

Chapter 4--Motives of NCE Traders

As discussed in Chapter 3, the NCE has the classic characteristics of a thin market: During 1988-1993, less than 0.3 percent of all cheese manufactured was sold on the Exchange, and trading was concentrated among a few traders.¹ Although thin markets may arise for a variety of reasons, they inevitably raise questions of their effectiveness in generating competitively determined prices, including whether they are susceptible to, or facilitate, market dominance or manipulation.

In this chapter we shall (a) review alternative beliefs or hypotheses regarding the function of the Exchange; (b) test the conflicting hypotheses of trader motivation by examining overall trading patterns; (c) examine the business characteristics of leading traders to determine whether they benefit financially from higher or lower NCE prices; (d) analyze why traders may prefer to sell in the spot market as an alternative to the NCE; and (e) examine documentary evidence of trader motives.

A. Functions of the NCE

The National Cheese Exchange serves two functions: (a) it provides a centralized cash market at which members may buy or sell cheese each Friday morning for about 30 minutes beginning at 10:00 a.m.; and (b) it establishes a block and barrel price or "market opinion" based on the last sale, highest bid or lowest offer. The "market opinion"² or settlement price is used as

¹ Although there are about 40 members of the Exchange representing over 90 percent of the cheese manufactured in the United States, only a few members actually trade on the Exchange.

² The NCE does not issue the barrel/block "market opinion" at the end of each trading day. Rather, *The Cheese Reporter*, a trade publication not affiliated with the NCE, reports a "Market Opinion" as to the price level at the end of each trading day. It began doing so

the basis or reference price in formula pricing 90-95 percent of all cheese transactions made off the NCE.³ Many marketers also use NCE prices to establish the wholesale selling price of cheese, both for private label brands sold to grocery retailers and food service cheese customers and, to some degree, for weaker company brands.

There are conflicting views as to the primary function of the NCE and the motives of leading traders on the Exchange. One view holds that traders use the NCE primarily because it provides a cash auction market for the sale or purchase of cheddar cheese. An alternative view is that traders use the Exchange in order to influence the price.

Among those holding the first view is the long-time president of the NCE, Richard J. Gould. As he sees it,

[T]he primary purpose of the Exchange is to furnish facilities for those who want the Exchange as an alternative source of supply and as a place to dispose of a surplus. It is an alternate market but it cannot be used for distressed or otherwise unmarketable cheese. The Exchange can and does furnish a comfortable market alternative in a highly competitive business. Most trading in cheese, however, is done in regular commercial channels--retail and wholesale outlets. The primary value of the NCE lies in its availability.⁴

all transactions on the Exchange. Subsequently, the USDA assumed responsibility to act as the market reporter and to report Exchange prices in its *Market News Reports*. "All About the National Cheese Exchange," *The Cheese Reporter*, Madison, Wisconsin, October 21, 1988, pp. 47-48. Thereafter, the *Cheese Reporter* has continued to publish a market opinion based on the "last significant transaction" on the Exchange as reported in USDA *Market News* reports.

³ Kraft General Foods, Inc., *National Cheese Exchange*, May 10, 1990, KGF 16971, 16978.

⁴ Richard J. Gould, "The National Cheese Exchange," in M.L. Hayenga (ed.), *Pricing Problems in the Food Industry (with Emphasis on Thin Markets)*, Northwest Regional Research Bulletin 261, College of Agriculture and Life Sciences, University of Wisconsin-Madison, February 1979, p. 80.

Although NCE prices are used as a basis for pricing 90-95 percent of manufactured cheese transactions made off the Exchange, Mr. Gould explains that setting cheese prices is not the "real function" of the NCE:

[T]he emphasis placed on the meaning of Exchange transactions (Exchange prices) often overshadows the real function of the Exchange. Perhaps this is a result of the transactions being of such great interest to so many people other than the members of the Exchange. However, the Exchange does not exist to furnish an index as to the value of cheese. It serves as an index because it more openly and actively reflects supply and demand conditions than other sources of information.⁵

Some dairy marketing economists have accepted this view of the Exchange. As Harold W. Lough has put it:

The primary purpose of the Exchange is as a source of supply and a place to dispose of surplus. It is an alternative market since most trading in cheese is done through regular commercial channels.⁶

Many leading industry members also characterize the NCE solely as a place to sell and buy cheese.⁷ Two prominent cheese executives described the National Cheese Exchange as

⁵ Richard J. Gould, "History and Function of the National Cheese Exchange, Inc." (mimeograph), p. 11, attached to letter from R.J. Gould to Wesley Ringo, Securities Commissioner, State of Wisconsin, May 17, 1991.

⁶ Harold W. Lough, *Cheese Pricing*, Agricultural Economic Report No. 462, USDA, Economics and Statistical Service, December 1980, p. 7.

⁷ In the course of our interviews of leading traders on the NCE, practically all company officials interviewed characterized the NCE as an alternative outlet or source of supply and stated that they believed it accurately reflected overall market conditions. In follow-up questions some officials acknowledged it also served purposes other than an alternative outlet for, or source of, bulk cheese. Some persons interviewed questioned the effectiveness of the NCE as an efficient price discovery mechanism and believe it is susceptible to price manipulation.

The unanimity of responses by some leading companies suggests that they may have discussed with the Exchange president and others the "strategy" to follow in response to the investigation of the Department of Agriculture, Trade and Consumer Protection. This inference is supported by an internal memorandum of one leading company, which stated, in part:

...a facility for trading by members who have extra cheese inventory on hand to dispose of or who have need for supplies over and above what they have on hand or can assemble before needed.⁸

The publicly stated position of Kraft General Foods, Inc., is that it buys or sells on the NCE in order to balance inventories with demand. Kraft expressed this view in a 1991 "position paper"⁹ as follows:

Kraft manufactures approximately 30 percent of the natural cheese it uses in and sells as natural and process cheese products. Nonetheless, Kraft maintains substantial inventories of cheese and attempts to match its inventories with expected sales to the retail grocery trade and, ultimately, to the consumer. When the demand for Kraft cheese products is less than anticipated, as it has been in the past year, Kraft sometimes finds itself in a position of having excess inventory. Consequently, although Kraft is a net buyer of cheese, the company sometimes has excess inventories.

The National Cheese Exchange (NCE) is under investigation by the Wisconsin Department of Agriculture....There are also rumours that Congress, the House Subcommittee on Livestock, Dairy and Poultry, may hold a hearing on the NCE. *We have met with the NCE to discuss a strategy and we plan to meet with other members when appropriate.* Emphasis added. [[Source deleted in public report as not essential.]]

⁸ Vincent L. Zehren and D.D. (Dave) Nusbaum, *Process Cheese*, Schreiber Foods, Inc., Cheese Reporter Publishing Co. 1992, p. 92. This source was summarizing the views of D.D. Nusbaum and H.A. Palmiter, expressed in an article in *The Cheese Reporter*, June 1983, p. 8.

⁹ The position paper was prepared in opposition to a proposed stockholder resolution which, among other things, would have prevented Kraft from selling on the NCE. Donald Fried, Vice President of Philip Morris, to Reverend Seamus Finn, O.M.I., Re: Stockholder Resolution, November 15, 1991. An internal Kraft Position memorandum, evidently prepared for the purpose of rebutting a stockholder resolution, explained in more detail than did its public "Position Paper" why Kraft traded on the NCE. Kraft General Foods, Inc., *National Cheese Exchange (NCE)* KGF 16913-16917. Although the document is undated, it discusses the manner in which Kraft disposed of surplus cheese in 1991.

Cheese is sold both on the National Cheese Exchange in Green Bay Wisconsin and in private transactions. *Kraft uses both methods for buying or selling cheese in order to balance its inventories with demand for its products.*¹⁰

In this view, the NCE is no different than other cash commodity auction markets, such as livestock or tobacco leaf auctions, where each participant's position in the market is predictable:

(a) producers of the commodity are sellers; (b) processor-marketers of the commodity are buyers; and (c) brokers are buyers or sellers depending on whom they represent. In competitive commodity markets prices are set by the impersonal interaction of many buyers and sellers.

Hence, prices are the end *result* not the *object* of trading.

Others, however, accept the alternative view of the NCE--that leading participants trade for the explicit purpose of influencing prices. For example, three prominent dairy marketing economists observed that at the NCE

[T]rades are not normally made for merchandising, but instead are made primarily when product traders feel price adjustments are needed to reflect supply-demand conditions.¹¹

Some traders also explicitly reject the notion that the NCE is simply a place to buy and sell cheese. As one trader interviewed in the course of this study stated,

The Exchange is not a place where you go with a load of cheese with expectations to sell it.¹²

Another cheese industry executive interviewed stated that the NCE served two functions:

¹⁰ Fried, *op. cit.*, p. 4; emphasis added.

¹¹ Robert E. Jacobson, Jerome W. Hammond, and Truman G. Graf, *Pricing Grade A Milk Used in Manufactured Dairy Products*, Research Bulletin 1105, Ohio Agricultural Research and Development Center, Wooster, Ohio, December 1978, p. 36.

¹² Wayne Hoecker, General Counsel, Mid-America Dairymen, Inc., typed transcript of recorded interview, August 2, 1993, p. 59.

My opinion is that it serves both functions [trading to satisfy one's commercial needs and to influence price discovery]. At times...people are selling cheese on the Exchange because they have no other place to go.... But it also serves...the price discovery thing. I think there are times when people offer to buy or sell, not because they really want to change their supply, but because they have some strong opinion about the long-term supply and demand that they don't think is being registered properly in the price.¹³

Some industry members interviewed believe that buyers and sellers of cheese have had a specific interest in influencing the direction of NCE prices. As one company executive put it:

AMPI and Mid-Am have generally been buyers and Kraft has more often than not been selling. And, you know, I don't think there's anything abnormal about that. If Kraft had any bias toward an overall price, I should think it would be a bias toward wanting to buy as efficiently as they can buy--at as low a cost as they can. That's their business. That doesn't mean that they want low prices, because they need to maintain enough of a price to maintain a supply. You know, but it would be logical that they would want to buy at the best price that they could and still accomplish their objectives of buying enough good quality cheese to fulfill their business purpose. AMPI and Mid-Am, on the other hand, if we have any bias, it would be toward wanting higher prices. We certainly want higher prices, but we must accomplish this within the constraints of the marketplace....¹⁴

In addition to the above motives for trading on the NCE, some trading may occur solely to influence the spread between block and barrel prices. One executive said that while his company's principal reason for trading on the NCE was to buy or sell cheese, "the other thing that would be important to us is the value between blocks and barrels."¹⁵

¹³ Interview of Mark Firth, Regional Manager AMPI North Central, typed transcript of recorded interview, July 29, 1993, pp. 34-35.

¹⁴ Mark Firth, AMPI North Central Regional Manager, typed transcript of recorded interview, July 29, 1993, p. 39.

¹⁵ Douglas Johnson, Vice-President of Dairy Food Operations, typed transcript of recorded interview of Land O' Lakes, April 29, 1993, p. 28. See Chapter 5, Section E, for more on pricing to influence the block-barrel spread.

