ink-jet printers. Neopost said that low-volume machines accounted for 70 per cent by volume and 50 per cent by value of UK sales of franking machines. Prices are in the £400 to £3,000 range.

(b) Mid-range machines have higher capacity and more sophisticated features. Typically they are used for between 100 and 500 letters a day, and account for around 25 per cent of UK sales (by volume and value). The price range is between £3,000 and £6,000.

(c) High-end machines usually deal with volumes between 500 and 5,000 items of mail a day, and may be integrated into entire mailing systems, including mail folders/inserters, automatic feeders and stackers (see Appendix 3.2). Priced between £6,000 and £18,000, high-end machines account for 5 per cent of the number of sales but 25 per cent of sales value in the UK.

3.28. Pitney Bowes, Frama and Consignia described very similar three or four segment classifications. However, their estimates of the number of mail items processed per machine per day, or as an alternative measure the meter cycle speed, in each segment varied. *What to Buy for Business* commented in 1998 that 'The manufacturers' estimates of what these three (categories) constitute in terms of the number of envelopes franked varies so widely that it is impossible to give a definitive figure'. It describes several of the franking machines currently on the market as spanning market segments.[1] Machine capacity can also be varied by the use of autofeeders, integrated scales etc.

3.29. The parties said that machine capacity was one factor in several that determined purchasing decisions, that customers varied greatly as to the extent to which they were concerned with average or peak capacity, and that purchasers could use a lower-capacity machine for a greater proportion of the day, or use multiple lower-capacity machines rather than one high-capacity machine, for example, to cope with peak volumes. Consequently, they argued that categorizations based on capacity did not mean the segments were distinct (see paragraphs 5.17 and 5.18 for a discussion). Pitney Bowes, however, told us that there was very little movement of customers between the segments, which could be defined both by customer demand and the functional characteristics of the equipment supplied.

Royal Mail regulations

3.30. In order to ensure the security of its revenue, Royal Mail (the mail-handling arm of Consignia) imposes strict licensing conditions to make fraudulent franking difficult. The following conditions are common to all franking machines in the UK. Users have to pay in advance for postage. Meters have to incorporate two registers: an ascending register which keeps a record of the total value of franks made over the lifetime of the machine, and a descending register which keeps a record of the value of credit left on the machine, and which is reset every time new credit is added. The total of these two registers should tally with Royal Mail's records of value credited to that machine. Every franking machine must be inspected by the manufacturer, approved supplier or approved third party maintenance provider at least annually (some models have to be inspected more frequently), when the registers will be checked against the control total and the machine examined for evidence of tampering. Royal Mail may also inspect the machine without prior warning to check security and to ensure that it prints legibly.

3.31. All franking machine models must be tested and approved by Royal Mail before they can be sold in the UK. Royal Mail tests machines primarily for security from fraud (for example, that meters are inaccessible and cannot be tampered with), and physical performance (although it offers no guarantees to users about this aspect). Royal Mail also has the power to withdraw approval for particular models if it changes its standards. From the submission of a new model for examination through to final approval may take three to six months.[2] Manufacturers must also indemnify Royal Mail against a loss of revenue from fraud that is attributable to deficiencies in the machine or the negligence of the manufacturer. The supplier's annual liability is currently limited to the cost of 1 million first class impressions, based on the minimum first class value at prevailing rates, hence the value of the required bond is currently £270,000. Royal Mail also approves manufacturers, their agents or independent companies to service franking machines (see paragraphs 3.43 to 3.52). Distributors and servicing companies also have to indemnify Royal Mail.[3] Royal Mail has to be satisfied that each of these companies is financially secure and properly managed, and that its premises and vehicles are physically secure, before it will be licensed.

3.32. Users also need to be licensed by Royal Mail for each machine. Normally, a manufacturer obtains the licence on the purchaser's behalf. Any franking machine which is to be scrapped, sold or returned to a leasing company needs to be de-licensed. Royal Mail can withdraw licences from users.

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[1]For example, in the 2001 *What to Buy for Business* review the Secap DP-200 is described as low- to mid-volume, and the Secap Alpha Autofeed, Frama Sensonic, Neopost SM75 and Ascom 337/340-324 are all described as mid- to high-volume frankers.

[2]If the machine incorporates new technology this may require earlier negotiation for concept acceptance.

[3]Consequently, manufacturers currently have to lodge three of these bonds to cover each of their risks as manufacturers, distributors and service providers.

3.33. The postal authorities in different countries have their own rules and standards (for example, on machine performance, the nature of the franking mark and ink, meter security and recrediting procedures), and so machines may need modification to be suitable for different countries.[1]

Meter migration programme

3.34. Royal Mail launched a meter migration programme in October 1997 with the aim of improving the security of meters by phasing out mechanical machines by October 2002 in favour of electronic models. It also announced the withdrawal by the end of 2004 of three methods of recrediting meters—purchasing credit at a Post Office, having a Royal Mail representative visit business premises to recredit the machine, and the provision by Royal Mail of 'value cards' for certain models. Consequently, all machines will have to be recredited remotely, which may require modifications to some existing electronic machines. Some will also have to be modified to improve security (ie make them more tamper-proof). The franking machine users generally bear the cost of the changes, including the manufacturers' charges for modifying the machines.

3.35. Royal Mail estimated in 1997 that 72,000 installed mechanical machines would need replacing by the 2002 deadline (category 1 machines); 94,000 remotely recredited electronic machines would need security modifications by 2002 but could then remain in service (category 2 machines); and 15,000 electronic machines would need security modifications before 2002 but would still have to be replaced by 2004 as they were incapable of remote recrediting (category 3 machines). AMS told us that 80 per cent of its installed customer base in 1997 was affected by these changes. It appears that it was behind other manufacturers in introducing new technologies that would meet these requirements before 1997. As at December 2001, it still had [✂] non-compliant machines registered (of which it believed [✂] were still in use and needed to be replaced), out of an installed base of 32,777, and it told us it currently (April 2002) had [✂] non-compliant machines. For comparison, Neopost currently has [✂] category 1 machines, and [✂] category 2 and 3 machines still installed, out of a much larger installed base, and Francotyp told us it had just [✂] category 1 machines still installed. AMS told us that it did not have the sales staff and service engineers to carry out installations of all decertified machines by September 2002, and so it risked losing a significant proportion of its customer base at this date.

3.36. Over all manufacturers, Royal Mail estimated that at December 2001 there were around 16,000 category 1 machines, 38,000 category 2 machines and 6,400 category 3 machines still in use, waiting to be replaced or modified. However, Pitney Bowes told us that because the meter migration programme had been phased over five years, it had not led to a surge in volumes of business.

