8 Pricing

Contents

Pricing policies

8.1. In this section we describe the pricing policies of veterinary manufacturers, veterinary wholesalers and veterinary practices. A special feature of this industry is that veterinary manufacturers not only set the price at which they sell to their direct customers (mainly veterinary wholesalers) but also, to a large extent, they set the price at which their indirect customers (veterinary practices purchasing through the veterinary wholesalers) can purchase their products, through the operation of rebate schemes direct to veterinary practices. These rebate schemes are described in detail in the next section (see paragraphs 8.15 to 8.54).

Manufacturers

8.2. We asked 13 veterinary manufacturers to describe their pricing policies. Most of these manufacturers are international in scope but have a UK pricing policy independent of that for other countries. Even those with international pricing policies and internal transfer pricing policies allow UK managers some discretion for pricing in the UK market.

8.3. Most manufacturers told us that they did not know the cost of production or of R&D of the medicines they sold, because these were accounted for at group level. As a consequence, pricing in the UK did not generally reflect costs of production or of R&D, and manufacturers told us that these costs would be taken into account at group level, for example in the decision whether or not to launch a product. Some manufacturers told us that they took the internal transfer price of medicines into account when setting local UK prices. However, Merial told us that the transfer price was set as a function of the UK market price rather than the reverse.

8.4. Manufacturers consider a wide range of factors when setting the price of a new product, most of which relate to local market conditions. All 13 manufacturers said that they took into account the price of competing products and demand conditions in setting the price of a new product. Other factors often mentioned were costs (in particular, local marketing costs), transfer prices, product features and benefits and the level of marketing support needed for the product.

8.5. Merial, Leo and Janssen change their prices on an ad-hoc basis. Merial told us that prices were changed as and when market conditions, such as competition and costs, changed. The other ten manufacturers change their list prices either annually or biannually, although this may not preclude ad-hoc changes in the prices of some products. The manufacturers said that price changes mainly reflected inflation, changes in costs and changes in market conditions and in competitive pressures. Only one manufacturer, Elanco, applies a centrally-decided percentage price increase across a range of its products.

8.6. We asked manufacturers whether, when deciding to change the price of a medicine, they used any pricing formulae, or whether they attempted to maintain a constant price differential between their prices and the prices of competing medicines. All 13 manufacturers told us that they did not use any pricing formulae, nor did they attempt to maintain a fixed price differential between their products and those of competitors. Schering-Plough told us that, in practice, ‘the prices of patented medicines are generally higher than those without such protection’. However, most manufacturers did not have a different pricing policy for patented medicines.

8.7. In practice, most veterinary medicines manufacturers will typically set a list price for their POMs, to which a discount is applied in order to arrive at the wholesaler price. Manufacturers then set the terms of their respective rebate schemes to veterinary practices.

8.8. *The list price.* It is common practice in the industry for manufacturers to publish list prices for their POMs. These list prices work as a basis for calculating the wholesaler price, and rebates and discounts to veterinary practices (see the discussion on rebates and discounts to veterinary practices in paragraphs 8.15 to 8.54). Many manufacturers told us that list prices were recommended prices for the resale of their POMs by wholesalers to veterinary practices. However, Pfizer and Boehringer told us that their list prices were not recommended or minimum resale prices. Schering-Plough said that its recommended prices worked in effect as a maximum recommended resale price for the veterinary wholesalers.

8.9. *The veterinary wholesaler price.* Veterinary wholesalers generally receive a standard 15 per cent discount on the list price, independently of the quantity purchased. In addition to this, most manufacturers pay either a fixed fee or an additional 0.5 to 2 per cent to wholesalers in exchange for provision of monthly data on purchases of their products by individual veterinary practices. The list prices are the same for all the veterinary wholesalers, as well as the terms of payments. The only difference between wholesalers resides in the additional percentage or fee they receive for providing sales data to the manufacturers, which is negotiated individually between each wholesaler and the manufacturer in question. Elanco operates differently, in that it sells to wholesalers at its declared selling price, and not at a 15 per cent discount over a list price.

8.10. *The rebate to veterinary practices.* It is common practice in the industry for manufacturers to grant discounts and rebates direct to veterinary practices—even when these veterinary practices are supplied through veterinary wholesalers. These rebates and discounts are usually calculated as a percentage off the list price, and are described in detail in paragraphs 8.15 to 8.53.

Veterinary wholesalers

8.11. Veterinary wholesalers told us that they followed the manufacturers' list prices, and then granted discounts to veterinary practices on their purchases from the wholesaler. These discounts were not usually product or manufacturer specific and generally applied to all of a veterinary practice's purchases from the veterinary wholesaler. This means that the veterinary wholesalers do not usually alter the relative prices of the medicines as set by the manufacturers in their list prices. The veterinary wholesalers told us that manufacturers did not exert any pressure on them to respect the recommended list prices in this way. Dunlops said that no manufacturers prohibited it from selling at different prices, but that manufacturers did seek the wholesalers' cooperation in selling at the recommended prices in order to enable their rebate schemes to be more easily administered.

8.12. The wholesaler NVS told us that it was industry practice to follow recommended prices, and then to grant veterinary practices discounts on volume purchases. It said that, if it were to reduce the price below the recommended price and not reduce the discount accordingly, veterinary surgeons would certainly notice the decrease in discount but not necessarily that the headline price had decreased.

8.13. Table 8.1 shows the average discount over gross turnover (of all product groups) granted by each wholesaler in 2001. These discounts mainly took the form of volume discounts or settlement discounts, as discussed in paragraphs 5.51, 5.75, 5.90 to 5.92, 5.103, 5.111 and 5.133. They ranged from [*Details omitted. See note on page iv.*]. Centaur operates as a cooperative, and the [✂] per cent discount included a [✂] per cent rebate to Centaur's members in 2001.

TABLE 8.1 **Ratio of wholesaler discount over gross turnover, 2001**

Wholesaler	*%*
Centaur*	✂
Dunlops†	
Dunwood*	
Genus*	
NVS‡	
VSSCo§	

Source: CC, based on data from wholesalers.

*Year ended 31 March 2001.
†Year ended 30 September 2001.
‡Year ended 30 June 2001.
§Year ended 31 August 2001.

Veterinary surgeons

8.14. Pricing by veterinary surgeons is described in the two BMRB surveys of veterinary surgeons commissioned by the CC, BMRB1 and BMRB2 (see Appendices 6.1 and 6.2) and in a CC study of the

BMRB postal survey which is presented in Appendix 9.1 and discussed in Chapter 9 (see paragraphs 9.114 to 9.116). Chapter 6 also analyses a number of issues relating to pricing of POMs by veterinary surgeons, such as the provision of itemized bills, the basis for their mark-ups on POMs, and cross-subsidization (see paragraphs 6.128 to 6.164 and 6.175 to 6.181).

Manufacturer rebates, discounts and promotions to veterinary practices

8.15. It is common practice for veterinary medicine manufacturers to offer rebates and discounts on sales of POMs to veterinary practices. We have received details of the rebate schemes of 13 manufacturers. The terms of individual rebate schemes vary considerably from manufacturer to manufacturer. However, what most rebate schemes have in common is that they are volume based, in the sense that the rate of rebate increases with the value of purchases, that they are retrospective, and that rebates are not incremental, in the sense that they apply to all units purchased rather than only to the incremental units above certain volume thresholds. In the following, the term 'rebates' is used to include both discounts and rebates to veterinary practices, unless otherwise indicated.

8.16. Manufacturers buy sales data at the individual veterinary practice level from the veterinary wholesalers in order to operate these rebate schemes (see paragraph 8.9). [*Details omitted. See note on page iv.*] Janssen delegated the administration of its scheme to the veterinary wholesalers in 2001.

8.17. Most manufacturers told us that the origins of their rebate schemes were mainly historical and that these rebate schemes were maintained as a response to competition.

8.18. Manufacturers identified three main advantages to their rebate schemes. First, their flexibility enabled them to respond to competitive pressures. Second, they rewarded customer loyalty and encouraged purchasing of the manufacturer's products. Third, the operation of rebate schemes was seen as a way of communicating with veterinary surgeons and of creating and strengthening relationships with veterinary surgeons in a situation where manufacturers did not sell directly to veterinary practices. In addition, Fort Dodge told us that one advantage of its rebate scheme was that it enabled it to assess likely demand for its products.

8.19. Before describing the way in which individual rebate schemes operate, we present some general data on the amount of rebates paid by manufacturers to veterinary practices. Table 8.2 shows the percentage rebate over gross sales paid by the 19 largest POM manufacturers on purchases of POMs in 2001, where manufacturers are shown in decreasing order of their total sales of POMs. Of the 13 manufacturers who provided us with a detailed description of their rebate schemes, two (Leo and Boehringer) did not operate a rebate scheme to veterinary practices in 2001. Another four manufacturers have schemes where the average rate of rebate on POMs was less than [✂] per cent in 2001. The remaining manufacturers, including the five largest, have schemes where the average rate of rebate on POMs exceeded [✂] per cent in 2001.

TABLE 8.2 **POM sales and rebates, 2001**

Manufacturer	*Gross sales*	*Net sales*	*Rebates*	*Rebates/gross sales*
		£'000		*%*
Intervet Pfizer Merial Schering-Plough* Fort Dodge Novartis* Bayer Pharmacia Boehringer Leo Vétoquinol Virbac Elanco Arnolds Norbrook Animalcare Janssen Alpharma Ceva	*Details omitted. See note on page iv.*			

Source: CC, based on data from manufacturers.

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*[

Details omitted. See note on page iv.

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8.20. Table 8.3 shows the average amount of rebate paid on all veterinary medicines and on POMs by the larger manufacturers over the last three years. Novartis provided data only for 2001. Boehringer and Leo, which did not operate a rebate scheme during the period, have also been excluded. On average, rebates on POMs and rebates on other veterinary medicines have been increasing as a percentage of gross sales since 1999. Most manufacturers grant higher rebates on purchases of POMs than on purchases of other veterinary medicines.

TABLE 8.3 **Percentage rebates over gross sales on POMs and on all veterinary medicines, three years to 2001**

	Average rebate on all veterinary medicines			*Average rebate on POMs*		
				per cent		
Manufacturer	*1999*	*2000*	*2001*	*1999*	*2000*	*2001*
Intervet Pfizer Merial Schering-Plough Fort Dodge Bayer Pharmacia* Norbrook	*Figures omitted. See note on page iv.*					
Average	15.2	16.4	17.9	18.5	19.6	20.2

Source: CC, based on data from manufacturers.

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*[

Details omitted. See note on page iv.

]

8.21. Table 8.4 shows the number of veterinary practices to which manufacturers were paying rebates in 2001. Eight manufacturers were able to give us this information. As discussed in Chapter 6, the number of veterinary surgeries in the UK was between 3,100 and 3,200 in 2001. This table suggests that a large number of these surgeries were receiving rebates from several manufacturers in 2001:

Intervet, Pfizer, Merial and Schering-Plough, the four largest POM manufacturers, [*Details omitted. See note on page iv.*].