An internal memorandum of another company explicitly included such trading as part of its *current strategy*: "Bid barrels if necessary to prevent block/barrel spread increase."¹⁶

In summary, some dairy marketing specialists and some leading traders acknowledge that participants on the NCE trade not merely to obtain or dispose of cheese but to register their view as to the most appropriate price, given market supply and demand conditions. Thus, participants may often trade for the explicit purpose of influencing prices. In this situation, leading traders enjoy some discretion in influencing or managing prices, at least in the short run. The extent of discretion depends on the relative market power of participants and on whether they act independently or cooperatively, either by tacit or overt agreement.¹⁷ If there are numerous buyers and sellers, each with a small share of the market, it is not possible for individuals to influence price. In that case, a trader's only motive for trading would be to use the market as an alternative cash market. However, in highly concentrated markets like the NCE, individual traders have the potential and incentive to influence the market price. Determining whether such traders use this potential requires examination of their actual trading conduct.

B. Purchases and Sales Patterns

Here we examine facts helpful in testing the conflicting hypotheses of trader motives. If those trading on the Exchange use it primarily as an outlet for or source of cheese, one can predict whether particular participants will be primarily buyers or sellers: (a) firms that are primarily cheese manufacturers that sell more bulk cheese than they buy off the NCE will use

¹⁶ Schreiber Foods, Inc., Vice President-Purchasing to top corporate managers, "SFI Market Position and Current Strategy," July 24, 1989, Bates 4724.

¹⁷ F.M. Scherer and David Ross, *Industrial Market Structure and Economic Performance*, 1990, pp. 235-274.

the NCE mainly as an alternative outlet for surplus cheese; (b) firms that are primarily marketers of cheese and that buy most of their manufactured cheese requirements from other companies off the NCE will be primarily buyers on the NCE; and (c) brokers will either buy or sell on the NCE, depending on whom they represent.

Not all NCE traders fit neatly into these categories. At times companies buying most of their cheese requirements from manufacturers may commit for cheese exceeding their needs. If such firms have inflexible supply agreements, they may be forced to dispose of the excess supply, though typically they do not do so on the NCE. Likewise, a cheese manufacturer selling more cheese than it buys may at times find itself short of cheese to fill its commitments to cheese converters/marketers, food retailers or finished product customers, forcing it to look elsewhere for supplies. But in general one would expect that a participant's trading activity on the Exchange would follow the overall pattern outlined above. Hence, one test of the hypothesis that the NCE is used mainly as an outlet for or source of cheese is whether the participants' trading conduct follows a pattern consistent with whether they are primarily buyers or sellers of bulk cheese off the NCE.

Tables 4.1 and 4.2 display the total cheese purchases and sales of companies on the NCE during 1980-1993. (The companies are grouped by the categories described above.)¹⁸ Since some leading participants abruptly changed their trading conduct about 1987-1988, we divided trading activity after 1980 into two periods: 1980-1987 and 1988-1993. (Only companies accounting for more than 1 percent of all transactions are shown in the body of the tables; others appear in footnotes.)

¹⁸ See Chapter 2 for the basis of this characterization.

Table 4.1. Trades on NCE by Primary Type of Business, 1980 TO 1987

Type of Primary Business	---BARRELS & BLOCKS---							Total	Loads Bought							Total		
	1980	1981	1982	1983	1984	1985	1986		1987	1980	1981	1982	1983	1984	1985		1986	1987
Manufacturers of Cheese¹																		
Land O' Lakes	172	16	22	20	106	35	115	172	658	16	12	0	1	0	0	0	39	68
Bongards'	0	0	0	0	136	78	220	39	473	0	0	0	0	0	34	0	0	34
Mid-America	0	0	0	0	0	0	129	45	174	0	0	0	11	13	5	1	0	30
Woldt's Cheese	0	0	0	0	0	0	0	0	0	36	7	0	0	0	0	0	0	43
Clearfield	0	0	0	0	0	0	0	0	0	11	0	16	0	9	0	0	0	36
Sub-Total	172	16	22	20	242	113	464	256	1305	63	19	16	12	22	39	1	39	211
Marketers of Cheese²																		
Kraft	55	6	8	4	5	3	94	332	507	16	2	0	8	183	98	104	0	411
Borden	17	16	0	2	5	26	20	0	86	61	9	10	0	23	0	0	16	119
Beatrice	11	0	0	6	0	0	2	0	19	20	0	0	8	56	2	635	540	1261
Schreiber	2	0	0	0	0	0	17	0	19	72	6	14	6	21	5	0	75	199
Masters Gallery	0	0	0	1	3	1	33	16	54	0	0	0	0	2	0	12	0	14
Marathon ³	0	1	10	1	0	0	0	0	12	0	0	0	0	0	0	0	31	31
Sub-Total	85	23	18	14	13	30	166	348	697	169	17	24	22	285	105	751	662	2035
Brokers																		
Dairystate	0	0	0	0	47	0	102	84	233	0	0	0	0	0	0	0	0	0
Sub-Total	0	0	0	0	47	0	102	84	233	0	0	0	0	0	0	0	0	0
All Others⁴	7	0	0	0	5	1	20	19	52	32	3	0	0	0	0	0	6	41
Total	264	39	40	34	307	144	752	707	2287	264	39	40	34	307	144	752	707	2287

Source: National Cheese Exchange, Trading Activity Minutes, AMS, USDA, 1980-87.

¹These are cheese manufacturers that sell significantly more bulk cheese than they buy.

²These are cheese manufacturers that buy significantly more bulk cheese than they sell. Beatrice manufactures more of its total cheese requirements than it buys from other cheese manufacturers.

However, off the Exchange it sells very little bulk cheese and buys virtually all of its cheddar cheese, which is the only cheese traded on the NCE (see Chapter 2). Because of this, Beatrice is included among the "primarily cheese marketers group" of traders. Totals for Beatrice include those for Pauly cheese acquired in 1984.

³Marathon is a converter that cuts and packages cheese only for marketers like Kraft, Schreiber and others.

⁴Includes those companies that made less than 1 percent of all carloads traded on NCE during this period. These are Marketing Association (sold 17 carloads), Edelweiss (sold 13 carloads), Swiss Valley (sold 9 carloads), Twin Dakota (sold 7 carloads), AMPI (bought 2 carloads), Anderson Clayton (sold 4 and bought 15 carloads), Northern (sold 2 and bought 7 carloads), and N. Dorman (bought 17 carloads).

Table 4.2. Trades on NCE by Primary Type of Business, 1988 TO 1993

---BARRELS & BLOCKS---

Type of Primary Business	Loads Sold						Loads Bought							
	1988	1989	1990	1991	1992	1993	Total	1988	1989	1990	1991	1992	1993	Total
Manufacturer of Cheese¹														
Mid-America	1	3	0	0	0	0	4	3	48	137	132	165	491	
Land O' Lakes	46	2	0	10	12	2	72	9	21	0	4	98	189	
AMPI	0	0	0 ⁶	0	0	0	0 ⁶	56	7	20	29	30	172	
Bongards'	32	0	0	0	34	9	75	0	0	0	0	0	0	
Sub-Total	79	5	0	10	46	11	151	68	76	157	165	293	852	
Marketer of Cheese²														
Kraft	277	107	193	339	258	443	1617	0	22	0	0	0	22	
Alpine Lace	0	0	62	16	30	22	130	0	0	0	0	3	3	
Borden	2	0	3	18	19	17	59	0	28	4	0	0	32	
Beatrice	0	0	0	0	0	0	0	13	172	85	165	220	773	
Schreiber	0	0	6	0	0	1	7	28	13	123	34	46	322	
Masters Gallery	0	5	2	0	0	0	7	0	46	16	0	0	62	
Marathon ³	0	0	35	0	0	0	35	0	0	0	0	0	0	
Sub-Total	279	112	301	373	307	483	1855	41	253	228	199	269	1214	
Brokers⁴														
Dairystate	3	1	31	3	0	91	129	0	1	7	0	13	29	
Northern Wisconsin Produce	0	0	8	2	8	0	18	4	10	7	6	0	33	
Schurman	0	0	0	0	0	7	7	0	0	0	2	18	20	
Sub-Total	3	1	39	5	8	98	154	4	11	14	8	31	82	
All Others⁵	0	0	2	11	19	4	36	5	2	0	8	3	48	
Total	361	118	342	399	380	596	2196	118	342	399	380	596	2196	

Source: National Cheese Exchange, Trading Activity Minutes, AMS, USDA, 1988-1993.

¹These are cheese manufacturers that sell significantly more bulk cheese than they buy.²These are cheese marketers that buy significantly more bulk cheese than they sell. Beatrice manufactures more of its total cheese requirements than it buys from other cheese manufacturers. However, off the Exchange it sells very little bulk cheese and buys virtually all of its cheddar cheese, which is the only cheese traded on the NCE (see Chapter 2). Because of this, Beatrice is included among the "primarily cheese marketers group" of traders. Totals for Beatrice include those for Pauly cheese acquired in 1984.³Marathon is a converter that primarily cuts and packages for marketers like Kraft.⁴Market Cheese Traders, which is owned by Alpine Lace Brands, is also a broker. NCE market activity reports do not distinguish between trades made by Alpine Lace for its own behalf or for others.⁵Include those companies that made less than 1 percent of all carloads traded on NCE during this period. These are Dairygold (sold 14 carloads), Edelweiss Cheese (bought 19 carloads), Golden Cheese (sold 10 carloads), Marketing Association (sold 6 carloads), Northwood Dairy (sold 6 and bought 5 carloads), Hermke Cheese (bought 13 carloads), Empire Cheese (bought 5 carloads), and Alto Cooperative (bought 6 carloads).⁶AMPI sold 10 loads through a broker in 1990.

During 1980-1987, firms that engaged primarily in cheese manufacturing and that sold more bulk cheese than they bought off the NCE, also were primarily sellers on the NCE, *selling* 6.2 loads for every load they *bought* (Table 4.1). Firms that are primarily marketers of cheese and that bought more bulk cheese than they sold off the NCE, also were primarily buyers on the NCE, *buying* 2.9 loads for every load they *sold*. These trading patterns are consistent with the hypothesis that during this period the NCE was used as another cash market to dispose of or obtain cheese.

When viewed aggregately, the facts displayed in Tables 4.1 and 4.2 indicate that in 1988 a reversal occurred in the trading patterns of leading market participants. During 1980-1987 the firms that *sold* more bulk cheese than they *bought* off the NCE were primarily *sellers* on the NCE. But during 1988-1993, they became primarily *buyers* on the NCE. The opposite is true for the firms that bought more bulk cheese than they sold off the NCE. Whereas during 1980-1987 they were primarily buyers on the NCE, during 1988-1993 they became primarily sellers.

However, the overall patterns conceal important shifts within the groups of traders. In the marketing group, for example, two leading participants did *not* change their buying patterns: Beatrice and Schreiber *bought* much more during 1988-1993 than they *sold*, just as they had during 1980-1987. Kraft alone accounts for practically all of the reversal in aggregate trading by cheese marketers: whereas during 1980-1987 Kraft *sold* 1.2 loads for each one it *bought*, during 1988-1993 Kraft *sold* 73.5 loads for each *one* it *bought*. Two other leading cheese marketers, Borden and Alpine Lace, also *sold* more than they *bought* during 1988-1993. Some differences in business characteristics between firms within the marketing group appear to account for differences in trading conduct. Kraft, Borden and Alpine Lace market predominantly branded

cheese products, whereas Beatrice and Schreiber market mainly private label or weaker company brands to food retailers and to food service and other non-retail outlets where brand preferences are unimportant. The significance of these differences among marketers is discussed below.