Demand for franking machines

3.37. Only around 10 per cent of businesses use franking machines. Consignia told us that the recent introduction of low-cost, low-volume (SoHo) machines meant that franking was now a realistic option for firms sending as few as ten letters per day. As shown in Figure 3.1, around 210,000 franking machines were in use in the UK at the end of 2001.

3.38. Rather than using a franking machine, businesses have the option of paying for postage using stamps, Royal Mail's bulk postage schemes, hybrid mail schemes, the Hays DX service or—for mail items over a certain weigh—a large number of alternative carriers. These alternatives are described in detail in paragraph 5.12 and Appendix 5.1. There are also a number of non-postal alternatives such as email and fax, while new technology and deregulation of postal services may open up further alternatives in the near future (see paragraphs 5.126 to 5.134 for a discussion of these issues). A number of advantages are claimed for postal franking machines over the use of stamps (according to *What to Buy for Business*, May 2000):

— A franking machine is much faster.

— It is more cost-effective as the correct value postage is always applied.

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[1]Whereas UK postal prices are based on the weight of the item, some European countries base postal charges on package size as well, which may involve more complex pricing rules. Most modern franking machines can handle such a system with some software changes.

— Cost control is easier as many machines allow some form of cost-centre accounting.

— Undeliverable mail can be tracked as the sender's Royal Mail ID number is printed on every frank.

— Franked mail is sometimes seen as creating a more professional impression, and a logo or message can be added to the frank for promotional purposes.

3.39. Consignia said that franking typically lent itself to mailing runs comprising a mix of different letter sizes, weights and class of postage, whereas a high-volume run of identical mail might best be handled using Printed Postage Impression (PPI) permits (see Appendix 5.1).

3.40. Therefore, in assessing whether to use a franking machine or stamps, a business has to weigh up the importance of factors such as staff time, availability of cost-centre accounting, whether it will convey a professional image etc, against the price of the franking machine, its cost of use through servicing and consumables (ink, labels), and the need to train staff.[1] Royal Mail offers no discounts on postal rates for franking over stamps, even though Consignia acknowledged that its margins were higher for franked mail (and similar to bulk mail) because of stamp production costs and the need to pay commission to stamp retailers. In the 1986 MMC report (see Appendix 3.3), the Post Office also reported that it achieved savings in excess of the costs of administering the franking machine system and resetting meters; these savings came on facing (preparation of mail to ensure stamps are aligned before cancelling) and cancelling mail, and producing and selling stamps. The only available discounts are attached to customer sortation of mail (see Appendix 5.1). Postal authorities in some other countries do offer discounts on postage to franking machine users. In France and Germany larger customers get a 1 per cent discount, in the Netherlands users get discounts ranging from 0 to 12.5 per cent, and in Sweden, 8 to 18 per cent for prepay customers (source: *Transaction Costs of Alternative Postage Payment and Evidencing Systems*, John Haldi and John T Schmidt, paper presented at the Sixth Conference on Postal Delivery and Economics, Montreux, Switzerland, June 1998). Posten (the Swedish Post Office) told us, however, that its current discount for franking machine users was 2 per cent.

3.41. Deutsche Bank (Analyst Report on Neopost, 2002) notes that the overall postal market tends to grow in line with GDP. In recent years, demand for franking machines has tended to follow the same pattern, both because of growth in the installed base and the replacement of obsolete machines, largely as a result of decertification. The report notes that in the USA, all electronic meters will need to be replaced with digital ink-jet machines by 2008, and it expects European post offices to begin announcing similar programmes from 2003 onwards.

3.42. Customers in the UK tend to replace franking machines every five to seven years, although replacement is expected to become more frequent as technological developments accelerate. For most customers, the decision to replace a machine will, therefore, be infrequent. Their sources of information will be suppliers (via telesales, web sites, or salespeople), Royal Mail (which can provide details of suppliers and approved models) or business publications (for example, *What to Buy for Business*, *Better Buys for Business* and *Mind Your Own Business* magazines). Existing customers will usually receive regular contacts from their supplier's sales staff, both by mail and telemarketing, while competing suppliers will also try to establish contacts with potential customers, via mailed advertisements, cold calls and customer visits. However, the parties argued that Pitney Bowes enjoyed an advantage through brand recognition, particularly among first time and infrequent customers.

Maintenance of franking machines

3.43. As mentioned in paragraph 3.30, Royal Mail requires that all machines be inspected at least annually by an approved servicing company to check for any signs of tampering or fraud. Consequently, users are required to pay for these statutory annual inspections (often through an 'inspection-only' service contract). Alternatively, manufacturers offer limited or fully comprehensive maintenance agreements, including to various extents maintenance visits and necessary call-out, labour and parts expenses. Maintenance contracts are usually sold on a 12-month rolling basis. Some machines that have

[1]The 1986 MMC report conducted a survey of 273 users to ask about the main advantages of using franking machines. Convenience was by far the most significant factor; controlling postal costs, avoiding fraud and reducing post room costs were other advantages.

recently been introduced allow remote servicing by modem,[1] to check for any interference with the postage meter, and allow remote or self-diagnosis of problems. Some low-end machines are generally replaced rather than repaired if problems emerge.

3.44. Royal Mail authorizes manufacturers, their agents, and, subject to certain conditions (see paragraphs 5.110 to 5.111), independent companies, to service franking machines and perform the necessary revenue protection checks. In order to safeguard its revenue, Royal Mail imposes strict conditions on these maintenance companies, for example in ensuring that staff are properly trained, that accurate and complete records are kept, and that premises and vehicles are secure to prevent theft of meters or tools that might grant access to meters. They are also required to offer an indemnity bond to cover any losses suffered by Royal Mail from fraud enabled by the actions of the servicing company or its employees.

3.45. Neopost told us that it offered either an inspection-only contract (the mandatory service cover contract designed to meet Royal Mail's requirements) or a fully comprehensive service plan. A few customers were still under a service-only contract (this was no longer offered to new customers), while customers of the entry level IJ25 model could choose between two contracts that offered service by way of exchanging the machine for a new one—either an on-site or a return-to-base option. Neopost told us that over [✂] per cent of its installed base had no maintenance contract but paid for maintenance as needed (covering call-out, labour and parts charges), although the proportion of recent customers without a contract was much less ([✂] per cent of those acquiring machines in 2000). Around [✂] per cent of customers had comprehensive contracts. There is also a choice between 4-hour and 8-hour response times.

3.46. AMS offers a number of options for maintenance services. There is a comprehensive option (including two planned visits), an annual limited option (one site visit for statutory inspection, and all maintenance costs during that visit), the statutory annual inspection only, or a chargeable service. AMS said that [✂] per cent of its customers had comprehensive agreements, [✂] per cent were covered by the first year guarantee, [✂] per cent had the annual limited contract, [✂] per cent an inspection-only contract, and [✂] per cent paid as charges arose. Maintenance is included in all Neopost and AMS rental contracts.