TABLE 8.4 **Number of veterinary practices receiving rebates in 2001**

Manufacturer	*No*
Intervet	
Pfizer	
Merial	
Schering-Plough	✂
Fort Dodge	
Bayer*	
Pharmacia	
Norbrook	

Source: CC, based on data from manufacturers.

*[*Details omitted. See note on page iv.*]

8.22. Pfizer, Schering-Plough and Bayer sent us information on the number of veterinary practices receiving rebates within each discount band. Of the [✂] veterinary practices that received rebates from Pfizer in 2001, [✂] received less than [✂] per cent rebate and [✂] received more. Schering-Plough granted rebates to [✂] veterinary practices in total. Of these, [✂] per cent received a rebate of [✂] per cent or more, and [✂] per cent a rebate of [✂] per cent or more. Bayer granted discounts to [✂] veterinary practices in 2001. [✂] were in Bayer's lowest discount band of [✂] per cent.

8.23. Bayer, Pfizer and Intervet told us that there had been an increase in the number of veterinary practices receiving their rebate between 1999 and 2001, and Novartis told us that it had decided to increase the number of veterinary practices receiving its rebate between 1999 and 2001. [*Details omitted. See note on page iv.*] Norbrook and Fort Dodge told us that the number of practices receiving their rebates decreased between 1999 and 2001.

8.24. In our telephone survey of veterinary surgeries (BMRB1), respondents were asked whether they negotiated rebates or discounts from manufacturers. Four out of five veterinary surgeons said that they did. This varied slightly by drug sales and by specialism. Larger drug purchasers were more likely to negotiate rebates and discounts with manufacturers: 89 per cent of the veterinary practices with medicine sales above £150,000 a year did so, compared with 72 per cent of the veterinary practices with medicine sales up to £75,000 a year. Mixed and large-animal veterinary practices were also more likely to negotiate rebates or discounts with manufacturers than small-animal veterinary practices (85 per cent of mixed and large-animal veterinary practices against 77 per cent of small-animal veterinary practices). This may be due to the generally higher volumes of medicines purchased by mixed and large-animal practices.

8.25. Table 8.5 shows the average rebate over gross price (across all manufacturers) in each of the relevant product markets defined in Chapter 7. Markets are shown in decreasing order of their size. The markets which attracted the highest levels of rebates, in 2001, were POM antibacterial soluble products for poultry/pigs (53 per cent), dog vaccines (36 per cent), cat vaccines (33 per cent) and general anaesthetics by inhalation (30 per cent). POM antibacterial soluble products for pig and poultry are in most cases supplied direct by manufacturers. Other markets that attracted relatively high levels of rebates are oral and injectable antibacterials, and markets for large-animal vaccines.

TABLE 8.5 **Average rebate over gross price in each relevant product market**

Name of market	*Size £m*	*Leading manufacturer*	*Share of the leading manufacturer %*	*Average rebate in 2001 %*
Prescription-only small-animal flea treatments		Merial	58	
All other oral and injectable antibacterials		Pfizer	23	
Poultry vaccines		Intervet	56	
Small-animal oral analgesics and anti-inflammatories		Pfizer	42	
Dog vaccines excluding bordetella and rabies		Intervet	45	
Cat vaccines excluding rabies vaccines		Fort Dodge	39	
Small-animal wormers		Bayer	85	
Injectable analgesics and anti-inflammatories		Pfizer	25	
Cardiac/respiratory products for small animals		Novartis	43	
POM antibacterial soluble products for pigs/poultry		Pharmacia	32	
Sedatives		Pfizer	58	
Lactating cow mastitis treatments		Pharmacia	36	
Dry cow mastitis treatments		Schering-Plough	47	
Vaccines against respiratory diseases in pigs		Fort Dodge	58	
General anaesthetics by injection		Schering-Plough	78	
Horse vaccines	✂	Fort Dodge	46	✂
General anaesthetics by inhalation		Schering-Plough	60	
Treatment of otitis externa in dogs and cats		Leo	53	
Oral and injectable electrolytes for the treatment of scours		Animalcare	44	
Vaccines against calf scours		Schering-Plough	75	
Vaccines for respiratory diseases in cattle		Pfizer	64	
Euthanasia products		Arnolds	46	
Bovine leptospirosis vaccines		Schering-Plough	83	
Antibacterials for the treatment of eye infections		Leo	65	
Combination steroid/antibiotics for the treatment of surface pyoderma		Leo	67	
Large-animal oral analgesics and anti-inflammatories		Arnolds	59	
Treatment of seborrhoic dermatitis in dogs		Leo	71	
Bordetella vaccines for dogs		Schering-Plough	82	
Cardiac/respiratory products for horses		Boehringer	83	
Vaccines against erysipelas and parvovirus in pigs		Intervet	62	

Source: CC, based on data from manufacturers.

Description of the rebate schemes to veterinary practices

8.26. The terms of individual rebate schemes vary considerably between manufacturers, and, in some cases, a manufacturer will have several different rebate schemes in operation depending on the type of customer and/or on the products purchased. Some manufacturers also have special schemes in operation for poultry and pig specialist products. These schemes are dealt with in a separate section, as they are specialist areas where the supply chain differs from the normal supply chain to veterinary practices (see paragraphs 4.21 to 4.23). We concentrate in this section on rebate schemes to veterinary practices supplied through the veterinary wholesalers. The complexity of individual rebate schemes varies between manufacturers, and we begin by describing Merial's rebate scheme to veterinary practices, which contains a greater variety of elements than most others.

8.27. [

Details omitted. See note on page iv.

]

8.28. Merial undertook a number of changes to the structure of the veterinary purchase plan (VPP) in July 2001. The main changes were an increase of the number of tiers available under the band reward (see paragraph 8.29), [

Details omitted. See note on page iv.

].

8.29. Since July 2001, Merial's VPP consists of three elements: a band reward, [*Details omitted. See note on page iv.*]:

(a) Band reward: This is a [

Details omitted. See note on page iv.

].

8.30. [

Details omitted. See note on page iv.

]

8.31. We now turn to the description of the other manufacturers' rebate schemes. Of the 13 manufacturers referred to in paragraph 8.15, two (Boehringer and Leo) do not operate any rebate scheme. Boehringer only granted occasional ad-hoc discounts and a rebate to one veterinary charity in 2001. It subsequently told us that it had introduced two product-specific discount schemes at the end of 2002. Another two manufacturers (Novartis and Norbrook) only grant rebates to their largest customers on a discretionary basis. Two manufacturers (Intervet and Fort Dodge) operate schemes in which most or all rebates are individually negotiated with veterinary practices. The remaining seven manufacturers (Pfizer, Merial, Schering-Plough, Bayer, Pharmacia, Janssen and Elanco) operate schemes which are not, or not usually, subject to individual negotiation, and where the conditions for obtaining rebates are the same for all veterinary practices.

8.32. Four manufacturers operate rebate schemes in which the rate of rebate is determined retrospectively and depends on total purchases from the manufacturer within an agreed time period (Merial (whose rebate scheme was described in paragraphs 8.27 to 8.30), Pfizer, Schering-Plough and [✂]). Under Pfizer's rebate scheme, Vetsave, the level of rebate on purchases made during any month is determined by reference to total purchases of all of Pfizer's POMs and of certain non-prescription medicines made during the 12-month period ending at the end of the month in question (the MAT of the customer's purchases). The same rate of rebate applies to all products covered by the rebate scheme, except for two POMs (Rimadyl and Stronghold) which do not receive any rebate, and cat and dog vaccines, which get a higher rate of rebate. Pfizer told us that, under its Vetsave scheme, rebates of up to [✂] per cent on list prices are given on small-animal vaccines, and of up to [✂] per cent on most other POM products. Not all of Pfizer's rebate is retrospective, however: a [✂] per cent rebate is paid directly via the veterinary wholesalers on all sales of products covered by the scheme to all participating veterinary practices. [

Details omitted. See note on page iv.

] Pfizer engages in individual negotiations with a small number of rapidly-growing practices and very large accounts whose level of purchases significantly exceed the top purchase level of Pfizer's scheme.

8.33. Under Schering-Plough's rebate scheme, veterinary practices receive the same retrospective rebate on all of their purchases from Schering-Plough, determined by reference to their total purchases of Schering-Plough products. The rates of rebate range from [✂] to [✂] per cent depending on the purchasing band reached by the veterinary practice. Schering-Plough has two banding structures, one for companion-animal veterinary practices and another for large-animal veterinary practices: companion-animal veterinary practices need to achieve a lower level of turnover than large-animal veterinary practices in order to receive an equivalent rebate. Schering-Plough told us that this is consistent with the lower levels of turnover that companion-animal practices typically generate compared with large-animal

practices. Each month, the discount is determined by reference to purchases in the previous 12 months (monthly MAT). However, before a veterinary practice moves to a higher discount band, the new turnover band must be achieved for two months, and before it moves to a lower discount band, the new turnover band must be achieved for four months. This principle ensures that rebates do not vary unexpectedly from one month to another. Schering-Plough only engages in individual negotiations of rebates with those veterinary practices who exceed the highest turnover band of its scheme. In 2000, Schering-Plough also offered a loyalty bonus and a growth rebate to veterinary practices. However, Schering-Plough told us that these were abandoned in 2001.

8.34. [

Details omitted. See note on page iv.

]

8.35. The rebate schemes operated by Intervet and Bayer combine the elements of a retrospective rate of rebate and a fixed rate of rebate. Under Intervet's rebate scheme, [

Details omitted. See note on page iv.

].

8.36. [

Details omitted. See note on page iv.

]

8.37. Bayer operates a scheme which consists of a monthly discount ('contract discount') and a yearly retrospective rebate. Under Bayer's contract discount, the veterinary practice receives a monthly discount, which is a fixed percentage of the practice's actual purchases from Bayer for that month. The discount rate depends on the practice's estimated yearly purchases from Bayer, which is based on previous-year performance. There are four discount bands, ranging from [✂] to [✂] per cent, with associated expected purchase thresholds. In addition, veterinary practices are eligible for an end-of-year retrospecttive rebate of [✂] per cent if their yearly purchases exceed the threshold of the discount band they are in by more than a certain amount. Both rebates (the contract discount and the annual retrospective rebate) apply to all products purchased from Bayer.

8.38. [

Details omitted. See note on page iv.

