5 The sale and distribution of raw milk

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Introduction

5.1. In this chapter we describe the methods that Milk Marque and other milk groups use to sell their milk; the way that they collect the milk from producers and distribute it to processors; and the statutory, contractual and other quality and traceability requirements that wholesalers of milk need to meet.

The sale of raw milk

Milk Marque

5.2. Milk Marque's approach to selling milk consists of two elements: six-monthly volume-bid selling processes for medium-term contracts, and short-term spot auctions where milk is sold under a sealed-bid tender system on a monthly and daily basis. This overall approach was broadly set at deregulation and has evolved since. Initially, Milk Marque held annual volume-bid selling processes; their frequency was increased to twice yearly in response to customer requests.

5.3. At deregulation, the EWMMB discussed two alternative ways of selling milk with its customers: long-term producer contracts combined with an auction system, or shorter-term producer contracts combined with bilateral contracts with processors. Milk Marque's customers (through the DTF) did not favour an auction at that time and Milk Marque itself was concerned that a few large customers might dominate an auction system. Milk Marque therefore initially chose to discuss the second alternative with MAFF and the OFT, who were uneasy about the effect of Milk Marque's potentially large market share (which was expected to be about 70 per cent following deregulation).

5.4. The outcome of these discussions, which are described more fully in paragraphs 3.19 to 3.27, 8.4 and 8.5, was the OFT's insistence that a transparent selling system would be preferable to individually negotiated contracts between Milk Marque and its customers. In response, Milk Marque consulted its customers and decided to develop a selling system from the volume-bid system that the EWMMB had developed with the DTF and tested in the 'New Ways of Buying Milk' initiative in 1992 (see paragraph 3.13).

5.5. We consider first the six-monthly selling processes at which the majority of Milk Marque's milk is sold. The short-term markets that are the other main method that Milk Marque uses to sell milk are discussed in paragraphs 5.70 to 5.74.

Milk Marque's volume-bid selling processes

Types of auction

5.6. Milk Marque's volume-bid selling system is different from the more familiar variable-price auction systems. There are a number of types of variable-price auctions. One example is the rising-price auction, such as those commonly used by major auction houses, in which many types of individual lots of predetermined size are sold separately in sequence. In these auctions, the auctioneer normally suggests an initial price for the first lot (which is below the price it is expected to realize). He or she invites bids at that level from buyers, who may be present or may have left instructions with the auctioneer's staff for bids to be made on their behalf. If a bid is received, bids are then sought at progressively higher levels until no more bids are received. The lot is then sold to the highest bidder.

5.7. In an alternative category of auction, prices fall until a bid is made. In these 'falling-clock' auctions, such as those used to sell flowers in the Netherlands or, indeed, milk in Northern Ireland (see paragraph 5.90), the auctioneer sets an initial price for the lot that is above the price it is expected to realize. This price, which is displayed on a dial or clock, is then lowered by an automatic system until it reaches a level at which a buyer is prepared to acquire the lot by stopping the clock.

Milk Marque's selling processes

5.8. By contrast, Milk Marque's selling processes consist of a limited number of successive rounds of bidding for the volumes that customers are prepared to buy at given prices. Milk Marque announces in advance an indicative price for each contract type and buyers are invited to specify, simultaneously in writing, the quantity of milk they are prepared to buy on each type of contract at these prices. The amount of milk sold for each contract type is variable, within a specified overall total, and depends on the bids received. Milk Marque suggested that this system had a number of advantages over the more familiar auction systems. In particular, all customers bidding for the same contract type in a bidding round paid the same price and no customer choosing to bid at this price was likely to be left without any milk. Depending on the aggregate volume of bids received, the bids may be accepted or scaled back or further bidding rounds may be held at different prices.

5.9. Milk Marque's selling processes have evolved since deregulation, as described in Appendix 5.1. At each recent selling process the common features have been as follows:

(a) Milk Marque offers medium-term contracts for a fixed overall quantity of milk for sale (referred to as the 'target volume'). Milk Marque arrives at this quantity by estimating the total volume of milk that will be available from its members over the six-month period of its main

medium-term contracts and deducting both any prior commitments from previous selling processes and an allocation of milk for short-term markets.

(b) Milk Marque specifies several types of service contract, which have varying levels of certainty in the volume that will be supplied each day, each month and over the entire contract period. It also offers a range of tailored options based on these contract types.

(c) Milk Marque announces the initial indicative price for each contract type at the start of the first bidding round.

(d) Customers have the option of bidding for contracts lasting six months or longer under one or more of the contract types.

(e) Depending on the outcome, further bidding rounds may take place (see paragraph 5.11).

5.10. Each selling process starts about three months before deliveries under the contracts are due to commence. At the beginning Milk Marque publishes:

(a) the total volume of milk for sale in the selling process;

(b) the volume reserved for short-term markets;

(c) a brochure describing all aspects of the process, including: details of the standard contract types and of a range of tailored options (such as specialist types of milk); and the rules that will be applied; and

(d) an offer form showing the indicative prices with guidance notes for completing it.

Milk Marque allows processors about two to three weeks to place volume bids. These are binding offers to buy the volumes of milk they require, under one or more of the types of service contract, at the indicative prices set by Milk Marque. Each customer is allocated an account manager by Milk Marque who contacts the customer to offer assistance and discuss the range of possibilities available to meet its individual requirements.

5.11. If the total volume of bids received exceeds the volume of milk available, Milk Marque may decide to increase the indicative prices and proceed to a further bidding round. Alternatively, it may reduce the size of its short-term markets or, as a last resort, it may scale back the amount allocated to each buyer. If, on the other hand, the total volume of milk bid for is less than the amount available in the auction, Milk Marque may decide to reduce the indicative price for each contract type and then hold a further bidding round. The course of action followed depends on the balance of supply and demand and the rules set for the particular selling process: there were, for example, significant changes to the rules as a result of the assurances that Milk Marque gave to the OFT in 1996 (see paragraph 5.14). Milk Marque must sell all the milk produced by its members, as stocks cannot be carried forward. Accordingly, some or all of any milk remaining unsold at the end of the selling process may be offered for sale in the short-term market. Alternatively, Milk Marque may seek processors who are willing to process some of it under contract for Milk Marque.

5.12. After the close of the bidding round, Milk Marque tells customers the outcome of the round including: the total volumes bid for by contract type and contract duration; whether it has accepted these offers; and whether a further bidding round will be held and, if so, what indicative prices will apply.

5.13. From the beginning, the DIF has been dissatisfied with the system (see paragraphs 10.10 to 10.17). The changes that Milk Marque has made to its selling system, partly in response to customer requests, have been further sources of dispute. We describe these changes in Appendix 5.1. The DIF's account of them, and Milk Marque's rationale for the changes, are in Appendix 8.1. The DIF's concern about aspects of Milk Marque's selling system (particularly the July 1995 selling process in which customers buying in the two bidding rounds paid different prices) led it to complain formally to the OFT in 1996.

The assurances Milk Marque gave to the OFT

5.14. The OFT's scrutiny of these representations led to the DGFT telling Milk Marque in February 1996 that he was minded to refer the wholesale supply of milk to the MMC (see paragraph 3.31). Following negotiations with Milk Marque, in July 1996 the DGFT sought assurances from it about certain aspects of its operations. Following these negotiations, the DGFT agreed in August 1996 to accept voluntary, non-statutory assurances from Milk Marque instead of making a reference to the MMC. The OFT's press release of 21 August 1996 (see Appendix 3.3) stated that Milk Marque's selling system had 'allowed prices to rise when there was an excess demand for milk, but did not provide for a corresponding fall in prices when there was a shortfall in demand'.

5.15. The assurances that Milk Marque gave to the OFT were applied in all selling processes until Milk Marque abandoned them in July 1998. These assurances provided for a price-capping mechanism and for prices to increase or decrease according to demand until either 90 per cent of the milk was sold or the price of the lowest-priced contract reached the IMPE. The main elements of the assurances were as follows:

(a) The OFT obliged Milk Marque to apply a '90 per cent threshold' that reduced its discretion in deciding whether to terminate a selling process with milk remaining unsold. It took effect if Milk Marque received bids for less than 90 per cent of the milk on offer in a bidding round. In these circumstances, Milk Marque was obliged to hold a further bidding round and offer all the milk again, at lower prices chosen by Milk Marque, unless the price of its lowest-priced contract had already fallen to the IMPE.

(b) If the price of the lowest-priced contract had fallen to the IMPE, this would be used as a 'collar' or floor price that reflected the price of raw milk implicit in the EC's intervention prices for butter and SMP (see paragraph 3.41). The IMPE, which has no formal status within the EC CAP mechanism, was to be calculated in accordance with a formula put forward by Milk Marque and agreed by the OFT as a compromise between the conflicting calculations put forward earlier by Milk Marque and the DIF. The formula was based on current exchange rates and UK processing costs.

(c) An EVPA imposed a penalty on buyers for increasing their bids too steeply from round to round in a selling process. An amount additional to the bid price was payable on any volume bid that was more than 10 per cent greater in volume than the bid for the same delivery site in the previous round (the 'excess volume'). This premium was equal to half the difference between the prices for the relevant contract type in the two rounds. Milk Marque told us that the OFT had accepted this adjustment as a response to Milk Marque's concerns that buyers might bid tactically in such a way as to drive down prices.

(d) The OFT required Milk Marque to give customers the option to take any milk they had bid for in an earlier round at the price obtaining in that earlier round.

(e) Milk Marque agreed to offer an additional tailored option for Residual contracts (see paragraph 5.36). In exchange for a premium of not more than 3 per cent of the price, this option provided for the price to be index-linked to changes in the Dutch and German butter and milk powder markets, and the green pound.

(f) Milk Marque agreed to accept combined bids, through an agent, provided that the total demand for combined bids did not exceed 5 per cent of the milk offered for sale.

(g) The OFT introduced a price cap. Milk Marque agreed that a cap would be applied to the price it set for Ex-farm Profile contracts (see paragraph 5.34) in the first round of each selling process. This ceiling was to be calculated by reference to a 12-month rolling average of the prices paid to dairy farmers by the six highest-paying purchasers in the National Farmers' Union of England and Wales (NFU)'s milk price survey (or in a comparable survey agreed by the OFT). Milk Marque agreed to set the price cap at a level 3 ppl above this reference price. (This arrangement was not, however, intended to oblige Milk Marque to set the price for the lowest-priced contract below the IMPE.)

(h) To increase the short-term flexibility of the market, Milk Marque agreed to maintain a spot market, with consignments offered three days ahead of delivery. In normal circumstances and provided that the volume of milk available remained at the levels current in 1996, Milk Marque undertook to offer at least 100,000 litres of milk for sale each day on the spot market.

(i) To provide greater transparency in each selling process, Milk Marque agreed to publish more information including:

(i) publishing its forecast of the volume of milk available for sale, in each month during the six-month contract period, at least seven days before the closing date for bids;

(ii) publishing at the end of each bidding round (and at least seven days before the closing date for bids in the next round) the total bids received (and where applicable accepted) for each contract type; and

(iii) publishing the average prices achieved on its monthly short-term market at least seven days before the closing date for bids in the next monthly sale.

5.16. Milk Marque told us that it had argued against the 90 per cent threshold on the basis that a single customer that accounted for more than 11 per cent of the milk on offer would be able to manipulate the system by declining to bid. For this reason, and to guard against strategic bidding, it had felt that 85 per cent would have been a more reasonable cut-off to apply in terminating its selling processes (see paragraph 8.14). The OFT, however, rejected Milk Marque's lower percentage as it was not prepared to accept that it would be commercially viable for such a large customer to abstain from bidding unilaterally.

Continuing concerns of the OFT, the DIF and Milk Marque

5.17. Four selling processes were conducted subject to the assurances and the OFT continued to monitor the situation. It sought further evidence from processors. Even with the OFT assurances in operation, criticism of Milk Marque and its selling system persisted. They revealed a high degree of consensus among the complainants. Having put the substance of the complaints to Milk Marque and considered its response, the OFT concluded that Milk Marque had been able largely to circumvent the assurances. The OFT told us that Milk Marque had achieved this by changing key elements of its selling system, using its ability to price discriminate between customers, and making frequent changes in the mix of contracts on offer. The OFT found that processors, particularly those producing fresh liquid milk, needed a reasonably reliable and steady supply of milk to meet the demands of their customers and make the most efficient use of their productive capacity. They could therefore be said to have an aversion to interruptible supply and a fear of not having security of supply. In the OFT's view, Milk Marque had adapted its selling system to exploit this vulnerability by forcing many of its customers into higher-priced contracts (that is, those that offered the greatest security in supply). In this way, it had been able to push up the average price of its milk. This in turn had led processors to try to obtain their liquid milk requirements direct from farmers. In the vast majority of cases, the OFT told us, these additional supplies could come only from former Milk Marque farmers. Since processors were obliged to pay a premium over the Milk Marque price to entice the farmers away from Milk Marque, the OFT said, there was a further upward impact on milk prices.

5.18. The OFT also found that Milk Marque's contract types (see paragraphs 5.23 to 5.25) were not sufficiently cost-related. The OFT considered that the price differentials between the different levels of service might have been expected to remain fairly constant over time or to change only when the service levels changed. The OFT found that this had not been the case and that, on the contrary, the price differentials that Milk Marque had charged had arisen from its wish to extract a premium by exploiting the demand profile of its customers, resulting in higher milk prices.

5.19. There were other respects in which the OFT found that Milk Marque had succeeded in undermining the assurances. One of these concerned the IMPE. During 1997, the OFT told us, there had been frequent revaluations of the green pound. The OFT said that in the July 1997 selling process, Milk Marque had based the IMPE on the green rate applicable at the beginning of the selling process,

even though Milk Marque had known that there would have to be a revaluation in August 1997, before the milk would be delivered. (Milk Marque subsequently told us that there had been no certainty that a green rate revaluation would take place in August 1997 (see paragraph 8.23).) The effect of that revaluation would have been to reduce the level of the IMPE. As a result, the OFT said, contracts for supply from 1 October 1997 were based on an IMPE floor price that would already have been superseded. In the same selling process, Milk Marque set its lowest-priced contract at the IMPE level in the first bidding round. In this way, the OFT told us, Milk Marque ensured that it would not be obliged to hold a second bidding round and reduce prices on any of its contracts.

5.20. Finally, the OFT found that, since April 1997, Milk Marque had been using contract processing to take milk out of the selling system rather than offering it to buyers at a lower price. Under contract processing arrangements (see paragraph 4.107), Milk Marque enters into contracts with processors to manufacture butter and SMP from milk that has not been disposed of in the selling process, while retaining ownership of the resulting products. The OFT concluded that Milk Marque's contract processing activities had been used to intimidate its customers and raise the overall milk price. Moreover, removing large quantities of milk from the market prevented arbitrage between customers and severely limited the secondary market for milk. The OFT considered that similar motives underlay Milk Marque's moves into vertical integration (see paragraphs 4.84 and 4.85) with the purchase of the Welsh cheese company, Aeron Valley, in October 1997, and its publicly stated intention to increase the proportion of milk that it processed and marketed itself over the next few years.

5.21. The OFT told us that, to the extent that milk prices had fallen overall during 1997, that had been due to an extrinsic factor, namely the strength of sterling. The assurances given by Milk Marque in August 1996 had, in the OFT's view, been ineffective in bringing the desired degree of competitiveness and transparency to a market in which Milk Marque would continue to be the dominant player for some time to come. The OFT believed that, having subverted the effectiveness of its behavioural undertakings once, Milk Marque could do so again. If behavioural undertakings were to succeed, they would probably need to be so detailed that the market would be unable to function in a genuinely competitive manner. For all these reasons, the DGFT came to the view that his original concerns about Milk Marque had not been met and that a reference to the MMC had become necessary.

5.22. Increasingly, Milk Marque itself had also become dissatisfied, particularly with the operation of the 90 per cent threshold, which ultimately resulted in four bidding rounds at successively lower prices being held in its January 1998 selling process. Milk Marque told us that these price reductions reduced the revenue received by its members by about £50 million. This experience led Milk Marque, in July 1998, to abandon the assurances it had given to the OFT. Milk Marque considered that it was no longer obliged to adhere to them, following the DGFT's decision to make this reference to the MMC (see paragraphs 8.28 and 8.29). It therefore operated the summer 1998 selling process without applying the provisions contained in the assurances. Milk Marque added that it had discussed the status of the assurances with the OFT at a meeting in May 1998. The OFT confirmed that, once the reference had been made, the consideration in respect of which Milk Marque had given the assurances had disappeared (see paragraph 3.37).

Milk Marque's standard contract types

5.23. Milk Marque told us that its mix of contract types was designed to satisfy the needs of customers who required a level source of supply, to enable Milk Marque to manage the problem of seasonal variations in production and to deal with milk unsold on the short-term markets. Although there are variations in the minimum butterfat levels specified, each type of service contract is chiefly characterized by the extent to which the buyer and Milk Marque are permitted to vary the amount of milk supplied.