3.47. In common with most suppliers (except Neopost), AMS includes a comprehensive first-year inspection and maintenance contract with its sales of new machines as a part of its warranty. Neopost told us that maintenance and service contracts were not automatically included in the price of its machines, although all its sales included a one-year return-to-base warranty. [

Details omitted. See note on page iv.

] (before October 2000 a one-year maintenance contract was included in the machine's list price).

3.48. The manufacturers told us how their annual charges for comprehensive maintenance compared with the list price of the machines. Frama charged about 8 per cent of the list price, Pitney Bowes 8 to 10 per cent (although it stressed that this varied with the terms of the agreement, such as guaranteed call-out times), and AMS estimated its charges averaged around 5 to 6 per cent of list price, although the figure was higher for its low-range machine, the Smile, where the cost was around 9 per cent. Neopost estimated an average cost of around 10 per cent; however, we saw that these costs ranged from under 3.5 per cent for a top of the range machine to over 10 per cent for low-end machines.

3.49. Appendix 3.5 shows list prices and comprehensive maintenance prices for a variety of Neopost and AMS franking machines from 1999 to 2002 (except that 2002 maintenance prices for Neopost were not available). Maintenance prices are expressed as a percentage of the list price of the machine. It can be seen that, in general, maintenance is a much higher proportionate cost for lower-priced machines than for higher-priced machines. We also observe that, in many but not all cases, for machines of a similar list price, Neopost's maintenance prices tend to be slightly more expensive. This comparison should be treated with caution as the machines are not like-for-like (the Neopost machines are more likely to contain recent and complex technologies), differing levels of discount from machine list prices may be achieved, and the exact terms of the maintenance agreements differ (some Neopost contracts provide guaranteed call-out times for service). Moreover, Neopost estimated that around [✂] per cent of its service contracts carried a discount, averaging [✂] per cent. AMS told us that it did not normally discount the price of maintenance contracts.

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[1]The Internet-capable machines currently being developed by Pitney Bowes and others will feature these services as standard.

3.50. In standard maintenance contracts, manufacturers reserve the right to alter annual charges. Most manufacturers told us that they looked to increase maintenance prices in line with general inflation each year. AMS told us its maintenance list prices had increased by around 3 per cent a year since 1998 except for a small one-off additional increase in September 2000 and higher charges for old mechanical machines affected by meter migration.

3.51. Neopost told us that it offered three different payment options for comprehensive maintenance contracts. These are: annual payments with provision for annual increases; price protection payments, where annual payments are fixed in advance for up to six years (the price of this service is 5 per cent above first year standard list prices); and all-in-one payments, available only with leased machines, where the lease and maintenance costs are combined and fixed for the period of the lease (typically five or six years). All-in-one accounted for [✂] per cent of customers in 2000, and price protection [✂] per cent. Because of these options, and variations in the extent of discounting, Neopost told us that the price for a new contract need not be the same as one for a similar machine which had been running for two or more years. AMS said it had no equivalent of these options and normally charged the same prices to all customers.

3.52. There is no publicly available data to show the size, or supplier shares, of the servicing and maintenance industry. We found that independent servicing companies accounted for slightly more than 1 per cent of all servicing and maintenance revenue (see paragraph 5.53). Other than that, servicing and maintenance are carried out by the manufacturer or its agent, and so market shares may be expected to vary broadly in line with the manufacturer's share of the installed base of machines.

Consumables

3.53. Sales of consumables are a significant source of revenue for manufacturers. Franking machines require consumables such as ink (or ink-jet cartridges) or thermal ribbons, and labels. These are usually sourced from the manufacturer, although there are independent dealers who offer inks, and labels can be sourced from other channels (as the sticky labels for over-size parcels do not need to be Royal Mail-approved). We heard that some manufacturers (not including Neopost) had decided that the use of third party consumables would invalidate any warranty on the machine (usually just to the extent that breakdowns resulted from the use of such consumables, but sometimes this might be extended to cover any problem, whether resulting from use of these consumables or not). We were told that modern ink-jet cartridges were designed specifically so that they could be fitted only to particular machines, and that these proprietary designs could not be copied by third parties.[1]

3.54. We were told that the cost of printing from ink-jet cartridges could be high—up to 3p or 4p per impression, depending on the size of the slogan plate used. Neopost provided us with details of current prices and capacities for ink-jet cartridges. Although the price of the basic cartridge for the entry-level IJ25 machine works out at 2.2p an impression, a higher-capacity cartridge is available where prices are below 0.9p an impression, and for the mid-range IJ65/75 model, ink-jet costs are below 0.2p an impression (and some customers negotiate discounts on cartridge purchases). Consumable costs are generally lower for larger machines, and especially for impact printing machines.

3.55. Recrediting may also involve a cost, although this tends to be a low percentage of total costs. Recrediting is usually provided only by the manufacturers,[2] most of whom levy charges for the service (see Appendix 3.1). Francotyp makes no charge for modem recrediting and direct debit payments, and AMS offers free recredits in the first year and six free recredits in second and subsequent years (it used to offer 12 a year in subsequent years, but this was changed at the end of 2001).

3.56. When postal rates change, the rates stored in the memory of scales or franking machines, which are used to calculate applicable postage rates for different weights of mail, need to be updated; manufacturers notify users and dispatch new chips containing the new rates. The charges levied to users for this service are also described at Appendix 3.1.

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[1]For example, Neopost told us that its proprietary designs of ink-jet cartridges contained a security chip (to satisfy the requirements of Royal Mail), and that it had registered the trademark Sure.jet. Neopost has one registered design and two patents that cover features of its ink-jet cartridge applications.

[2]Secap's agents now also handle recrediting for its machines.

Other products

3.57. In addition to the supply and servicing of franking machines, the parties overlap in the supply of certain other items of mailing equipment, which are described in turn below.

Folding and inserting machines

3.58. Neopost assembles, and both Neopost and AMS sell, mail-folding and inserting machines. AMS's folding and inserting machines are rebadged versions of machines supplied by PFE.[1] These machines select documents, fold them and insert them into envelopes, which are then sealed. There are some machines on the market that perform only one of these functions. Folders and inserters speed up the preparation of large batches of similar mail, for example bills, statements and marketing information. The customers are banks, insurance companies, manufacturing companies, local authorities, government departments etc. An inserting machine can be placed in line with a franking machine so that the filled envelopes are carried to the franking machine for automatic franking, and it is often possible to combine franking and inserting machines from different manufacturers. Sales of integrated systems from one manufacturer appear to be quite rare; Neopost estimated that it had only one or two such sales a month, although 5 to 8 per cent of AMS's inserting machine sales are made with a franking machine (unlike Neopost, AMS always offers a discounted price on such combined sales).