]

8.39. Of the remaining manufacturers, two (Novartis and Norbrook) only grant rebates to their larger customers on a discretionary basis. Novartis selects around 200 veterinary practices annually, who then receive a [✂] per cent rebate on their purchases of companion-animal medicines. Novartis also grants individually negotiated volume discounts to farm-animal veterinary practices. Norbrook individually negotiates discounts with its largest and more regular customers: usually, these are payable at a preset percentage off list price irrespective of the number of units bought, and there are three product categories with a different discount level for each category. Elanco operates a rebate scheme based on growth of purchases of ruminant veterinary products compared with the previous year: if a veterinary practice purchases the same value of ruminant veterinary product as the previous year, it qualifies for a 5 per cent retrospective rebate. If a practice grows purchases of Micotil and Tylan 2000 combined by 10 per cent, it qualifies for a 17 per cent retrospective rebate, and if a practice increases purchases of any combination of ruminant medicines it qualifies for a 20 per cent retrospective rebate. Janssen grants flat discounts on most of its POMs to practices that commit to a certain level of purchases within the year.

8.40. We received some information on the rebate schemes operated by four other smaller manufacturers (Virbac, Ceva, Animalcare and Arnolds). [

Details omitted. See note on page iv.

] Animalcare told us that it negotiated retrospective discounts with some veterinary practices, based on achievement of sales volumes. Ceva does not operate any rebate scheme; however, it sometimes offers bonus goods on volume deals. Arnolds grants rebates only to its largest customers (around ten very large veterinary practices), on a discretionary basis.

8.41. A number of manufacturers told us that they provided veterinary practices with regular statements on the practice's amount of purchases and the total discount received. Bayer sends practices a monthly statement in respect of the purchases made (monthly and cumulative) and of the discounts paid for that month. Merial sends quarterly statements, showing the practice's purchases over the previous four quarters and the total amount and rate of rebate it achieved. [

Details omitted. See note on page iv.

] Schering-Plough sends a monthly statement showing the practice's total MAT purchases and discount achieved. Pfizer sends a monthly statement to veterinary practices, containing information on the practice's level of purchases and discount for each product. Intervet told us that each practice received a letter advising it of what discount payment it was receiving, and, upon request, a statement showing how the discount had been calculated. Pharmacia provides veterinary practices with statements on their total purchases upon request. Most manufacturers told us that a veterinary practice could easily deduce, from these statements, the net price it had been paying on a product-by-product basis. However, Bayer is the only manufacturer who told us that it provided practices with net price lists of their products. Bayer's net price lists state, for each product, the list price of this product, the list price net of the contract discount, and the list price net of the contract discount and of the maximum retrospective rebate that the practice can achieve. The net price paid by a veterinary practice which participates in Bayer's rebate scheme (before taking into account the wholesaler discount) will be comprised between the list price net of the contract discount and the list price net of the contract discount and of the maximum rebate.

8.42. The complexity of manufacturers' rebate schemes to veterinary practices can be assessed according to two main characteristics: whether the rate of rebate is determined retrospectively and whether the same veterinary practice receives multiple rebates from the same manufacturer. Each characteristic is discussed in turn in the following paragraphs.

8.43. First, the fact that the rate of rebate is determined retrospectively and depends on future purchases can make it difficult for the veterinary surgeon to evaluate the exact cost of POMs at the time of purchase. However, the use of monthly MAT in the calculation of rebates smooths this effect because in that case, a change in purchasing patterns in one month is unlikely to have a major impact on the rebate received at the end of that month. The following manufacturers operate a rebate scheme which is retrospective, with or without the use of MAT to smooth rebates across time.

TABLE 8.6 **Manufacturers operating a retrospective rebate scheme**

Manufacturer	*Use of MAT*
Details omitted. See note on page iv.	

Source: CC, based on data from manufacturers.

8.44. In order to evaluate the uncertainty over net purchasing price arising from these rebate schemes, Table 8.7 shows by how much a 'median' veterinary practice would need to increase its total annual purchases in order to qualify for an increase in its rate of rebate on all purchases of POMs. With the exception of [✂], each of the manufacturers in this table operates a rebate scheme where the rate of retrospective rebate on list price depends on the amount of purchases within predefined purchasing bands (in [✂] case, we only looked at the effect of an increase on its end-of-year retrospective rebate, as the contract discount does not vary with purchases). The amount of purchases by the 'median' veterinary practice was derived as the level of purchases that would put a customer at the middle point of the middle band of that manufacturer's rebate scheme. For example, if a manufacturer offered different rebate rates for purchases (at list price) of £1 to £10, £10 to £20, and £20 or more, the median veterinary practice's purchases would be £15. Data was not available on the actual distribution of rebates achieved by veterinary practices, and this table is indicative only. Under [✂] rebate scheme, there is a smooth relationship between the amount of purchases and the rate of rebate, and the entry in the table was given to us by [✂], as an example of a 'typical veterinary practice' with purchases close to the mean.

TABLE 8.7 **Relation between incentive-based rebate rates and purchases**

Manufacturer	*Median vet's purchases*	*Increase in purchases necessary %*	*Increase in rate of rebate achieved %*
Details omitted. See note on page iv.			

Source: CC, based on data from manufacturers.

[

Details omitted. See note on page iv.

]

8.45. Under [*Details omitted. See note on page iv.*] rebate schemes, an increase in total purchases of less than [✂] per cent would result in an increase in the rate of rebate of [✂] per cent. Under [✂] scheme, a median veterinary practice would need to increase total purchases by [✂] per cent in order to qualify for a [✂] per cent increase in its rate of rebate. Under [✂] rebate scheme, a median practice would need to increase its purchases by [✂] per cent; however, it would then be eligible for a [✂] per cent additional rebate on all its purchases from [✂].

8.46. [

Details omitted. See note on page iv.

]

8.47. Table 8.7 should be interpreted with care. First of all, it only looks at the uncertainty arising from a small change in purchasing from one manufacturer only. If a veterinary practice is considering switching purchases of a particular product from one manufacturer to another, it may face uncertainty as to the total effect of switching on prices from both manufacturers' rebate schemes. Another important element to bear in mind is that this table was compiled for a 'median vet'. The uncertainty over the rate of rebate will be increased if purchases are closer to the boundaries of purchasing bands. It will also, under most rebate schemes, be higher if the veterinary practice's purchases are low, so that it is close to the limit level of purchases from which the rate of rebate scheme starts operating.

8.48. Another factor which may contribute to uncertainty is the amount by which the rate of rebate increases between one purchasing band and the next. [*Details omitted. See note on page iv.*] Under [✂] scheme, the incremental rate of rebate depends on the purchasing band. For relatively low levels of purchases, the rate of rebate increases by two percentage points from one band to the next. For larger purchases, the increase is of one percentage point, and for relatively high purchases, the increase is of half a percentage point. Under [✂] rebate scheme, the incremental rate of retrospective rebate from one band to another is of one percentage point. It is of 2.5 percentage points in [✂] rebate scheme.

8.49. Intervet did not give us information on [*Details omitted. See note on page iv.*]. However, it told us that in 2001, [✂]of the total rebates it paid to veterinary practices were incentive based.

8.50. As mentioned in paragraph 8.42, a second factor which contributes to the complexity of rebate schemes is the fact that a given veterinary practice receives multiple rebates from the same manufacturer—if the rate of rebate varies depending on the product or the product group, or if the manufacturer grants different types of rebates to the practice, for example a retrospective rebate on total purchases and a growth rebate at the end of the year. The complexity will generally increase with the number of different rebates the veterinary surgeon has to take into account. Table 8.8 summarizes which manufacturers operate rebate schemes with this characteristic.

TABLE 8.8 **Manufacturers operating a rebate scheme with different rebates to the same practice**

Manufacturer	*Different rebates for different products*	*Different types of rebates*
Details omitted. See note on page iv.		

Source: CC, based on data from manufacturers.

Other financial incentives

8.51. Some manufacturers offer other financial incentives to veterinary practices, in addition to their rebate scheme, such as marketing support or Continuous Professional Development (CPD) schemes. These are described in the following paragraph.

8.52. Intervet told us that, in order to remain competitive for small-animal vaccines, it offered market support payments, as part of wider market support services, which usually related to a

commitment to purchase Intervet products over a period. Novartis told us that it sometimes offered veterinary practices marketing support or financial help towards the cost of laboratory fees. [

Details omitted. See note on page iv.

] Schering-Plough makes use of 'standing order discounts', mainly on purchases of anaesthetics. These are extra discounts that veterinary practices will receive if they put in place a standing order to receive a set volume of products in a given period. The average standing order discount was of [✂] per cent off list price in 2001. Schering-Plough told us that its use of such standing order discounts was very limited. Schering-Plough and Bayer operate CPD schemes. Under Schering-Plough's scheme, veterinary practices accumulate CPD points which they can redeem against training courses. Bayer's CPD scheme is offered to those veterinary practices that purchase a wide range of Bayer's medicines. Under this scheme, veterinary practices can accumulate CPD value, based on their level of purchases from Bayer. Pfizer does not operate a formal CPD scheme. However, from time to time it provides veterinary surgeons assistance with CPD training as part of its promotional activity.

8.53. A number of manufacturers have different rebate schemes for specialized accounts, such as pig, poultry and/or aquaculture accounts. These products are often supplied direct rather than through the veterinary wholesalers:

(a) As described in paragraphs 8.27 and 8.30, avian products are not part of Merial's rebate scheme and rebates on these products are negotiated individually.

(b) [

Details omitted. See note on page iv.

]

(c) Schering-Plough has two types of direct customers: aquaculture customers and specialist poultry customers. It does not offer any rebates to its direct aquaculture customers, but it negotiates directly the price with these. Poultry customers are eligible for the Chicklink scheme, which covers two specialist poultry products of Schering-Plough. The rate of rebate depends on total purchases of these products, and the maximum rebate is of [✂] per cent.

(d) Novartis also has a special rebate scheme for its pig and poultry customers, where the rebate (of up to [✂] per cent) depends on total purchases of these products. However, Novartis told us that it was currently being phased out as part of a move towards net pricing in the pig and poultry business.

(e) Alpharma does not use the veterinary wholesaler channel, and sells most of its veterinary medicines direct to specialist veterinary practices (see paragraph 4.195). It offers a retrospective rebate on [✂], one of its leading products. A price is agreed with each veterinary practice based on expected quarterly volume sales. The veterinary practice can then receive a 5 per cent retrospective rebate at the end of the quarter if the agreed volume has been purchased. Alpharma told us that in a limited number of cases and at the veterinary surgeon's request, a lower flat price based on anticipated volumes to be achieved was negotiated up front. In addition, Alpharma told us that one fish practice in the UK received lower prices, in the form of flat discounts, on Alpharma's range of aquatic medicines.

(f) Elanco operates a separate scheme for specialist pig and poultry practices. This will often amount to straightforward quantity discounts. In addition, specialist pig practices may receive a retrospective payment for market information about use of in-feed POMs for pigs provided by these practices.