5.24. Milk Marque normally offers one service contract that closely follows the average seasonal variation in its members' milk production in aggregate (the 'Ex-farm Profile contract'). Other, higher-priced contracts, which permit the buyer to vary the daily quantity of milk supplied, are referred to as 'market-led' contracts. In these contracts, such as the Premier Service contract (see paragraphs 5.32 and 5.33), Milk Marque provides the additional service of helping its customers to balance their supply with day-to-day requirements. Milk Marque told us that market-led contracts were chosen by

many of those manufacturers of perishable products (such as liquid milk) who had limited ability to balance surpluses and shortages of milk, required a predictable and level supply, or needed to be able to specify daily variations in their requirements.

5.25. Lower-priced contracts that give Milk Marque the flexibility to vary the quantity supplied by making use of wide contractual supply tolerances are referred to as 'supply-led' contracts. The supply tolerances in these contracts enable Milk Marque to balance variations in production with the requirements of other customers. Milk Marque told us that it needed supply-led contracts to enable it to manage the problems of:

(a) balancing the seasonal and daily fluctuations in its members' milk production caused by many factors such as the (predictable) seasonal lactation cycles of cows and (unpredictable) variations in the weather;

(b) satisfying the precise varying requirements specified by customers with market-led contracts; and

(c) dealing with unsold milk from the short-term markets.

Milk Marque is also prepared to negotiate tailored contracts by adapting a standard contract type to meet a particular customer's requirements. Although a list of tailored options is included in the brochure for each selling process, it does not claim to be comprehensive and does not include information about the premiums payable or the terms and conditions of the tailored options. Interested customers would need to contact Milk Marque's designated account managers to find out these details.

5.26. Table 5.1 and Figure 5.1 illustrate the take-up of the contract types that Milk Marque has offered in each selling process since deregulation and summarize the outcomes of the selling processes. The precise mix of service contracts offered has changed each time. The fact that the name of a contract type remains the same from one selling process to the next does not necessarily imply that there were no changes to it. Milk Marque told us that these changes had been made in response to customer requirements. In Milk Marque's first selling process in July 1994, approximately equal volumes of milk were sold on Ex-farm Profile, supply-led and market-led contracts. Figure 5.1 demonstrates that supply-led contracts became the dominant types within two years and that market-led contracts have fallen steadily to a very low level. A full account of the evolution of Milk Marque's selling system and the changes in the contract types between 1994 and 1997 is given in Appendix 5.1. In the following paragraphs, we outline the contract types that Milk Marque offered in the January and summer 1998 selling processes. A full description of these contracts is given in Appendix 5.2 including their terms and conditions and factors affecting variations in the volumes of milk supplied.

The contracts in Milk Marque's January 1998 selling process

5.27. In its January 1998 selling process, Milk Marque offered six-month contracts for 15.0 million litres of milk a day. It also gave notice that it intended to make between 0.5 and 1.3 mlpd available on the short-term market. In this selling process Milk Marque considered itself bound by the assurances it had given to the OFT in August 1996, which had been applied in all subsequent selling processes (see paragraphs 5.14 and 5.15).

TABLE 5.1 **Sales of milk under each contract type offered by Milk Marque since deregulation**

	Selling process							
	July 1994	*July 1995*	*January 1996*	*July 1996*	*January 1997*	*July 1997*	*January 1998*	*Summer 1998**
								Quantity, mlpd
Milk offered	19.4	18.7	3.3	9.5	13.3	13.9	15.0	13.6
Milk sold	20.0	18.7	3.5	7.8	9.8	11.8	13.7	12.9
								Percentage of milk sold by standard contract type
Contract type								
Market-led contracts								
Premier Service	4.5	3.8	5.6	5.6	4.7	1.4	1.0	0.9
Daily Demand	21.6	0.8	1.6	-	-	-	-	-
Flat	8.4	9.0	4.5	2.0	-	-	-	-
Total market-led	34.5	13.6	11.7	7.7	4.7	1.4	1.0	0.9
Ex-farm Profile	30.3	37.7	17.3	1.8	14.9	19.8	22.3	5.8
Supply-led contracts								
Standard Supply	8.9	-	-	-	-	-	-	-
Balancing Supply	-	5.3	3.2	11.8	-	-	-	-
Fluctuating Supply	19.8	37.0	61.4	43.8	38.4	26.9	7.4	5.5
Residual†	6.3	5.8	6.1	34.6	41.5	51.1	69.0	-
Varying Supply	-	-	-	-	-	-	-	64.8
Capacity	-	-	-	-	-	-	-	22.4
Total supply-led	34.9	48.1	70.7	90.2	79.8	77.9	76.3	92.7
Specialist milk	0.2	0.6	0.3	0.3	0.5	0.8	0.4	0.6
Grand total‡	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of bidding rounds	3	2	1	3	2	1	4	2
Outcome	Scale-back	Market cleared	Market cleared	Failed to clear	Failed to clear	Failed to clear	Failed to clear	Failed to clear
								Price levels, ppl
Price								
Average selling price	26.1	26.3	27.0	25.5	23.2	21.3	19.9	N/A
Lowest contract price	23.8	24.5	25.8	24.2	22.0	19.8	19.0	19.2§
Price change between first and last rounds¶	+0.9	–0.2	N/A	–0.8	–0.3	N/A	–1.4	–1.0¤
IMPE**	22.2	24.4	25.0	24.2	22.0	19.8	19.0	18.4
Average price less IMPE	3.9	1.9	2.0	1.3	1.2	1.5	0.9	N/A
Lowest price less IMPE	1.6	0.1	0.8	0.0	0.0	0.0	0.0	0.8

Source: Milk Marque.

*The July 1998 bidding round was abandoned by Milk Marque. A new bidding round was held in August 1998. We describe these two bidding rounds as the summer 1998 selling process.

†Includes Residual A and Residual B contracts.

‡Excludes short-term market sales.

§Typical price for tailored Capacity contracts, subject to change due to indexation.

¶For lowest-priced contract type.

¤Price change for the Varying Supply contract. (The Capacity contract did not have a selling price in the July 1998 bidding round.)

**IMPE estimated by Milk Marque or published by the OFT at the time.

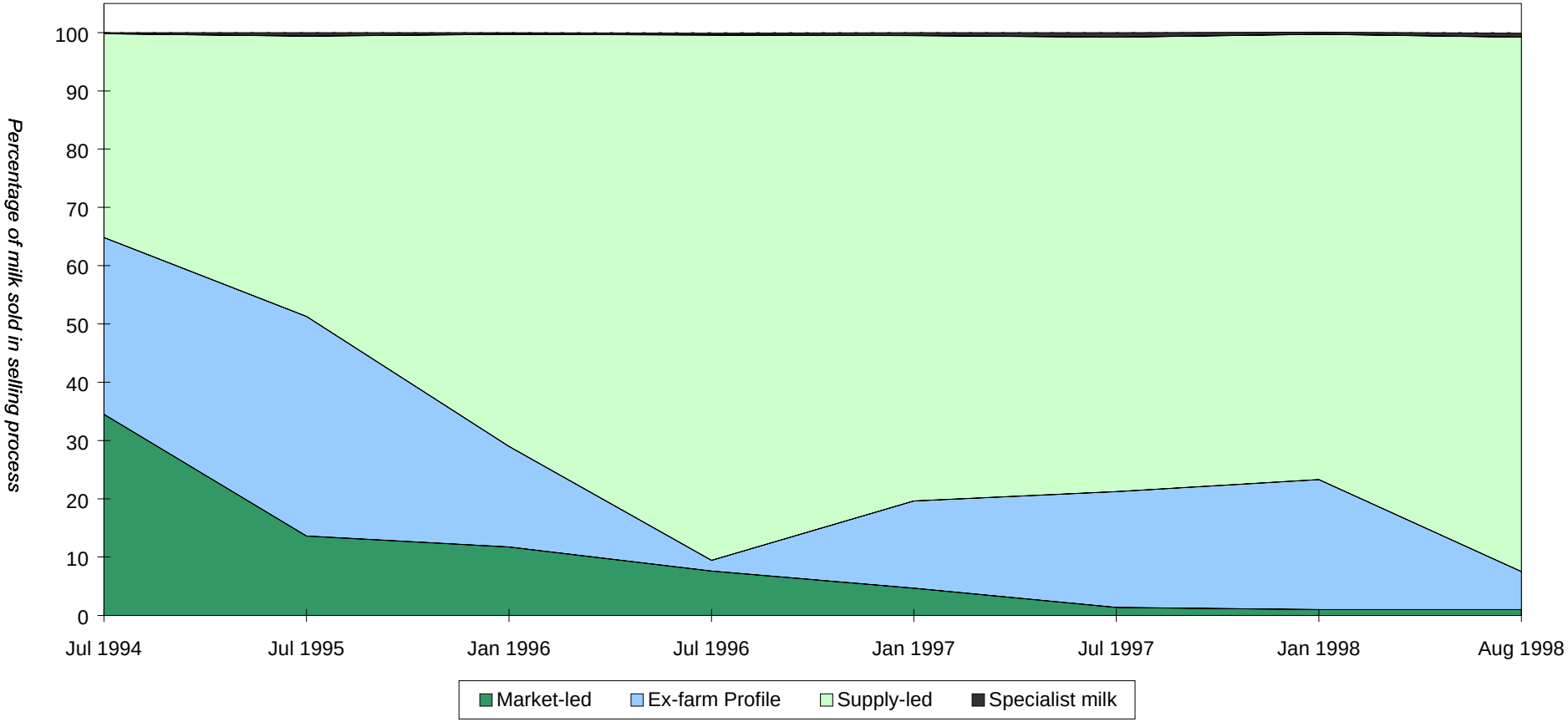
Note: Figures may not sum because of rounding.

5.28. In January 1998 Milk Marque offered the following five standard contract types, which are listed in descending order of service quality and price:

Market-led contract	*Supply-led contracts*
Premier Service	Fluctuating Supply
	Residual A
Ex-farm Profile	Residual B

FIGURE 5.1

Milk Marque selling processes: percentage of volume sold on market-led, supply-led, Ex-farm Profile and specialist milk contracts



Source: Milk Marque.

5.29. All the contract types included supply tolerances that permitted Milk Marque to vary the amount supplied each day, each month and over the contract period. These tolerances are discussed separately in paragraphs 5.55 and 5.56. In addition to the standard contract types, Milk Marque offered specialist contracts for particular qualities of milk (such as Channel Island milk) and tailored contracts, in which it adapted a standard contract type to meet the requirements of a particular processor. Such specialist or tailored contracts normally involve the payment of an additional premium in exchange for extra services required by the customer.

5.30. All the first three standard contract types listed in paragraph 5.28 enabled the customer to bid for a contractual daily volume requirement that could subsequently be varied by Milk Marque, within defined contractual limits. The Premier Service contract was the only standard contract type that also allowed the customer to vary the quantity of milk it requested each day during the contract period, within defined contractual limits. The last two, Residual contract types, were contracts that required the customer to make capacity available to accept widely varying quantities of milk determined by Milk Marque, again within defined contractual limits.

5.31. Some of the significant characteristics of the contract types in the January 1998 selling process are summarized in outline form in Table 5.2. The meaning and significance of the detailed features are explained in paragraphs 5.32 to 5.37 and Appendix 5.2.

TABLE 5.2 **Contract types offered by Milk Marque in its January 1998 selling process**

percentage variations in volumes supplied

	Premier Service	*Ex-farm Profile*	*Fluctuating Supply*	*Residual A**	*Residual B†*
Maximum customer variation of					
Total contract volume	±15	N/A	N/A	N/A	N/A
Average daily contract volume (ADCV)‡	±10	N/A	N/A	N/A	N/A
Daily quantity	±30	N/A	N/A	N/A	N/A
Maximum Milk Marque variation of					
Total contract volume	±1	±3	±12	±17	±40
Total monthly volume	±1	±5	±25	–58 to +67	–70 to +100
Daily volume	±6	±10	±30	–100 to +67	±100
Maximum seasonal variation in monthly supply	N/A	–8 to +10	–20 to +25	N/A	N/A
Minimum butterfat level (percentage milk composition)	3.5	3.5	3.2	3.2	3.2

Source: Milk Marque.

*Assuming an equivalent ADCV equal to 60 per cent of the residual milk capacity (see paragraph 5.33).
†Assuming an equivalent ADCV equal to 50 per cent of the residual milk capacity.
‡See paragraph 5.33.

- *The Premier Service contract*

5.32. The Premier Service contract is a market-led contract, which was available in both the January 1998 and summer 1998 selling processes. No changes were made to it in July or August 1998. Milk Marque told us that the Premier Service contract was available to all customers and particularly benefited independent liquid milk processors who wished to be able to rely on deliveries that met their requirements precisely. Numerous tailored variations of the Premier Service contract were also available, including options for small companies needing infrequent deliveries of small amounts of milk.

5.33. The Premier Service contract is the only standard contract that enables customers to specify the volume to be delivered each day, within a range from 70 per cent of the ADCV specified in their contract to 130 per cent of the ADCV. It also allows customers to increase or reduce the ADCV by up

to 10 per cent, after giving one month's notice. These variations are subject to further overall limits set out in Appendix 5.2.

- *The Ex-farm Profile contract*

5.34. Ex-farm Profile contracts were available in both the January 1998 and summer 1998 selling processes. Volumes supplied under the Ex-farm Profile contract closely follow Milk Marque's overall seasonal supply profile and are broadly similar to the supply profiles provided by most other suppliers. Milk Marque told us that it considered its ex-farm profile to be more stable and reliable than that of other suppliers as it represented the combined output of a large number of farms. The pattern of monthly variations is illustrated in Figure 5.2. Milk Marque told us that seasonal adjustments to contracts were needed because it had to market greatly increased volumes of milk in predictable peak periods, such as the spring 'flush' period (see paragraph 4.10) and reduced volumes in off-peak periods. It added that the Ex-farm Profile contract was used both by liquid milk dairies and by manufacturing customers who had limited capacity and were seeking a high level of plant utilization.

- *The Fluctuating Supply contract*

5.35. Fluctuating Supply contracts were available in both the January 1998 and summer 1998 selling processes. They are supply-led contracts with wider seasonal variations than Ex-farm Profile contracts, as illustrated in Figure 5.2, and considerably broader supply tolerances. They were designed to help Milk Marque to balance its supply and demand position in response to variations in production, varying customer demands under Premier Service and tailored contracts and variations in demand on short-term markets. In the summer 1998 selling process, Milk Marque reduced the degree of seasonal variation in Fluctuating Supply contracts. It attributed this reduction to the lower level of seasonal variation in supply during the six winter months compared with the six spring and summer months.

- *Residual A and Residual B contracts*

5.36. Residual A and Residual B, the two Residual contract types available in the January 1998 selling process, were withdrawn in July 1998. As the most radical forms of supply-led contract, these contracts required customers to make capacity available to accept highly variable quantities of milk determined by Milk Marque, in exchange for the lowest prices. On any day, the contracts entitled Milk Marque to deliver any volume of milk up to the capacity specified. They also had very wide monthly and contract period supply tolerances but no underlying seasonal variation. The Residual A contract involved a slightly less uncertain milk supply than the Residual B contract in return for a slightly higher price. Milk Marque told us that its former Residual contract types were designed to provide it with the large degree of flexibility it needed to balance seasonal and daily variations in the aggregate milk supply and demand.