3.59. Neopost told us that there was a distinction between high-volume inserting machines, which neither it nor AMS produced, and smaller, desktop machines. PFE distinguished between three segments:

(a) *Small desktop folders and inserters.* PFE defined desktop machines as small items of office equipment designed for ease of use, intended to process between 2,500 and 30,000 envelopes a month with a maximum daily run size of around 3,000 pieces. The typical maximum thickness of an envelope would be about 2mm. It said that prices ranged from £3,500 to £10,000 per machine.

(b) *Medium modular office models.* Modular office machines are considerably larger than desktop ones, and so will be located in a dedicated postroom. One would typically process 30,000 to 300,000 items a month with a maximum daily run of 15,000 envelopes, each up to an overall pack thickness of 6mm. PFE estimated prices to range from £12,000 to £50,000.

(c) *Large production mail machines.* Production machines are physically large, and may be accommodated in industrial premises. They process in excess of 300,000 items a month, with speeds of 6,000 to 30,000 items an hour. They are designed to handle any type or combination of stationery, and can cost from £50,000 to over £250,000.

PFE suggested that the manufacturers, nature of production methods and technologies, and the nature of the customers were distinct in each of these segments (see paragraph 5.20).

3.60. The principal suppliers of desktop and modular office machines are Pitney Bowes, PFE and Neopost. These companies also have various OEM agreements, including supplying AMS, Francotyp and Secap (now owned by Pitney Bowes). Major producers of larger production mail machines are Bowe Systec, Kern, Pitney Bowes and Bell & Howell, recently purchased by Pitney Bowes. PFE also named KAS, Kalmar and IntelMail as manufacturers, and PFE itself entered this segment in September 2001. All suppliers that are active in the UK are members of the FEI and so FEI sales data provide a full picture of UK folders/inserters, as shown in Table 3.3. FEI statistics are collected for machines valued below £6,000, £6,000 to £21,000, £21,000 to £46,000, £46,000 to £86,000, and above £86,000. The parties have no machines priced over £21,000, and suggested that this might be a suitable ceiling to define the market segment in which they were active (but see paragraphs 5.19 to 5.21 for a discussion of the appropriate economic market). While sub-£21,000 folders and inserters account for the great majority of the number of sales, they are much less important as a proportion of value, due to the high price attached to very high-capacity production mail machines.

[1]PFE also supplies AMS dealers in the USA directly, rather than through AMS, for sale under the PFE name.

TABLE 3.3 **Total UK sales of folders/inserters**

	Folders/inserters priced under £21,000		*All folders/inserters*	
	Value £'000	*Units*	*Value £'000*	*Units*
1995	7,524	1,169	28,303	1,338
1996	8,925	1,494	30,789	1,660
1997	7,850	1,070	28,185	1,227
1998	7,280	1,016	26,624	1,171
1999	8,916	1,248	27,689	1,387
2000	8,140	1,092	19,997	1,200
2001	9,116	1,078	23,635	1,184

Source: FEI.

3.61. The parties told us that they offered similar arrangements for the servicing of folding and inserting machines as for franking machines, excepting that there was no Royal Mail requirement for a statutory annual inspection.

Letter openers

3.62. Incoming mail can be fed through a letter opener, which automatically slices the top off an envelope without damaging the contents, in order to speed up processing of incoming mail. Models range from simple desktop machines to floor-mounted high-volume machines operating at up to 10,000 items a minute. Some models can also extract the contents from the envelope. As shown in Tables 4.2 and 4.9 and paragraph 5.60, the parties' sales in the UK are relatively low. AMS sells only two models, which it sources from Frama or Secap. Neopost estimated that the combined sales of both itself and AMS accounted for under 30 per cent of total UK sales. There is no published data available apart from the sales of FEI members, but not every supplier is a member of that association. The main competitors are Opex, Stielow and Pitney Bowes; other suppliers named by Neopost included Morgana, Synertec, Twofold, Dahle, Gem UK Mailing Solutions, Frama and Francotyp.

Scales

3.63. Postal scales are used to determine the correct value of postage for the weight of an item. Modern postal scales will usually have applicable postal rates stored in their memory, allowing the correct rate of postage for different classes of service to be calculated and displayed automatically. These can often be connected to a compatible franking machine so that the correct postage value is automatically transferred to the meter, rather than having to be input manually. Neopost told us that most scales were either sold with franking machines, or were actually built into the base of the franking machines, and so it was rare to supply a stand-alone scale. As the communications protocols between scales and meter are manufacturer-specific, scales will usually have to be bought from the manufacturer of the franking machine. If the customer does not require scales to be integrated with the franking machine, or is using a low-end franking machine which does not offer a facility for communication with scales, then it can purchase from alternative manufacturers or an independent scales manufacturer (such as Total, Mailtec or Cherlyn). Stand-alone scales may also be required by users of stamps to determine the relevant postage value. Neopost estimated that around 70 per cent of new franking machine users typically used scales.

3.64. FEI statistics on UK sales show that over 14,000 units were sold in 2001: see Table 3.4. This data covers postal scales, most of which could be interfaced with franking machines (although other types of scale could sometimes be used in a postroom). Neopost attributed the surge in sales in 1995 to 1997 to the membership of FEI of Sega-Wedo. FEI data in these years, therefore, includes its sales, which Neopost told us were of inexpensive spring balance postal scales rather than sophisticated, interfaceable machines.

TABLE 3.4 **Value and volume of sales of all postal scales (FEI members only, 1993 to 2001)**

Date	*Value £'000*	*Units*
1993	6,028	13,155
1994	7,367	15,521
1995	9,128	18,329
1996	8,746	20,721
1997	9,007	26,005
1998	8,585	13,688
1999	9,452	14,819
2000	9,896	14,387
2001	8,121	14,363

Source: FEI statistics.

Furniture

3.65. The parties' sales of mailroom furniture are very low (see Tables 4.2 and 4.9). The products are mainly benches, mail-sorting pigeonholes etc. Some desks are specifically recommended to provide a stable base for franking machines and letter folders/inserters, but otherwise there are many other suppliers of suitable furniture in the UK and the companies' market shares are very low. We therefore do not consider these products further.

Production methods for mailing equipment

3.66. The manufacture of franking machine components is usually subcontracted to specialist companies. Ink-jet systems are usually sourced from a big printer manufacturer, such as Hewlett Packard or Brother.[1] Final assembly will be on a dedicated production line using specific tools. In the case of simple, low-end models, this process might also be subcontracted by the manufacturer. Manufacturers will usually assemble larger machines (with additional features, some customization and lower volumes) in-house. Generic machines will also need to be customized for each national market according to the postal regulations. Folding and inserting machines are usually assembled in the same way, except for the country-specific adaptations.