8.54. Six manufacturers operate different rebate schemes in Northern Ireland from those in the rest of the UK. Three of these (Novartis and Schering-Plough, and Intervet since 2002) sell in Northern Ireland through their Irish Republic subsidiary. Bayer's rebate scheme is not available to Northern Irish veterinary practices: instead, a [✂] per cent retrospective rebate is offered to a small number of the larger practices in Northern Ireland, based on an agreed yearly sales target. Similarly, Elanco does not

operate its retrospective rebate scheme in Northern Ireland, and offers simple quantity driven up-front discounts in the form of free goods. Norbrook and Intervet (up to 2001) had a policy of offering lower rebates to Northern Irish veterinary practices. Norbrook told us that list prices might be lower in Northern Ireland than in Great Britain, and at the same time retrospective rebates might also be lower in Northern Ireland. Intervet told us that, in Northern Ireland, it had a policy of offering certain products automatically on a free of charge basis but lower rebates compared with the rest of the UK, so that net prices in Northern Ireland were similar to those achieved in the rest of the UK.

Promotions

8.55. In addition to the rebate schemes, most manufacturers offer temporary promotions to veterinary practices, on an individual product basis. We asked 13 manufacturers for schedules of all their price promotions on veterinary medicines in 2001 in the UK. Of the 13 manufacturers, two (Leo and Norbrook) did not offer any price promotions to veterinary practices in 2001.

8.56. Most promotions on POMs to veterinary practices were product specific and took the form of straightforward discounts or price cuts on specific medicines, or of free goods if the veterinary practice exceeded a certain volume of purchases for a specific product ('buy-one-get-one-free' type of promotions).

8.57. Bayer also granted some promotions that were conditional on the veterinary practice purchasing several presentations (for example, different pack sizes) of its medicines, and some promotions which were conditional on the purchase of their whole range of medicines. For example, in October and November 2001, veterinary practices were offered wine and food hampers if their purchases from Bayer exceeded £[✂].

8.58. Throughout 2001, Novartis offered a promotion on growth of purchases of Program injectable compared with 2000, in the form of a quantity discount.

8.59. [

Details omitted. See note on page iv.

]

Price trends

8.60. In this section, we look at how the prices of POMs have changed in recent years. We present the results of two studies: a study of the changes in the list prices of medicines sold through veterinary wholesalers between 1996 and 2001, and a study of the changes in net ex-manufacturer prices of POMs between 1999 and 2001. The results of the two studies are linked through the manufacturer rebates and discounts: an increase in the list price relative to the net price, all other things being equal, would suggest an increase in the rebates and discounts granted by manufacturers, and vice versa.

8.61. Given the very large number of products in both studies, we present the results as price indexes for each year. First, we converted each price into a number relative to the price in the first year of the study (such that the price of each product was equal to 100 in the first year of the study, ie 1996 for the study of list prices and 1999 for the study of net prices). We then computed a weighted average of these indexes by weighting each product by its value sales in the first year of the study. Such indexes, based on constant weights in the first year of the study, are called Laspeyres indexes.

8.62. This methodology has several limitations and the results of both studies must be interpreted with caution. First, by using sales in the first year of the study as weights, Laspeyres indexes tend to underestimate the impact of price increases of medicines which were relatively more popular in the more recent years than in the first year of the study. Second, a number of medicines were launched during the period, whilst others were discontinued. Under this methodology, these were excluded from the analysis.

Manufacturer list prices

8.63. GfK records monthly volume sales of veterinary medicines through the veterinary wholesalers, sales being valued at list price (ie before manufacturer rebates to wholesalers and veterinary practices). We used this database to look at the changes in the list prices of veterinary medicines sold through wholesalers between 1996 and 2001. Although the great majority of sales recorded by GfK are of POMs, a small proportion of these sales are of other veterinary medicines.

8.64. The results of our study, using the methodology described above, are presented in Table 8.9. For instance, a price index of 107 in 1998 means that, on average, medicines sold through veterinary wholesalers were 7 per cent more expensive in 1998 than they were in 1996. We excluded from the study all products that were discontinued or launched during the period, and the total sales at list price of the medicines in our study were £204 million in 2001. This means that only a little more than half of the total GfK sales in 2001 were included.

TABLE 8.9 **Yearly price index for all products sold by the veterinary wholesalers, 1996 to 2001**

	1996	*1997*	*1998*	*1999*	*2000*	*2001*
Price index*	100	104	107	110	113	115

Source: CC, based on GfK.

*Prices weighted by value sales in 1996.

8.65. These results suggest that the average list price of products sold through the veterinary wholesalers increased steadily by around 3 per cent per year from 1996 to 2000, and by 2 per cent between 2000 and 2001. All in all, the average list price grew by 15 per cent from 1996 to 2001.

8.66. Table 8.10 shows how the average list prices of the 19 largest manufacturers have changed since 1996, where manufacturers are shown in decreasing order of their total net sales of POMs. With the exception of [✂], the five largest manufacturers' list prices rose more slowly than the average.

TABLE 8.10 **Yearly price index* for the 19 largest POM manufacturers, 1996 to 2001**

Manufacturer	*1996*	*1997*	*1998*	*1999*	*2000*	*2001*
Intervet Pfizer Merial† Schering-Plough Fort Dodge Novartis Bayer Pharmacia Boehringer Leo Vétoquinol Virbac Elanco Arnolds Norbrook Animalcare Janssen Ceva Millpledge	*Figures omitted. See note on page iv.*					
Average for the top 19 manufacturers	100	104	107	111	114	116
Average for the top 5 POM manufacturers	100	103	107	109	112	114

Source: CC, based on GfK.

*Prices weighted by value sales in 1996.
†Merial was created in the second half of 1997, and figures used for 1996 and 1997 are those of Merial's predecessor companies.

8.67. Some manufacturers expressed reservations as to the quality of the data on list prices derived from the GfK database. Bayer told us that, between 1998 and 1999, its list prices had increased by [✂] per cent and not by [✂] per cent as shown in Table 8.10. Leo told us that [✂] in 1997, 1999 and 2001. Merial told us that it had not increased list prices by [✂] per cent between 1997 and 1998.

Manufacturer net prices

8.68. We asked the 20 largest POM manufacturers for data on the value of sales, net of discounts and rebates, and the volume of sales of each medicine, for calendar years 1999 to 2001. We used this data to compare net average selling prices of POMs in years 1999 to 2001. Two manufacturers (Alpharma and Arnolds) were not able to provide data for the year 1999 and were excluded from the analysis. All products that were launched or discontinued during the period were also excluded, and the total net value of sales of the POMs included in this analysis was £162 million, that is approximately 80 per cent of the total net sales of POMs by the 20 largest manufacturers.

8.69. Table 8.11 shows the resultant figures for the change in the average net price of POMs charged by the largest POM manufacturers, between 1999 and 2001, using the methodology described above, where manufacturers are shown in decreasing order of their net sales of POMs. On average, this shows net prices of POMs as having decreased by 1 per cent in 2000 and increased by 2 per cent in 2001. Average list prices of the same manufacturers were found to have increased by 4.5 per cent between 1999 and 2001 (see Table 8.10), and therefore more quickly than net prices. This confirms that, on average, manufacturer rebates and discounts over list prices have been increasing during the period (see Table 8.3).

TABLE 8.11 **Price index of POMs, 1999 to 2001**

Manufacturer	*1999*	*2000*	*2001*
Intervet Pfizer Merial Schering-Plough Fort Dodge Novartis Bayer Pharmacia Boehringer Leo Norbrook Vétoquinol Elanco Virbac Janssen Animalcare Ceva Millpledge	*Details omitted. See note on page iv.*		
Average	100	99	101

Source: CC, based on data from manufacturers.

8.70. The results suggest that, among the five largest manufacturers, Intervet, Merial and Schering-Plough experienced [✂] in the average net price of their POMs in the period. On the other hand, Pfizer's prices [✂] since 1999, and Fort Dodge's prices [✂] since 1999.

8.71. Products which were sold at a negative average selling price or in negative quantities in any year were excluded from the analysis. Pfizer told us that one of its products, despite having a negative average selling price in 2001, should not have been excluded from the price index calculations. However, we consider that including products with negative value sales into price index calculations would potentially distort the results.

8.72. Table 8.12 shows changes in average net prices depending on the species indications of the medicines (in decreasing order of their importance in total value sales). The net price of medicines for farm animals fell by 5 per cent between 1999 and 2001, whilst the net price of medicines for small animals increased by 3 per cent during the same period. These two categories of medicines account, together, for more than 90 per cent of sales of POMs. The average price of the other two categories increased during the period (by 9 per cent for multi-species medicines and by 4 per cent for horse-only medicines).

TABLE 8.12 **Average changes in net prices according to species indication**

	1999	*2000*	*2001*
Small-animal medicines	100	100	103
Farm-animal medicines	100	96	95
Horse medicines	100	102	104
Multi-species medicines	100	106	109

Source: CC, based on data from manufacturers.

8.73. Table 8.13 shows the change in price of the leading medicine, in terms of net value sales in 2001, in each relevant product market as defined in paragraphs 7.11 to 7.86. Two broad categories of markets experienced a fall in the average net price of their leading product during the period: vaccines for farm animals (with the exception of bovine leptospirosis vaccines) and general anaesthetics markets. The leading products in markets for antimicrobials (with the exception of POM antibacterial soluble products for poultry/pigs) and in several markets containing only small-animal medicines experienced the largest price increases during the period. In the following paragraphs, we analyse the more important price changes.

TABLE 8.13 **Change in prices of the leading medicine in each relevant product market, 1999 to 2001***

Name of market	*Leading product*	*Prices normalized to 100 in 1999* 1999	2000	2001
Prescription-only small-animal flea treatments	*Details omitted. See note on page iv.*			
All other oral and Injectable antimicrobials				
Poultry vaccines				
Small-animal oral analgesics and anti-inflammatories				
Dog vaccines (excl bordetella and rabies)				
Cat vaccines (excl rabies)				
Small-animal wormers				
Injectable analgesics and anti-inflammatories				
Cardiac/respiratory stimulants for small animals				
POM antibacterial soluble products for poultry/pigs				
Sedatives				
Lactating cow mastitis treatments				
Dry cow mastitis treatments				
General anaesthetics by injection				
Vaccines against respiratory diseases in pigs				
Horse vaccines				
General anaesthetics by inhalation				
Oral and injectable electrolytes				
Vaccines against calf scours				
Vaccines for respiratory diseases in cattle				
Euthanasia products				
Bovine leptospirosis vaccines				
Large-animal oral analgesics and anti-inflammatories				
Antimicrobials for the treatment of eye infections				
Bordetella vaccines for dogs				
Cardiac/respiratory stimulants for horses				
Antifungals				
Vaccines against erysipelas and parvovirus in pigs				

Source: CC, based on data from manufacturers.

*Where the leading medicine was sold in several pack sizes or dosage strengths, the price of the largest-selling presentation in 2001 is shown.

[

Details omitted. See note on page iv.

]

8.74. *The prescription-only small-animal flea treatment market*. In February 2000, Pfizer introduced Stronghold on this market. Pfizer told us that [*Details omitted. See note on page iv.*] (see further discussion in Table 9.4). This could explain why the average net price of [*Details omitted. See note on page iv.*] in 2000.