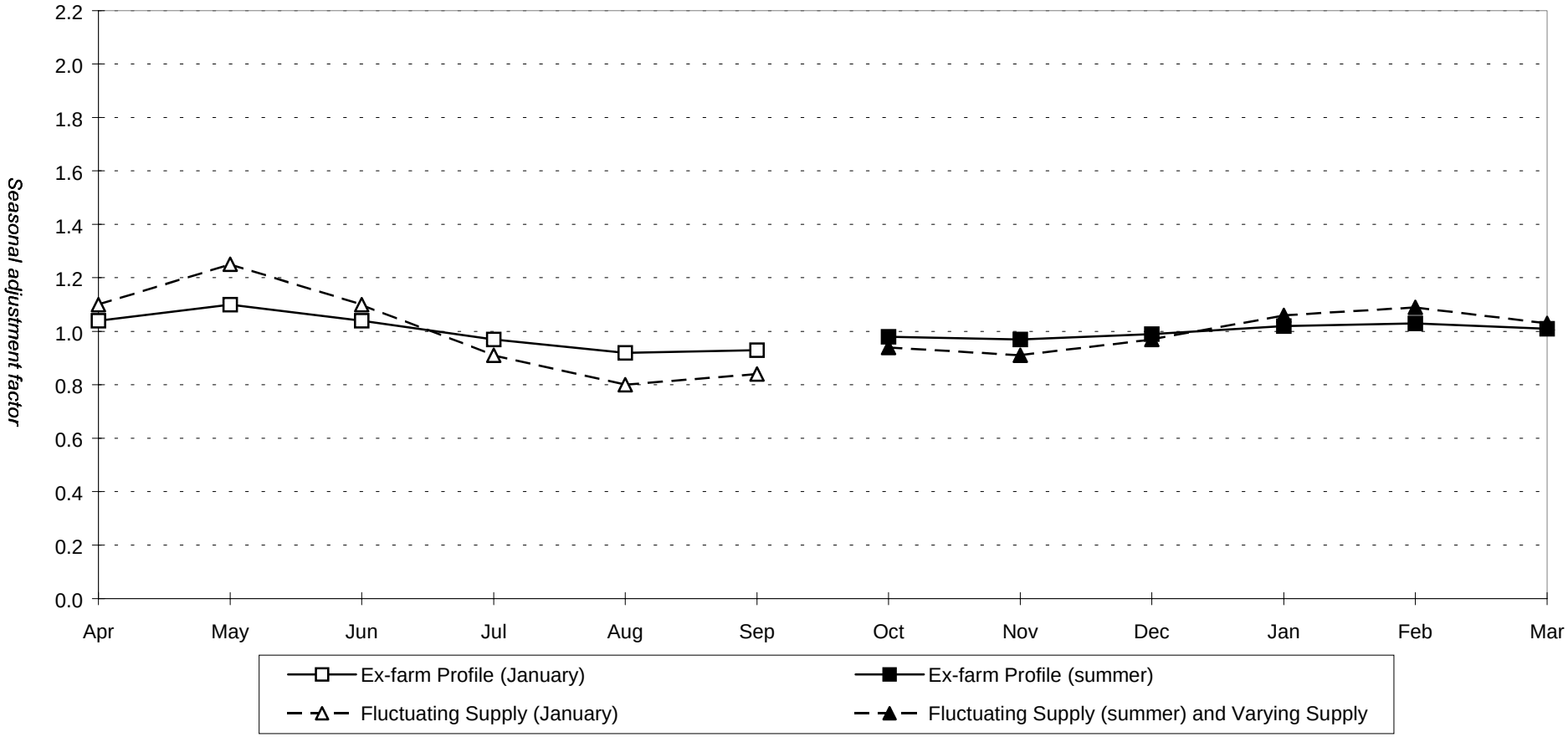
5.37. The lower limit of 100,000 litres a day that was applied to the size of Residual contracts precluded most small processors from using them individually (see customer complaints summarized, for example, in paragraphs 10.30, 10.336, 10.387 and 10.447). Milk Marque told us that it would have been uneconomic to supply smaller quantities on Residual contracts and commented that small processors were able to group together to purchase a Residual contract jointly at one site (see paragraphs 8.87 to 8.89).

Outcome of January 1998 selling process

5.38. Table 5.3 summarizes the pricing of the contracts offered by Milk Marque in January 1998 and the bids it received in each bidding round. As Milk Marque received bids for less than 90 per cent of the milk in the first three bidding rounds, none was sold. After lowering prices three times, but maintaining the price differentials between contracts, Milk Marque eventually achieved bids for over 90 per cent of the milk on offer (assuming full use of the supply tolerances on supply-led contracts)

FIGURE 5.2

Monthly variation in Milk Marque seasonal contracts in 1998/99: underlying variation without use of tolerances



Source: Milk Marque.

and was able to accept the bids made in the fourth bidding round. Residual contracts predominated at 72 per cent of the volume sold. Given the highly variable total quantities that Milk Marque can supply under Residual contracts, this percentage depended on its assumption that it intended to supply the maximum amount allowed by the contracts. Milk Marque commented that it had informed customers that it anticipated operating towards the top end of the supply tolerances, as it had done following the July 1997 selling process.

TABLE 5.3 **Prices and bids received in Milk Marque's January 1998 selling process**

	Round 1		*Round 2*		*Round 3*		*Round 4*	
Contract types	*Price ppl*	*Bid mlpd*	*Price ppl*	*Bid mlpd*	*Price ppl*	*Bid mlpd*	*Price ppl*	*Bid & bought mlpd**
Market-led contract								
Premier Service	24.6	0.14	24.0	0.14	23.6	0.14	23.21	0.14
Ex-farm Profile	23.1	2.64	22.5	2.67	22.1	2.56	21.71	2.68
Supply-led contracts								
Fluctuating Supply†	22.6	1.45	22.0	1.34	21.6	1.28	21.21	1.00
Residual A‡	20.9	4.16	20.3	2.57	19.9	1.66	19.51	2.94
Residual B‡	20.4	4.28	19.8	6.07	19.4	7.52	19.01	6.86
Total supply-led		9.89		9.98		10.46		10.80
Specialist milk§		0.05		0. 06		0.05		0.06
Grand total		12.72		12.85		13.21		13.68
Target volume		15.00		15.00		15.00		15.00
Percentage subscribed		85		86		88		91

Source: Milk Marque.

*Mix of 6-month (98 per cent), 12-month (1 per cent), 18-month (0 per cent) and long-term (1 per cent) contracts.
†Volumes flexed up by 12 per cent with maximum use of supply tolerances.
‡Volumes at 70 per cent of residual milk capacity bid.
§No price is shown for specialist contracts as they cover different types of milk at various prices.

5.39. Milk Marque commented that, to induce the extra 5 per cent demand needed to satisfy the 90 per cent threshold, it had had to reduce the revenue to its members by about £50 million (see paragraph 8.25). Consequently, its members' sales realization had fallen to 86 per cent of the EC CAP target price, a level lower than at any time in the previous 15 years. Milk Marque told us that it believed that the major buyers had bid strategically to ensure that prices fell. It considered this to be an example of processor market power (see paragraph 8.25). In our questionnaire to large processors (see Appendix 1.1), we asked respondents to itemize the bids they had made in each bidding round since deregulation and summarize the rationale behind their decisions to choose particular types of contract. A summary of the replies from five of the largest companies is at Appendix 7.1.

Changes to the Milk Marque contract types in summer 1998

5.40. Milk Marque was dissatisfied with the outcome of the January 1998 selling process and, in particular, the prices that resulted from it. It told us that it had initiated discussions with the DIF before the summer 1998 selling process, but these had failed to produce any agreement. The DIF told us that these discussions were of a broader nature, not specifically linked to the forthcoming selling process. The accounts of these events put forward by Milk Marque and the DIF are described in paragraphs 8.26 and 10.20 respectively. In July, Milk Marque offered six-month contracts for 13.6 million litres of milk a day (a reduction of 1.4 mlpd compared with the January 1998 selling process resulting from a fall in Milk Marque's membership). It also gave notice that it intended to make between 1.0 and 2.0 mlpd available on the short-term market (compared with the range of 0.5 to 1.3 mlpd in the previous six months) in order to meet customer requests for a larger short-term market.

5.41. The principal changes that Milk Marque made in July 1998 were intended to address the problems it had identified. They were:

(a) the abandonment of the assurances it had given to the OFT in 1996, including the '90 per cent threshold';

(b) an increase in all the initial indicative prices for the standard contract types; and

(c) the removal of both Residual contract types and the introduction of a new 'Varying Supply contract' (a supply-led contract that incorporated much less uncertainty in the volume of milk that was to be supplied than the former Residual contracts) and a new 'Capacity contract' (initially designed as a contract processing arrangement with an option to buy the resulting products).

5.42. Other amendments to the standard contract types included the changes to the Ex-farm Profile and Fluctuating Supply contracts outlined in paragraphs 5.34 and 5.35 and described in more detail in Appendix 5.2.

5.43. Some of the main characteristics of the standard contract types in the summer 1998 selling process are summarized in outline form in Table 5.4. The meaning and significance of the detailed features are explained in paragraphs 5.32 to 5.37 and 5.44 to 5.46 and in Appendix 5.2.

TABLE 5.4 **Standard contract types offered by Milk Marque in its summer 1998 selling process**

		percentage variations in volumes supplied		
	Premier Service	*Ex-farm Profile*	*Fluctuating Supply*	*Varying Supply*
Maximum customer variation of				
Total contract volume	±15	N/A	N/A	N/A
Average daily contract volume	±10	N/A	N/A	N/A
Daily quantity	±30	N/A	N/A	N/A
Maximum Milk Marque variation of				
Total contract volume	±1	±3	±12	±20
Total monthly volume	±1	±5	±25	±40
Daily volume	±6	±6	±30	±50
Maximum seasonal variation in monthly supply	N/A	±3	±9	±9
Minimum butterfat level percentage milk composition	3.5	3.5	3.2	3.2

Source: Milk Marque.

- *The Varying Supply contract*

5.44. Many aspects of the Varying Supply contract resemble the Fluctuating Supply contract more closely than the Residual contracts it replaced, for example the Varying Supply contract uses the same underlying pattern of seasonal volume variation as the Fluctuating Supply contract. The supply tolerances of the Varying Supply contract are broadly between those of the Fluctuating Supply contract and those of the former Residual contracts.

- *The Capacity contract*

5.45. Prior to the July 1998 bidding round, Milk Marque held discussions with processors and the DIF. It told us that it concluded from these discussions that butter and SMP manufacturers had particular requirements, which depended on the market conditions for those products, and needed a specially designed contract. When Milk Marque introduced the Capacity contract in July 1998, it was intended to meet these specific requirements and had many of the features of contract processing. The resulting products would either have remained Milk Marque's property or they would have been sold to the processor at a price to be negotiated later. Milk Marque explained that this arrangement was intended to address processors' concerns that prices were negotiated too far in advance. In effect, Milk Marque offered to take control of marketing the output of butter and SMP capacity from the processors, together with all the market risks, in exchange for a processing fee of 3.7 ppl. However, as processors preferred to take ownership of the products, no sales were made on this basis.

5.46. In the August 1998 bidding round, Milk Marque set out to negotiate tailored Capacity contracts. All the Capacity contracts entered into were tailored contracts in which the products were sold on to the processors in advance. The Capacity contract consequently became a form of supply-led contract available only to manufacturers of butter and SMP. The large processors with tailored Capacity contracts negotiated individual supply tolerances and prices. On average, and despite the average price being lower, the supply tolerances of these tailored contracts were narrower than those of the Varying Supply contract. Milk Marque told us that this comparison was misleading and commented that the milk received also depended on the priority ranking of the contract types. Varying Supply contracts were given greater priority than Capacity contracts in the daily allocation of milk. Customers with tailored Capacity contracts would, therefore, suffer greater variability in practice than those with Varying Supply contracts. It added that in November 1998, when milk supplies were lower than forecast, customers with Varying Supply contracts had received 16 per cent less than their expected volume while those with tailored Capacity contracts had received 20 per cent less than their expected volume. Milk Marque also told us that customers with tailored Capacity contracts would suffer greater shortfalls over the term of the contracts than those with Varying Supply contracts.

Summary of changes in the summer 1998 selling process

5.47. The changes in the main contract types offered in the summer 1998 selling process, compared with the January 1998 selling process, and the price changes are summarized in Table 5.5. Both the initial prices for the first January 1998 bidding round and the prices at the end of the fourth and final round are shown. The table also shows a comparison of the prices in the summer 1998 bidding rounds with the price of the nearest equivalent contract at the end of the January 1998 selling process. In the case of the Varying Supply and Capacity contracts, the price comparison made is with the former Residual B contract, which many customers would previously have chosen to use.

TABLE 5.5 **Changes in the contract types and prices offered in Milk Marque's summer 1998 selling process**

January 1998 selling process			*Summer 1998 selling process*				
Contract type	*Starting price ppl*	*Final January price ppl*	*Contract type*	*July price ppl*	*Change from January %*	*August price ppl*	*Change from January %*
Premier Service	24.6	23.21	Premier Service	24.0	+3.4	23.3	+0.4
Ex-farm Profile	23.1	21.71	Ex-farm Profile	22.5	+3.6	21.8	+0.4
Fluctuating Supply	22.6	21.21	Fluctuating Supply	22.0	+3.7	21.3	+0.4
Residual A	20.9	19.51					
Residual B	20.4	19.01					
		Replaced by:	Varying Supply	21.5	+13.1*	20.5	+7.8*
			Capacity	3.7†	N/A	19.2‡	+1.0*

Source: Milk Marque.

*Change compared with Residual B contract.
†Contract processing fee.
‡A typical price representing forecast receipts from fixed price and indexed Capacity contracts.

5.48. In the August 1998 bidding round, Milk Marque reduced the price of the new Varying Supply contract by 4.7 per cent (1 ppl) from the level in the July bidding round. This price was still 7.8 per cent (1.5 ppl) above the final level achieved by the Residual B contract in the January 1998 selling process but 3.3 per cent below the final level achieved by the Fluctuating Supply contract in that round. Milk Marque told us that any price comparison between Varying Supply and Residual contracts was misleading owing to their different terms and conditions; it considered that Varying Supply contracts should be compared with Fluctuating Supply contracts, which they resembled in many ways. Nonetheless, many customers that had previously used Residual contracts would have had to change to Varying Supply contracts. The prices for the other contract types were reduced by 0.7 ppl (about 3 per cent) in August 1998. The net effect of this was to bring the prices of the Premier Service, Ex-farm Profile and Fluctuating Supply contracts close to the levels achieved in the final January 1998 bidding round and below the levels in the July 1997 selling process.

Outcome of the summer 1998 selling process

5.49. Table 5.6 summarizes the pricing of the contracts offered by Milk Marque and the bids it received in each bidding round. In the July bidding round 16 processors, including all the largest, did not bid or bid for only notional volumes. The other 197 processors that did take part placed bids for their expected requirements but this accounted for only 17 per cent of the available milk. Milk Marque abandoned the bidding round, did not accept any of the offers to buy, and sold no milk.

5.50. After the July bidding round was abandoned and following four weeks of consultation with its customers, Milk Marque held a further bidding round in August 1998. In this second bidding round, Milk Marque offered the same volume of milk for sale and the contract types and their terms and conditions remained unchanged. Milk Marque, however, reduced all the prices and set out to negotiate tailored contracts, including arrangements that would change the nature of the Capacity contract. Milk Marque received bids for 83 per cent of the milk on offer (assuming full use of the supply tolerances on supply-led contracts) and accepted them. All bids classified as Capacity contracts were for tailored contracts in which the milk was to be sold rather than contract processed.

5.51. After the completion of the August bidding round, Milk Marque approached all its customers again to see whether they wished to buy more milk on the terms and prices offered in August. Thirty customers indicated that they wished to buy more milk totalling 1.6 mlpd. This took the total milk sold to 95 per cent of the volume on offer (assuming, as before, full use of supply tolerances). Milk Marque considered that this demonstrated that processors had previously bid tactically to drive down prices (see paragraph 8.37). It told us that it intended to have much of its unsold milk processed under contract. The quantity involved amounted to about 5 per cent of the volume it had initially offered (see paragraph 4.112).

TABLE 5.6 **Prices and bids received in Milk Marque's summer 1998 selling process**

	July bidding round		*August bidding round*		*Re-offer of additional volume*	
Contract types	*Price ppl*	*Bid mlpd*	*Price ppl*	*Bid & bought mlpd**	*Price ppl*	*Bid & bought mlpd*
Market-led contract						
Premier Service	**24.0**	**0.11**	**23.3**	**0.11**	**23.3**	†
Ex-farm Profile	**22.5**	**0.67**	**21.8**	**0.74**	**21.8**	**0.01**
Supply-led contracts						
Fluctuating Supply‡	22.0	0.87	21.3	0.69	21.3	0.02
Varying Supply§	21.5	0.66	20.5	6.76	20.5	1.60
Capacity¶	3.7¶	0.00	19.2¶	2.89	19.2¶	-
Total supply-led		**1.53**		**10.34**		**1.62**
Specialist		**0.07**		**0.08**		**-**
Grand total		**2.38**		**11.27**		**1.63**
Target volume		13.60		13.60		13.60
Percentage subscribed		17		83		12

Source: Milk Marque.

*All six-month contracts.
†Less than 0.01 mlpd.
‡Volumes flexed up by 12 per cent with maximum use of supply tolerances.
§Volumes flexed up by 20 per cent with maximum use of supply tolerances.
¶The July Capacity contract price shown is a contract-processing fee. All Capacity contracts entered into in August 1998 were tailored contracts in which the milk was sold at about the typical price shown. Volumes at target throughput for contract term.

January 1999 selling process

5.52. Milk Marque's January 1999 selling process was in progress as our report was being finalized. Since the outcome was not clear, we have not included it in our analysis. Many aspects of the selling process were similar to the summer 1998 selling process. The key changes made by Milk Marque were:

(a) It abolished the Fluctuating Supply contract 'because of improvements to the Varying Supply contract'.

(b) The price of the Premier Service contract was reduced by 0.8 ppl (3.4 per cent). Its supply tolerances were unchanged.

(c) The price of the Ex-farm Profile contract was reduced by 0.3 ppl (1.4 per cent). Its supply tolerances were unchanged.

(d) New narrower supply tolerances, which changed from month to month, were introduced for the Varying Supply contract. Its price was increased by 0.7 ppl (3.4 per cent).