3.67. Smaller manufacturers can supplement their product ranges by sourcing equipment from other manufacturers. Neopost and AMS also source furniture and letter openers from other manufacturers. AMS purchases scales on an OEM basis from Mailtec Postal Scales GmbH, Cherlyn Electronics Ltd and Bisco Vaegte Denmark. PFE supplies AMS's desktop folding and inserting machines, and Neopost supplies folding and inserting machines to Francotyp. There are also OEM agreements covering franking machines: Frama markets a rebadged version of Neopost's IJ25 entry-level machine, Francotyp sells a rebadged version of Neopost's SM85 model in the USA, while Secap has purchased high-end franking machines from AMS for resale in France.

3.68. AMS told us that there were important economies of scale in the production of franking machines. For input costs, it estimated that if volume were doubled, assembly costs were reduced by approximately [✂] per cent and purchasing costs by approximately [✂] per cent. It said that the importance of such economies of scale was enhanced by the fact that new technologies were changing the cost structure of franking machine equipment: today the cost of materials, including outsourced components, could be up to [✂] per cent of the production costs. Neopost stressed the importance of scale economies in R&D, and said that as a result of the merger it would be able to spread its R&D effort over a larger volume of sales. It added that further sources of economies would arise in distribution and marketing, management and administration.

[1]Neopost said that the technical and economic challenges of developing ink-jet solutions were beyond the reach of most franking machine manufacturers prior to cooperation with PC manufacturers. These, for example, have developed ink-jet heads that perform adequately, and have helped develop special ink-jet ink that meets postal requirements.

Distribution

3.69. Most sales of franking machines in the UK are made by direct sales forces. Neopost and AMS make limited use of dealers and agents, who cover only Northern Ireland, the Channel Islands and the Isle of Man where the parties do not have direct sales forces.[1] Pitney Bowes relies entirely on direct sales; Frama uses regional dealers as well as direct sales; and Francotyp has regional franchises. Telesales are also used by the two largest manufacturers, particularly for low-end machines where absolute margins may not justify greater sales staff time.

3.70. Sales tactics tend to be pro-active. The manufacturers told us that they had to stimulate demand in order to achieve sales, rather than waiting for customers to make an approach. There is considerable use of customer visits, cold calling and direct mail to stimulate demand, raise brand awareness and achieve repeat sales or poach from competitors.[2] Sales staff are usually paid partly on a commission basis. In Neopost's case, commission rates tend to be inversely related to the rate of discount given on the list price, but are higher if a lease deal is arranged with the in-house leasing company than if the machine is sold outright: for example, commission rates for national account executives are [✂] per cent of list price higher if a lease is arranged. Neopost also offers additional commission, at around [✂] per cent of list price, if a comprehensive maintenance agreement is signed. AMS told us that its sales staff also received a further [✂] per cent commission for lease sales using Ascom Leasing Ltd, its in-house leasing company, in addition to the basic commission, but there was no commission for agreeing a maintenance contract.[3] The additional commission for leasing contracts had been introduced three or four years ago: up to that time AMS had not incentivized its sales staff to favour leased over outright sales. We heard that maintaining a successful sales force was expensive, hence despite high gross margins on franking machines, overall profitability would be much lower. Pitney Bowes said that distribution channel economics were very tight and so it did not make sense to dilute this with independent distributors. FMCS told us that as a dealer it made no net margin on the sale of franking machines but relied on maintenance and consumables sales for its profits. AMS said that around 50 per cent of the sales value of a machine went to cover its own costs, mainly labour.

3.71. At the time of the 1986 MMC report (see Appendix 3.3), Post Office regulations only authorized manufacturers, importers or their agents to supply franking machines direct to users. The report considered that the development of a dealer or distributor system would be pro-competitive and would improve customer choice. Consequently, the Post Office relaxed its restrictions on suppliers in the late 1980s, although manufacturers were not compelled to supply independent dealers and distributors. To date, the three largest UK suppliers have made little use of independent distributors (see paragraph 3.69).

3.72. There are some sales of second-hand franking machines in the UK. These tend to be refurbished machines returned early to the manufacturer (sales are low as it is not usually worthwhile to refurbish a machine after a typical full lease period). Neopost estimated that such machines accounted for [✂] per cent of its UK mailing systems revenue, and AMS [✂] per cent of its sales ([✂] per cent by number). Francotyp estimated that [✂] per cent of its sales by number were of second-hand machines. Occasionally, second-hand machines are sold privately, but these must be relicensed via the original manufacturer. The suppliers noted that, as many of the machines currently being retired fell foul of the meter migration programme, it would not be possible to offer them for reuse.

3.73. The same sales forces sometimes sell other relevant equipment, besides franking machines, in the same manner. The ability to offer a range of mailroom equipment is often seen as an advantage, as some customers may prefer a 'one-stop shop' approach. While companies such as Pitney Bowes and Neopost may have the product range to offer this themselves, other manufacturers of different categories of mailroom equipment have combined to market their ranges cooperatively. Mailroom Innovations is a specialized body consisting of different manufacturers of mailroom equipment, which have cooperated in staging exhibitions of their equipment. Established in 1995, it aims to exhibit a wide range of office and mailing equipment. PFE told us that generally the members did not compete with each other as each specialized in particular types of equipment (although AMS said that it did compete with PFE and Envopak within this marketing organization). Members include AMS for franking machines, PFE for

[1]Neopost has, on a trial basis, one mainland dealer selling the IJ25 (low capacity) machine.
[2]Large customers with multiple franking machines may well have more than one supplier.
[3][*Details omitted. See note on page iv.*]

folders and inserters, Stielow for letter openers, Envopak for mailroom furniture, and Target Addressing for addressing machines. PFE told us that Mailroom Innovations was an important marketing tool, and said that over [✂] per cent of its sales leads were generated from this marketing medium in 2001 (see also paragraphs 7.77 to 7.80). AMS told us that it envisaged that the merged company would continue to participate following the merger, but other members expressed concern that, with its greater range of mailroom products as part of Neopost, it would compete with their specialities or would see no need to participate.

Pricing

Industry pricing

3.74. Average selling prices for franking machines, calculated from the overall number and value of machines sold (using FEI data), are of limited value as such figures do not make allowance for the capacity and specification of machines changing over time, and changes in the mix of sales. Quality has increased but, particularly in recent years, there have been many more sales of lower-priced machines to smaller users. Average prices (based on the data in Figure 3.2) were around £1,700 in 1993, and have since varied from £1,534 to £2,004. There is no clear trend in average prices, and although they were over £2000 per unit in 2000, the average appears to have fallen in 2001.