8.75. *Poultry vaccines.* The average net price of the leading product on this market dropped by [✂] per cent between 1999 and 2001. The fall in prices occurred across the market, and was associated with a decline in net sales of [✂] per cent in total during the period, suggesting that the fall in prices was driven by a fall in demand for poultry vaccines.

8.76. *General anaesthetics by inhalation.* The net price of [✂] fell by nearly [✂] per cent during the period. [✂] told us that it introduced [*Details omitted. See note on page iv.*]. Between 1999 and 2001, three new products were launched based on [*Details omitted. See note on page iv.*] told us that the entrants priced at around [✂] per cent of the [✂] level, and that it became necessary to decrease the price of [✂] by [✂] per cent at the end of 2000.

8.77. *General anaesthetics by injection.* The [✂] patent expired in 2000. One injectable anaesthetic was launched by [✂] in 2000, and another by [✂] in 2001.

8.78. *Vaccines against respiratory diseases in pigs.* [✂] told us that the prices on this market were moving downwards because [✂] and [✂] continually fought to hold and grow business. [✂] told us that as a consequence, it lowered the list price of [✂] by [✂] per cent in 2001.

8.79. *Vaccines against respiratory diseases in cattle.* The price of [✂] fell by [✂] per cent during the period, whilst its sales fell by [✂] per cent in 2001. This could have been led by the entry of [✂] in 2001, which became the largest product in that market.

8.80. To summarize, list prices of medicines sold through veterinary wholesalers appear to have been increasing faster than net prices in the last three years, which suggests an average increase in the rebates and discounts granted by manufacturers. Increases in net prices were moderate on average over the last three years. Our analysis suggests that, on average, net prices of farm-animal medicines have fallen since 1999, whilst the net prices of small-animal medicines increased since 1999.

8.81. In the introduction to this section (see paragraph 8.62), it was said that Laspeyres indexes tend to underestimate price increases. We constructed Paasche indexes (that is, price indexes which use the sales in 2001 as weights), and confirmed that average price increases then appeared larger. On average over all manufacturers, the Paasche price indexes for 2001 were 118 in the study of list prices (above the figure of 114 in Table 8.10), and of 103 (above the figure of 101 in Table 8.11) in the study of net prices.

International price comparisons

8.82. We conducted two studies in order to compare prices of POMs in the UK and elsewhere: one comparing UK ex-manufacturer prices with those of other countries, and one comparing UK retail prices of POMs with those of other countries. The results of these studies are described in the remainder of this section and in Appendices 8.1 to 8.3.

Comparison of ex-manufacturer prices

8.83. Comparison of UK prices with those of other countries can be a useful indicator of whether UK prices are above the competitive level. However, price differences must be interpreted with caution, as market conditions other than the extent of competition can also vary between countries.

8.84. We begin by describing the main differences in the conditions of veterinary medicines supply, which may lead to ex-manufacturer price differences from one country to another. As discussed in paragraphs 7.5 to 7.10, the markets for veterinary medicines are largely national in scope. EC law governs the principles, and many of the details, of the regulation of veterinary medicines. Despite this, some manufacturers told us that the legislation was applied differently from state to state. This might affect the cost of obtaining an MA, and hence the price. Bayer told us that the full cost recovery policy for obtaining MAs applied by the VMD in the UK made it one of the most expensive countries in the EC to obtain an MA. Bayer said that this could explain why prices differ between countries.

8.85. Pricing across countries may depend on the local market conditions and the local cost of supply. For instance, the prevalence of certain diseases or of certain animal species differs between countries, and this may result in demand for specific veterinary medicines being higher in certain countries. Demand for a specific product may also vary if this product is licensed for different indications in different countries. A medicine may also face more competition in one market than another, depending on which products are authorized for sale in each market. VAT rates may also vary between countries, which may lead to differences in ex-manufacturer prices.

8.86. Differences in the distribution system and in the supply chain can also to some extent explain differences in pricing between countries. In particular, there are large differences in the role of pharmacies in the distribution of veterinary medicines across Europe and large differences in the legal

classification of medicines. Fort Dodge told us that its prices would vary according to the circumstances of its customers in different countries (whether they were wholesalers, distributors or veterinary surgeons). For instance, different levels of marketing may be required depending on the type of customer.

8.87. Finally, a number of manufacturers have pointed out the role of exchange rate fluctuations, and particularly the strength of sterling, as a factor explaining differences in prices between the UK and the rest of Europe. It was said to us that the UK pound had appreciated substantially against the euro currencies since the 1990s, and that the effect of this was to make UK prices in general appear higher than in other European countries.

Methodology of the CC study

8.88. We conducted an international comparison of ex-manufacturer prices of medicines in 2001. This section describes the methodology of our study.

8.89. *Choice of countries.* In choosing the countries, we took into account a number of factors including proximity to the UK, similarity in size of the veterinary medicines market and similarity in farm/companion-animal population. We also wanted to have a selection of countries reflecting the different roles of pharmacies in the supply of POMs. It was decided that the comparison should be between the following European countries: the UK, France, the Republic of Ireland, Germany, Belgium and the Netherlands. In addition, we asked for pricing data in the USA because we had been told of large differences in the pricing of veterinary medicines between the USA and Europe. We also asked for Northern Ireland prices separately from those of the rest of the UK, because a number of manufacturers have different pricing policies in Northern Ireland and because we were told of substantial price differences between Northern Ireland and the rest of the UK.

8.90. *Choice of products.* We selected the ten top-selling medicines in the UK of each of the 11 largest veterinary medicines manufacturers in the UK. Because we selected top-selling medicines, these are by definition among the medicines which are most important to UK customers. Although the large majority of these products are POMs (75 per cent in value sales), some are PML and medicated feedingstuffs (MFS). We decided to include them in the exercise in order to compare the international price differences of POMs with those of other veterinary medicines. The POMs included in our study accounted for more than half of the sales of POMs in the UK in 2001.

8.91. *Choice of prices.* As discussed in paragraphs 8.15 to 8.54, it is common practice in the UK for POM manufacturers to grant large rebates and discounts to veterinary practices. Therefore, list prices do not necessarily reflect the actual transaction price in the UK and tend to overestimate the price charged by manufacturers for their products. For this reason, we decided to compare average prices net of any rebates or discounts granted by manufacturers in each country (average net ex-manufacturer prices). We asked for these prices in calendar year 2001. One limitation of this study is that we have not been able to generate reliable time series data on the international prices of veterinary medicines.

8.92. *Comments on our methodology.* A number of manufacturers questioned the usefulness of an international price comparison exercise in the light of the numerous factors that can explain international price differences and which were described in paragraphs 8.84 to 8.87. Pfizer said: 'Whether prices are lower, higher or the same in the UK as overseas does not provide an indication of whether there is a competition failure in the UK', because no conclusions about a competition failure could necessarily be drawn from price differences that might arise as a result of differences in demand conditions. However, the CC considers that comparison of UK prices with prices in other countries can provide valuable indicative evidence of the existence of a competition problem in the UK. Merial told us that the purpose of our international comparison of prices should be to establish whether prices are systematically higher in the UK than elsewhere. We do not consider it necessary for our purposes to establish that the price differences across all products and countries are of similar magnitude.

8.93. Merial and Pfizer commented on our choice of products. They said that the CC's approach to product selection imported a systematic bias to the exercise, because the analysis was based on UK top-selling items, which would tend to attract a price premium in the UK. They added that it would not be valid to extrapolate results of a pricing comparison based on a non-random sample of products to draw conclusions about relative prices in the UK market as a whole. However, it is not necessarily the case

that a product will have a higher price in a market where it achieves greater sales: the price will depend on a range of factors including costs, the competitive environment and the supplier's strategy. Merial told us that a limitation of our analysis was that it did not attempt to identify the corresponding best-selling items in the other national markets. We do not consider it appropriate to identify such products. Indeed, this exercise looks at the UK market and whether the most important medicines to UK customers are more expensive in the UK than elsewhere. Merial also told us that a meaningful comparison of the overall level of prices in the UK and elsewhere should be made on the basis of a basket of products. The aim of our international price comparison is to see how UK prices compare with overseas prices, and not whether UK customers are paying more on average for veterinary medicines than overseas customers, in other countries, and therefore we did not consider it appropriate to construct a representative basket of veterinary medicines for each country.

8.94. Fort Dodge told us that the status of its customers varied from country to country, which made it difficult to compare average selling prices across countries. Fort Dodge told us that its data for Belgium and the Republic of Ireland represented wholesaler prices, whilst in France and the Netherlands its data represented a mixture of wholesale and veterinary practice prices. We note that prices in the UK should also represent a mixture of wholesale and veterinary practice prices, because many manufacturers sell their POMs to veterinary wholesalers and then grant rebates and discounts direct to veterinary practices. The information we obtained from manufacturers (see paragraph 8.99) suggests that the granting of rebates and discounts direct to veterinary practices by manufacturers is also widespread in some of the other European countries in our study. Novartis commented on our selection of countries. It said that some countries that were not included in the study, for instance Denmark and Sweden, were more expensive on average than the UK.

8.95. A number of manufacturers pointed out specific characteristics of some medicines included in the study, which may explain price differences from one country to another. These are presented in Appendix 8.4. We note that it is not always clear in which direction these specificities would influence price differences, and that some relate to the conditions in which manufacturers compete in different countries.

Description of the data

8.96. We asked the 11 largest veterinary medicines manufacturers in the UK for the average price, net of all discounts, rebates and taxes, in year 2001 of their ten UK best-selling medicines in the following countries: Great Britain, Northern Ireland, France, Republic of Ireland, Germany, the Netherlands, Belgium and the USA. All but two manufacturers sent pricing data for Great Britain, France, the Republic of Ireland, Germany, the Netherlands and Belgium. The two exceptions were Leo, which does not have any sales force in Germany and Belgium, and Norbrook, which is only present in the Republic of Ireland and in the UK.

8.97. Only four manufacturers (Bayer, Norbrook, [✂] and Schering-Plough) sent us Northern Ireland prices separately from Great Britain prices. These four manufacturers are among those who have separate pricing policies or different rebate schemes in Northern Ireland and in the rest of the UK. The other manufacturers sent us prices for the UK as a whole and therefore sales and prices in Northern Ireland are included in their UK data. Intervet, although it has a different rebate policy in Northern Ireland (see paragraph 8.54), did not send us prices in Northern Ireland separately from the rest of the UK.

8.98. Six manufacturers sent us prices of their products in the USA: Bayer, Schering-Plough, Pharmacia, Fort Dodge, [✂] and Merial. However, few products sold in the USA appear to be comparable to UK products (see Table 8.14).