5.53. The price differentials between contract types were thus reduced. The final amount of this reduction will, however, depend on whether tailored Capacity contracts are again agreed and, if so, on their price levels. As in July 1998, the Capacity contract was presented as a contract processing arrangement with a processing fee of 3.7 ppl. Milk Marque also introduced a 'farm-assured' option as a free addition to the Premier Service and Ex-farm Profile contracts. This option was also available, at an unspecified premium, for Varying Supply contracts.

5.54. Just before we submitted our report, Milk Marque said that it had received bids for only about one-quarter of the milk on offer as several large processors either did not bid or only submitted low bids. On the day before we submitted our report, Milk Marque announced the second round of the January 1999 selling process. In this round, it reduced the prices of all contract types by 0.7 ppl, a reduction of about 3 per cent. The price of the Varying Supply contract, which was the only contract type to have an increased price in the first bidding round, was thus returned to its level in the August 1998 bidding round. The prices of the Premier Service contract, at 21.8 ppl, and the Ex-farm Profile contract, at 20.8 ppl, were now 6.4 per cent and 4.6 per cent respectively below their levels in August 1998.

Comparison of contract supply tolerances

5.55. Milk Marque's contract supply tolerances permit it to vary the amount of milk it supplies—each day, each month and over the entire contract period—under each contract type according to market conditions. These supply tolerances are superimposed on the underlying seasonal variation in the Ex-farm Profile, Fluctuating Supply and Varying Supply contracts and on the requirements specified by customers with Premier Service contracts. Milk Marque told us that it needed the flexibility provided by the supply tolerances for a number of reasons:

(a) Milk supplies in a month could differ from Milk Marque's forecasts by as much as 2.7 mlpd.

(b) Production could vary by as much as 3 mlpd during a month as a result of factors such as the impact of the quota regime at the end of the year.

(c) If milk that was allocated to short-term markets remained unsold, an outlet was needed for it. Demand in the short-term markets varied considerably and as much as 2 mlpd could be left unsold.

(d) Provision had to be made for customers' unforeseen operational problems. The largest such *force majeure* event experienced so far involved the shutdown of a processing plant, leaving Milk Marque with 1.4 mlpd of unsold milk. A further case, which happened during our inquiry, resulted in the loss of 1 mlpd of processing capacity for several days and substantially reduced available capacity for several months.

(e) The varying requirements of customers with market-led contracts might necessitate changes of about 0.4 mlpd in the amount Milk Marque supplied to customers with other contract types.

5.56. A direct comparison of the supply tolerances available for Milk Marque's use in the Premier Service, Fluctuating Supply and Varying Supply contracts with those in the former Residual contracts is made more complex by the different forms the contracts take. Quantities supplied under contracts, other than the former Residual contracts, are related to an ADCV (see paragraph 5.33 and Appendix 5.2). Milk Marque may supply either more or less than the ADCV. In the case of the former Residual contracts, the volumes supplied were related to a 'residual milk capacity', which represented the maximum volume that could be supplied, other than at Christmas when a higher volume could be supplied. Contract supply tolerances can, however, be compared after converting the former Residual contracts into a format similar to Milk Marque's other contracts. In our analysis, we have achieved this by using the mid-point of the possible total volumes that could be supplied over the contract period to calculate an equivalent ADCV for Residual contracts that corresponds to their residual milk capacity. On this basis, the equivalent ADCV is 60 per cent of its residual milk capacity for a Residual A contract and 50 per cent for a Residual B contract.

5.57. We outline below the supply tolerances in the January and summer 1998 selling processes. A full analysis of the changes in supply tolerances since deregulation is included in Appendix 5.3. Milk Marque told us that, in its July 1997, January 1998 and summer 1998 selling processes, it had informed all customers that it intended to operate at the upper limit of the supply tolerances. It disagreed with our method of analysis on the grounds that it did not take account of the relative loading each type of contract was likely to achieve, in view of its priority in each day's milk allocation. It did not, however, put forward any alternative analysis.

- *Daily supply tolerances*

5.58. After making the adjustment to the format of the Residual contracts (described in paragraph 5.56), the tolerances by which Milk Marque could vary the volume of milk supplied daily under the various contracts in the January and summer 1998 selling processes are summarized in Table 5.7.

TABLE 5.7 **Supply tolerances by which Milk Marque can vary the amount of milk supplied each day**

	Percentage of ADCV (after applying seasonal adjustment factors and customer variations)			
Selling process and contract type	*Minimum %*	*Maximum %*	*Christmas maximum %*	*Maximum volume change for small orders, litres a day**
January 1998				
Premier Service	94	106	106	1,000
Ex-farm Profile	90	110	103	N/A
Fluctuating Supply	70	130	150	N/A
Residual A†	0	167	167	N/A
Residual B‡	0	200	220	N/A
Summer 1998				
Premier Service	94	106	106	1,000
Ex-farm Profile	94	106	103	N/A
Fluctuating Supply	70	130	130	N/A
Varying Supply	50	150	150	N/A
Capacity§	44	124	124	N/A

Source: Milk Marque.

*Applies when greater than the percentage change.
†Percentage of an equivalent ADCV equal to 60 per cent of the residual milk capacity.
‡Percentage of an equivalent ADCV equal to 50 per cent of the residual milk capacity.
§Average of tailored contracts, weighted by contract volume.

5.59. In terms of its daily variability assessed on this basis, the new Varying Supply contract lies between the Fluctuating Supply contract and the former Residual A contract. On average, the tailored Capacity contracts have less onerous daily supply tolerances for customers than either the Varying

Supply or Fluctuating Supply contracts. Milk Marque commented that it was also necessary to take account of the relative priority given to Varying Supply, Fluctuating Supply and Capacity contracts in allocating milk (see paragraph 5.46).

- *Monthly supply tolerances*

5.60. In a similar way, the tolerances by which Milk Marque may vary the volume supplied monthly under the contracts in the January and summer 1998 selling processes are summarized in Table 5.8.

TABLE 5.8 **Supply tolerances by which Milk Marque can vary the amount of milk supplied each month**

	Percentage of ADCV (after applying seasonal adjustment factors and customer variations) multiplied by number of days in the month		
Selling process and contract type	*Minimum total monthly deliveries*	*Maximum total monthly deliveries*	*Maximum volume change for small orders, litres a day**
January 1998			
Premier Service	99	101	9,000
Ex-farm Profile	95	105	9,000
Fluctuating Supply	75	125	9,000
Residual A†	42	167	N/A
Residual B‡	30	200	N/A
Summer 1998			
Premier Service	99	101	1,000
Ex-farm Profile	95	105	9,000
Fluctuating Supply	75	125	9,000
Varying Supply	60	140	24,000
Capacity§	66	119	N/A

Source: Milk Marque.

*Applies when greater than the percentage change.
†Percentage of an equivalent ADCV equal to 60 per cent of the residual milk capacity.
‡Percentage of an equivalent ADCV equal to 50 per cent of the residual milk capacity.
§Average of tailored contracts, weighted by contract volume.

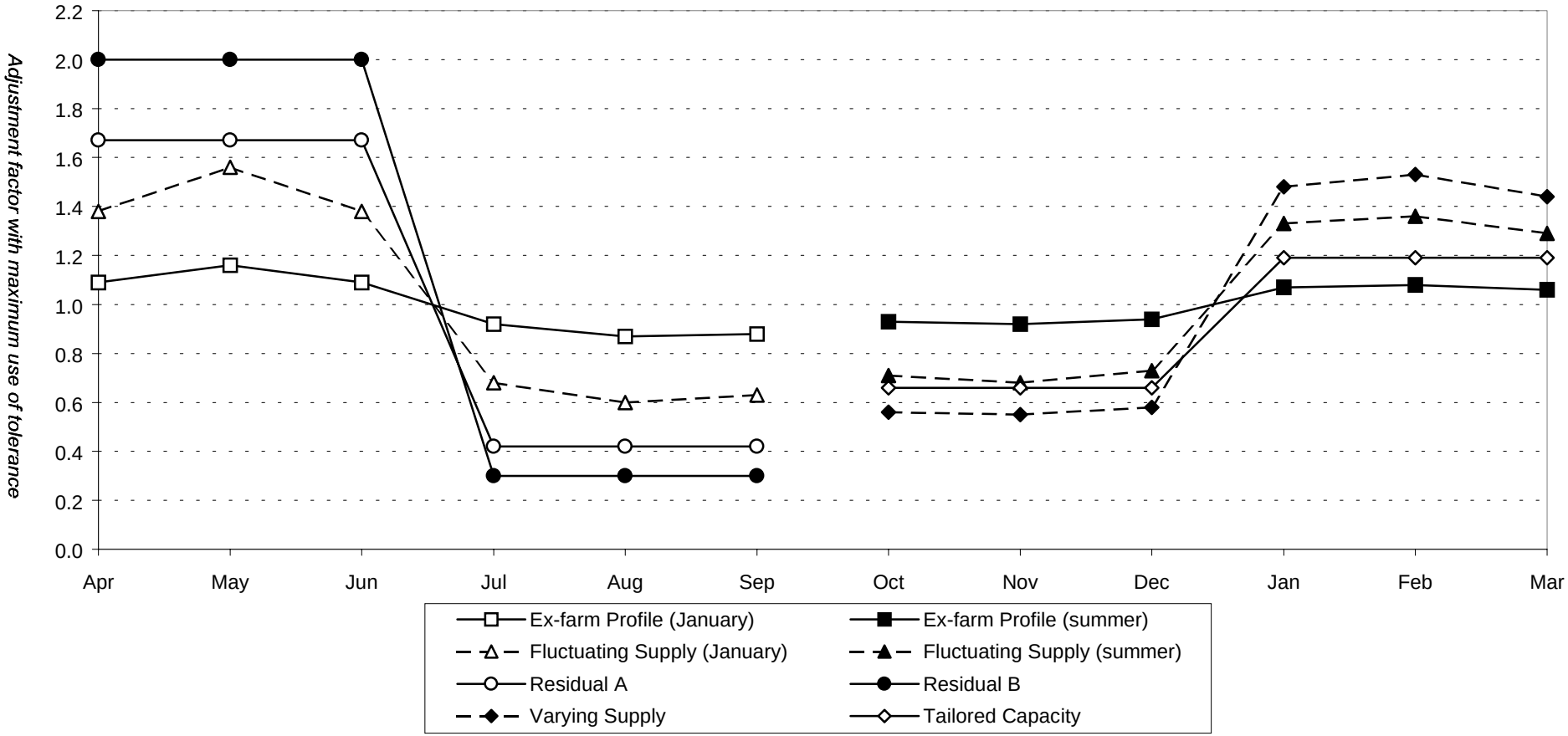
5.61. Assessed on this basis, the Varying Supply contract again lies between the Fluctuating Supply contract and the former Residual A contract in terms of monthly variability. On average, the tailored Capacity contracts have monthly supply tolerances that are less onerous for customers than those of the Varying Supply contract and similar to those of the Fluctuating Supply contract. Milk Marque commented that the milk received would also depend on the priority ranking of the contract types in allocating milk (see paragraph 5.46).

5.62. The variation in the volume supplied each month depends both on Milk Marque's seasonal adjustment factors for each month (see Appendix 5.2) and on its use of the monthly supply tolerances. Figure 5.3 shows a combination of the variation caused by both factors and compares the maximum ability to vary monthly supply that Milk Marque built into the January 1998 and summer 1998 contract types.

5.63. Figure 5.3 suggests that Milk Marque included more variability than it needed in the January 1998 contracts and was consequently able to reduce greatly the level of fluctuation built into the supply contracts in the summer 1998 selling process. Milk Marque considered that such an inference would not be valid since it was unable to forecast the overall variability that would result from its contracts as it had no prior knowledge of the volumes that processors would bid for under each contract type. It also commented that, as the variation in milk supplies was greater in the spring/summer period than in the winter period, the two periods had to be treated differently.

FIGURE 5.3

Monthly variation in Milk Marque seasonal contracts in 1998/99: variation with maximum use of monthly tolerances



Source: Milk Marque.

Contract period supply tolerances

5.64. Finally, the tolerances by which Milk Marque may vary the volume supplied under the various contracts in the January and summer 1998 selling processes over the entire six-month contract period are summarized in Table 5.9.

TABLE 5.9 **Supply tolerances by which Milk Marque can vary the amount of milk supplied over a six-month contract period**

	Percentage of customer order for contract period		
Selling process and contract type	*Minimum total deliveries*	*Maximum total deliveries*	*Maximum volume change for small orders, litres a day**
January 1998			
Premier Service	99	101	N/A
Ex-farm Profile	97	103	0
Fluctuating Supply	88	112	0
Residual A†	83	117	N/A
Residual B‡	60	140	N/A
Summer 1998			
Premier Service	99	101	N/A
Ex-farm Profile	97	103	0
Fluctuating Supply	88	112	0
Varying Supply	80	120	N/A
Capacity§	81	119	N/A

Source: Milk Marque.

*Applies when greater than the percentage change.
†Percentage of an equivalent ADCV equal to 60 per cent of the residual milk capacity.
‡Percentage of an equivalent ADCV equal to 50 per cent of the residual milk capacity.
§Average of tailored contracts, weighted by contract volume.

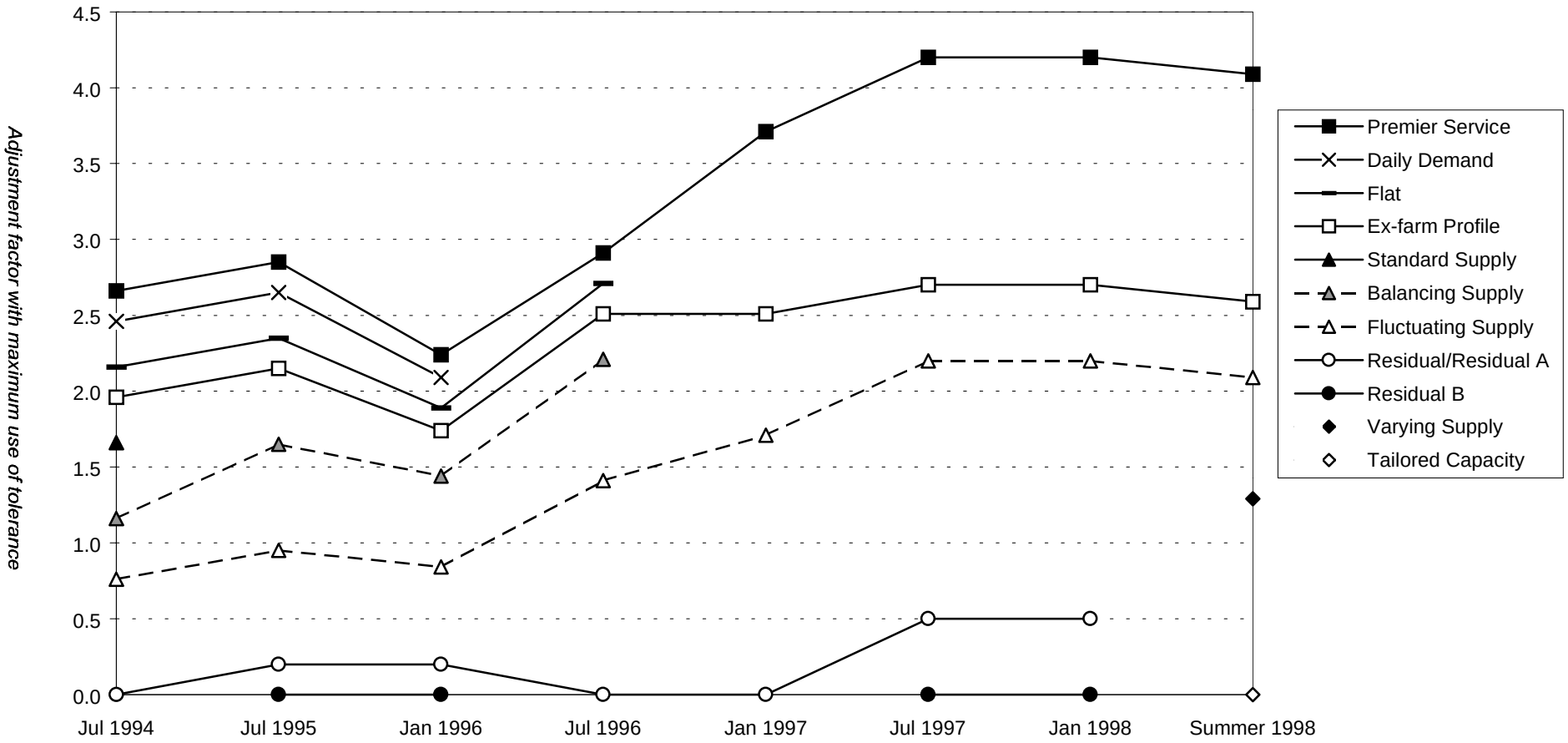
5.65. In this case, the Varying Supply contract lies between the former Residual A and Residual B contracts in terms of variability over the contract period. Milk Marque took the view that, if the likely supply loading over the term of the contract was considered, the Varying Supply contract was at least as good as the Residual A contract. On average, the tailored Capacity contracts have contract period supply tolerances close to those of the Varying Supply contract, which is, however, likely to receive greater priority in allocating milk (see paragraph 5.46).