A similar shift occurred in the manufacturing group: during 1980-1987 this group *sold* 6.2 loads for each one they *bought*, but during 1988-1993 they *bought* 5.6 loads for each one *sold*. As in the marketing group, only a few traders are responsible for the reversal. Mid-Am, Land O' Lakes and AMPI, three large agricultural cooperatives and the largest manufacturer-traders of 1988-1993, *bought* 11.2 loads for each load they *sold*, thus making 39 percent of all barrel and block purchases on the NCE. During 1980-1987, these three traders *bought* only one load for each 8.5 loads they *sold*, amounting to only 4.3 percent of all NCE purchases.¹⁹ As with the marketing group, some traders did not change their behavior from one period to the next: Bongards', a smaller cooperative, remained a seller-trader throughout.

Kraft's transition to exclusively seller-trading actually began in August 1986 and continued thereafter.²⁰ The fact that the cooperatives did not become primarily buyer-traders until 1988 suggests they were responding to Kraft's change to a seller-trader more than one year earlier.

¹⁹ AMPI made no trades on the NCE during 1980-1987 (Table 4.1).

²⁰ From January through July 1986, Kraft bought 94 loads and sold no loads of barrels and blocks. Beginning August 29, 1986, through December 1986, Kraft sold 104 loads and bought none. Thereafter it was exclusively a seller-trader on the NCE. It bought 22 loads of blocks in 1990, but these purchases evidently were made to affect the block-barrel spread, not to buy blocks, since Kraft had a surplus at the time. See Chapter 5, Section E.

Thus the facts indicate that during 1980-1987 various firms conducted their trading in a way one would anticipate, given their primary functions, and in consistency with the first view of the NCE discussed earlier: cheese manufacturers used the NCE as an alternative outlet for surplus cheese and cheese marketers used it as a supplemental source of supply. Conversely, during 1988-1993 trading conduct assumes a pattern one would expect to see if traders were interested primarily in using the NCE to influence prices. Among cheese marketers, Kraft's reversal of role from a buyer to a seller is particularly significant. If the NCE were being used as a supplemental cash market, one would expect marketers (like Kraft) that buy all or most of their bulk cheese to be on both sides of the market. Although we expect such firms to be mainly buyers, from time to time they are also likely to have surpluses, some of which they may dispose of on the NCE. It is, therefore, difficult to reconcile Kraft's change in trading behavior with the contention that traders use the market mainly to dispose of surpluses or to remedy shortages.

Trading Activity in Barrels and Blocks

There are significant differences in the trading patterns of barrels versus blocks sold on the NCE. More carloads of barrels than of blocks are sold on the NCE: barrels accounted for 67 percent of all sales during 1980-1987 and 68 percent during 1988-1993. During 1988-1993, Kraft had a larger share of barrel than block sales, 83 percent versus 53 percent (Appendix Tables 4.2a and 4.2b).

The reversal of trading roles of some leading NCE participants was great in both barrels and blocks. Kraft's share of total NCE barrel sales rose from 25 percent during 1980-1987 to 83 percent during 1988-1993. Kraft's share of total block sales rose from 16 percent during 1980-1987 to 53 percent during 1988-1993.

Trading Activity of Brokers

Brokers may trade for either buyers or sellers of cheese on the Exchange. In fact, however, during both the 1980-1987 and 1988-1993 periods leading brokers were predominantly seller-traders. Brokers' share of NCE sales were 10.2 percent in 1980-1987 and 7.0 percent during 1988-1993 (Tables 4-1 and 4-2). Their shares of purchases in these two periods were 0.0 percent and 2.8 percent, respectively. In both periods, Dairystate was the leading broker.

Because a broker may represent a number of different companies, its total Exchange transactions do not reflect the importance of the individual companies it represents. Although brokers generally represent mainly small cheese makers on the NCE, as is shown in Chapter 6, they may, at times, represent large cheese manufacturers.

Alpine Lace, which is included in the cheese marketers group above, also has operated a brokerage business, Market Cheese Traders. We have not included Alpine Lace among the brokers because it is predominantly a marketer of specialty cheeses. Moreover, the NCE activity reports do not identify whether Alpine Lace trades are made for Market Cheese Traders or made in its own behalf.²¹

Conclusions

The above facts indicate the following:

1. The overall trading pattern of major cheese manufacturers and marketers during 1980-1987 was that expected in a cash commodity auction market. Thus their conduct was consistent with the hypothesis that they were using the NCE as an alternative cash outlet or source of supply.

²¹ See the following section for a discussion of the business characteristics of Alpine Lace.

2. The overall trading conduct of cheese manufacturers and marketer-traders during 1988-1993 was *not* consistent with that expected in a commodity auction market serving solely as an outlet or source of supply. Rather, their trading behavior was consistent with the hypothesis that the *leading traders on the NCE were motivated primarily by a desire to influence price.*

The difference in trading patterns during the two periods coincides with the change in the role of cheese price supports. During 1980-1987, cheese prices were determined primarily by the government price support program; the NCE played a minor role in prices (Fig. 2.8). However, during 1988-1993, cheese prices were largely above the support price and market-driven; consequently, there was a sharp increase in the volatility and range of cheese prices.

A major cheese marketer commented on this change in a 1988 letter to its customers:

For more than ten years, you had to pay little attention to the cheese market. Prices rarely moved more than a fraction of a cent. The only major changes were when governmental price supports took effect and these were generally signaled well in advance of the effective dates. As we all know, this pattern of predictability has changed radically...What once was a docile market for cheese has now taken on a completely different character.²²

In this environment cheese companies have both greater opportunity and greater incentive to influence NCE prices.

C. Business Characteristics of Leading Traders

The preceding section documents that in recent years overall trading patterns on the NCE are consistent with the hypothesis that most trading on the NCE occurs to influence price. Here we examine the leading traders' business characteristics that may motivate them to engage

²² Schreiber Foods, Inc., Senior Vice-President and General Manager, letter to retail customers, Sept. 30, 1988, Bates 109.

primarily in either buying or selling on the NCE. This analysis involves determining how changes in the level of NCE prices may affect each trader's profitability and, therefore, its motive for attempting to influence NCE prices in one direction or the other. We also need to understand both the nature of their business and the extent to which their input costs (of milk or bulk cheese) and selling prices (of bulk or finished cheese) are related to the NCE. We examine the business characteristics of the nine leading traders that accounted for 93 percent of all purchases and 92 percent of all sales during 1988-1993.

Kraft General Foods, Inc.

In December 1988 Kraft, Inc. (established in 1903), was acquired by the Philip Morris Companies Inc., who merged Kraft with General Foods, Inc. (acquired by Philip Morris in 1985) to form Kraft General Foods, Inc., a division of Philip Morris. In 1989 Kraft General Foods, Inc., reportedly had sales of \$23.3 billion and made about 10 percent of all retail food sales.²³ Kraft U.S.A. (a division of Kraft General Foods, Inc.) which conducts Kraft's cheese business, had estimated sales of \$4.5 billion in 1989.²⁴

Kraft buys about 60 percent of its bulk cheese (70 percent excluding cream cheese), nearly all from committed suppliers at NCE-based formula prices. The cost of cheese manufactured in Kraft plants is also influenced heavily by NCE prices since pay prices for milk used in making cheese are largely driven by NCE prices.²⁵

²³ A.M. Freedman, "Corporate Focus: Miles will Lead Kraft General Foods, Marketing Whiz Must Smooth Merger at Philip Morris," *The Wall Street Journal*, September 28, 1989.

²⁴ *Id.*

²⁵ See Chapter 2, Section E for a discussion of milk pricing.

In 1990, Kraft reportedly sold through retailers 852 million pounds of finished cheese products with a retail value of about \$3 billion under Kraft consumer brands.²⁶ In 1990 Kraft brands, which command significant price premiums, reportedly accounted for the following shares of retail cheese sales: cream cheese, 70 percent; processed cheese, 58 percent; natural cheese, 30 percent; combined share, about 44 percent of total retail cheese sales.²⁷

Before 1985, Kraft's cheese prices charged to retailers were apparently tied to NCE prices. In January 1985 Kraft informed its retail trade customers that,

Effective January 31, 1985, Kraft will no longer automatically link its cheese prices to the National Cheese Exchange's weekly opinion. Rather Kraft will change prices as business conditions, costs and competitive situations dictate. This is consistent with the pricing practice on other Kraft products, such as salad dressings, margarine and pasta products.²⁸

The decoupling of Kraft's wholesale prices from the NCE also changed the impact of the NCE price on Kraft's margins. Before 1985, both Kraft's purchases and sales were priced off the NCE. After Kraft decoupled wholesale prices from NCE prices, changes in wholesale list prices were made much less frequently than changes in NCE prices. Although Kraft cannot price entirely independently of other company brands or of the private label brands of retailers, during

²⁶ SAMI 1990 Million Dollar Brands. Another source estimated Kraft retail sales as 2,647 million in 1990. Appendix Table 6.4d.

²⁷ SAMI 1990 Million Dollar Brands.

²⁸ Kraft, Inc., "To Our Customers," KGF 20822-20823. Kraft gave several reasons for the change in pricing policy including the need to "protect our customers and ourselves from wide cheese price fluctuations...."; response to customer "complaints about the many price changes that take place as a result of the weekly transactions on the National Cheese Exchange." The NCE "does not consider changes in the costs of packaging, labor, distribution, administration and the cost of aging cheese." Kraft said that reducing the frequency of price changes would "lower administrative cost for both you and Kraft." *Id.* KGF 20823.

1981-1990 it apparently commanded substantial and increasing premiums over other leading company and private label brands.²⁹ Until 1988 it did so without losing market share.³⁰

In the short run Kraft's profit margins for cheese are determined largely by the spread between the cost of cheese it buys or makes and the wholesale price of cheese it sells. Since the cost of cheese purchased by Kraft is tied directly to the NCE, whereas its selling prices are not, Kraft has a financial interest in the level of prices established on the NCE.³¹ Leading Kraft competitors generally acknowledge that Kraft, like other sellers of strong brands, benefits from lower NCE prices.³² This price relationship is documented in Section F, Chapter 6.

²⁹ Appendix Tables 6.10 and 6.11; Chapter 6, Section E.

³⁰ Kraft's dollar share of all processed natural and cream cheese was about 46 percent in 1981 and in 1988. *SAMI Million Dollar Brands*.

³¹ Chapter 6, Section E, includes a statistical analysis of the relationship between NCE prices and Kraft's gross margins. It documents that Kraft's gross margins increase as NCE prices decrease.

An additional analysis of the relationship between NCE prices and Kraft's gross margin used data supplied by Kraft and revealed a statistically significant negative relationship between NCE prices and gross margins. Although this is as expected, the data submitted by Kraft were for list prices and were aggregated across all types of Kraft cheeses. Because of this limitation in the data, we consider the results only a rough estimate of NCE-gross margin relationships for Kraft. The analysis was based on data provided by Kraft in response to a Demand for Document Production by the Wisconsin Department of Agriculture, Trade and Consumer Protection.