8.99. In addition to data on other countries' prices, we asked the same 11 manufacturers for information on their pricing policies in the different countries, and in particular whether the granting of rebates direct to veterinary practices was specific to the UK. The information we received suggests that such rebates are relatively widespread in France, the Netherlands and Germany, and a little less common in the Republic of Ireland. In Belgium, a number of manufacturers told us that rebates to veterinary practices and pharmacies were strictly controlled by law, and Merial and [✂] told us that they granted some discounts to pharmacies in Belgium.

8.100. Two manufacturers that were not part of the CC study of international prices (Elanco and Virbac) provided us with data on their prices in other countries:

(a) Elanco provided the CC with the prices of its affiliates in a range of other countries. Those in Denmark and Italy were generally higher than in the UK, and those in Spain were lower, but in other European countries prices appeared similar to UK levels.

(b) Virbac provided data on the average net selling price of eight of its veterinary medicines in the UK, France and Germany. [

Details omitted. See note on page iv.]

Method for comparing prices of individual products

8.101. We considered two different ways to define equivalent products for the purpose of comparing prices of veterinary medicines between two countries:

— Option 1: to define a product at pack size level and only compare prices of products with the same concentration of active ingredient and which are sold in the same pack size in both countries.

— Option 2: to define equivalent products as two products with the same concentration of active ingredient in both countries in order to be able to compare prices when pack size differs from one country to another (by calculating an average price per unit or an average price per standard quantity of the active ingredient).

8.102. The relative merits of each option depend on the quality of the data. On average, it appears that concentrations of active ingredients are standardized across Europe. However, some products tend to be sold in different pack sizes across Europe. For this reason, we used option 2 and compared average prices per unit or per standard quantity of the active ingredient in the following. Average prices per unit or per standard quantity of the active ingredient may be expected to vary according to the pack size, with larger pack sizes commanding relatively lower average unit prices. However, this does not have a substantial effect on the results, because some products are sold in larger packs in the UK whilst others are sold in smaller packs compared with other countries' products.

8.103. Table 8.14 summarizes the number of products (as defined in option 2 above) in each country that are comparable to UK products, for each manufacturer. The number of comparable products between the UK and other European countries is high on average. In contrast, the total number of comparable products in the USA and Northern Ireland is much lower. Table 8.14 includes POMs and also some non-POMs. In most of the following, and unless otherwise specified, we concentrated on international differences in the prices of POMs.

TABLE 8.14 **Number of overseas products comparable to products sold in the UK***

Manufacturer	*Belgium*	*France*	*Germany*	*Republic of Ireland*	*Netherlands*	*Northern Ireland*	*USA*	*UK/Great Britain*
Bayer	10	10	10	10	10	10	6	10
Boehringer	10	10	10	10	10	-	-	10
Fort Dodge	8	7	7	9	8	-	5	10
Intervet	8	8	12	13	10	-	-	13
Leo	-	3	-	10	2	-	-	14
Merial	12	12	10	12	12	-	10	14
Norbrook	-	-	-	10		10	-	10
Novartis	5	7	6	9	6	10	4	10
Pfizer	9	9	9	10	9	-	-	10
Pharmacia	8	7	8	10	8	-	7	10
Schering-Plough	5	5	5	6	5	9	3	11
Total	75	78	77	109	80	39	35	122
Of which: POMs	62	66	64	86	66	30	28	97

Source: CC, based on data from manufacturers.

*This may exceed 10 for some manufacturers because, in some cases, even though two medicines have the same MA number, they differ in their concentration of active ingredient and therefore were counted as two different products for the price comparison.

8.104. We first present the international comparison of UK prices with prices in other European countries (Republic of Ireland, France, Germany, Belgium, the Netherlands). We then present the results of the international comparison of UK prices with prices in the USA, and the results of the comparison of prices in Great Britain with prices in Northern Ireland. We looked at international differences between the UK and the rest of Europe separately from differences between the UK and the USA because there exists a single regulatory framework for veterinary medicines within Europe, and not between Europe and the USA, which means that products in the UK and other European countries are much more comparable.

Comparison of UK prices with prices in other European countries: Republic of Ireland, France, Germany, Belgium and the Netherlands

8.105. Table 8.15 summarizes how UK prices of individual POMs compare with prices in the Republic of Ireland, France, Germany, Belgium and the Netherlands. The full results are presented in Table 1 of Appendix 8.1. For the four manufacturers who provided prices in Northern Ireland separately from prices in the rest of the UK, comparisons were made using average prices in Great Britain. Indeed, Northern Ireland only represents a very small part of the total UK market.

8.106. In Table 8.15, taking, for example, Belgium and the fourth row from the top, this means that 11 products were between 50 and 60 per cent of the UK price in Belgium, and that 19 per cent of products in Belgium were between 0 and 60 per cent of the UK price (expressed as a proportion of the number of products and not of value sales). In all five countries, a large majority of the POMs in our study are cheaper than they are in the UK. This ranged from 76 per cent of the products cheaper in the Republic of Ireland to 89 per cent of the products being cheaper in France and in Belgium. France, Belgium and the Netherlands appear to be the countries where the price differences with the UK are the largest. In these countries, half of the POMs are at least 24 per cent cheaper than in the UK. Irish Republic and German prices are closer to UK prices, with the median price being 86 per cent of the UK price in the Republic of Ireland and 83 per cent of the UK price in Germany. All in all, this indicates that a large majority of products, though not all, tend to be more expensive in the UK than in all other European countries of our study—the price differences being largest compared with the Netherlands, France and Belgium.

TABLE 8.15 **Comparison of prices in the UK, Belgium, France, Germany, the Republic of Ireland and the Netherlands**

Percentage of UK price	*Belgium*		*France*		*Germany*		*Republic of Ireland*		*Netherlands*	
Less than:	*Number of products*	*Cumulative %*	*Number of products*	*Cumulative %*	*Number of products*	*Cumulative %*	*Number of products*	*Cumulative %*	*Number of products*	*Cumulative %*
30	0	0	1	2	0	0	0	0	1	2
40	1	2	2	3	0	0	1	1	1	3
50	0	2	2	6	3	5	0	1	2	5
60	11	19	8	18	7	16	4	6	15	28
70	10	35	15	42	11	32	12	19	10	43
80	16	61	17	68	9	46	15	36	14	65
90	13	84	8	80	9	60	18	58	10	80
100	3	89	6	89	11	78	16	76	3	85
110	2	92	4	95	5	86	11	89	6	94
120	2	95	1	97	2	89	4	94	3	98
150	3	100	2	100	3	94	5	100	0	98
>150	1	100	0	100	4	100	0	100	1	100
Total	62		66		64		86		66	
Median Price	76		75		83		86		76	

Source: CC, based on data from manufacturers.

*The exchange rates used to convert foreign prices into sterling are yearly averages for 2001 and were calculated using data from the Bank of England.

8.107. In order to take into account the relative importance of each product for consumers, we constructed a price index by weighting the price of each product by its sales in the UK. This index can be interpreted as the UK consumers' views of prices overseas, taking into account the relative importance of

the products to UK consumers. Merial told us that weighting products by their UK sales value places more weight on those products which command higher prices. However, we consider that using UK sales values as weights is necessary in order to reflect the products' respective importance in the UK market.

8.108. Table 8.16 shows the different indexes for POMs in each country, normalized to 100 in the UK. Normalizing to 100 means that, if the price index is 73 in France, prices in France are on average 73 per cent of prices in the UK, or 27 per cent lower. On average, prices of the POMs in our study are higher in the UK than in each of the five European countries for which we have data—by 21 per cent on average. The average difference is largest compared with France (27 per cent), the Netherlands (25 per cent) and Belgium (23 per cent). Irish Republic and German prices are closer to UK prices although lower by 17 per cent on average in the Republic of Ireland and by 14 per cent on average in Germany.

TABLE 8.16 **Price indexes of POMs in Belgium, France, Germany, the Republic of Ireland and the Netherlands**

	Index UK = 100
Belgium	77
France	73
Germany	86
Republic of Ireland	83
Netherlands	75
All overseas countries	79

Source: CC, based on data from manufacturers.

8.109. Pharmacia said that using a weighting based on UK sales meant that a product of no overall consequence in one market was weighted on the basis of its importance in another market. In order to assess whether the results were influenced by the presence of medicines which were sold in relatively low volumes overseas, we constructed an index, for each country, which concentrated only on POMs which are sold in significant volumes overseas, by eliminating all POMs which were part of the manufacturer's 25 per cent lowest-selling medicines in the country. The results were as follows.

TABLE 8.17 **Price indexes in Belgium, France, Germany, the Republic of Ireland and the Netherlands for POMs which are sold in significant volume overseas only**

	Index, UK = 100
Belgium	77
France	74
Germany	86
Republic of Ireland	83
Netherlands	78
All overseas countries	80

Source: CC, based on data from manufacturers.

8.110. The indexes are very similar to those obtained in Table 8.16, showing at most one point difference, except for the Netherlands where the index is three points higher, but still shows substantially lower prices on average than in the UK. For this reason, we continued the analysis using our larger sample of prices.

8.111. Pfizer and Merial argued that purchasing power parity (PPP) rates should be used for each country instead of a single exchange rate for the euro zone, in order to control for differences in general price levels between countries. The PPP reflects the purchasing power of a unit of currency in respect of a typical basket of goods and services, and an index of prices in each country is required in order to compute PPP rates. Pfizer proposed the PPP exchange rates published by the OECD, which are based on the retail prices index (RPI) for the UK. The RPI has very little relationship to veterinary goods and services, and thus any approach to computing PPP based on indexes of retail prices would have little

justification as a rate of exchange with respect to persons for whom veterinary goods and services are substantial components of their expenditure. Table 8.18 shows that, even if one were to use PPP rates for each country, the POMs in our study are more expensive in the UK than overseas. Indeed, in Table 8.18, we compared the average price difference of POMs in our study with the comparative price levels for GDP between the UK and each country in the study. These comparative price levels for GDP are those used by the OECD in order to derive PPP rates. We found that POMs are more expensive relative to GDP by more than ten percentage points in all of the countries of the study except Germany. In Germany, POMs are four percentage points more expensive relative to GDP.

TABLE 8.18 **International price differences of POMs compared with average GDP in each country**

	Belgium	*France*	*Germany*	*Republic of Ireland*	*Netherlands*
POM	77	73	86	83	75
All sectors: comparative price levels for GDP	88	90	90	95	89
Difference	11	17	4	12	14

Source: CC/OECD, Base 100 in the UK.

8.112. Table 8.19 shows how the indexes of Table 8.16 vary for each manufacturer. On average, [✂] maintain the highest gaps between the UK prices of their best-selling POMs and other European prices, with prices in the UK around 30 per cent higher on average than in the other countries. [✂] have the lowest average price differences, the UK prices of their best-selling POMs being respectively 11 and 12 per cent more expensive than in the other European countries on average. There is only one case in which a manufacturer charges on average lower prices in the UK than in another country: [✂] in the Netherlands (7 per cent cheaper).