Price differentials

5.66. Table 5.10 and Figure 5.4 show an analysis of the price differences between each of Milk Marque's contract types and the lowest-priced contract in each selling process. The analysis demonstrates that the differentials widened substantially between January 1996 and July 1997. In particular, Milk Marque increased the price differential between the Premier Service contract and the other contract types substantially. Milk Marque considered that this comparison was misleading, as it took no account of changes in contract terms and conditions. Service levels under the Premier Service contract had improved. The price differential between the Premier Service contract and the Fluctuating Supply contract had remained stable at about 2.0 ppl from 1994 to 1998. Milk Marque added that the differentials between the Fluctuating Supply contract and the various Residual contract types had changed as contract terms were altered.

FIGURE 5.4

Price differentials between Milk Marque contract types



Source: Milk Marque.

TABLE 5.10 **Price differentials of contract types in Milk Marque selling processes**

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	July 1994 Round 3	*July 1995 Round 3*	*January 1996 Round 1*	*July 1996 Round 3*	*January 1997 Round 2*	*July 1997 Round 1*	*January 1998 Round 4*	*August 1998*
Market-led contracts								
Premier Service	2.66	2.85	2.24	2.91	3.71	4.20	4.20	4.10
Daily Demand	2.46	2.65	2.09	-	-	-	-	-
Flat	2.16	2.35	1.89	2.71	-	-	-	-
Ex-farm Profile	1.96	2.15	1.74	2.51	2.51	2.70	2.70	2.60
Supply-led contracts								
Standard Supply	1.66	-	-	-	-	-	-	-
Balancing Supply	1.16	1.65	1.44	2.21	-	-	-	-
Fluctuating Supply	0.76	0.95	0.84	1.41	1.71	2.20	2.20	2.10
Residual/Residual A*	0.00	0.20	0.20	0.00	0.00	0.50	0.50	-
Residual B*	-	0.00	0.00	-	-	0.00	0.00	-
Varying Supply	-	-	-	-	-	-	-	1.30
Capacity	-	-	-	-	-	-	-	0.00

Source: Milk Marque.

*After allowing for discounts and service fees.

5.67. If the price differentials in January 1998 and August 1998 are compared, it is apparent that the tailored Capacity contracts in August 1998 occupy a similar relative position in the price range to that occupied by the Residual B contract in January 1998. The pricing of the Varying Supply contract is midway between that of the Fluctuating Supply contract and the price the Residual A contract might have had if it had continued.

5.68. Figure 5.5 shows the price differential between the lowest- and highest-priced contracts plotted against the proportion of milk sold on supply-led contracts in each selling process. It might be expected that as the proportion of milk sold on supply-led contracts increased, Milk Marque would have reduced the price differentials to encourage more customers to use market-led contracts and restore the balance between its contract types. It did not do this: between the July 1994 and July 1997 selling processes the price differential between the lowest- and highest-priced contracts increased by nearly 2 ppl despite the strong movement towards supply-led contracts. Milk Marque told us that it believed that intervention by the OFT and strategic bidding by large processors had distorted the market; it did not consider that all contract prices should be driven down by what it felt to be unfair bidding behaviour.

Other contractual terms and conditions

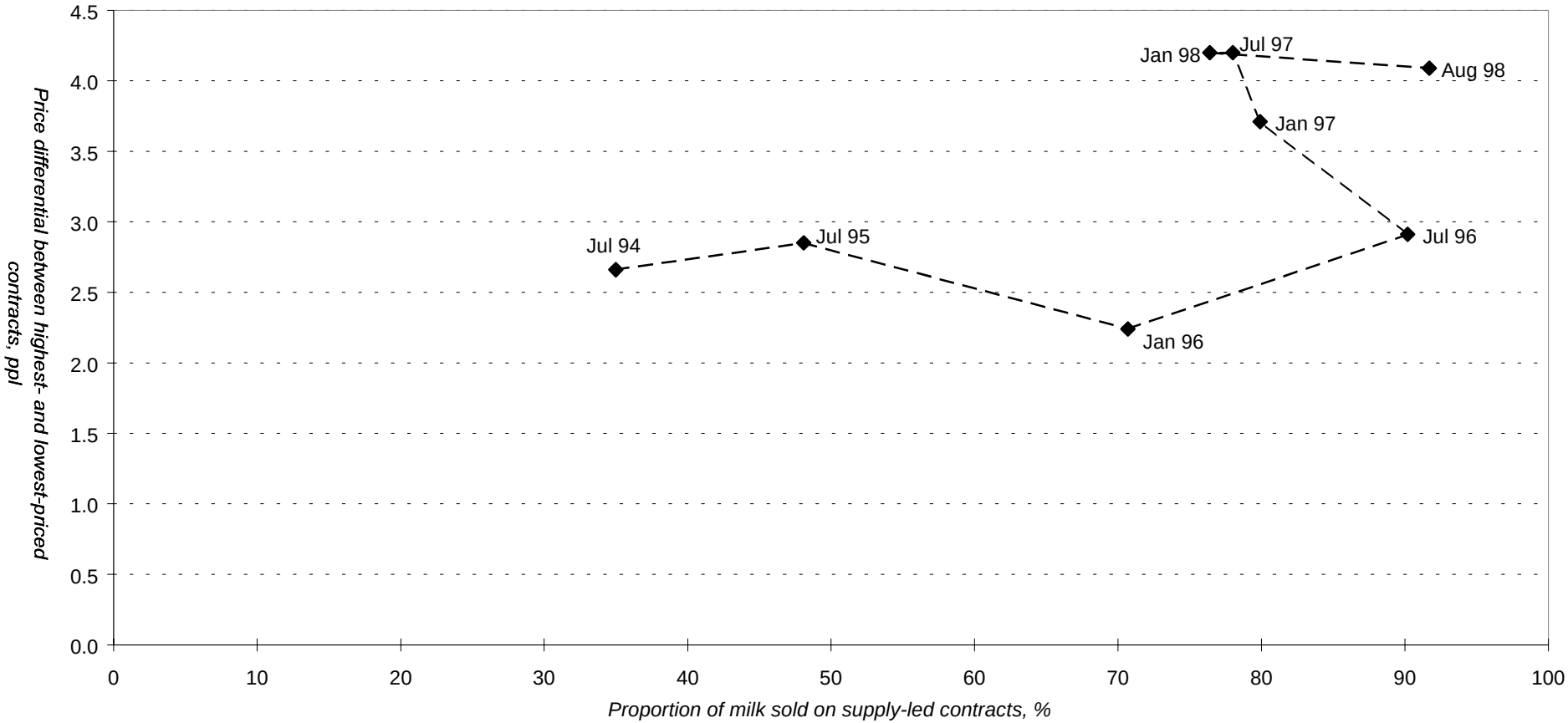
5.69. Milk Marque typically publishes the terms and conditions of all its contracts, together with the other relevant data and information, between two and three weeks before the closing date for each selling process. ‘General Conditions for the Sale of Milk’ contains the terms and conditions that apply to all contract types. ‘Specific Conditions for the Sale of Milk’ contains the particular conditions that apply to the contracts currently being offered. A description of the rules and procedures for each selling process is published in a brochure accompanying the contractual documents.

Milk Marque’s short-term markets

5.70. In each of the periods covered by the last five selling processes, Milk Marque has sold between 10 and 17 per cent of its milk by methods other than term contracts. These sales have mainly been made through the short-term markets, which are a key part of its selling arrangements. Milk Marque told us that short-term markets were needed to help both its customers and itself to deal with uncertainties in the market place by providing milk to balance short-term variations in milk production and customer requirements. Milk Marque added that its customers needed the flexibility to purchase milk on a short-term basis, as well as under medium- and long-term contracts. They might be starting

FIGURE 5.5

Price differential between highest- and lowest-priced Milk Marque contract types versus proportion of milk sold on supply-led contracts



Source: Milk Marque.

up production or need to supplement their purchases either to match growing requirements or to augment supplies, particularly on a seasonal basis. Milk Marque has therefore created two types of short-term market:

(a) a daily spot market operating one, two or three days ahead of delivery, under which a specified volume of milk was offered for sale; and

(b) a 'monthly' short-term market, which was in fact a forward market for each day's milk in a month, offered three to four weeks ahead of the month of delivery.

5.71. Both short-term markets operate through sealed-bid tenders in which customers bid for both prices and volumes. When tenders are opened in each of these markets, bids are ranked in descending order of price. Milk Marque then accepts bids until the aggregate volumes accepted match the volume offered. Successful customers then pay the price they have bid (rather than any lower price set by the last successful bid). A reserve price is set by reference to market-place returns for butter and SMP as well as the IMPE. The amounts provisionally allocated to short-term markets differ from actual sales owing to unexpected fluctuations in production or demand caused by factors such as drought or varying use of the contract term supply tolerances.

5.72. Table 5.11 summarizes the milk that Milk Marque has sold on its short-term markets or had processed under contract during the period covered by each selling process. The 'unplanned' sales shown are additional short-term sales held when milk was left unsold in Milk Marque's formal selling process.

TABLE 5.11 **Milk Marque sales on short-term markets and contract processing**

mlpd

	Selling process							
	July 1994	*July 1995*	*January 1996*	*July 1996*	*January 1997*	*July 1997*	*January 1998*	*Summer 1998*
Original allocation to short- term markets	0.55	0.50	1.30	1.30	1.30	0.50	1.30	2.00
Surplus/(deficit) from medium-term selling process	-	-	(0.20)	1.70	3.50	2.00	1.30	0.70
Provisionally available for short-term markets and contract processing	0.55	0.50	1.10	3.00	4.80	2.50	2.60	2.70
Actual sales on short-term markets								
Daily spot market	0.25	0.10	0.15	0.19	0.15	0.52	0.37	0.31
Monthly forward market	0.32	1.16	0.53	0.69	0.62	1.10	1.08	1.55
Bi-monthly market	-	-	0.19	0.27	0.34	-	-	-
Short-term advance sales	-	-	-	0.68	1.78	-	1.07	-
Total short-term sales	0.57	1.26	0.87	1.83	2.89	1.62	2.52	1.86
Of which unplanned	0.02	0.76		0.53	1.59	1.12	1.22	
Contract processing	-	-	-	-	0.20	1.04	0.30	0.80
Total sales outside selling process	0.57	1.26	0.87	1.83	3.09	2.66	2.82	2.66
Term contract sales*	19.63	19.01	18.68	16.05	14.99	14.18	13.88	12.80
Total sales	20.20	20.27	19.55	17.88	18.08	16.84	16.70	15.46
								per cent
Percentage of milk sold:								
Term contract sales	97.2	93.8	95.5	89.8	82.9	84.2	83.1	82.8
Planned short-term sales	2.7	2.5	4.5	7.3	7.2	3.0	7.8	12.0
Unplanned short-term sales	0.1	3.8	-	3.0	8.8	6.7	7.3	-
Contract processing	-	-	-	-	1.1	6.2	1.8	5.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Milk Marque.

*Sales in the current selling process and prior commitments from previous selling processes.
Note: Figures may not sum because of rounding.

5.73. Milk Marque told us that many of its customers were now seeking to purchase much larger volumes on the short-term markets. It believed that this was part of a strategy that involved reducing participation in the six-monthly selling processes to drive down prices.

5.74. Milk Marque considered that it had to strike a balance between the volume of milk that it could make available on a short-term basis and the risk of this milk remaining unsold (and the costs of managing that risk). It did not consider it practicable or desirable to sell large quantities of milk on the short-term market. Such a situation would lead to uncertainty that benefited neither farmers nor Milk Marque's customers. It would also create significant cost and logistical problems.

The secondary market

5.75. Given the perishability of milk, it is essential to have a mechanism for dealing rapidly with short-term imbalances between processors' milk supplies and their immediate requirements. Although the short-term market operated by Milk Marque allows processors with short-term shortages to obtain supplies, it does not permit them to dispose of surpluses. Processors have therefore established an informal secondary market for milk as a clearing mechanism through which they may trade short-term surpluses of milk. Milk Marque told us that this secondary market was well developed and involved both processors and traders. It catered particularly for transactions in milk purchased from sources other than Milk Marque. Milk Marque believed that the size of the secondary market could significantly affect its short-term and six-monthly contract markets by reducing the volume of milk sold.

5.76. Milk traded on the secondary market may be transferred to the purchaser either by diverting the initial delivery (which may incur some extra costs) or, at a higher cost, by making a secondary tanker movement of milk that has already been delivered. Milk Marque told us that, although it tried to assist its customers to sell supplies purchased from it through the secondary market, its ability to do so depended on management and transport resources being available. Milk Marque added that it had established two ways of dealing with secondary market issues.

5.77. Less frequent or one-off movements of milk were dealt with by diverting supplies through broker arrangements (see paragraph 5.114). Milk Marque would arrange up to 30 such diversions in each six-month contract period. Where there is a long-term problem, Milk Marque, or the customer, could suggest the assignment of a contract (or part of a contract) to another customer. The customer to whom the contract is assigned then took full responsibility for it, as though it had purchased the milk from Milk Marque in the first place.

Scottish Milk

5.78. Scottish Milk's customers are mostly located in the central lowlands of Scotland and in northern England (see paragraph 4.117). At deregulation, it adopted a computerized falling-clock auction system to sell its milk on short- and medium-term contracts. This system required customers to bid both volume and price for multiple lots of milk put into the auction market by Scottish Milk. Successful bidders paid the price they bid, which included delivery costs. In addition, the Scottish Milk system provided buyers with an entitlement to buy 'option milk' at a fixed price. Existing customers were given the option to purchase about 60 per cent of the volume they had previously purchased from the SMMB. The purchase price was based on the average price of Milk Marque's contract types. Customers were only committed to buying one month's supply of option milk at a time. In the five-month period ending 31 March 1995, about 45 per cent of Scottish Milk's sales by volume were of option milk. Buyers could give notice that they intended to accept or reject their entitlement to option milk.

5.79. Scottish Milk told us that the system as originally implemented quickly became unworkable when many customers rejected their option entitlements early in 1995, leaving it with large volumes of milk to dispose of. After consultation with its customers, Scottish Milk responded by introducing a major change to its selling system. It withdrew the option milk scheme and replaced it with individually negotiated contracts with processors (see paragraphs 9.48 and 9.49). It has, however, continued to use its auctions to sell small quantities of milk on short-term contracts.

Individually negotiated medium- and long-term contracts

5.80. Almost 90 per cent of Scottish Milk's sales are now made through individually negotiated contracts. Unlike the Milk Marque selling system, there are no predetermined contract types. Scottish Milk told us that all its contracts were the result of unfettered negotiations about the requirements of its customers. Most of Scottish Milk's contracts explicitly link the sale price to changes in the published prices of one or more standard Milk Marque contract types. Wiseman is by far the largest customer. We asked Scottish Milk to group its contracts into categories that corresponded broadly to Milk Marque equivalents. It did so but stressed that this categorization had no legal or commercial significance and the terms and conditions of the contracts varied widely within each category. A summary of those contracts in force in January 1999 is set out in Table 5.12.

TABLE 5.12 **Scottish Milk: contracts in force in January 1999**

Category of contract	*Number of contracts*	*Volume '000 lpd*	*Percentage of volume*	*Average ppl*
Flat	9	604	32.5	
Island milk	4	142	7.6	
Residual	2	353	19.0	✂
Tailored	2	760	40.9	
Total	17	1,859	100.0	

Source: Scottish Milk.

Short-term auction sales

5.81. About 3 per cent of Scottish Milk's sales are now made through its auctions. Auctions are held on a monthly basis. Any buyer who has been registered with Scottish Milk for at least five days can participate. Scottish Milk could delay or refuse registration if it had received inadequate information or unsatisfactory credit references or if a buyer had unsatisfactory milk receiving facilities. Registered customers may also participate in the daily spot market.

5.82. Scottish Milk added that the procedures for its sales were set out in its brochure, *Buying Milk from Scottish Milk*. Bid market sales are conducted using the 'falling clock' method. Registered customers may participate in a bid market sale by using a computer keyboard either at Scottish Milk's saleroom in Paisley or from a remote site. Buyers can stop the clock either by using their keyboard manually or by pre-programming their bid. Bids are subject to validation by the auctioneer and to any minimum or maximum purchase levels that had been set. Contracts are made at the prices bid when customers stop the clock.