³² During an interview by an investigator of the Wisconsin Justice Department, Mr. Jerome Folz, Beatrice's trader on the Exchange since 1984, expressed his belief that Kraft has a financial interest in lower NCE prices. The investigator's report stated, in part:

...Mr. Folz explained that Kraft has a fixed price on all of its retail products that it sells. However, the purchase price on all of the cheese products that Kraft purchases is variable. Therefore, Mr. Folz related that Kraft would have a good reason to want to lower the purchase price in order to provide a greater margin of profit on the retail end. Rosemary Perrizo, Investigator to Matt Frank, Assistant Attorney General, Wisconsin Department of Justice, February 3, 1988, p. 5.

Another large cheese company executive interviewed for this study gave a similar

Borden, Inc.

Borden, Inc., incorporated in 1899, had annual sales of \$5.5 billion in 1993. Its cheese business is conducted by its Refrigerated Products Division. Borden brand cheese sales had a reported retail value of \$232 million in 1990. Borden is predominantly a marketer of processed cheese that buys all its raw material cheese from manufacturers. Practically all these purchases are cheddar barrels and blocks purchased at NCE-based formula prices. Borden procures most of its bulk cheese requirements under committed supply agreements, purchasing the remainder in the spot market and on the NCE.³³

The great majority of Borden's cheese is sold to retail outlets under the Borden brand, which in 1990 reportedly accounted for 8.1 percent of all grocery store sales of processed cheese and 0.5 percent of natural cheese.³⁴ Although its brand share is a distant second to that of Kraft,

explanation of how Kraft's selling on the NCE could enhance its margins:

They [Kraft] buy a lot of their product based on the barrel market [NCE opinion]...Kraft doesn't always sell their finished product based on the market at all; they have a fixed price. So as they are a bigger offerer on the Exchange and they drive...the cost lower for them, they've enhanced their margins because they sell at a fixed price. James Lauderdale, Vice-President Sales and Marketing, Mid-America Dairymen, Inc., typed transcript of recorded interview, August 2, 1993, p. 43.

³³ Borden, Inc., Han Kim, Vice President-General Manager, Refrigerated Products, typed transcript of recorded interview, August 31, 1993, p. 23. Data submitted by Borden revealed that it bought over one-third of its bulk cheese from spot suppliers during 1989-1991. Borden, Inc., "Refrigerated Comparative Analysis Summary of Receipts by Vendor for Bulk Cheese." It bought only four loads on the NCE during these years (Table 4.2).

³⁴ *SAMI 1990 Million Dollar Brands. I.R.I. Infoscan* data as reported by Cotterill and Franklin, *op. cit.*, state that in 1992 Borden accounted for 9.1 percent of American processed slices and loafs sold in grocery stores.

Borden brands command a substantial premium over private label and lesser processed cheese brands (Appendix Figure 6.2).

Until 1985, Borden's wholesale prices to retailers were formula-priced off NCE prices. When Kraft discontinued formula-pricing in 1985, Borden did likewise and sold at list prices that generally followed Kraft's, though at a somewhat lower level.

Since Borden formula prices the cheese it purchases while selling its branded cheese to retailers at list prices that since 1985 change infrequently, it has the same financial interest as Kraft in lower NCE prices; i.e., Borden cheese profit margins are determined largely by the spread between its wholesale prices and NCE prices. Because Borden's private label business to retailers is relatively more important than Kraft's, NCE price changes may affect Borden's margins less than Kraft's. On balance, however, its financial interest in the level of NCE prices

is the same as Kraft's.³⁵ Since Borden is a much smaller factor in the market than Kraft, Borden tends mostly to follow Kraft's moves in wholesale pricing and on the NCE.³⁶

³⁵ Borden Inc., Han Kim, Vice President-General Manager, Refrigerated Products, acknowledged that although Borden has some private label and food service business, "Borden...and most branded people...would like to see a lower cheese market. That will give us the best...profit opportunities. [Such opportunities occur because] they have list prices, and therefore, they like to see, you know, not the lowest...but they like to see...certain low points in the cheese market...." Typed transcript of recorded interview, August 31, 1993, typed transcript, pp. 68-69.

An analysis of the relationship between NCE prices and Borden's average gross margins did not yield conclusive results. Gross margins were negatively associated with NCE prices as expected, but were not statistically significant. The analysis was based on data for 1989-1992 submitted by Borden in response to a Demand for the Production of Documents by the Wisconsin Department of Agriculture, Trade and Consumer Protection.

This was an atypical period in which to examine the relationship between NCE prices and Borden's gross margins. Kraft increased its gross margins by unprecedented amounts during 1990-1991, following a large price increase in late 1989. When this move resulted in a substantial widening of the price gap between the retail price of Kraft brands and private-label brands, Kraft lost market share (Appendix Table 6.4a). Since Borden brand retail prices followed Kraft brand prices upward (Appendix Figure 6.2), Borden also lost market share. Kraft responded to its lost share with a large trade allowance program and several deep price cuts. As Borden responded to Kraft's conduct, the result was a substantial variation in Borden's list prices, which probably explains our findings of no significant statistical relationship between NCE prices and Borden's gross margins.

A trade source reported that, Kraft's offensive has hurt rival Borden, Inc. Although Borden's cheese sales began to pick up in the 12 weeks ended Dec. 27, dollar volume for cheese still fell 3.5% for the period and 9.7% for the year....Borden's promotional spending increased 20% to 30% last year, according to Mitch Wienick, senior vice president for dairy products.... S.L. Hwang, "Kraft Puts Cheese Market in Ferment," *Wall Street Journal*, March 18, 1993, p. B3.

³⁶ Han Kim, Vice President-General Manager, Refrigerated Products, Borden Inc., stated that: "We are not really the pace setters; rather we are more followers,...you know, we are trying to survive in the market place maintaining what share we can get." Typed transcript of recorded interview, August 31, 1993, pp. 53-54.

Alpine Lace Brands, Inc.

Alpine Lace Brands, Inc., (First World Cheese until June 1991) has two principal businesses, a branded cheese business that develops, markets and distributes specialty cheeses under its own brand, and a cheese commodity business operating as Market Cheese Traders. In 1993, Alpine Lace had total sales of \$180 million, a relatively small percentage of which came from Market Cheese Traders.³⁷

Alpine Lace sells primarily nutritional cheese that is low in cholesterol and sodium, including non-fat cheese. Market Cheese Traders serves as a broker for buyers and sellers, trading primarily in the spot market but sometimes on the NCE.

Alpine Lace relies predominantly on bulk cheese bought from others and makes some cheese under co-pack arrangements. While it buys bulk cheese using NCE-based formula prices, Alpine Lace cheese brands are sold to retailers at list prices not coupled to the NCE. These pricing practices give Alpine Lace the same financial interest in lower NCE prices as that of Kraft and Borden. Although Market Cheese Traders' business as a broker does not give it an interest in the direction or level of NCE prices, business logic suggests that, when trading on the NCE, it will act in a manner consistent with the overall financial interest of Alpine Lace.³⁸

³⁷ *Moody's OTC Industrial Manual*, 1994, 1061.

³⁸ The trader on the NCE is an employee of Alpine Lace, not of Market Cheese Traders. [[Source deleted in public report as not essential]]

Beatrice Cheese, Inc.

Beatrice Cheese, Inc., is an independent operating company of ConAgra, Inc., with sales of \$23.5 billion in 1993. ConAgra acquired Beatrice in 1986 after Beatrice had expanded its cheese business in 1984 by acquiring Esmark, Inc., owner of the Pauly Cheese business.

Beatrice manufactures 50-75 percent of the cheese that it sells. In recent years it has become a large manufacturer of mozzarella cheese, which it sells to pizza companies. It also has a sizable processed cheese operation where it mainly uses purchased cheddar barrels. Beatrice does not have a strong consumer franchise for its finished cheese products, which are sold predominantly as private label brands to food service outlets, retailers, and industrial users.³⁹ The wholesale prices charged customers in these various market segments are either formula priced off the NCE or else they are competitive with other formula priced products.

Beatrice's pay prices for raw material cheese are formula priced off NCE prices, and its pay prices for milk used in its own manufacturing plants are also driven by changes in NCE prices. Although both Beatrice's buy and sell prices are coupled to Exchange prices, it may benefit from higher NCE prices because of its processed cheese business. Consider the following hypothetical example provided by a marketer of processed cheese: (a) Assume a company formula prices its processed cheese products to retailers based on the NCE barrel price plus an "overage" to cover processing and distribution costs including a profit margin; and (b) assume that raw material cheddar cheese represents 70 percent of the cost of making one pound

³⁹ In 1990, Beatrice brands reportedly accounted for 0.7 percent of total retail processed cheese sales and 3.0 percent of total retail natural cheese sales. *SAMI 1990 Million Dollar Brands*. Beatrice's brands had much smaller price increases between 1981 and 1990 than did Kraft brands (Appendix Table 6.11).

of finished product. In this example, holding other things constant, a 10 cent per pound increase in the NCE barrel price increases the wholesale price of the finished product by 10 cents per pound and increases the cheese manufacturing cost by 7 cents per pound, thereby adding 3 cents per pound to the price-cost margin.⁴⁰ The effect of changes in NCE prices on a seller's price-cost margin varies with the type of processed cheese sold. The effect is largest in "cheese food and spreads," where non-cheese ingredients may account for as much as 49 percent of the weight of the finished product. The effect of NCE prices on Beatrice also depends on the importance of processed cheese products in its sales mix. Since we estimate processed cheese products account for only about one-fifth of Beatrice cheese sales, the source of potential profit enhancement described above is probably quite modest.⁴¹

Beatrice has another financial incentive to buy on the NCE. It manufactures only a small part of its bulk cheddar cheese requirements, procuring the rest from committed suppliers and the spot market. Insofar as Beatrice raw material cheese needs exceed the volume available from committed suppliers, it has an incentive to buy cheddar barrels on the NCE when the NCE price is below that in the spot market, as has normally been true in recent years. In short, the NCE often is a cheaper, though less dependable, source of supply than the spot market. This may have been an important consideration in Beatrice's large purchases on the NCE at market

⁴⁰ [[Source deleted in public report as not essential.]] This assumes that other costs remain unchanged.

⁴¹ An analysis of NCE prices and Beatrice's average gross margins during 1989-1992 indicates that gross margins were positively and significantly related statistically to NCE prices one month earlier. However, Beatrice's margins were only modestly enhanced by higher NCE prices. The analysis was based on price-margin data supplied by Beatrice Cheese, Inc., in response to a Demand for Production of Documents by the Wisconsin Department of Agriculture, Trade and Consumer Protection.

bottoms. If so, this buying may not have been an attempt to raise prices but to exploit a buying opportunity.⁴²

Schreiber Foods, Inc.

Schreiber Foods, Inc., is a private corporation founded in 1945 and headquartered in Green Bay, Wisconsin. It reportedly had 2,300 employees and total sales of about \$900 million in 1994.⁴³

During 1988-1993, Schreiber bought the bulk of its raw cheese requirements (from committed suppliers, from the spot market, and on the NCE). Schreiber's purchases were formula-priced off NCE prices. Schreiber's primary business is marketing processed cheese products; whereas Beatrice is the major supplier of pizza chains, Schreiber is a leading supplier of fast food hamburger chains.⁴⁴ Less than 50 percent of its sales are to retail supermarkets, where it primarily supplies private label products.⁴⁵ Schreiber's wholesale prices are either formula priced off the NCE or are competitive with prices of other products formula priced off the NCE. Insofar as changes in both raw material costs and processed cheese prices are coupled to NCE prices, Schreiber benefits from increases in NCE prices and loses from decreases in NCE prices.⁴⁶ In this respect, its financial interest is similar to that of Beatrice and others sellers

⁴² [[Source deleted in public report as not essential.]]