TABLE 8.19 **POM price indexes by country and by manufacturer**

Index, UK = 100

Manufacturer	*Belgium*	*France*	*Germany*	*Republic of Ireland*	*Netherlands*	*All overseas countries*
Bayer Boehringer Fort Dodge Intervet Leo Merial Norbrook Novartis Pfizer Pharmacia Schering-Plough	*Figures omitted. See note on page iv.*					
All manufacturers	77	73	86	83	75	79

Source: CC, based on data from manufacturers.

8.113. Up to now, we have concentrated on medicines which are POM in the UK. In our request to manufacturers, we also asked for the prices of some non-POM medicines (non-POMs represented 24 per cent of the products in our request in terms of UK value sales), and we analysed how the price differences varied depending on the legal classification of the medicines in the UK and in the other European countries. The results are summarized in Table 8.20.

TABLE 8.20 **Price indexes depending on the legal classification of the medicines in the UK and in other countries**

Index, UK = 100

	*Belgium**	*France*	*Germany*	*Republic of Ireland*	*Netherlands*	*All overseas countries*
POM in the UK	77	73	86	83	75	79
PML or MFS in the UK	90	85	94	91	91	91
POM in the UK, non-POM overseas	-	61	76	84	72	73

Source: CC, based on data from manufacturers.

*Only one medicine is POM in the UK and non-POM in Belgium, and therefore the index is not shown here.

8.114. PML and MFS medicines are also, on average, more expensive in the UK than in each of the countries of our study. However, UK price differences of POMs are larger than price differences for other veterinary medicines. On average, the price difference between the UK and the other countries surveyed was 12 per cent greater among POMs than among PML and MFS medicines. This suggests that legal classification has an impact on ex-manufacturer price differences in the sense that manufacturers are able to sustain larger price differentials in the UK for POMs than for other medicines. This result also suggests that price differences of POMs in the UK may not be solely attributable to those factors which are common to all veterinary medicines of our sample of products, such as, for example, the local cost of supply and of regulation, popularity of the medicines and the strength of sterling.

8.115. If one looks only at the prices of medicines in our study that are POM in the UK but are not POM in other countries, price differences are even larger (these medicines are up to 39 per cent cheaper on average in France), except in the Republic of Ireland where the price difference is the same on average.

8.116. Among the countries of our study, Belgium is the only country in which POMs can only be sold in pharmacies, and is also one of the countries where the price differences with the UK are the highest. In France, pharmacies play a role for distribution of flea products which are POM in the UK and non-POM in France. These products are also those that show the largest price differences compared with the UK. On the other hand, Germany, where POMs may be sold only by veterinary surgeons, shows the smallest differentials in prices compared with the UK. These results suggest that a larger role for pharmacies in the retail distribution of POMs may result in lower prices at the ex-manufacturer level.

8.117. In Table 8.21, we present indexes depending on the species indication of the medicines. Compared with the average price difference, speciality horse medicines are substantially more expensive in the UK than in each of the other countries. The differences in prices of poultry medicines, on the other hand, are much lower: UK prices of poultry medicines are comparable to French prices, and are 6 per cent lower than in Germany and 21 per cent lower than in the Republic of Ireland. On average for all countries, small-animal, farm-only and multi-species medicines display price differences of similar magnitude, being over 20 per cent more expensive in the UK.

TABLE 8.21 **Price index of POMs by species and by country**

Index, UK = 100

	Belgium	*France*	*Germany*	*Republic of Ireland*	*Netherlands*	*All overseas countries*
Poultry	93	98	106	121	91	102
Farm animals	79	75	71	74	75	75
Horse only	58	77	66	72	56	65
Multi-species	72	68	93	79	55	77
Small animals	76	70	86	82	74	78
All POMs	77	73	86	83	75	79

Source: CC, based on data from manufacturers.

8.118. Table 8.22 shows the price indexes for each of seven broad therapeutic indications for POMs. Small-animal vaccines, large-animal vaccines and small-animal parasiticides are the broad therapeutic areas where prices in the UK tend to be the most expensive compared with overseas prices (around 30 per cent more expensive on average). Small-animal pharmaceuticals (excluding antibiotics and parasiticides) and large-animal pharmaceuticals (excluding antibiotics) also display large price differences (respectively, 19 per cent and 16 per cent more expensive on average in the UK). At the other extreme, poultry vaccines tend to be cheaper in the UK than overseas (poultry vaccines are 8 per cent cheaper in the UK on average).

TABLE 8.22 **POM price indexes in broad therapeutic areas, average for all countries except the UK**

Broad therapeutic indication	*Index (all countries), base UK = 100*
Antibiotics	92
Large-animal pharmaceuticals (excluding antibiotics)	84
Large-animal vaccine	67
Small-animal parasiticides	73
Small-animal pharmaceuticals (excluding antibiotics and parasiticides)	81
Small-animal vaccines	64
Poultry vaccine	108
All POMs	79

Source: CC, based on data from manufacturers.

8.119. We examined the prices of small-animal vaccines and how UK prices compare with the prices in other European countries. Table 8.22 showed that price differences between the UK and the other countries were larger, on average, for small-animal vaccines than for other medicines. Table 8.23 looks at the international prices of small-animal vaccines on a product-by-product and country-by-country basis (each price being normalized to 100 in the UK), and the value of an index based only on the price of small-animal vaccines in each country. The index for small-animal vaccines is lower, for each country, than the index for all POMs, which means that small-animal vaccines are relatively more expensive in the UK than other POMs compared with each of the other countries in our study.

TABLE 8.23 **International price differences for small-animal vaccines**

Price, UK = 100

Manufacturer	*Product*	*Belgium*	*France*	*Germany*	*Republic of Ireland*	*Netherlands*
Details omitted. See note on page iv.						
	Index for small-animal vaccines only	67	59	60	77	61
	Index for all POMs	78	73	86	83	75

Source: CC, based on data from manufacturers.

[*Details omitted. See note on page iv.*]

8.120. To summarize, our results show that most of the UK best-selling POMs are substantially more expensive, at ex-manufacturer level, in the UK than in all the other European countries of our study. These price differences are large on average and are unlikely to be attributable only to exchange rate effects. Our results suggest that POMs are relatively more expensive than other veterinary medicines in the UK. They also suggest that countries in which pharmacies play a larger role in the retail distribution of POMs are also those with the lowest ex-manufacturer prices compared with the UK.

Comparison of UK prices with prices in the USA

8.121. The results of our comparison of prices between the USA and the UK are reproduced in Table 3 of Appendix 8.1. By constructing an index of prices in the USA, weighting each product by its value sales in the UK as in the previous section, we find that, on average, POM prices in the USA tend to be 43 per cent higher than in the UK. However, these results are based on a very limited selection of products and therefore comparisons were difficult to make. Indeed, five manufacturers did not provide us with any prices in the USA, and, even for the six manufacturers that did, there were very few comparable POMs between the USA and the UK (see Table 8.14), because product specifications and concentrations in active ingredients differ between the USA and the UK. One of the reasons for this may be that the regulatory regime in the USA is different from the European one.

Comparison of prices in Northern Ireland with prices in the rest of the UK

8.122. The results of our comparison of prices between Northern Ireland and the rest of the UK are reproduced in Table 2 of Appendix 8.1. Table 8.24 shows the Northern Ireland price indexes for the four manufacturers that provided Northern Ireland prices separately from prices in the rest of the UK, based on an index of 100 for Great Britain. Although individual prices vary between Northern Ireland and Great Britain, on average the POMs in our exercise are only 2 per cent more expensive in the UK than in Northern Ireland.

TABLE 8.24 **Price index of POMs in Northern Ireland, by manufacturer**

	Index, base 100 in Great Britain
Details omitted. See note on page iv.	
All manufacturers	98

Source: CC, based on data from manufacturers.

International comparisons of retail prices

8.123. We commissioned research that would allow us to compare UK retail prices with retail prices in a selection of other European countries and would enable us to establish whether prices in the UK were systematically different from overseas prices.

8.124. We compared prices in the UK with those in several countries of the euro zone. In order to obtain information on retail prices in the UK we asked BMRB to conduct a survey of UK veterinary surgeries which included questions on the prices of a selection of veterinary medicines (survey BMRB2 in Appendix 6.2). We separately asked NOP Healthcare to collect prices for the same products in several countries in the euro zone (see Appendix 8.2).

Selection of comparator countries

8.125. The eight countries with the largest veterinary medicines markets in the EC by value are, in rank order: France; Germany; UK; Spain; Italy; the Netherlands; Belgium; the Republic of Ireland. We excluded Italy from our study of retail prices because we were told that we would have difficulty in obtaining reliable data for Italy. We also considered comparing one of the Scandinavian countries, such as Denmark, but this has a smaller market and is outside the euro zone, thereby adding an additional consideration to the interpretation of our results with no obvious benefit.

8.126. In the UK, POMs are primarily sold by veterinary surgeons but this is not the case in all other countries, so our list of comparators included countries where pharmacies are either an alternative or the

principal distributors of POMs. The selected countries were: France; Germany; Spain; the Netherlands; Belgium; the Republic of Ireland. They are among the most easily accessible from Great Britain and are within the euro zone. In these countries the veterinary medicine markets are comparable in size to that of the UK and, as they are part of the EC, their regulatory costs are similar.

Selection of medicines for comparison

8.127. The selected small-animal medicines included leading branded products by a range of manufacturers in the UK POM market, one medicine (Drontal) that was PML but only sold in the UK by veterinary surgeons, together with POM products that had been identified in the comments of members of the public. The last included several versions of a popular flea treatment (Frontline). We included some of the leading branded large-animal medicines. We also included two generic medicines used in the treatment of farm animals.

8.128. The selection of products did not represent a typical 'basket' of animal medicine purchases as would be used in constructing a consumer price index, for example. However, each medicine selected for comparison was one that a substantial number of UK animal owners would be likely to have purchased in any year.

Retail prices relative to Great Britain

8.129. The large number of veterinary surgeons that responded to the BMRB2 survey (see Appendix 6.2) enabled accurate estimates of average selling prices to be computed as well as their variation across Great Britain. NOP obtained data from fewer respondents in its international survey, but the results were sufficient to establish that prices elsewhere were consistently different (see Appendix 8.3). UK prices were converted to their euro equivalents using the average exchange rate for July 2002, the month in which the fieldwork was conducted. Retail prices were recorded exclusive of VAT. The details of these calculations are given in Appendix 8.3 and the results are summarized below.

8.130. Table 8.25 shows the average relative levels of retail prices of selected medicines for small animals, in Great Britain and the other countries surveyed, where British prices correspond to 100 per cent. It can be seen that prices of these medicines in Great Britain are generally higher than prices overseas, with the exceptions of Program 80 in Belgium, Synulox in Germany and Drontal. Drontal, unlike all the other medicines in this study, is a PML medicine and not a POM.