5.83. Scottish Milk told us that it retained the right to set a reserve price in the bid market prior to each sale. Any milk that did not achieve the reserve price could be withdrawn from the market and sold by Scottish Milk at its discretion. Scottish Milk also reserved the right to buy milk in its bid markets. In addition, Scottish Milk could make a proportion of the milk in each bid market available for sale before the market sale. A customer could record his advance sale requirements at various premiums above the market price. Such an advance order constituted an irrevocable offer to purchase up to the number of lots indicated, at the premiums indicated on the form. In the auction, the customer bid for the pre-agreed volume of milk in the normal way. If successful, he paid the price at which the bid was successful and the premium previously notified. Should he fail to secure the pre-agreed volume in the bidding, he would be charged a market price for the milk plus a penalty. Customers were advised in writing whether they had been successful in securing advance milk. The advance sale procedure has not been used in the recent past.

5.84. Customers have to nominate a delivery point within 24 hours of buying at bid market sales and, if more than one delivery point is nominated, have to specify the quantities to be delivered at each. Additional charges are payable under certain conditions, including haulage outside Scottish Milk's standard delivery areas, non-standard supply profiles, delivery times or quality and changed delivery points. In order to cater for variations in the volume of milk supplied to it, Scottish Milk

reserves the right to vary the quantity of milk delivered and invoiced from that originally contracted to be purchased by 5 per cent in either direction.

5.85. Scottish Milk also makes milk available for a spot market each day. It told us that customers who had previously expressed an interest would be notified by fax about the volume to be sold on the spot market. Faxed bids were then taken and the milk sold to the highest bidder. Milk sold on the spot market would generally be delivered two days later. Again, to cater for variability in supplies, Scottish Milk reserves the right to vary the quantity of milk delivered and invoiced from that originally contracted to be purchased by 20 per cent in either direction. It told us that the power to vary quantities supplied in the bid and spot markets was used only in extreme circumstances, such as severe drought.

5.86. The SDA told us that it had not opposed the broad framework of Scottish Milk's original selling system, although it had expressed concern about some of its details. It did not believe that the subsequent changes, described in paragraphs 5.79 and 5.80, had been adequately discussed with customers and was concerned about the lack of transparency in the new system (see paragraphs 10.123 to 10.129). The OFT told us that, although it had received complaints about Scottish Milk soon after deregulation, no formal complaints had been made in recent years.

Other successors to the milk marketing boards

Claymore Dairies Limited

5.87. Claymore, the successor to the NSMMB, retains most of the milk collected from its members for processing into liquid milk, fresh cream, butter and cheese in its own subsidiary companies. Much of the remaining milk is sold to a small number of local dairies (see paragraph 4.151). Most milk that is surplus to local needs is sold to Caledonian Cheese and AMS or marketed through Scottish Milk. It also sells milk to Wiseman. Claymore told us that it did not have formal contracts for sales to other processors. Prices were normally set for six-month periods by negotiation with each customer. Recently, monthly reviews had been introduced to take account of rapid changes in the green pound. Claymore told us that the prices published by Milk Marque had been used as benchmarks in these negotiations. Much of Claymore's surplus milk had been sold at or below Milk Marque's Residual B price, after allowing for substantial transport costs. Regular customers received all the milk they required as Claymore normally had surplus milk.

Aberdeen Milk Company Limited

5.88. AMCO is the successor to the ADMMB. It does not purchase its members' milk but sells it for them on an agency basis. Its method of selling milk is thus completely different from that of Milk Marque. Contracts for an annual supply of milk are offered to each AMCO member's customers on a stand-alone basis at delivered prices. At the end of six months, or at the customer's request, AMCO and the customer review the contract and renew it for a new 12-month period. It told us that, in the event that a price could not be agreed after the review, the price paid in the preceding six months continued to apply and either party could terminate the agreement by giving six months' notice in writing. AMCO told us that the prices and terms agreed by it on behalf of its members were based on those of Milk Marque and Scottish Milk. Milk prices were normally agreed twice a year in April and September, when they were brought into line with those of other major suppliers.

5.89. Over 90 per cent of AMCO members' milk is supplied to Wiseman, with small amounts going to Scottish Milk and two small processors. Three contracts had been agreed with Wiseman: one for a flat supply profile and the other two for varying profile supplies at lower prices. In each case, the contract price would be adjusted in line with Wiseman's contracts with Scottish Milk, when they were reviewed. AMCO told us that its contracts were, in general, designed to ensure that the liquid milk demand in the North-East of Scotland could be satisfied. It added that any milk unsold in its major markets was processed by its subsidiary, AMS, into powder and butter. AMS also uses a small quantity of milk to make cheese.

United Dairy Farmers Limited

5.90. Although Northern Ireland is outside the terms of reference of our inquiry, the selling system operated there by United (the successor to the NIMMB) has been the subject of much comment to us. United uses two main methods of selling milk: a falling-clock auction system; and 'option milk' whereby established customers have the right to buy volumes based on total purchases in the previous year. Although they were critical of the 'option milk' scheme, several processors told us that United's auction system was successful in the context of its local market (see Chapter 10). We therefore describe the system in Appendix 5.4.

Other milk groups and direct supply

5.91. Other milk groups can be divided into quota-holding and non-quota-holding groups.

Quota-holding milk groups

5.92. Other than the three successors to the MMBs which hold quota (AMCO is not a quota-holding group), we have identified only four quota-holding milk groups, all of which are much smaller than Milk Marque and Scottish Milk (see paragraph 4.153). It is difficult for small milk groups to become quota-holders, as they need to be able to support the administration needed to manage and account for their quota to the Intervention Board (see paragraphs 3.54 and 4.40). Quota-holding, however, has considerable advantages once a milk group is large enough to support a small administrative team. It makes selling to more than one customer much less complex and makes it easier to change customers. This flexibility, together with the fact that the groups have corporate (rather than individual member) sales contracts, gives quota-holding groups increased bargaining power with their customers. As examples, we consider The Milk Group, which is the only one of these groups with more than 1 per cent of registered wholesale quota, and Sorn Milk, which demonstrates that it can be possible to run a very small quota-holding milk group.

The Milk Group Ltd

5.93. The Milk Group is the largest quota-holding milk group that is not a successor to one of the MMBs (see paragraph 4.154). It purchases the milk produced by its members and contracts with milk processors for the sale of that milk. The Milk Group told us that its contracts were based around the volume, composition and hygienic quality of milk supplied and the service required. It added that, unlike Milk Marque, it did not offer fixed 'contract types': all its contracts were individually negotiated with customers and had varying terms and conditions. The nature and purpose of each contract was determined in conjunction with the individual customer.

5.94. We examined a typical two-year contract with a major processor. Under this contract, an estimated volume of milk was to be supplied over the contract period to two specified dairies. This volume was to be the total production, collected every day, of a number of farms that were specified along with their production profiles in a schedule. The Milk Group could substitute other farms, after agreement in writing between both parties. Although it had to try to maintain production within the specified overall profiles, positive and negative supply variances for each dairy of up to 10 per cent monthly and 5 per cent annually were to be accepted by the processors without penalties.

5.95. The price paid was to be calculated from specified butterfat and protein compositional payments and was subject to seasonal price adjustments. The specified butterfat and protein contents were 4.1 per cent and 3.3 per cent respectively. A specific fixed price was quoted for each plant. However, the contract went on to specify that prices would be adjusted periodically in line with changes in the overall weighted average Milk Marque selling price.

Sorn Milk Ltd

5.96. We also looked at Sorn Milk as an example of a small quota-holding milk group. Sorn Milk, based in Ayrshire, collects and markets all the milk produced by its 33 members. Sorn Milk's milk is sold on three-month and six-month contracts to two customers on an ex-farm delivered price basis. Its contract is a simple document that sets out the price and the approximate volume and specifies that the milk will comply with Milk Marque standards.

Non-quota-holding milk groups and direct supply

5.97. Non-quota-holding milk groups usually supply one processor exclusively. Often a large processor requires its direct suppliers to join a tied non-quota-holding milk group that it effectively controls; some other non-quota-holding milk groups have more independence. In either case, the milk supply contracts are between the individual farmers and the processor. All the contracts that we examined for milk supplied by non-quota-holding milk groups were standard contracts that had been specified by the customer.

5.98. Non-quota-holding milk groups tend to be very dependent on the processor that acts as their quota-holder. Owing to their arrangements for quota administration, they find it difficult to sell to more than one customer and have a weak bargaining position. Becoming a quota-holding group would involve taking on administrative work which small farmer-led groups may be reluctant to consider. Changing their customer would also be a complex operation requiring documents to be sent to the Intervention Board to transfer quota administration from one processor to another. As a result, most non-quota-holding milk groups, particularly the many small ones, have little flexibility and may experience considerable pressure from their customers (see paragraphs 9.160 to 9.162). In many ways, they are in a very similar position to independent direct suppliers.

5.99. We examined EMP, the largest non-quota-holding milk group. As all the milk produced by EMP's members is sold to Express Dairies EMP is effectively tied to Express Dairies. Its ownership is divided equally between Express Dairies and the partnership's producer members. The members are represented through district and regional committees and share equal voting rights with Express Dairies on the EMP board, which agrees issues such as quality standards. Express Dairies negotiates prices with the producer members of the EMP board. EMP also acts as a forum for discussions on all aspects of the relationship between its members and Express Dairies.

5.100. In contractual terms, there is little difference between direct suppliers, who are not part of a milk group, and members of non-quota-holding milk groups. We considered the individual farmers who participate in the Unigate Business Deal (UBD) as examples of the former type of direct suppliers. Unigate's UBD contract is a comprehensive document covering more than the normal contractual matters, such as pricing and milk quality; it also has detailed provisions concerning farm management. It offers an additional bonus to direct suppliers who are members of a non-quota-holding milk group that commits all its supplies to Unigate. Individual direct suppliers (like non-quota-holding milk groups) rely entirely on their customer to administer their quota. They cannot effectively negotiate prices, terms or conditions with a buyer. Their sole bargaining power rests with their ability to choose between fixed packages offered by different purchasers in their area. A number of consultants, such as ADAS, offer a service designed to help such farmers choose the most profitable package on offer in their area.

The distribution of raw milk

Milk Marque's distribution arrangements

5.101. Milk Marque sells all its milk at uniform delivered prices, which include provision for collection and delivery costs. Customers do not have the option to collect their supplies. Under this system, despite significant differences in the distances and costs involved, customers pay the same price for any given contract type, regardless of the location of the farm supplying the milk and the

dairy processing it. At the beginning of our inquiry Milk Marque told us that each day some 950 vehicles operating out of 54 depots collected and delivered about 17 million litres of milk. Following closures, the number of depots had fallen to 45 by the end of 1998 [*Details omitted. See note on page iv.*]. The vehicles make nearly 2,000 deliveries daily to around 300 customer locations. As about 60 per cent of Milk Marque's 15,500 members are collected from on alternate days, there is a significant variation in collection points from day to day.

5.102. Figure 5.6 shows the location of the Milk Marque depots that were operating between July and September 1998. It also shows the amount of milk collected in that period by the depots in each county, divided between milk transported direct to customers and milk transshipped for long-distance deliveries. In the figure, Milk Marque's code number is used to identify each depot. The code numbers of depots that had closed between July and December 1998 are shown in brackets. Appendix 2.2 includes a full list of Milk Marque's depots, some of which are owned by Milk Marque and others by the relevant haulier.

5.103. Milk Marque introduced EODC after deregulation. To facilitate the spread of EODC, Milk Marque has encouraged its members to invest in improved milk storage vats and cooling systems by helping to make financial arrangements. It told us that approximately 70 per cent of its milk was now collected every other day with resulting environmental and cost advantages. EODC had also reduced farm costs through more efficient cooling and lower vat cleaning costs, particularly where modern vats had been purchased. Milk Marque added that, although milk collected every day was available at a premium of 0.3 ppl, this option was taken up on less than 1 per cent of its milk.

5.104. Milk Marque's reasons for selling milk on a delivered price basis are set out in paragraphs 8.127 and 8.128. This practice has been criticized by the DIF (see paragraphs 10.39 and 10.40) and by many large processors, as described in Chapter 10. Processors told us that they would like to have the option of buying milk at a lower farm-gate price and arranging their own collection. They considered that they could organize collection more efficiently than Milk Marque by combining the collection of Milk Marque milk with the collection of milk from their own direct suppliers. Milk Marque also told us that its members did not wish to have processors' vehicles on their farms for practical and commercial reasons. It also considered that its haulage tendering process had demonstrated that the in-house haulage businesses of the large processors were uncompetitive in tendering to haul milk. The large processors' share of Milk Marque's haulage had consequently fallen from 85 per cent under the EWMMB system to a low level. We consider this issue further in paragraphs 5.155 to 5.160.

Hauliers

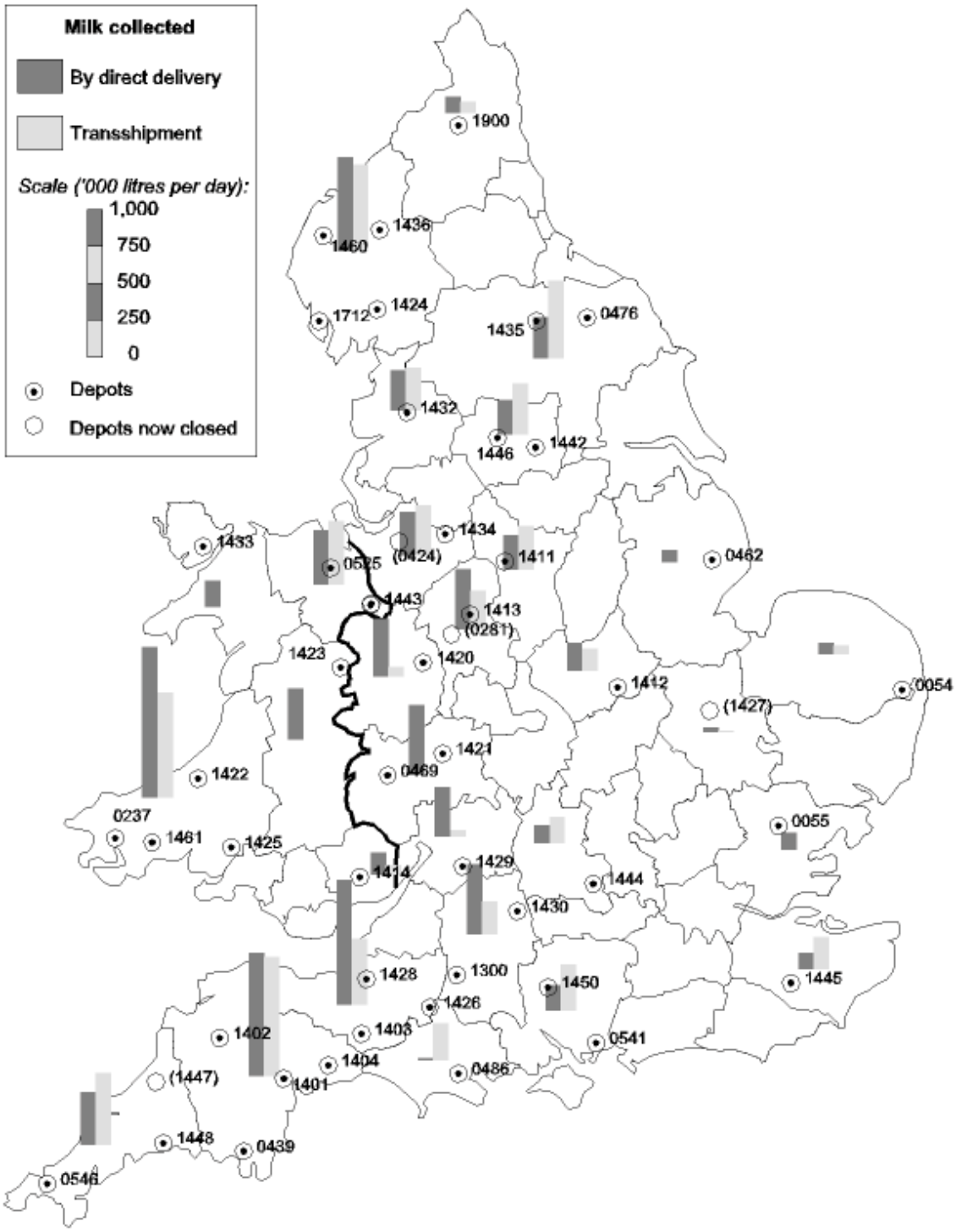
5.105. All Milk Marque's transportation is contracted out to specialist hauliers, following competitive tendering processes for areas centred on each of its depots. Contracts were initially awarded in three tranches for a period of three years. The former Dairy Crest vehicle fleet was made available for purchase at book value and, to encourage tendering, Milk Marque underwrote the value of the vehicles involved. To achieve this it gave each contractor an option that would compel Milk Marque to acquire the vehicles at book value in the event that the contractor lost its contract at the end of the three-year period. Initially, 167 companies expressed interest in tendering and 30 of these submitted tenders, of which 15 were successful. The successful contractors were either independent hauliers or the haulage divisions of dairy companies.