⁴³ *Million Dollar Directory, Leading Public and Private Corporations*, 1994, p. 4564.

⁴⁴ [[Source deleted in public report as not essential.]]

⁴⁵ In 1990, Schreiber brands reportedly represented only 0.8 percent of total branded cheese sold to retailers. *SAMI, 1990 Million Dollar Brands*. This source does not report individual sales of private label cheese by the name of individual supplier.

⁴⁶ For explanation of the reasons for this, see discussion of Beatrice above.

of NCE formula-priced processed cheese.⁴⁷ Like Beatrice, Schreiber may look to the NCE as a cheaper source of cheese than its committed suppliers or the spot market, depending on its flexibility in adjusting the amount taken from committed suppliers. In practice, Schreiber buys a small percent of its total needs on the NCE.⁴⁸

Agricultural Cooperatives

Three of the leading traders in 1988-1993 were agricultural cooperatives: Associated Milk Producers, Inc. (AMPI), San Antonio, Texas; Mid-America Dairymen, Inc. (Mid-Am), Springfield, Missouri; and Land O' Lakes, Inc., (LOL), Minneapolis, Minnesota. In 1992 AMPI had 14,729 members with a total milk volume of 16.5 million pounds; Mid-Am had 13,108 members with a total milk volume of 16.5 million pounds; and LOL had 5580 members with a total milk volume of 4.2 million pounds.⁴⁹ These cooperatives have an economic interest in NCE prices from at least two standpoints. First, the farmer-members of cooperatives benefit directly from higher NCE prices because of the linkage to farm milk prices. Indeed, cooperatives that have sold on the NCE have at times been criticized by their farmer members because such sales are perceived as potentially lowering cheese and milk prices. Some cooperatives have become very hesitant to sell cheese directly on the NCE. Thus, cooperatives

⁴⁷ Analysis of margin data supplied by Schreiber for 1989-1992 reveals a statistically close but lagged linkage to NCE prices. The gross margins were positively related, with a several-week lag, to changes in NCE prices. An increase in NCE prices yielded only a modest increase in gross margins. Based on data supplied by Schreiber in response to a Demand for Production of Documents by the Wisconsin Department of Agriculture, Trade and Consumer Protection.

⁴⁸ During 1988-1993, Schreiber's average annual NCE purchases of 54 loads per year were an insignificant percent of its total annual purchases (Table 4.2).

⁴⁹ "Milk Up 2 Billion Pounds in Top 50 Co-ops," *Hoard's Dairyman*, October 10, 1993, p. 720.

have a public relations incentive for not selling on the NCE. During 1988-1993, Land O' Lakes sold more loads on the NCE (74) than Mid-Am (4 loads) and AMPI (18 loads).⁵⁰

Each of these cooperatives converts and markets some cheese to supermarkets, food service accounts and industrial users. The linkage of NCE prices to the profitability of this part of their business is difficult to sort out. Mid-Am has no processed cheese operation. Its sales of natural cheese to food service and retail customers are directly or indirectly linked to the NCE, but this may not affect Mid-Am's margins in the same way they do those of Beatrice and Schreiber (through increased margins on processed cheese).

AMPI processes roughly 10 percent of the cheese it sells. Since AMPI does not have a strong brand, all of its finished product is formula-priced off the NCE or is sold in competition with other NCE formula priced products. AMPI's short-term profits from its cheese manufacturing business are probably positively linked to price increases on the NCE; its profits from their conversion-marketing business may also be slightly higher with higher NCE prices, all else remaining the same.

The Land O' Lakes processed cheese accounts for a substantial part of its total cheese business. In addition, Land O' Lakes is the only cooperative with moderately strong consumer brands for cheese (Land O' Lakes and Lake to Lake).⁵¹ Insofar as these Land O' Lakes brands

⁵⁰ AMPI sold 10 of these loads through a broker, as discussed in Chapter 6, Section A.

⁵¹ Land O' Lakes has the strongest consumer brands among these cooperatives. A public source reports that in 1992, Land O' Lakes retail brands accounted for 1.7 percent of all processed cheese, 3.7 percent of natural cheese, and 2.1 percent of natural shredded cheese. *I.R.I. Infoscana* data, Andrew W. Franklin and Ronald W. Cotterill, *Pricing and Marketing Strategies in the National Branded Cheese Industry*, Food Policy Center Research Report No. 26, Department of Agricultural and Resource Economics, University of Connecticut, September 24, 1994. In 1990, Land O' Lakes reportedly sold 53 million pounds to supermarkets. *SAMI 1990 Million Dollar Brands*. Neither of the

are sufficiently strong to price somewhat independently of NCE prices, Land O' Lakes gross margins for these sales may be negatively related to NCE prices. Since we do not know the extent to which their converted products are formula priced off the NCE and the extent to which they are list priced, we cannot estimate the effect of changes in NCE prices on the profits of Land O' Lakes' conversion/marketing business. The evidence indicates that Land O' Lakes brands are not nearly as strong as Kraft brands (Appendix Tables 6.9a and 6.11).

A farmer-owned cooperative interested in maximizing the joint profits of farmer-members and the cooperatively owned cheese operation is affected adversely when NCE prices decline and favorably when they rise. Insofar as the above three cooperatives engage in joint-profit maximizing, they have a financial interest in higher NCE prices, although they cannot be indifferent to the effect higher prices have on milk consumption and production. Unless they act in concert and control the supply of milk for manufactured products, in the long run the highest price they may achieve is the competitive equilibrium price, absent government support programs. They do, of course, have a strong incentive to prevent NCE prices from going below this price, which may occur if NCE prices are manipulated downward.

Brokers: Dairystate Brands, Inc.

Since Dairystate Brands differs from the traders discussed above, we are unable, *a priori*, to predict whether it has a financial interest in higher or lower NCE prices. The financial interests of brokers, *qua* brokers, are neutral with respect to the level of prices since brokers receive the same fee regardless of price. However, the party a broker represents may have an

other two cooperatives had sufficient retail brand sales to be reported by *SAMI* or *I.R.I Infoscan*.

interest in the level of prices. Small cheese companies that have cheese to sell presumably expect their brokers to obtain the highest available price, whether on the spot market or on the NCE. But some parties using a broker may have a different objective. As discussed in Chapter 6, on at least one occasion Dairystate represented a large company apparently interested in lowering the market. Finally, a broker may trade for speculative purposes, either acting in its own behalf or for others.

Because of the disparate interests of a broker or of its customers, we are unable to hypothesize whether Dairystate has an interest in higher or lower NCE prices. In Chapter 5 we seek insights into Dairystate's motives by examining its overall trading pattern on the Exchange.

Other Traders

Thirteen other concerns traded at least once on the Exchange during 1988-1993.

Together they accounted for 7 percent of all purchases and 8 percent of all sales.

Bongards' Creameries, Bongards, Minnesota, was the largest of these, selling 75 loads on the NCE in three different years and buying none. Bongards' is an agricultural cooperative, primarily a cheese manufacturer, and was primarily a seller both in 1980-1987 and in 1988-1993 (Tables 4.1 and 4.2).

Masters Gallery Foods, Inc., which began operating in Plymouth, Wisconsin, in 1974, sold seven loads and bought 62 loads on the NCE during 1988-1993. Masters Gallery, a seller in two years and a buyer in two years, is a cheese marketer that manufactures no cheese; i.e., it purchases all the cheese it converts and markets. Its trading pattern on the Exchange is consistent with that expected of a cheese marketer that does not have a strong consumer brand.

Northern Wisconsin Produce Company, a cheese broker in Manitowoc, Wisconsin, sold 18 loads and bought 33 loads during 1988-1993. It was a seller in three years and a buyer in five years.

Marathon Cheese Corporation, Marathon, Wisconsin, sold 35 loads--all in 1990--and bought none. Marathon is a specialized cheese converter that engages primarily in the business of converting cheese into finished products for other companies, especially Kraft with whom it has had a co-pack arrangement for several decades.⁵² It manufactures very little cheese. About 40 percent of the cheese it co-packs for other companies is supplied by those companies. Since Marathon is a co-pack converter, its financial interests appear to be unaffected by the level of cheese prices.

Schurman's Wisconsin Cheese Country, Inc., a cheese broker in Beetown, Wisconsin, sold seven loads and bought 20 loads on the NCE during 1988-1993. It was a seller in one year and a buyer in two years.

The remaining eight concerns each accounted for less than 1 percent of all NCE transactions during 1988-1993, most trading during only one or two years. All but three of these are located in Wisconsin. The three out-of-state concerns were Dairygold, Inc., Seattle, Washington, an agricultural cooperative (sold 14 loads); Golden Cheese of California, Corona, California, a cheese manufacturer and marketer (sold 10 loads of blocks); and Empire Cheese, Inc., Cuba, New York, a cheese manufacturer and marketer (bought 5 carloads). These concerns each traded during a single year and during relatively few sessions.

⁵² Interview of Wayne Hangartner, former Director of Cheese Procurement and Inventories for Kraft, typed transcript of recorded interview, December 8-9, 1992, pp. 134-135.

Summary

The business characteristics of cheese companies determine whether, other things remaining the same, they benefit from lower NCE prices or higher NCE prices. We hypothesize that the *leading* traders on the NCE benefit as shown below.

Company	Benefit Financially if NCE Price is:	Total Loads Traded on NCE 1988-1993	
		Sales	Purchase
Kraft	Lower	1617	22 ⁵³
Borden	Lower	59	32
Alpine Lace	Lower	130	3
Beatrice	Somewhat higher	0	773
Mid-Am	Higher	4	491
Schreiber	Neutral to Higher	7	322
AMPI	Higher	0	172
Land O' Lakes	Higher	72	189
Dairystate	Unclear	129	29

Source: Sales and purchases, Table 4.2.

The remainder of this chapter examines (a) the nature and purpose of trading in the spot market versus the NCE and (b) documentary evidence relating to trader motives.

D. Spot Trading as Alternative to the NCE

Whereas the NCE centralizes spot trading at one location for 30 minutes each Friday, there is a much larger spot market involving direct transactions at negotiated prices among cheese companies with short-term shortages or surpluses.⁵⁴ In recent years about 5 to 10 percent

⁵³ Kraft's purchase of 22 loads of blocks in 1990 apparently was motivated by a desire to influence the block-barrel price spread, not because it needed blocks. See Chapter 5, Section E.

⁵⁴ NCE sales are also spot sales, but herein the term *spot sales* shall refer only to those spot sales made off the NCE.

of all manufactured cheese has been sold in the spot market, whereas 0.2 percent has been sold on the NCE.⁵⁵ The fact that spot sales are more than ten times greater than NCE sales raises further questions as to whether the primary purpose of the NCE is to provide an "alternative source of supply and a place to dispose of surplus."⁵⁶ Some of those believing this function to be the primary purpose of the NCE view it as a *market of last resort*,⁵⁷ a place buyers or sellers turn to because other alternatives are unavailable.