3.75. AMS and Neopost provided average realized selling prices for each of their models over the last few years. These are shown at Appendix 3.6. Again, these series show some price variability, and although prices have generally risen in the last five years, they have not done so uniformly. The prices of all models, except Neopost's SM9560, were higher in 2001 than in 1997, or when they were introduced if more recent. In the case of folding and inserting machines, for each of the parties' models prices increased until 2001 when they fell back somewhat.

3.76. The parties told us that international comparisons of pricing were inappropriate as the specifications of franking machines differed between countries according to the requirements of the national postal authorities. Moreover, the methods of purchase, and level of included service and maintenance, also varied. Pitney Bowes said that prices in various European countries had displayed different behaviour from the UK, and even from their immediate neighbours. It said that the introduction of the euro had resulted in replacement purchases of many franking machines. In some countries such as Germany, manufacturers had competed fiercely to maintain market share, and, despite the increased demand, prices had fallen. Other countries such as France had not seen such a marked price effect (partly because the French Post Office had insisted on machines with new specifications). However, Frama and Francotyp were of the opinion that prices in the UK were currently higher than in many European markets. (See also paragraphs 4.29, 4.32 and 4.70.)

Company pricing policies

3.77. All franking machine manufacturers publish price lists, but usually discounts are offered on these prices. Neopost estimated that roughly [✂] of its sale transactions involved a discount. There may also be occasional promotions. Both parties told us that there was no difference in list prices between purchase and lease options.

3.78. Neopost told us that its list pricing was determined by costs of production and transport to the UK, selling costs, margin requirements and competitor pricing, particularly by Pitney Bowes. Sales staff were authorized to offer discounts on list prices of up to [✂] per cent, authority from senior managers or directors being required for higher discount rates. A wider band of discount rates applied to public sector customers.

3.79. AMS told us that, in setting its list prices, it also considered production and transport costs, the need to obtain an adequate return, and competitor pricing. However, it had no specific margin targets, and although Pitney Bowes' pricing was most important, it also considered the pricing of other suppliers.

3.80. Whereas Neopost has one price list, AMS operates four different pricing schedules:

— a standard price list for normal commercial customers;

— a standard major account price list for large companies such as banks, insurance companies etc;

— a public sector price list for central government departments, local government, hospitals, universities, local authorities etc; and

— dealer prices (prices charged to AMS's distributors).

Additionally, AMS negotiates contract prices, determined on a customer by customer basis. Sales staff can offer discounts from the standard list price of up to [✂] per cent, with higher discounts at the discretion of senior management. AMS said it offered discounts in [✂] per cent of sales, varying according to the circumstances of the sale (see Table 3.5).

3.81. The levels of discount offered by the parties usually reflect the volume of business, the perceived likelihood of obtaining the sale and the customer's negotiating position, for example whether alternative offers have been made. Some large customers request bids by competitive tender for a contract to supply equipment. Pricing for these contracts is determined on a case by case basis. As these are usually the largest contracts, customers are often able to negotiate substantial discounts. Pitney Bowes told us that it was much more likely to offer discounts on mid- and high-end models but that discounts were very unusual for the bottom half of the market. Neopost and AMS both told us that discount rates tended to vary according to the size of the contract rather than the types of machine under consideration. In contrast, Frama said that discounting was more common in the lower part of the market, as purchasers of mid- and high-range machines were less price sensitive, being more concerned with features, reliability etc.

3.82. The average level of discounts, by the parties' own categories of account, are shown in Table 3.5.

TABLE 3.5 **Neopost and AMS, average discount on franking machine prices**

Supplier	*Type of account*	*Average level of discount %*
Neopost	Direct (standard commercial customer)	✂
	Major accounts (public sector)	
	National accounts (accounts put out to tender by large organizations)	
AMS*	Large corporate	
	Public sector	
	Dealer price	

Source: Neopost and AMS.

*These are discounts from the standard list price only, not from the extra pricing schedules (see paragraph 3.80).

3.83. Neopost told us that it also occasionally carried out promotions on particular models. This might be in response to market information on the sales of that model and those of competitors, and particularly might be a response to promotions by competitors, usually Pitney Bowes.

3.84. We considered whether there was any evidence to suggest that Neopost franking machines were generally more or less expensive than AMS franking machines. *What to Buy for Business* magazine publishes an annual review of franking machines on the UK market, including details of machine specifications and list prices. We used this source to compare similar Neopost and AMS machines, as shown in Appendix 3.7. There are significant difficulties in making such a comparison—machines vary in their characteristics, such as cycle speed, recommended monthly usage, printing mechanism, whether there are PC interfaces, integrated scales, auto-feeders and many other features. Some features may be available as options, and manufacturers also compete on product reliability, service standards and costs etc. Noting these limitations, we compared those cases where Neopost and AMS appear to have competing machines. In terms of list prices (ignoring discounts), there does not appear to be a consistent pattern of one manufacturer being more expensive than the other across their ranges.

Leasing

3.85. All manufacturers in the UK now offer their customers the option of rental, lease or outright purchase. Of Neopost's sales by number of machines, [✂] per cent are leased, [✂] per cent purchased, and [✂] per cent rented. By value the figures are [✂] per cent leased and [✂] per cent outright sale: rentals are not included in the value breakdown because rental income is spread over the life of the rental contract while leases and purchases are both booked on delivery.) Neopost was not able to provide data on whether any of its outright sales represented leasing by third party leasing companies. For AMS, currently around [✂] per cent of sales are outright purchases, [✂] per cent lease and [✂] per cent rent. Pitney Bowes told us that many of its entry-level machines were rented; it said that rental was particularly attractive to start-up companies which did not want to be tied into a lease.

3.86. Neopost told us that it favoured leases because of cash-flow factors, because of the leasing company's entitlement to capital allowances, and because of the potential for an additional income stream if the purchaser used its leasing subsidiary, Neopost Finance Limited. Its sales staff receive higher rates of commission if a sale is on a lease basis (see paragraph 3.70). Leases vary from three to six years, but are usually six years, reflecting the typical life of a machine. AMS has had a much lower proportion of lease sales than Neopost (even though it has introduced increased commissions to sales staff for agreeing leasing deals). We were told that this was partly because historically it had not sought to promote sales by lease over other sales methods, and partly because of the profile of its existing customer base, which included a relatively high proportion of public sector institutions that did not generally use leasing. Francotyp estimated that [✂] per cent of its UK sales were leased; Frama told us that around [✂] of its direct sales (as opposed to those made through dealers) were leased, and Pitney Bowes said that [✂] per cent of its machines supplied in the UK were leased.