5.106. As the initial contract periods ended, Milk Marque has sought to reduce overheads by closing depots and rationalizing collection areas. It has then relet the contracts on termination dates which ensure that the entire portfolio of contracts is due for renewal or retendering in November 1999.

5.107. All hauliers work to common standards set out in Milk Marque's contract for the carriage of milk. Each is required to collect milk from a list of collection points specified by Milk Marque. Once Milk Marque has specified the collection and delivery points, hauliers are expected to assess the most efficient collection and delivery rounds for their vehicles, agree collection times with the farmers and finalize delivery times with customers. The hauliers are responsible for carrying out the procedures specified in Milk Marque's 'Drivers' Manual', including taking samples of the milk collected

FIGURE 5.6

Milk collected by Milk Marque depots in each county, July to September 1998, divided into direct deliveries and transshipment and showing depot locations



Source: MMC.

from each farm and delivered to each customer. They are responsible for keeping records of the amount of milk collected and delivered, the time of collection and the temperature of the milk. Hauliers are required to examine the milk before collection and reject any milk that contains foreign matter, has an abnormal appearance or smell or has a temperature of more than 5°C.

The planning of collection and delivery

The monthly plan

5.108. Each month, Milk Marque's supplies management team draws up a plan for each haulier, including the initial volume forecast to be supplied to each customer. The hauliers then agree a delivery profile with each customer. This profile is based on the volumes set out in the monthly plan, agreed collection times at farms and delivery time windows negotiated with customers. To allow for short-term variations in supply and demand, not all milk can be allocated at this stage and hauliers may appear to have unallocated supplies, which are only scheduled for delivery later in the process.

5.109. As set out in the individual views from processors in Chapter 10, some customers complained that Milk Marque's forecasts of the monthly availability of milk under its former Residual contracts were unreliable and that the volume of milk supplied under these contracts was subject to an unnecessary degree of variation. In response, Milk Marque told us that it provided forecasts to assist customers with production planning. Its forecasts were made with a high degree of accuracy, given the circumstances and the fact that milk supply was affected by many unpredictable factors. It added that the variability of the volume supplied within each type of contract was made clear to customers when they bid.

Planning the daily milk allocation

5.110. Each day's detailed milk allocation is produced 48 hours in advance. At this stage, Milk Marque adapts its monthly plan to reflect the supply and demand situation on the day and to incorporate changes initiated by Milk Marque, customers or the hauliers. With normal seasonal fluctuations, Milk Marque's aggregate daily milk supply varies by up to 20 per cent over the year and supply from individual farms may vary by considerably more, even before taking account of EODC. Milk Marque consequently needs to redirect supplies from day to day depending on variations in the farms being collected from, fluctuations in farm supply and variations in processors' requirements. Processors do not necessarily, therefore, receive their milk from the same farms on a regular basis.

5.111. Milk Marque uses a computerized allocation system each day to minimize the distance vehicles run in collecting and delivering milk. The output from this system determines the customers that each haulier is asked to deliver to on the next day.

Milk Marque-initiated changes

5.112. Variations in the overall level of supply from farms largely determine the volumes available for supply-led contracts, such as Fluctuating Supply, Residual and Varying Supply contracts. In the spring, when the daily level of supply can increase by 10 to 15 per cent, Milk Marque uses the daily supply tolerances in these contracts as an outlet for the increased production. This requires Milk Marque to introduce significant changes to the monthly plan.

5.113. Some customers complained that Milk Marque made very late variations in the volume of milk to be supplied under Residual contracts (for example, see paragraph 10.318). In some cases, it is alleged that only a few hours' notice had been given. In response, Milk Marque said that it had not been aware of this concern, but was always prepared to discuss particular problems with customers. Milk Marque added that breakdowns and emergencies sometimes caused late changes; a recent factory fire had, for example, required it to find new outlets on the day of the fire for some 600,000 litres of milk a day.

Customer-initiated changes

5.114. Customers can initiate changes by varying the volumes requested under Premier Service and some tailored contracts, by buying milk on the monthly and daily spot markets, or by requesting that milk be diverted to another delivery point (referred to as a 'broker movement'). Adjustments may also be needed to ensure that volumes meet overall contractual requirements or to assist customers with production problems.

5.115. To provide for customers' changing needs and to enable secondary trading to take place, Milk Marque has evolved a system of broker movements (that is, temporary diversions of milk to delivery points other than the one specified in each contract). These other locations could be either other plants owned by the original buyer or plants owned by other processors. Milk Marque applies conditions to broker movements and has developed a method of charging additional costs to customers. Milk Marque told us that it informed customers about these charges in advance and reminded them about the charges when they requested diversions.

5.116. The terms of Milk Marque's contracts with customers do not require it to vary delivery points to meet customer requirements. Milk Marque is, however, prepared to offer broker movements on a contract for up to 30 days in each six-month contract period. If more numerous brokering arrangements are required, Milk Marque suggests that either the contract should be assigned or the customer should make its own arrangements for moving the milk.

5.117. Milk Marque's charges for broker movements depend upon the nature of the movement. Where a farm collection tanker can be diverted to the new destination, a minimum charge of £32 per diverted load is made, even if the distance travelled is reduced by the diversion. If the diverted tanker travels more than 30 additional kilometres, a charge of 50p per additional kilometre is made. For a typical tanker load of 11,000 litres, these changes are equivalent to about 0.29 ppl and 0.005 ppl per additional kilometre over 30 kilometres, respectively. Milk Marque told us that these charges provided for planning the revised transport arrangements, agreeing delivery times with the new customer, telling the haulier to make the change, and making the necessary changes in invoicing as well as any additional transport costs that might be incurred.

5.118. Where transshipment tankers are involved, the charge for diversion is two-thirds of the cost of a spot-hire vehicle between the original customer's plant and the new delivery point, plus an administration charge of £22.

5.119. If the customer requires the milk to be diverted a greater distance than the distance originally scheduled, additional tanker resources may be needed. Milk Marque told us that any such additional costs are calculated and recovered from the customer. It added that the charges involved are explained to the customer at the time of quoting the rate for the change of destination.

5.120. Contract assignment is used to deal with longer-term diversions of milk. Milk Marque told us that it usually requires a month's notice to assign a contract. The customer may then assign a contract, or part of a contract, to another buyer for the remainder of the contract term. If the change of destination causes additional costs, these are charged to either the new customer or the original purchaser.

5.121. Several processors complained that Milk Marque sought to limit or discourage broker movements and that these limitations affected their ability to dispose of surplus milk on the secondary market (see Chapter 10). These customers also considered that Milk Marque's diversion charges were not cost-related and that its policies made it more difficult for processors to balance their milk supplies by hindering the development of the secondary market.

5.122. Milk Marque told us that it had always been prepared to meet requests from customers to depart from its contractually agreed delivery arrangements, provided that they reimbursed it for the additional costs. Milk Marque added that, even in cases where the distance travelled was shortened by the diversion, it was necessary for it to hire sufficient tanker capacity to provide for the original longer journey. Milk Marque considered that, if there were no charge for diverting supplies, there would be an incentive for multi-site processors to order large volumes of milk for their liquid milk plants near London and then regularly divert these supplies to their manufacturing creameries in the West

Country. It felt that this tactic would be adopted to affect Milk Marque's cost structure adversely and weaken its position in competing against the processors to recruit or retain milk producers.

Haulier-initiated changes

5.123. Hauliers may need to make changes in response to changes in the supply profile of the milk field. Once the revised daily allocation has been determined, Milk Marque sends the hauliers faxes notifying them of the customers and volumes they are to supply. It also sends faxes to customers notifying them of the hauliers that will be supplying them and the volumes they will be delivering. Large customers may receive deliveries from several hauliers on the same day. Finally, the individual hauliers contact the customers to confirm the delivery profile for the day.

Day-ahead amendments

5.124. Customers or Milk Marque can initiate further planned amendments at 24 hours' notice. These arise from such problems as plant cleaning and maintenance, replacement of rejected supplies or adjustments to supply or delivery profiles.

On-the-day amendments

5.125. Customers or Milk Marque may need to make unplanned amendments on the day. In addition to the problems that cause planned amendments, unplanned amendments may result from operating problems such as plant breakdowns, on-site vehicle conflicts, tanker and silo rejections, vehicle breakdowns or on-farm quality problems.

Handling of milk during collection and delivery

5.126. As described earlier in this chapter, most milk is collected on alternate days. Much of it is, therefore, likely to be collected either shortly after milking or about a day later. Exceptionally, it may be collected up to 48 hours after milking. On the farm, milk is held in refrigerated tanks. The tankers used to collect milk are special-purpose vehicles with a typical capacity of 26 tonnes and limited alternative uses. They are insulated to preserve the temperature of the milk, but have no cooling or refrigeration system. To safeguard the quality of milk supplied to customers, Milk Marque aims to deliver it at a temperature below 5°C and guarantees that it will be delivered at a temperature below 6°C. Milk Marque seeks to ensure that all milk is delivered to processors within 24 hours of being collected from the farm. A large proportion is delivered within 12 hours of collection.

5.127. There is no holding capacity at Milk Marque's depots; milk is normally delivered direct to nearby customers using the vehicles that collected it. However, a significant amount of Milk Marque's milk has to be transported over long distances. This milk is often taken to a depot for transshipment into larger multi-purpose tankers, which typically have a gross capacity of 38 tonnes, allowing a maximum load of about 25,000 litres of milk. The proportion of its milk that Milk Marque transships is increasing: in 1998 over 45 per cent was transhipped. To reduce transport costs, these large vehicles may also be used for the haulage of other compatible food products, such as bulk sugar, on a small proportion of return journeys.

Scottish Milk's distribution arrangements

5.128. Scottish Milk sells a large proportion of its milk on the same uniform delivered price basis as Milk Marque and many of its collection and delivery arrangements resemble those of Milk Marque. On occasion, however, Scottish Milk may make additional haulage charges to customers for such extra service requirements as delivery to varying nominated sites and the delivery of particular types of milk. Because customers' daily requirements vary and as many of Scottish Milk's members are

collected from on alternate days, there is a marked variation in collection and delivery points from day to day.

Hauliers

5.129. All Scottish Milk's transportation was contracted out to specialist hauliers, following competitive tendering processes for contracts for each of 14 milk fields. Milk field boundaries were drawn to minimize the number of fields whilst ensuring that no member was more than 60 minutes' driving time from a depot. Members are allocated to a haulier but, as for Milk Marque, Scottish Milk customers can receive milk from any of the hauliers.

5.130. All Scottish Milk's hauliers work to common standards set out in its milk haulage general terms and conditions. Each is required to collect milk from a list of collection points specified by Scottish Milk. The hauliers are responsible for carrying out the procedures specified in Scottish Milk's 'Tanker Operators Manual', including taking samples of the milk collected from each farm and delivered to each customer. They are responsible for keeping records of the amount of milk collected and delivered, the time of collection and the temperature of the milk. Hauliers are required to examine the milk before collection and reject any milk that contains foreign matter, has an abnormal appearance or smell or has a temperature of more than 7°C.

Daily supply pattern

5.131. To determine the delivery pattern for the next day, Scottish Milk first updates its production volumes using the latest collection figures from each milk field. At the same time, customer requirements, including any planned spot market sales, are collated and updated to take account of changed delivery points. Using a matrix of delivery costs from each milk field to each customer site, Scottish Milk then determines the delivery pattern that will achieve the lowest estimated overall cost.

Delivery points

5.132. If a delivery point is not in Scottish Milk's standard delivery area, which is based on its milk collection area, it may make an additional haulage charge. Scottish Milk is not contractually obliged to deliver milk to any point other than the nominated delivery point. It normally does agree to customer requests for variations in delivery points, which may be subject to the payment of an additional charge.

Handling of milk during collection and delivery

5.133. The tankers used to collect milk are similar to those used by Milk Marque. To safeguard the quality of milk supplied to customers, Scottish Milk's contracts require it to deliver milk at a temperature of 6.5°C or less.

5.134. As for Milk Marque, Scottish Milk has no holding capacity at depots and milk is normally delivered direct to customers using the vehicles that collected it. Milk that is to be transported longer distances may be taken to a depot for transshipment into larger trunking vehicles.

Collection and delivery arrangements for other milk groups and direct supply

Aberdeen Milk Company Limited

5.135. AMCO acts as an agent in selling its members' milk on a delivered price basis. It collects and delivers all the milk produced by its members using its own fleet of tankers. Customers wishing to collect could, however, do so.

Claymore Dairies Limited

5.136. Claymore collects and delivers all the milk produced by its members using its own fleet of tankers. The bulk of its milk is transported to Claymore's own plants for processing. Where long-distance secondary haulage between depots is required, Claymore uses contractors' vehicles. Claymore awards contracts for secondary haulage on the basis of annual quotations.

Other quota-holding milk groups

5.137. Few milk groups, other than the successors to the MMBs, make their own arrangements for collecting and delivering milk. Most sell their milk at a farm gate price with collection to be arranged by the purchaser.

5.138. We have identified four quota-holding milk groups that are not successors to the MMBs (see paragraph 4.153). Most of these, including The Milk Group, which is the largest, are among the small proportion of milk groups that make their own arrangements for transportation.

The Milk Group Ltd

5.139. The Milk Group operates in three distinct areas (see paragraph 4.155). It told us that it arranged milk collection and delivery from its members' farms to its customers' dairies using six independent hauliers. These hauliers had submitted competitive quotations for rounds based on forecast volumes for everyday collection from allocated farms. The haulage contracts ran for six months or longer. In some cases, however, customers arranged to collect their milk. The Milk Group's hauliers operated from 14 depots that they owned. Transport costs were not directly taken into account in selling prices, but the overall net sales return to the Group was taken into account when negotiating terms with the customers. The Milk Group felt that it might have negotiated better haulage rates because its hauliers operated the same collection and delivery rounds each day. This also enabled it to offer full traceability of supplies.

Non-quota-holding milk groups and direct supply

5.140. We are not aware of any direct suppliers or non-quota-holding milk groups (other than AMCO) that arrange their own collection and delivery. Most non-quota-holding milk groups, such as EMP, and direct suppliers are effectively tied to one processor and rely on it to collect milk from their farms. As processors normally seek direct suppliers close to their plants, collection costs tend to be lower than for Milk Marque or Scottish Milk (see paragraphs 5.151 and 5.153).

Collection and delivery costs

Milk Marque

Transport costs

5.141. Table 5.13 shows that Milk Marque's average unit transport cost increased by 12 per cent from [✂] ppl in its first five-month period ending on 31 March 1995 to [✂] ppl in the year ending 31 March 1997.

TABLE 5.13 **Milk Marque transport costs**

	*1994/95**	*1995/96*	*1996/97*
Total haulage costs (£m)			
Milk transported (m litres)			
Costs per litre:			
Farm collection (ppl)		*Figures omitted.*	
Transshipment (ppl)		*See note on page iv.*	
Other direct distribution costs (ppl)			
Total (ppl)			
Average ex-farm trip (km)			
Average transshipment trip (km)			

Source: Milk Marque.

*Quantities for the five-month initial period in 1994/95 multiplied by $\frac{12}{5}$.

5.142. Milk Marque explained that, over this period, there had been a significant increase in the cost of fuel, which represented about 20 per cent of transport costs. Fuel costs had increased by 12 per cent in 1996/97 alone. In addition, hauliers had invested about £30 million since vesting day in replacing ageing vehicles. This had increased the typical size of Milk Marque's ex-farm collection tankers from 17 tonnes to 26 tonnes.

Transport efficiency

5.143. In addition to the overall cost per litre of milk collected, Milk Marque uses four operational performance indicators to assess the efficiency of its transport system: litres per trip, trips per vehicle per day, litres per vehicle per day and litres collected per kilometre travelled by the vehicles. As shown in Table 5.14, it has achieved improvements in each of these operational performance measures since 1995. Despite this, the overall transport cost per litre of milk collected has increased.

TABLE 5.14 **Milk Marque transport performance measures**

	Calendar year	
Performance measure	*1995*	*1997*
Litres per trip	9,674	11,165
Trips per vehicle per day	2.33	2.48
Litres per vehicle per day	22,568	27,742
Litres per vehicle-kilometre	109	120

Source: Milk Marque.

5.144. These operational efficiency gains have been achieved despite large reductions in both the volume collected and the number of collection points, resulting in an increase in the distance between collection points. The increase in litres per trip has been achieved through an increase in average vehicle size. Milk is only collected from a farm if the tanker still has room to take its full consignment. Consequently, the amount of milk that can be carried is usually less than a full load. Improved planning of collection rounds is thus an additional factor in improving vehicle utilization. Extended operating hours have permitted more vehicles to make three trips per day, rather than two, resulting in an increase in the average number of trips per vehicle.