The *market of last resort* rationale for Exchange trading is most plausible for small cheese manufacturers with limited knowledge of market alternatives; such companies might logically employ brokers to dispose of surplus cheese. This explanation does not imply, however, that they must sell on the NCE. Indeed, virtually all smaller cheese companies rely entirely on the spot market in disposing of their surplus cheese. And even those using brokers to

⁵⁵ Chapter 2, Section G. Company estimates of the size of the spot market vary. The 5 to 10 percent estimate is based on industry interviews.

All but two companies were unable to break out their spot sales or purchases. As shown in Appendix Table 4.3, during 1987-1992, Kraft, the largest seller on the NCE, reported sales of 61.3 million pounds of cheese on the NCE and 87.8 million pounds in the spot market. It also sold 23 million pounds of Swiss cheese in the spot market during 1989-1992. Kraft General Foods, Inc., *Raw Material Cheese Sales*, KGF 23755-23766.

Another large cheese marketer that bought virtually no cheese on the NCE during 1989-1991 made spot bulk cheese purchases representing over one-third of its total purchases. Borden, Inc. "Refrigerated Comparative Analysis Summary of Receipts by Vendor for Bulk Cheese."

Kraft responded on this point: "Overtime, approximately [...] % of the cheese Kraft purchases is cheese Kraft had previously committed to buy." Letter from Roibin Ryan, Kirkland and Ellis, to Reid Klopp and Bruce Marion, February 21, 1994. Information has been temporarily redacted pending judicial resolution of trade secret issues. See statement in Appendix Table 4.3.

⁵⁶ See notes 4-8 above.

⁵⁷ Kraft General Foods, Inc., Wayne Hangartner, former Director of Cheese Procurement and Inventories, said that the NCE may be viewed as a market of last resort. Typed transcript of recorded interview, December 8-9, 1992, p. 103.

dispose of surplus cheese on the NCE typically sell more in the spot market than on the Exchange.

Possession of limited market knowledge is an implausible reason for large companies to trade on the Exchange. Such companies have extensive knowledge of market conditions and communicate frequently with prospective buyers and sellers.⁵⁸ Those exploring spot market opportunities need expend little effort to learn whether any of the few companies trading on the Exchange are interested in buying or selling cheese. According to Kraft's former purchasing director, there are no special costs incurred in selling on the spot market rather than on the NCE, which has a charge of 0.25 cents per pound for both the buyer and the seller.⁵⁹ In fact, even the leading traders on the NCE typically do much more business in the spot market than on the Exchange. Many sizable proprietary and farmer-owned cooperative cheese companies *never* use the NCE, preferring to rely entirely on the spot market in dealing with short-term surpluses or shortages.

Spot market volume greatly exceeds NCE volume because spot trading has substantial advantages over NCE trading.

- a. Spot traders are able to establish more precise delivery, age and quality specifications than are NCE traders. NCE trade specifications allow elements of uncertainty not present in spot trades. This problem is much less serious for barrels than for blocks.
- b. Spot transactions may occur during all hours of each business day rather than during the typical NCE trading period of 30 minutes each Friday. In addition,

⁵⁸ In response to a legal demand by DATCP for this study, most large companies reported having regular communications with many other companies in the normal course of business.

⁵⁹ Kraft General Foods, Inc., Wayne Hangartner, former Director of Cheese Procurement and Inventories, typed transcript of recorded interview, December 8-9, 1992, pp. 96-97.

- spot trades can be made by telephone from any location, whereas NCE trading requires physical presence or representation in Green Bay, Wisconsin.
- c. NCE sales are F.O.B. Green Bay, Wisconsin or within 200 miles of Green Bay. Plants located some distance from Green Bay may avoid the freight charges associated with NCE transactions by trading in the spot market.
 - d. Spot traders need not pay the 0.25 cent per pound charge assessed on both the buyer and the seller on the NCE transactions. (Those using brokers typically pay 1 cent per pound for this service on both spot and NCE sales.)
 - e. Spot market trading provides an opportunity to trade at prices not immediately known to competitors. In competitive oligopolistic industries firms departing from the prevailing price generally do not wish to communicate this information to all competitors.
 - f. Spot sales give a seller control over who buys its product. For example, a distress sale made on the NCE may end up in the hands of a direct competitor that may use it to undercut the seller in its "natural market."⁶⁰
 - g. The thinness of the NCE market and its widespread use in formula pricing discourage large cheese manufacturers and marketers from using the Exchange as an alternative outlet or source of supply. Cheese manufacturers are unwilling to sell on the NCE if doing so reduces NCE prices that are the basis for their *sales* under committed supply agreements. Cheese marketers with strong brands sold at list prices are reluctant to buy on the NCE if doing so increases NCE prices that serve as the basis for all their bulk *purchases* under committed supply agreements. Hence, the logical buyers and sellers in competitive cash auction markets are discouraged from using the NCE for these purposes. Spot trades do not create this conflict because the prices of committed supply agreements are not linked directly to spot prices.⁶¹

⁶⁰ For example, an internal company memorandum explains an incident occurring in September 1990 when NCE prices were falling:

Golden MUST move 40 to 50 loads of blocks in September that they have not sold and they will send them to the market and lower [the price] till sold. They don't like [this] method of disposal because they may be purchased by a cutter and come back to California to dampen their own natural market. Consequently they have offered them to us in white form for processing at \$0.1500 under block f.o.b factory with two weeks market protection after shipment. [[Source deleted in public report as not essential.]]

⁶¹ The prices negotiated by spot traders may vary greatly, even in a single day, and may be above or below NCE prices, although the average spot price is usually some premium over the NCE price. When supplies are short, spot price premiums over the NCE increase and sometimes remain at that level for several weeks. When this happens, it suggests that the NCE price is not fully reflecting changes in supply and demand.

It is difficult to identify reasons why large companies would rather sell on the NCE than in the spot market, other than to influence the market price. In recent years, cheese sold on the NCE generally has commanded a lower price than cheese sold in the spot market. The lower prices can make the NCE an attractive, though less reliable, source of supply for buyers that need cheese beyond what they get from committed suppliers.

The thinness of NCE trading prevents the Exchange from serving as a reliable outlet for surplus cheese. A recent incident involving Pizza Hut illustrates this point. Pizza Hut reportedly accepted delivery of a futures contract of block cheddar cheese and attempted to dispose of it on the NCE. On May 13, 1994, Pizza Hut offered three loads of blocks on the NCE, initially at \$1.2925 per pound. By the end of trading, Pizza Hut had reduced its offer 18 times but had never sold a load. As a result of the actions of Pizza Hut and other seller-traders, block prices dropped 10½ cents on that day with only one sale of 4 loads. Pizza Hut is no longer a member of the NCE, apparently concluding that it is an unreliable outlet for surplus cheese.

In sum, "the market of last resort" justification for the NCE appears specious, particularly for those few large companies that account for virtually all barrel trading. It is reasonable to assume that a seller could just as readily, and perhaps more readily, find a buyer by persistently

Sometimes the NCE price will rise sufficiently to eliminate the premium. Often, however, during periods of rising prices the premiums on spot sales may persist, and they do not disappear until NCE prices begin to fall (Appendix Table 4-4). The Federal and State Market News Service collects information on spot prices, which it calls "Wisconsin Assembly Point prices (WAP) and publishes a WAP price range each week. Industry representatives interviewed during the course of this study had mixed views concerning the accuracy and value of this price information. Some were not even familiar with it and others were very critical.

lowering the offer price in the spot market as by lowering the price on the NCE. At times such spot sales might require deeper price cuts than the seller wishes to accept. But selling at a less than desirable price also frequently happens on the NCE; indeed, at times NCE prices drop precipitously without any takers.⁶² Often large buyer-traders appear to cover offers by a small company selling a few loads to "protect" the price the buyers receive for their committed supply sales. In such cases, of course, the purchases are made as a by-product of trader activity designed to influence NCE prices, not because the buyer needs the cheese.

If the NCE is indeed the market of last resort, as some traders claim, then can it be an appropriate basis for formula pricing virtually all other bulk cheese? Certainly, prices based on "distress" sales in a market as thin as the NCE are not an economically rational basis for formula pricing.

The economic conditions giving birth to the NCE and its predecessors are rooted in the fragmented cheese industry extant in the 1870s through the early decades of the 20th Century. Since then there has been a continuing consolidation of manufacturing operations among fewer and fewer cheese factories. Whereas in 1910 there were over 3560 cheese factories, by 1987 there were only 508 cheese firms, of which only 216 had sales of \$100,000 or more. By 1987, the 20 largest manufacturers made 68 percent and the 50 largest made 82 percent of all natural and processed cheese sales (Appendix Tables 3.1 and 3.2).

Cheese manufacturing has also become geographically more disperse. Western and northeastern states have grown in cheese manufacturing while the north central states have declined. These changes and the great improvements in communication have decreased the need

⁶² See Chapter 6.

for a central auction market at which buyers and sellers are physically present. Experience in other food and non-food manufacturing industries demonstrates that spot markets function effectively without centralized trading. Food manufacturers, such as fruit/vegetable processors and meat-packers, frequently have surplus or deficit problems, which they solve largely by dealing directly with one another in spot markets.⁶³ Viewing the NCE in the context of organizational changes within cheese and other food and non-food manufacturing industries raises the question, has the NCE become an anachronism?

NCE vs. Spot Sales of Kraft

As explained above, many factors make the NCE an unattractive outlet for sellers of cheese, particularly large sellers. Why then has Kraft, the leading buyer of cheese off the NCE,

⁶³ For example, each year vegetable canners attempt to "book" (commit) their entire expected pack from their own acreage and contracted acreage. After canners have processed their crop they frequently end up with a surplus or shortage, especially of some can sizes. They solve this problem in several ways: (1) they buy from or sell to other canners; (2) they sell surplus product to a food wholesaler or retailer with whom the canner had not previously booked any product; (3) they bid on government contracts; and (4) they place the remaining surpluses in inventory. The industry refers to the first kind of transactions as "inter-company" sales and the second as "spot" sales. Intercompany sales most closely resemble the definition used to describe spot sales in the cheese industry. Canners sometimes use brokers to make inter-company and spot sales, as well as to get bookings. As canners have become fewer and larger they have relied increasingly upon their own sales departments or their own "in-house" brokers in making spot sales. Whereas there were many canner brokers four or five decades ago, today there may be no more than a dozen nationally.