3.87. Neopost told us that many customers preferred leasing, as this gave access to finance at point of sale, the ability to preserve credit lines for working capital requirements and ease of budgeting for periodic lease payments. Leasing from an in-house company gave convenience and control—in the event of dissatisfaction with either product or service the customer was able to withhold payment, and thus directly impact the product and service supplier. Leasing was advantageous to the manufacturers from a cash-flow standpoint. Non-lease customers were on 30-day payment terms, and typically took longer to pay, whereas payment from the leasing company was virtually instant, and bank funding could be readily secured against quality lease receivables. Title to leased equipment is retained by the lease company (which in the case of the parties and Pitney Bowes is usually a sister company). Neopost told us that it hoped to increase the proportion of customers using lease finance following the merger.

3.88. The parties provided details of the annualized percentage rate of interest (APR) yield implicit in their leasing portfolio. Ascom Leasing Ltd reported the implicit APR depending on length of lease. This varied from [✂] per cent for a two-year lease to [✂] per cent for a six-year lease. For Neopost Finance, implicit APR rates vary to a greater extent with the capital value of the lease, and to a lesser extent with the length of the lease. This varied from an average of [✂] per cent for capital values under £[✂], to [✂] per cent for capital values of £[✂] to £[✂]. Comparisons of interest rates may not reflect the reality for some customers, if they do not see their leases through to their expiry, or there is 'rolled-in' capital from a prior lease, or if a customer arranges leases with differing repayment structures such as initial deposits (AMS and Neopost said they did not tend to use these). The APR is a measure designed to abstract away from these complications to give a comparable measure. Its use in consumer markets is required under the Consumer Credit Act 1974 but it does not have to be stated where the customer is an incorporated body having a separate legal personality, which will include nearly all business customers. We have, therefore, used these APR figures to generate some illustrative total costs of repayments for differing machine costs and lease terms, shown at Appendix 3.8. Exact APRs for any customer may vary according to the term of the lease, value of the contract, negotiation and the frequency of payments. These illustrations show the sizeable costs implicit in leasing. However, the interest charges also include a premium to reflect the credit risk of customers (a repossessed franking machine is likely to have a low second-hand value).

3.89. It was put to us that existing suppliers enjoyed a great advantage in marketing because of their customer databases and knowledge of existing lease arrangements. In particular, we were told that customers would be approached maybe two-thirds of the way through a lease period, and invited to upgrade to a new or faster machine for a marginal increase in lease payments. If the customer agrees, its

liability under the existing lease is rolled up into the new one,[1] and consequently alternative suppliers have no opportunity to make a sale on expiry of the initial lease. While suppliers argued that this practice provided an opportunity for customers conveniently to upgrade machines or benefit from product innovation before expiry of the initial term of the agreement, it can also lead to total franking machine costs to the customer escalating over time, while competing suppliers are excluded. Several companies voiced concern that leasing was actively used in this manner to protect the major suppliers' customer bases. AMS argued that there was no difference in the difficulties alternative suppliers faced in identifying and approaching prospective customers, depending on whether they would be replacing a leased or purchased machine. It said that a customer was always free to contact other suppliers and it was the customer's, not the supplier's, choice as to whether it upgraded leases in this way. Furthermore, it was a normal part of the competitive process for suppliers to attempt to make sales by offering customers improved products.

3.90. Neopost told us that its sales staff were not allowed to seek new contracts in the first half of the life of a lease, and also that sales staff received commission only on the new, additional portion of any revised lease agreement rather than its full value. AMS told us that around three months prior to the expiry of a lease contract, its sales staff would be notified and would contact the customer with a view to upgrading the machine. AMS said that whereas in the past it had automatically renewed lease contracts on expiry, if the customer did not cancel the lease or upgrade the machine, it was now terminating leases at the end of their term. It said that this was standard leasing practice, and it would reconsider where a customer objected. One benefit of the change of practice would be in generating new orders.

Technical developments in franking machines

3.91. Technology in franking machines changed little in the first 70 years of their existence as both meter and printing systems were mechanical. In the early 1980s, electronic components were introduced into the meter system, to afford greater security and the ability to offer recrediting by telephone or modem.

Digital franking technology

3.92. Digital franking machines have recently been introduced and are now available from all manufacturers in the UK except AMS and Secap. These use a microprocessor to enable the machine to behave as an intelligent device processing software for a variety of different applications. Critical software for franking machines is that used for encryption and decryption as this must meet Royal Mail's security requirements. There are two cryptographic techniques used by Neopost in the design of its franking machines: encryption, and digital signatures. Both techniques provide a way of establishing non-repudiation of data. Encryption is used in order to provide confidential data security. Digital signatures are used to provide data security by validation. Neopost purchases proven cryptographic technology from specialist companies. AMS told us that it had outsourced the development of encryption and decryption technology, while establishing an in-house ability to maintain this.

3.93. Digitization also offers the potential to facilitate a number of additional functions, for example printing variable indicia, providing statistical and connection capabilities, and allowing franking machines to work with other equipment.

3.94. Digital franking machines require software-based ink-jet printing technology. Ink-jet printing has the advantage of being quieter than the mechanical alternative, enabling its use in office areas and benefiting users without a postroom facility, for example SoHo users or decentralized organizations. Further advantages include the ability to print on uneven surfaces while maintaining a high-quality image, and providing more flexibility for alterations to indicia and slogans.

3.95. We heard that suppliers had to overcome practical difficulties in adapting ink-jet technology to print indicia, for example enabling the printing of the frank in one pass. The size of the print-heads was

[1]Neopost said if its leases were upgraded during the primary term, the residual primary term payments were discounted by [✂] per cent a year and financed as part of the capital value of the new lease.

increased, and jets directed at different angles. Neopost told us that the ink-jet heads were proprietary to particular machines as well as suppliers and must comply with security requirements approved by Royal Mail. Furthermore, for a franking machine to be approved for use in the UK, the ink itself must meet Royal Mail specifications such as colour and chemical composition, durability, fluorescence and rate of drying properties.

Two-dimensional bar coding

3.96. Digital technology allows the printing of two-dimensional bar-code postmarks or IBI. Two-dimensional IBI include a unique digital signature making counterfeiting virtually impossible. These IBI can contain substantial amounts of information including postage amount; mail class; date; device number; town or licensing post office; and the sender's identity. They can also be used to ascertain the weight and quantity of letters and parcels sent. Two-dimensional IBI also permit the tracking of detailed information on individual mail items and customer usage patterns.

3.97. Consignia has said that, for security reasons, it might decide to introduce a requirement for two-dimensional franking marks in the UK within the next five years. Consignia would first need to establish that the cost of decryption software and investigation of irregularities was affordable. Consignia believes that, if deployed, two-dimensional IBI would need to be adopted on all franked mail so that the costs of decryption software could be spread over the entire volume.