Efficiency benchmarking

5.145. Milk Marque told us that it had compared the efficiency of the various contractors working for it and sought to identify and spread best practice. It had also exchanged data with Dutch and Irish co-operatives. These efficiency comparisons demonstrated that the Dutch and Irish co-operatives were achieving between 239 and 280 litres per vehicle-kilometre compared with Milk Marque's 120 litres per vehicle-kilometre. Milk Marque explained the difference in terms of:

(a) the greater density of milk fields in Holland and Ireland;

(b) the use of larger vehicles in Holland than would be permitted in the UK; and

(c) the use of every third day collection in Holland.

5.146. Milk Marque considered that its denser milk fields, such as those in West Wales, produce results closer to those for Holland and Ireland, despite Milk Marque's more frequent collections.

5.147. Milk Marque told us that it had benchmarked its collection and delivery operation against a domestic oil delivery operation and had found the costs to be similar. It had also compared the cost of its trunking tankers with that of a supermarket distribution operation and had again found the unit costs to be close.

Scottish Milk's transport costs

5.148. [*Details omitted.* *See note on page iv.*] It estimated that, between the same two periods, the average distance its hauliers travelled to make a delivery has increased from 36 miles to 51 miles. Scottish Milk told us that the main cause of this increase was a growth in sales to customers outside its collection area. These sales had risen from 9.6 per cent of sales in the five-month period ending on 31 March 1995 to 27.0 per cent of sales in the year ending on 31 March 1997. Scottish Milk also explained that the costs incurred by hauliers had risen: according to *Motor Transport*, between 1994 and 1998 these cost increases had included a 25 per cent increase in the cost of fuel and a 12.5 per cent increase in wages.

Efficiency comparisons by Scottish Milk and other milk groups

5.149. Although Scottish Milk has not carried out any formal efficiency benchmarking studies, it has attempted to compare its transport costs with those of other co-operatives. It does not, however, regard this information as being sufficiently reliable to provide an effective benchmark for its efficiency. Both AMCO and Claymore told us that they had not analysed the efficiency of their transport operations or benchmarked their costs against other milk groups or similar haulage operations. AMCO told us that quotes it had received from independent hauliers had, however, been higher than its own transport costs.

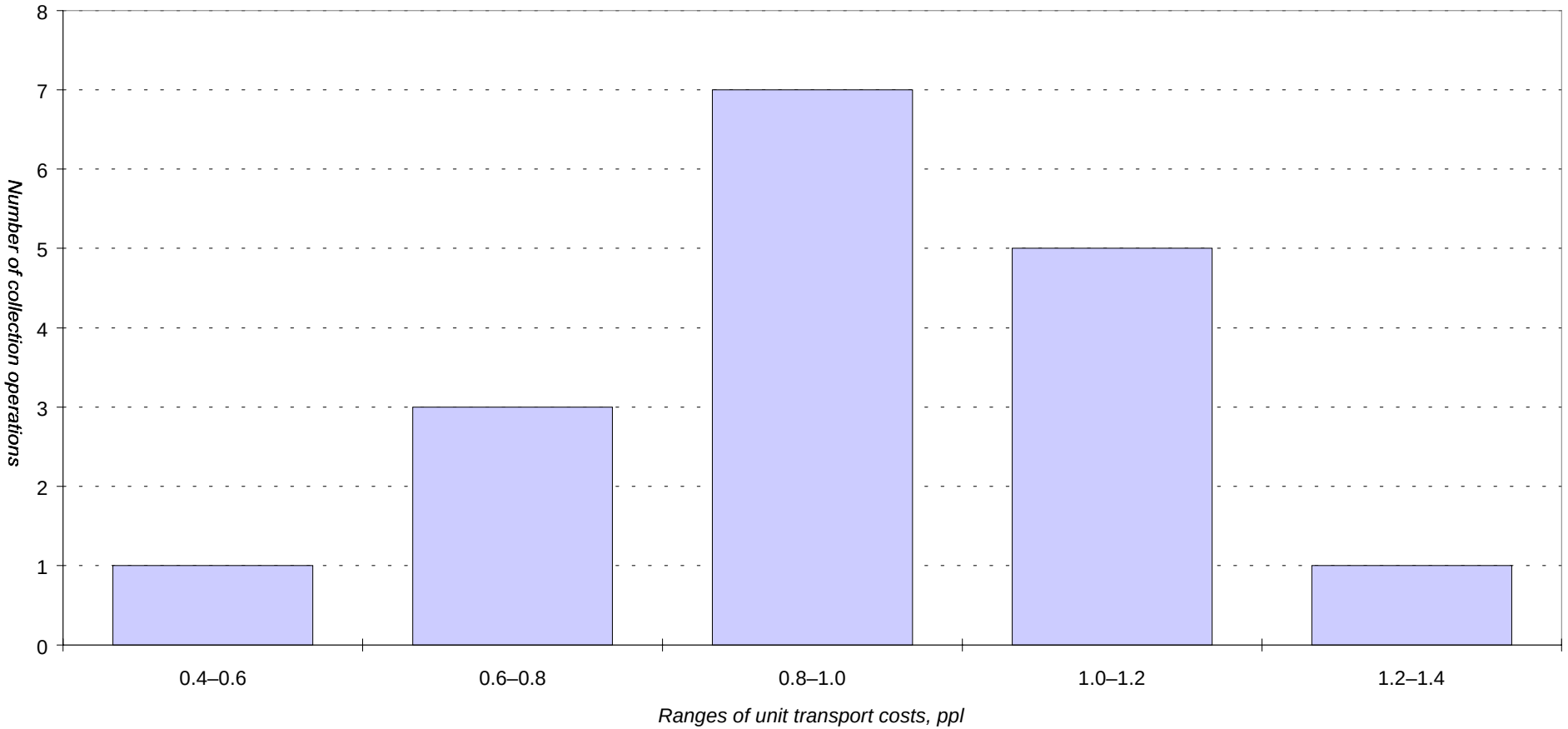
Comparative costs of milk collection operations

5.150. We obtained information on their transport costs of raw milk from a number of milk processors. Figure 5.7 shows how many of their collection operations had average milk collection costs per litre within each range of unit costs. In some cases, separate costs for regional depots are included in the analysis, rather than average costs over the entire group.

5.151. Figure 5.7 indicates that Milk Marque's average overall transport cost of [✂] ppl (including transshipment) is higher than the comparative collection costs of any of the processors, which range from 0.590 ppl to 1.310 ppl. Milk Marque told us that it carries out a disproportionate share of the long-distance movements of milk, which require transshipment (see paragraph 5.127), and it is likely that many of the processors were transporting their milk over significantly shorter distances.

FIGURE 5.7

Milk processors' raw milk collection costs



Source: Milk processing companies.

5.152. Some of the lowest cost figures in Figure 5.7 were, indeed, supplied by processors who were collecting from limited numbers of farms very close to their plants. As we have no reliable information on the comparative distances travelled by the vehicle fleets, we have been unable to estimate the effect of distance travelled on average costs per litre. It seems possible, however, that Milk Marque's commitment to three-year haulage contracts may have reduced its ability to adjust its transport costs in response to the decline in its membership and the quantity of milk it collects. Milk Marque disputed this theory and considered that its haulage contracts had proved sufficiently flexible to cope with changing milk volumes.

5.153. [*Details omitted. See note on page iv.*] As in the case of Milk Marque, it is likely that Scottish Milk is transporting its milk over significantly longer distances than most of the processors.

5.154. Scottish Milk told us that it provided its customers with supplementary services for which it received additional revenue that largely covered its extra transport costs. These services included a number of elements that were not provided for in the processors' transport costs from their direct supply farms:

(a) deliveries to distant customers (see paragraph 5.132) who in the furthest cases paid an additional charge; and

(b) such additional services that attracted additional payment as:

(i) the delivery of special types of milk such as milk from cows of only the Ayrshire breed;

(ii) the provision of varying levels of supplies to customers to balance their other sources of milk; and

(iii) the supply of milk on flat delivery profiles.

Overall cost minimization and the selective recruitment of direct suppliers

5.155. The collection and delivery of milk in Great Britain can be viewed as one complex system. The overall cost of the flow of milk from farms to processing plants would not be minimized simply by supplying each plant from the nearest farms. In practice, this would also be impossible to achieve in all cases. There are two main factors contributing to this complexity.

5.156. First, the supply of milk from a farm to a processing plant is not, in nearly all cases, a simple one-to-one process. Typically, it is necessary to collect milk from about 15 farms to fill a tanker. As a result, one of the most critical issues in efficient milk collection is assembling compact cost-effective collection rounds.

5.157. Second, supply and demand are not necessarily located in the same areas and the amount of milk arising in a depot's collection area may be much greater than demand in the vicinity. This often necessitates transshipment and long-distance trunking operations. On a national scale, there is an imbalance between the location of milk production and the location of processing plants. Most dairy farms tend to be located in rural areas, particularly in the western parts of Great Britain. Owing to the removal of water in processing, cheese, butter and milk powder are lighter, more compact and less perishable, and thus cheaper to transport, than the milk they are produced from. They consequently tend to be manufactured in areas near many dairy farms. By contrast, the liquid milk bottled or packaged in dairies is more expensive to transport than bulk supplies of milk in tankers. As a result, liquid milk processing plants tend to be located close to major population centres (see Figure 4.2). The effect of this is to create a need for long-distance flows of milk, mainly from west to east.

5.158. In theory, the overall costs of such complex systems can be minimized by planning all flows centrally, using complex mathematical optimization models. This is indeed the approach Milk Marque adopts to planning its own milk flows. Any factor that detracts from the overall optimization (such as some flows being changed from the optimal pattern) will usually result in some loss in efficiency and hence increased costs. In view of the east/west imbalance between milk production and

processing (see paragraph 4.8), an overall optimization of milk flows in Great Britain would produce a minimum cost collection and delivery pattern that often involved processing plants being supplied from farms well to their west rather than from the nearest farms.

5.159. As viewed by an individual processor, this optimization may appear to be inefficient. A processor could probably identify farms that are nearer than those allocated to it by the optimization model. If the processor were supplied from these farms, lower delivery costs would be incurred, taken in isolation. However, the overall effect would be to lengthen the distance that other processors' milk had to be transported and increase overall transport costs.

5.160. This produces a dilemma. Individual large processors supplied by Milk Marque are in a position to obtain milk supplies at low delivery costs by selectively recruiting, or 'cherry picking', local Milk Marque members as direct suppliers. As Milk Marque charges uniform delivered prices, this is likely to reduce the processors' overall costs. However, the result of removing these farms from the Milk Marque system is likely to be an increase in Milk Marque's unit costs of collection and delivery. Consequently, either the prices charged to its remaining customers would have to increase or the payments made to its remaining suppliers would have to fall. A similar position would apply in the case of Scottish Milk. This effect accounts, in part, for the high collection and delivery costs of Milk Marque and Scottish Milk, relative to other transporters of milk, and the rate at which they are losing members who wish to become direct suppliers.

Milk quality and traceability

Statutory requirements

5.161. The statutory quality requirements that all producers and wholesalers have to meet are set out in Appendix 5.5. The appendix also describes the additional contractual and other quality and traceability requirements set by some milk groups and processors.

5.162. In outline, all producers selling milk in England and Wales are subject to the statutory quality requirements set in the Milk and Dairies (General) Regulations 1959, the Dairy (Hygiene) Regulations 1995 and the Dairy Products (Hygiene) (Amendment) Regulations 1996. These regulations require them to safeguard their milk supply from exposure to infectious diseases, to register with MAFF and to receive routine visits from the Dairy Hygiene Inspectorate. Similar requirements apply in Scotland.

5.163. First purchasers of milk in England and Wales (see paragraph 3.54) are regulated under the Dairy Products (Hygiene) Regulations 1995 and the Dairy Products (Hygiene) (Amendment) Regulations 1996. These regulations require them to monitor the milk for the legal minimum standards concerning hygienic quality and the presence of somatic cells, extraneous water, antibiotic residues and other substances harmful to human health. The Food Safety Act 1990 sets further general standards for the safety and accurate description of foods, including milk. Various other detailed regulations and codes of practice set out minimum standards for food contamination by particular substances. Similar regulations and standards apply in Scotland.

Milk Marque

Quality standards

5.164. Milk Marque warrants that, on delivery, its milk:

(a) will be pure raw milk with all its cream;

(b) will be sweet, clean, and marketable;

(c) will have no preservatives added; and

(d) will comply with all applicable statutory requirements relating to the sale of milk.

Further contractual and other quality and traceability requirements that Milk Marque sets for itself and its members are described in Appendix 5.5.

Quality assurance

5.165. To ensure that all its quality requirements are met, Milk Marque publishes a milk quality reference manual for its members and operates a quality assurance scheme known as its 'Food Safety Assurance Scheme'. A sample is taken each time milk is collected from a farm, both as a record of the quality of milk collected and to enable routine weekly hygiene tests to be carried out.

Traceability

5.166. The traceability of supplies is an important quality issue in the dairy industry, particularly as regards the liquid milk requirements of the major supermarkets that are seeking steadily longer shelf lives. Milk Marque introduced every-collection sampling in August 1995. Each time one of its tankers makes a farm collection, a sample of the milk is taken. If problems occur, Milk Marque can identify all farms making up the tanker load and abnormalities can be traced back to the individual farm concerned.

5.167. Early in our inquiry, several of Milk Marque's largest customers told us that this form of traceability had not provided them with the degree of quality assurance that they wanted. This criticism is set out under the respective processors' views in Chapter 10. Although it had enabled Milk Marque to trace the source of problems after they have occurred, the supporting information had not generally been available to customers. Processors with major direct supply operations require detailed information from each farm supplying them. They typically also seek the power to require an independent expert inspection of a farm. Processors wanting this type of traceability told us that they had not been satisfied with Milk Marque's existing arrangements that did not tell them from which farms their supply came.

5.168. Milk Marque told us that it was developing arrangements to overcome this problem. They would enable it to guarantee to a processor that its milk had been produced by a number of farms in a pool previously identified to the processor. In August 1998 it had signed tailored contracts with its major customers to provide farm assured milk that met all their requirements and those of the major supermarket groups. Milk Marque added that information relating to its members was now accessible by customers where a specific requirement existed, for example, satisfying the traceability standards of retailers.

5.169. We consulted the major supermarket groups about whether Milk Marque's traceability arrangements met their quality assurance requirements. The supermarket groups confirmed that they required all milk suppliers to keep full records of the farms that supplied their milk. One group was concerned that the process of tracing the source of any problems might take longer if Milk Marque, rather than the group's immediate supplier, held the records. Most were, however, satisfied with the arrangements that Milk Marque was now developing. The supermarket groups' responses are set out in Chapter 11.

Farm welfare

5.170. Milk Marque developed its animal welfare code of practice, 'The Welfare of the Dairy Cow', in conjunction with J Sainsbury plc. Milk Marque told us that more than 98 per cent of its members were committed to meeting its requirements. Their performance was being verified through farm visits by trained, experienced staff. Consequently from its January 1998 selling process onwards, Milk Marque was able to offer welfare-assured milk as an option.

Scottish Milk

5.171. Scottish Milk's milk quality standards are outlined in Appendix 5.5. The standards, which are set out in Schedule 2 of *Buying Milk from Scottish Milk*, cover similar organoleptic, compositional, microbiological and physical requirements to those set by Milk Marque.

Other quota-holding milk groups

5.172. We examined the quality requirements in the contract between the largest quota-holding milk group that is not a successor to one of the MMBs, The Milk Group, and one of its large customers. It included a warranty similar to Milk Marque's (see paragraph 5.164). Minimum standards were specified including a butterfat level of 3.2 per cent and a protein level of 2.8 per cent, a maximum delivery temperature of 7°C, and a maximum total bacterial count (TBC). Samples of the milk collected from each farm were to be analysed by an independent laboratory that would make the results available to both the customer and The Milk Group. The contract also required The Milk Group to provide average monthly somatic cell counts and TBC results for each site.

5.173. We also examined the contract between a small quota-holding milk group and a large processor. This simple document just specified that the milk supplied would comply with Milk Marque's accepted standards for delivered milk.

Non-quota-holding milk groups and direct supply

5.174. We asked each milk processor for a copy of a typical supply contract with each of its suppliers and examined all the supply contracts between individual members of non-quota-holding milk groups and processors. In each case they were standard contracts that had been specified by the processor (see paragraph 5.94). These contracts included extensive quality requirements covering not only the quality of the milk supplied but also details of farm assurance and welfare. The basic milk quality standards covered similar parameters to those in the quota-holding groups' contracts with processors. The requirements specified by some processors were, however, more exacting than those quota-holding milk groups set for their members. The contracts specified and rewarded standards of excellence that significantly exceeded the statutory requirements. In one case, these requirements included an evaluation of stockmanship, farm inspections and a 'preferential farm management arrangement' that offered financial benefits to producers who used products and services nominated by the processor. The processors concerned told us that such quality requirements were needed to meet the quality demands made by their customers. They added that these requirements have subsequently formed the basis of a national dairy farm assurance scheme supported by the major multiples and sponsored by the NFU, the British Dairy Cattle Veterinary Association and the DIF.