There is still a cash auction market for butter located at the Chicago Mercantile Exchange. Although we have not studied this market in any detail, it has virtually no trading volume: During 1989-1993, actual transactions on the butter exchange averaged 0.16% of total butter manufactured annually. Dairy Market Statistics, Annual Summary, AMS, USDA, 1989-1993. This extremely thin market apparently has survived solely because industry members wish to use it as a basis for establishing a public price for butter, not because it represents a meaningful alternative market outlet or source of supply.

often sold heavily on the NCE rather than in the spot market? Kraft's public position is that it trades on the NCE to buy and sell cheese in order "to balance its inventories with demand for its products."⁶⁴ Kraft's former Director of Cheese Procurement and Inventories, Wayne Hangartner, gave a similar explanation in interviews. He said Kraft sells more than it buys on the Exchange because of the way it manages its inventories:

...with the exception of going into a surplus cycle late in the year, our tendency is to insure that we have just a little bit more cheese than what we think we're going to need, so we don't run that risk of being off the shelf; the other primary reason is our relationship with our suppliers that we take their entire production irrespective of what develops throughout the year, and that more often than not has put us on the long side rather than the short side.⁶⁵

But Hangartner's contention that Kraft always plans to carry a surplus does not explain its relatively large sales on the Exchange. Nor does it explain the sharp change in Kraft's trading activity on the NCE beginning in August 1986.⁶⁶ Hangartner's rationale implies that the NCE has been an important outlet for its surplus. However, our analysis demonstrates that Kraft usually handles planned or unplanned surplus in other ways and that much, if not all, surplus cheese sold on the NCE could have been sold elsewhere.⁶⁷

As one method of handling surplus, Kraft does not always take the "entire production" of committed suppliers, as Hangartner implies above. For example, in 1991 Kraft faced the largest

⁶⁴ See at note 10 above.

⁶⁵ Typed transcript of recorded interview, December 8-9, 1992, pp. 63-64.

⁶⁶ For a discussion of Kraft's explanation as to why it apparently became a seller in 1986-1987, see Chapter 5, Appendix A.

⁶⁷ See Chapter 6.

unplanned surplus in recent years. During the first eight months of the year alone, Kraft reduced procurement receipts by 35 million pounds and reduced production by 12 million pounds.⁶⁸ During the entire year Kraft disposed of surplus by selling [...] million pounds in the spot market and [...] million to the CCC. On the other hand, Kraft's reported total sales on the NCE in 1991 were 13.8 million pounds. Examination of Kraft's 1991 NCE sales suggests that they could have been disposed of more profitably elsewhere (ignoring the cost effect if the NCE sales reduced the price Kraft paid for raw material purchases).⁶⁹ Whereas in 1991 Kraft calculated that it incurred losses of \$240,468 on NCE sales, it enjoyed a gain of \$1,041,225 on spot market sales of barrels and blocks (\$1,984,297 including spot sales of 640-pound squares) and \$89,824 on CCC sales (Appendix Table 4.3).⁷⁰

⁶⁸ See Chapter 6, note 51.

⁶⁹ See Chapter 6, Section C. Some of the above information has been redacted from the report at this time pursuant to an agreement with Kraft General Foods, Inc., that there will be a subsequent judicial resolution of a good-faith dispute over the trade secret status of the information.

⁷⁰ Wayne Hangartner, former Director of Cheese Procurement and Inventories, stated that he had directed that the losses and gains for spot, CCC and NCE sales as summarized in Appendix Table 4.3, be calculated to show the actual gains or losses on each transaction:
...I initiated this report some years ago; it's to include all costs of that specific cheese as opposed to the way...we use inventory averages as far as accounting for the volume of cheese. I wanted to know specifically on the exact cheese that I would sell, either to the government, to the trade or on the Exchange, whether I was making a profit or making a loss; so I would include what we pay for the cheese, if it was in storage, what it cost to ship it to that storage, the storage and handling cost, any cost associated with that specific lot of cheese that I sold.

Kraft General Foods, Inc., typed transcript of recorded interview, December 8-9, 1992, p. 97.

The spot sales may include some Colby and an occasional load of Monterey Jack but no hard styles. *Id.* 107.

Kraft also experienced losses on its total NCE sales during 1987-1992 while experiencing gains on spot and government sales. For all years combined, Kraft calculated that it fared as follows on barrel and block cheese sales to the various outlets: it *lost* an average of 2.4 cents per pound on NCE sales, and *gained* an average of 3.3 cents per pound on outside spot sales and 0.2 cents per pound on government sales. If 640-pound squares (which are close substitutes for 40-pound blocks) are included, the gains on spot sales were 4.1 cents per pound (Table 4.3).⁷¹

To determine the extent to which differences in price affect the relative profitability of spot and NCE sales, we compared cheddar cheese of comparable age (4 weeks or less) sold in carlots at approximately the same time in the spot market and on the NCE. Table 4.4 shows Kraft spot sales of 500-pound barrels and 40-pound blocks and 640-pound squares made within three days of comparable sales on the NCE.⁷² The table makes two comparisons: (a) For each day Kraft sold on the NCE, the price it received on the Exchange is compared with the price received for any spot sales made within 3 days of the NCE sale; and (b) for weeks in which Kraft did not sell on the NCE, the price Kraft received for each spot sale is compared with the NCE price within three days of the spot sale.

⁷¹ These values are based on Kraft's own method of calculating gains and losses. See note 70.

⁷² Although only loads of 40-pound blocks were sold on the NCE during 1988-1993, we have included spot sales of 640-pound blocks in the comparisons because there appears to be no significant difference in the average price Kraft received for spot sales of 40-pound and 640-pound blocks of cheddar cheese sold in carlots. See note in Table 4.4.

Table 4.3. Kraft Gains or Losses on Raw Material Cheese Sales: NCE, Outside Sales, and Government, 1987-1992

	NCE			Outside Sales			Government		
	Loads	Pounds	Loads	Pounds	Loads	Pounds	Loads	Pounds	
	Total Volume (thousands of pounds)								
Blocks	297	11,969	514	20,684	484	20,231			
Barrels	1,214	49,322	717	30,787	1,509	61,666			
Squares ¹	--	--	984	36,290	--	--			
TOTAL	1,511	61,297	2,265	87,762	1,993	81,897			
	Gains or Losses in Cents per Pound								
Blocks	(6.16)		0.80¢			0.62¢			
Barrels	(1.49)		3.89			0.05			
Squares ¹	--		6.15			--			
TOTAL	(2.40)¢		4.09¢			0.187¢			
	Total Gain or Loss								
Blocks	(\$737,797)		\$165,634			\$125,128			
Barrels	(733,335)		1,196,795			27,596			
Squares ¹	--		2,230,437			--			
TOTAL	(\$1,471,132)		\$3,592,866			\$152,724			

Source: Kraft General Foods, Inc., Appendix Table 4.3

¹Squares are 640-pound blocks.

Table 4.4. Comparison of Prices Kraft Received for Spot Sales with NCE Prices, 1989-1992

Year	Price Comparison for Weeks Kraft Made Both Spot & NCE Sales				Price Comparison for Weeks Kraft Made Only Spot Sales				
	Spot Loads ¹ (1)	Average Spot Price (2)	NCE Loads (3)	Average NCE Price ¹ (4)	Spot Less NCE ² (5)	Spot Loads (6)	Average Spot Price (7)	Average NCE Price ³ (8)	Spot Less NCE ⁴ (9)
1989	13	\$1.1592	48	\$1.1396	\$0.0196	6	\$1.1250	\$1.1225	\$0.0025
1990	5	1.3825	3	1.3275	0.0550	70	1.4021	1.3580	0.0441
1991	260	1.2930	146	1.2631	0.0299	221	1.2022	1.1859	0.0163
1992	9	1.1953	23	1.1935	0.0018	9	1.2250	1.2219	0.0031
TOTAL	287	--	220	--	--	306	--	--	--
Average ⁵	--	1.2854	--	1.2564	0.0290	--	1.2471	1.2251	0.0220
40-Pound and 640-Pound Block Cheese									
1989	--	--	--	--	--	2	1.2125	1.1775	0.0350
1990	8	1.1559	12	1.1068	0.0491	20	1.2520	1.1981	0.0539
1991	220	1.3048	67	1.2617	0.0431	248	1.2412	1.1999	0.0413
1992	159	1.2990	82	1.2454	0.0536	286	1.3390	1.2914	0.0476
TOTAL	387	--	161	--	--	556	--	--	--
Average ⁵	--	1.2993	--	1.2518	0.0475	--	1.2918	1.2469	0.0450

Source: Kraft Sales Confirmation letters (see next page) and National Cheese Exchange, Trading Activity Minutes, AMS, USDA.
 Note: For 354 loads of Kraft's spot barrel sales, Kraft sales confirmation letters identified the age of cheese as 4 weeks or less; for 239 loads, the age was not identified. We assume the "no information" cheese is 4 weeks old or less. The average price difference between Kraft spot sales of cheese 4 weeks old or less and NCE price is \$0.0279/lb. For spot sales with no age information, this difference is \$0.0291/lb. All of the spot block (40 & 640 lb.) cheese sales were 4 weeks old or less. The average price difference between Kraft spot sales of 40 lb. blocks and NCE price is \$0.0464/lb. For spot sales of 640 lb. blocks, this difference is 0.0478/lb.

¹Average price Kraft received for sales on NCE within 3 days of a Kraft spot sale.

²Column 2 less Column 4.

³Average NCE price calculated as the average of the previous week final price and the NCE final price on a day within 3 days of a Kraft spot sale.

⁴Column 7 less Column 8.

⁵All prices are weighted averages based on quantity sold in the spot market.

**Table 4.4 (cont.) Bates Numbers for Kraft Sales Confirmation Letters
Showing Information on Spot Sales of Cheese Used in Table**

14866	15083	22387	22607
14868	15086	22388	22608
14869	15087	22391	22609
14870	15089	22392	22610
14871	20143	22393	22611
14872	20151	22394	22612
14873	20163	22395	22614
14875	20164	22396	22615
14876	20166	22397	22616
14877	20169	22400	22618
14878	20170	22401	22619
14883	20172	22402	22620
14885	21844	22403	22621
14886	21846	22404	22622
14887	21847	22406	22623
14889	21848	22409	22624
14891	21854	22410	22626
14892	21856	22411	22627
14893	21857	22412	22628
14894	21858	22414	22630
14896	21861	22417	22632
14897	21863	22418	22634
14899	21865	22419	22635
14900	21867	22420	22636
14902	21869	22421	22638
14903	21870	22422	22639
14904	21875	22423	22640
14908	21876	22424	22641
14909	21877	22425	22642
15004	21878	22428	22643
15034	21879	22429	22644
15055	21909	22430	22645
15056	21931	22431	22646
15057	21939	22436	22649
15058	21960	22444	22650
15060	21961	22445	22651
15064	21976	22447	22653
15066	22002	22451	22654
15067	22046	22453	22661
15068	22047	22454	22662
15069	22376	22457	22663
15070	22377	22464	22666
15071	22379	22472	22667
15072	22380	22479	22671
15073	22381	22595	22678
15076	22382	22599	22734
15077	22383	22602	
15078	22384	22603	
15080	22385	22604	
15081	22386	22606	

These comparisons document that for the four-year period 1989-1992 Kraft received an average of 2.9 cents per pound more for comparable age 500-pound barrel cheese sold in the spot market than for such sales made on the Exchange. During weeks when Kraft did not sell on the NCE, its price for barrel cheese sold in the spot market averaged 2.2 cents per pound more than the average NCE price at the time.

For 40- and 640-pound block cheese, Kraft received an average of 4.75 cents per pound more for cheese sold in spot sales than for comparable age cheese sold on the NCE. In weeks when Kraft did not sell on the NCE, its price for block cheese sold in the spot market averaged 4.5 cents more per pound than the average NCE price at the time (Table 4.4).