3.98. The USPS is migrating to two-dimensional IBI, and Pitney Bowes said that all meter manufacturers were represented on the IBI standards committee. Pitney Bowes plans to launch a new IBI-enabled product range worldwide in 2002 and 2003. The IBI functionality will, for the moment, only be relevant to the USA market. IBI in the USA will be used only on domestic mail, although we were told that other countries were also considering two-dimensional bar coding. Global harmonization of standards is under discussion, and the sorting technology makes this a prerequisite for cross-border two-dimensional IBI. The parties told us that European posts, including Consignia, were considering draft specifications for two-dimensional bar coding.

Internet applications

3.99. Next generation machines are expected to use networked digital technology for Internet applications; this functionality will be included in Pitney Bowes' 2002 and 2003 product launches. The new range uses next generation interface and communication protocols (Extensible Telephony Mark-Up Language (XTML)). This should provide greater bandwidth, or capacity, and greater speed than the current modem method, and will allow simultaneous two-way communication. Networking technology enables the franking machine to communicate with the postal and carrier systems through central servers. This will allow access to additional services such as track and trace, delivery confirmation, rate information and remote diagnostics, and allow postal services to gather valuable customer intelligence. Information about mail usage and patterns helps posts and carriers to offer new services and grow revenues.

3.100. The combination of rates update using XTML and digital ink-jet printing may make it easier to adapt the machine for alternative postal carriers following any postal liberalization. Customers may, as a result, be able to select a postage solution online from a range of competitor offerings.

Infrastructure

3.101. The operational functionality of Internet and IBI-enabled franking machines will be constrained by interface technology (network platform architecture) and the capabilities of other networks, including that of Royal Mail (for example, the carrier will need the capability to read and use two-dimensional postmarks). Other support networks could include those at banks, the suppliers' own service centres and telecommunications companies. Software applications need to be sufficiently flexible to accommodate the differing requirements of posts around the world and the liberalization of certain postal services. Neopost told us that, given the move towards online interaction and the need to integrate with an increasing diversity of systems, the differences between the requirements of national posts were

increasing. Neopost said that, of the digital machines it produced, around [✂] per cent of the product R&D investment was universal and the remaining [✂] per cent was particular to each post's requirements. Despite efforts to harmonize global standards, it added, there were fundamentally different infrastructure issues to be overcome.

3.102. In the UK, Royal Mail's sorting technology increases sorting speed and automates various stages of the sorting process. Equipment detects the meter mark and segregates franked mail by postage class. Bar codes enable Royal Mail to track 'special delivery' items through each stage of the sorting and delivery process for mail whose delivery next day is guaranteed. Royal Mail customers can use an online service to monitor the sorting or delivery status of their mail.

3.103. Consignia believes that meter marks will, within the next five years, include a unique identifier to enable automated scanning and verification. This would require new scanning capability at mail centres. Furthermore, real time delivery confirmation is expected for all mail items bearing a bar code. Other likely advances expected by Consignia include automated scanning and billing of PPI, Business Reply and Freepost mail.

PC franking

3.104. PC franking, or electronic stamps, is already in use in the USA, Germany and the Netherlands. Users purchase credit through online Internet services, store it either on a secure device attached to the PC or on a secure server located remotely with the service provider, and print franks using a conventional printer. PC-generated franks carry a unique digital signature and contain encrypted information allowing postal authorities to check their legitimacy.

3.105. We were told that this franking technique was currently marketed to the SoHo sector. The USPS has authorized four companies, including Neopost and Pitney Bowes, to provide Internet postage services. Neopost told us that the number of users of PC franking in the USA had grown to over 300,000 within two years of launch, equivalent to 20 per cent of the US installed base of 1.5 million franking machines. Deutsche Poste has launched its own PC postage solution.

3.106. The UK does not yet have an approved provider of Internet-based postage solutions. Consignia told us that it had no immediate plans to introduce electronic stamps as it was unable to demonstrate an adequate financial return from the investment required. However, Consignia said that if it identified a model with an adequate return, all electronic stamps would need to be validated by means of secure IBI.

3.107. Neopost told us that user interface software technology, currently held within the meter in digital machines, could be transferred to the PC. In this circumstance the franking machine could revert to being an application-specific secure printer but controlled by the PC. Neopost told us that, theoretically, PC franking could be rolled out across all volume categories, providing that appropriate security measures were taken.

Need for innovation and intellectual property

3.108. Digital technology and the move to franking machines networked to the Internet are introducing the need for a wider range of skills in the franking machine industry. Suppliers must innovate and acquire additional skills, resources and partnerships, particularly with the computer industry. To keep pace with technological changes, franking machine suppliers are spending more on R&D.

3.109. AMS entered a joint R&D agreement with Secap in April 1997. The agreement led to the development of two digital machines, called by AMS the InteliPost 36 and InteliPost 54. Under the terms of the agreement, AMS and Secap were licensed to use each other's intellectual property on a royalty-free basis for the purposes of the development project. Any intellectual property arising out of the project is jointly owned by AMS and Secap. Secap was subsequently purchased by Pitney Bowes, as a result of which Pitney Bowes now has access to technology relating to the two machines. The R&D project has now come to an end.

3.110. Neopost told us that rapid technological change was likely to reduce the average time for machine replacement, with the result that R&D expenditure would have to be recovered over a shorter product life cycle. The parties submitted that there was increasing pressure to bring products to market more rapidly, to meet the evolving requirements of postal regulators and to remain competitive with the new products released by Pitney Bowes.

3.111. Pitney Bowes told us that it had approximately 1,400 distinct[1] patents worldwide in all areas of mailroom product technology. It has 500 patents applicable to the UK and a further 281 pending. Neopost has 294 pending or granted UK patents, and AMS has a total of 76 granted and pending families of patents[2] which apply to the UK, out of a total of 125 families of patents that it has granted and pending worldwide. Manufacturers must license technology or develop their own technology without infringing patents. Pitney Bowes has successfully registered patents that relate to the security mechanism and the information contents of the USPS two-dimensional bar code. The applicability of these patents to other posts adopting a similar system will depend on the specific security mechanisms and information contents of the systems adopted. Pitney Bowes told us that, if its patents did apply to other systems, it would be willing to license the technology to other suppliers. The parties said that, if two-dimensional IBI technology was adopted by other posts, all competitors might need to rely on licensing Pitney Bowes technology. Pitney Bowes already has a number of cross-licensing agreements with other manufacturers of franking machines. The implications for competition of the IPR situation are discussed further in paragraphs 5.69 to 5.77.

[1]ie not counting similar patents in different countries. In total, Pitney Bowes has approximately 3,500 patents.
[2]The reference to a family of patents is where the same patent is granted in a number of jurisdictions.