TABLE 8.25 **Average price differentials of small-animal medicines as percentage of Great Britain price**

Great Britain = 100

	Front-line cat 3p	*Front line cat 6p*	*Front-line dog 3p*	*Front-line dog 6p*	*Front-line spray*	*Program*	*Surolan*	*Rimadyl*	*Metacam*	*Vivi-tonin*	*Synulox*	*Drontal*
Northern Ireland	91	99	89	99	89	69	83	85	87	80	79	91
Republic of Ireland	59	64	68	72	57	34	55	60	70	82	55	76
Netherlands	84	77	74	74	64	62	85	68	98	-	82	99
Germany	74	77	74	78	56	88	74	37	80	54	110	139
Belgium	57	58	63	64	49	141	62	43	76	39	86	101
Spain	78	80	81	64	57	71	-	56	68	39	79	116
France	62	61	78	79	58	70	66	84	75	49	79	107

Source: CC calculations, BMRB and NOP surveys.

8.131. Table 8.26 shows the average relative levels of retail prices of selected large-animal medicines, in Great Britain and the other countries surveyed. It can be seen that retail prices excluding VAT are generally higher in Great Britain than in the other countries surveyed. The exceptions are prices for PRID in the Netherlands and Belgium, and higher prices reported in France for the unbranded generic drugs oxytetracycline and amoxycillin.

TABLE 8.26 **Average price differentials of large-animal medicines as percentage of Great Britain price**

Great Britain = 100

	Excenel	*Tylan*	*PRID*	*Nuflor*	*Synulox*	*Tetra Delta*	*Leo Yellow*	*Oxytetra-cycline*	*Amoxy-cillin*
Northern Ireland	89	74	84	82	69	76	78	60	57
Republic of Ireland	82	73	89	78	40	59	63	39	32
Netherlands	74	54	124	65	_	_	_	50	52
Germany	75	44	94	60	37	_	_	68	72
Belgium	75	59	150	70	77	_	_	65	76
France	81	58	76	64	52	_	_	144	107

Source: CC calculations, BMRB and NOP surveys.

Notes:
1. Tetra Delta and Leo Yellow are sold only in the Republic of Ireland and the UK.
2. Oxytetracycline and amoxycillin are generic medicines.

8.132. Differences in retail prices might be explained by a number of factors: for example, differences in the type of retail outlet, the nature of the customers for medicines or the location of the retail outlet. Although fieldwork was conducted over a range of locations in each country, price differences might have occurred because of differences in types of catchment area. Also, since pharmacies are different types of retail outlets than are veterinary surgeries, this might have accounted for some of the observed price differences. We show next the result of comparing prices when these factors are taken into account.

Results of the analysis of retail prices

Small-animal medicines

8.133. We found that there was systematic variation in the prices of small-animal medicines according to whether the catchment area was urban or rural, the urban areas having higher prices. There was also systematic variation for the Frontline products where these medicines were cheaper when sold by pharmacies. There were always systematic price differences explained by the country, even when prices were corrected for any differences due to the urban or rural nature of the catchment area or the type of retail outlet.

8.134. Table 8.27 shows the price differentials that remain after differences due to the catchment area and type of retail outlet have been taken into account.

TABLE 8.27 **Relative prices of small animal medicines by country, adjusted for catchment area and outlet type**

Great Britain = 100

	Front-line cat 3p	*Front-line cat 6p*	*Front-line dog 3p*	*Front-line dog 6p*	*Front-line spray*	*Program*	*Surolan*	*Rimadyl*	*Metacam*	*Vivi tonin*	*Synulox*	*Drontal*
Northern Ireland	92	101	90	100	90	70	85	86	89	82	81	93
Republic of Ireland	62	67	72	76	64	32	62	59	72	91	53	76
Netherlands	85	77	74	74	64	63	86	69	99	-	83	101
Germany	74	77	74	77	55	89	75	37	79	54	110	139
Belgium	62	63	69	73	60	101	78	40	79	50	60	97
Spain	87	87	88	71	69	49	-	52	73	49	55	112
France	63	62	79	80	61	64	68	83	75	52	71	105

Source: CC calculations, BMRB and NOP surveys.

8.135. Table 8.27 shows that retail prices excluding VAT in Northern Ireland and the euro zone tended to be lower than those in Great Britain for POMs. Indeed, the great majority of values in the table are below 100 per cent of the Great Britain price. Drontal stands out as not having a systematic pattern. It is a PML medicine in the UK but is sold by veterinary practices only.

Large-animal medicines

8.136. There was generally not a systematic variation in the prices of large-animal medicines over different catchment areas or where prices were obtained from pharmacies rather than from veterinary surgeries. These medicines are not likely to be sold in urban or largely urban catchment areas where pharmacies are often located. However, there were always significant variations due to differences in countries, as we show next.

8.137. In the case of Spain, associations of livestock farmers typically purchase medicines from wholesalers and so farm-animal medicines tend not to be sold by retail pharmacies. Although one or two Spanish pharmacies were able to give some prices for farm-animal medicines, these were too few to be used in our analysis.

8.138. Table 8.28 shows that, as with medicines for small animals, prices in Great Britain tended to exceed those in Northern Ireland and the euro zone.

TABLE 8.28 **Relative prices of large-animal medicines by country, adjusted for catchment area and outlet type**

Great Britain = 100

	Excenel	*Tylan*	*PRID*	*Nuflor*	*Synulox*	*Tetra Delta*	*Leo Yellow*	*Oxytetra-cycline*	*Amoxy-cillin*
Northern Ireland	89	74	85	82	69	77	78	60	57
Republic of Ireland	90	71	85	81	40	57	62	45	35
Netherlands	74	53	125	65	-	-	-	50	52
Germany	76	44	92	61	36	-	-	68	73
Belgium	98	59	116	79	57	-	-	75	90
France	85	60	70	67	45	-	-	144	110

Source: CC calculations, BMRB and NOP surveys.

Notes:
1. Tetra Delta and Leo Yellow are sold only in the Republic of Ireland and the UK.
2. Oxytetracycline and amoxycillin are generic medicines.

Adjustment for differences in manufacturers' average selling prices

8.139. The previous section showed that manufacturers charged more for their medicines in Great Britain than in other European countries. This may account for some of the retail price differences between Great Britain and Continental Europe. The data that the manufacturers provided on average net selling prices enabled us to adjust for these differences between countries for some of the medicines, in order to establish whether retail price differences were mainly attributable to ex-manufacturer price differences. Table 8.29 shows the result of making this adjustment for those small-animal medicines where we had data. Where the average selling price for Northern Ireland was not provided, we assumed that the same price applied across the UK. In the case of Drontal, a PML medicine, average selling prices depended on the pack size. For this medicine, the mean price differential in manufacturer's average selling prices was used.

TABLE 8.29 **Relative prices of small-animal medicines by country, adjusted for catchment area, outlet type and manufacturers' average selling prices**

Great Britain = 100

	Frontline cat 3p	*Frontline cat 6p*	*Frontline dog 3p*	*Frontline dog 6p*	*Frontline spray*	*Program*	*Metacam*	*Vivitonin*	*Synulox*	*Drontal*
Northern Ireland	92	101	90	100	90	71	89	82	81	112
Republic of Ireland	109	-	112	-	104	28	81	85	70	87
Netherlands	112	99	99	95	110	105	95	-	109	130
Germany	96	99	89	89	96	109	72	70	77	149
Belgium	89	81	93	90	108	146	89	-	61	126
France	114	102	108	103	115	100	100	-	76	156

Source: CC calculations, BMRB and NOP surveys.

8.140. Table 8.29 shows that, after the adjustment, differences in the retail prices of Frontline products are much smaller across all countries. This suggests that the international differences in the retail prices of Frontline products are largely explained by ex-manufacturer price differences. Generally, retail price differences of small-animal POMs are smaller after adjusting for differences in manufacturers' average selling prices, although some substantial retail price differences remained for Metacam, Vivitonin and Synulox.

8.141. Table 8.30 shows the corresponding result for large-animal medicines, where it can be seen that the adjusted prices remain mostly higher in Great Britain than in the countries surveyed. However, the adjusted price of Excenel is higher in Belgium and France than in Great Britain. Both tables suggest that, for small-animal and large-animal POMs, retail price differences are not solely explained by differences in ex-manufacturer prices.

TABLE 8.30 **Relative prices of large-animal medicines by country, adjusted for catchment area, outlet type and manufacturers' average selling prices**

Great Britain = 100

	Excenel	*Nuflor*	*Synulox*	*Tetra Delta*	*Leo Yellow*
Northern Ireland	89	82	69	77	78
Republic of Ireland	98	83	51	93	77
Netherlands	101	81	-	-	-
Germany	98	72	33	-	-
Belgium	151	91	70	-	-
France	117	76	58	-	-

Source: CC calculations, BMRB and NOP surveys.

Note: Tetra Delta and Leo Yellow are sold only in the Republic of Ireland and the UK.

Retail prices of dog and cat vaccinations

8.142. NOP and BMRB also gathered data on veterinary surgeons' medicine and service charges for common booster vaccinations of cats and dogs (see Appendices 8.2 and 6.2). In Appendix 8.3, we compared the prices for complete treatments, including vaccination and health check. There were significant systematic differences in prices depending on the country and the urban or rural catchment area.

8.143. Table 8.31 gives the prices relative to those in Great Britain. The picture across different countries is mixed for dog vaccinations, whereas for cat vaccinations the Netherlands and Germany were found to be significantly cheaper than Great Britain, although prices in France were not significantly different.

TABLE 8.31 **Relative prices of vaccinations**

Great Britain = 100

	Cat	*Dog*
Northern Ireland	82	78
Republic of Irleand	82	108
Netherlands	62	78
Germany	73	102
France	97	90

Source: CC calculations, BMRB and NOP surveys.

Summary

8.144. The results of our comparison of Great Britain and euro-zone retail prices are consistent with the view that the retail prices of most of the veterinary medicines, which included many leading brands

of POMs, were systematically higher in the UK than in neighbouring countries. The prices for cat and dog vaccinations were lower in several countries compared with the UK.

8.145. The study in paragraphs 8.88 to 8.120 showed that average net ex-manufacturer prices of POMs also tend to be higher in the UK than in neighbouring countries. In order to estimate whether the retail price differences were attributable to differences in the ex-manufacturer prices, we adjusted retail prices of some medicines in order to take into account differences in ex-manufacturer prices. Prices of many medicines still remained higher in the UK than in the other countries of the study after this adjustment, which suggests that the higher retail prices in the UK are not solely explained by differences in ex-manufacturer prices.

8.146. As regards the impact of pharmacies on retail price differences, the NOP report (see Appendix 8.2) showed that the pharmacies surveyed, on average, charged lower mark-ups on POMs than the veterinary practices surveyed, and that average mark-ups on POMs were lowest in Spain and Belgium—both of which are countries where pharmacies are the only retail outlet for POMs. This is consistent with the view that a greater role for pharmacies in the dispensing of POMs may lead to lower retail prices of POMs.