In order to compare the above price difference with the profit differences calculated by Kraft for NCE and outside spot sales, we examined the figures for 1991, the year of Kraft's greatest spot and NCE trade volume. In 1991 the price per pound differences between spot and NCE barrel sales using the two comparisons reported in Table 4.4 were 3.0 cents per pound and 1.6 cents per pound; for blocks the two comparisons yield price differences of 4.3 cents and 4.1 cents. These differences were smaller than the differences in profitability between NCE sales and outside spot sales that Kraft calculated for 1991: 5.1 cents for barrels and 6.7 cents for blocks (Appendix Table 4.3). Apparently, not only did Kraft receive lower prices for NCE sales than for spot sales, but also the costs associated with Kraft's NCE sales were higher than the costs associated with spot sales. Several factors may explain this difference. First, Kraft sometimes sells cheese on the NCE from plants as distant as Stephenville, Texas, and Tulare,

California.⁷³ Whereas transportation costs on spot sales can be minimized by shipping directly between plants, all NCE sales are priced FOB within 200 miles of Green Bay. Also, the NCE charges 0.25 cent per pound for the seller and 0.25 cent per pound for the buyer. Kraft also incurs extra storage costs if it temporarily places cheese in Green Bay warehouses to have available for trading purposes.

There is also documented evidence that Kraft sold on the NCE at times when it could have sold in the spot market. A Kraft memorandum dated April 6, 1992, from Jeffrey C. Voermans, Regional Procurement Manager, to Wayne Hangartner, Director of Procurement, included a list of requests for cheese made to Voermans on or after the Exchange.⁷⁴ On March 30 one company requested 4-5 loads of barrels aged 2-4 weeks. Rather than sell these loads to the company in the spot market, Kraft sold two truck loads to it on the NCE the following Friday, April 3, 1992. On March 30 and 31 three other companies also expressed a desire to buy barrel or block cheese aged 30 days or less (the age of cheese sold on the NCE). The memorandum reports that no action was taken in one case involving a request for 4-5 loads of barrels; a second party requesting 2 loads of barrels was told that Kraft sold its excess cheese directly to customers; a third party requesting 4 loads of blocks was told none was available. In fact, however, the following Friday, April 3, 1992, Kraft sold 27 loads of barrels and two loads of blocks on the NCE. Thus, Kraft had cheese available for sale when the requests were made but chose to sell on the NCE rather than the spot market, despite the fact that Kraft generally received higher prices in the spot market than on the Exchange (Tables 4.3 and 4.4). Evidence

⁷³ Stephenville is over 1,000 miles from Green Bay and Tulare is about 2000 miles from Green Bay. This involves a freight differential of almost 2.5 cents per pound.

⁷⁴ Kraft General Foods, Inc., Jeff Voermans to Wayne Hangartner, Director of Cheese Procurement and Inventories, "Requests for Cheese," April 6, 1992, KGF 16023-16024.

clearly indicates that spot prices in early April were higher than NCE prices: the average WAP premium was 2.5 cents above the NCE price for barrels and 5.0 cents for blocks (Appendix Table 4.4).

Other evidence shows that Kraft retained surplus cheese for NCE trading purposes even when it could have sold more profitably in a "tight" spot market.⁷⁵ An internal memorandum of a large cheese marketer stated:

Barrels continue to be in tight balance. Kraft has agreed to sell [us] 10 loads of barrels to be delivered next week. Wayne [Kraft Director of Purchasing] said that Kraft's usage is up for a couple weeks due to buying as a result of price increases. Wayne believed that they don't want to carry more than they need for their own requirements; however, *he wanted to have some trading inventory* (emphasis added).⁷⁶

Kraft generally had "trading inventory" available since its policy was always to carry some surplus cheese.⁷⁷ Because Kraft had first call on the cheese from committed suppliers, Kraft could prevent such suppliers from selling surplus cheese in the spot market if Kraft wished to sell it on the NCE. A July 13, 1990, memorandum of a Kraft competitor explained such a situation.

Stephenville [an AMPI cheese plant in Stephenville, Texas] cut us 1 load of blocks this week and I understand they cut Mid-Am more in favor of shipping Kraft more. However, the blocks that Mid-Am bought from Kraft last week [July 6] on the exchange was filled with Stephenville blocks.⁷⁸

The timing of these events is significant. NCE barrel and block prices had risen about 20 cents per pound between the end of March and the end of June 1990. Beginning the week of

⁷⁵ The week of September 20, 1991, the average WAP spot market price for barrels was 3.5 cents per pound above the NCE barrel price (Appendix Table 4.4).

⁷⁶ [[Source deleted from public report as not essential.]]

⁷⁷ See at Chapter 6, note 95.

⁷⁸ [[Source deleted from public report as not essential.]]

July 6, Kraft began selling into the market until prices peaked July 17. The following weeks Kraft offered cheese and prices declined steadily. This illustrates the manner in which Kraft may use its control over committed suppliers to direct sales away from the spot market to the NCE.

The Assistant Manager of the North Central District of AMPI (a large Kraft supplier) informed an investigator of the Wisconsin Department of Justice that Kraft had carried excess supplies to "keep the market level."

[D]uring the last couple years Kraft has had more cheese under contract than they need for their own production. Mr. Mammen explained that Kraft makes these purchases in anticipation of market trends as well as *to keep the market level*.⁷⁹

These facts are consistent with the hypothesis that Kraft sells on the NCE, not to sell on the most profitable market alternative available, but rather to influence prices.

⁷⁹ Rosemary Perrizo, Investigator to Matt Frank, Assistant Attorney General, Wisconsin Department of Justice, Interview of Harlan Mammen, AMPI, March 31, 1988, p. 4. (Emphasis added.)

In an interview with Mark Firth, Manager of AMPI North Central, the latter said that Mammen's remarks "would have had to have been speculation. There's no logical way that Harlan could have any...first hand knowledge of exactly what Kraft's internal needs were, their decisions, you know." Typed transcript of recorded interview, July 29, 1993, p. 24.

We believe that, as Kraft's largest supplier, AMPI management personnel were in an especially advantageous position to interpret Kraft's conduct.

E. Evidence of Trader Motives

Here we discuss various documentary evidence relevant to the issue of trader motives.

Because of its prominent role in NCE trading we begin with Kraft.

Evidence of Kraft's Motives

The following rationale for Kraft trading appears in a 1989 internal document under the section heading, "Kraft--National Cheese Exchange Strategy."

-As one of many participants in the competitive cheese market, Kraft's primary objective at the NCE is to contribute to price discovery--i.e., by bidding and offering Kraft's view of industry supply and demand conditions are conveyed to the market place.

-Kraft should be in a position to buy or sell cheese to reinforce the market fundamentals.

-Tactical procurement decisions on whether to buy, hold, or sell, how much and what price are made weekly and reflect the most current information available about the industry.⁸⁰

Various other references suggest that Kraft views its trading activity on the NCE as an important factor in managing cheese costs. Because Kraft planning documents usually consist of outline presentations with little or no text concerning the various subjects included in the outline, these references tend to be quite cryptic. As an example, Kraft's *Refrigerated Products Groups 1990 Strategic Plan* states that "Cheese commodity cost management must be a strategic

⁸⁰ Kraft, General Foods, Inc., *1990 Cheese Inventory and Procurement Strategy*, Operations, December 12, 1989, KGF 3002, 3011. Wayne Hangartner, former Director of Cheese Procurement and Inventories, said that he disagreed with the document. He said that the "[E]xchange is not there as a price discovery mechanism...it's there solely for the purpose of people selling cheese if they so desire, or to buy cheese if they so desire; as a result of that, the industry has chosen to use that activity to develop an opinion as to what supply and demand conditions that dictate the value of cheese shall be." Typed transcript of recorded interview, December 8, 1992, p. 61. Marcia Glenn, Director of Dairy Economics, Kraft General Foods, Inc., characterized the difference between her and Hangartner's view of the Exchange as: "An economist's view versus a businessman's view." *Id.*

priority." Among the "Key issues to consider" in achieving this objective the Plan lists four items including the "Role of the Green Bay Exchange."⁸¹ A December 6, 1989, document, entitled "Cheese Procurement Strategy," lists various objectives, one of which is to *maximize profit*.⁸² The first item listed under its "Plan" to achieve the profit maximization objective is, "-Utilize industry price discovery mechanism--NCE."⁸³ A somewhat similar cryptic statement appears in Kraft's *Refrigerated Products Group 1988 Strategic Plan*,⁸⁴ which discusses how "Kraft Can Realize 3 Key Advantages with an Effective Milk Procurement Strategy."⁸⁵ It lists several items under the topic heading: "Developing Analysis, Conclusions and Strategic Formulation to Guide Decisions," with one of the items being, "-What Basis/When Should Kraft Move Cheese Prices?"⁸⁶

None of the above sources elaborates as to how Kraft could use the NCE to manage cheese costs. However, the planners' repeated allusions to the Exchange in the context of controlling costs and maximizing profits imply a belief that trading conduct on the NCE could play a strategic role in managing cheese procurement costs.

⁸¹ Kraft General Foods, Inc., *Refrigerated Products Group, 1990 Strategic Plan*, December, 1989, KGF 21183, 21192.

⁸² Kraft General Foods, Inc., *Cheese Procurement Strategy, Operations*, December 6, 1989. KGF 2948, 2992.

⁸³ *Id.*, KGF 2996.

⁸⁴ Kraft General Foods, Inc., *1988 Strategic Plan, Sources of Value Addition--Procurement/Manufacturing Strategy*, KGF 21112.

⁸⁵ *Id.*, KGF 21114.

⁸⁶ *Id.*, KGF 21115.

On April 12, 1990, a document entitled *Short-Term Cheese Options*⁸⁷ was prepared (with the assistance of Kraft personnel) by McKinsey Company consultants for purposes of discussion with senior Kraft management.⁸⁸ The document summarized the short-term problems facing Kraft, including the likelihood that, "If the current relationship between Kraft wholesale price and raw material costs does not improve, the result will be a [...] per month shortfall versus financial plan." The document then spells out several "options" open to Kraft, including trading on the NCE to influence barrel prices. This document is discussed in greater detail in Chapter 6, Section B, where we examine it within the context of market conditions before and during April 1990. Suffice it to say here that, in our opinion, this document implies that Kraft believed it could enhance profitability by influencing prices on the NCE.⁸⁹

In sum, the various Kraft documents cited above provide further support for the hypothesis that Kraft participated in NCE trading for the explicit purpose of influencing price. These various references to the NCE imply that Kraft decision-makers believed that trading on the NCE could play a strategic role in maximizing profits by managing cheese procurement costs.

⁸⁷ Kraft General Foods, Inc., *Short Term Cheese Options*, Kraft, USA, Discussion Outline, April 12, 1990, KGF 3026, 3027.

⁸⁸ Typed transcript of recorded interview, December 8, 1992, pp. 66-69. Senior management who met with McKinsey included Jim Kilts, president, and Dick Baily, Vice-President of Operations, Kraft USA. Wayne Hangartner, Director of Cheese Procurement and Inventories, said that senior management hired the McKinsey company personnel. Typed transcript of recorded interview, December 8, 1992, p. 67-68.

⁸⁹ Kraft personnel interviewed in the course of this study said that the McKinsey document does not reflect Kraft policy and was not acted upon. See Chapter 6, note 28, for the reasons we believe this document does indicate that Kraft believes it can influence NCE prices to its benefit.