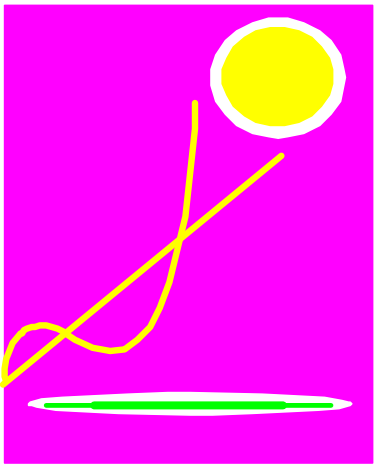

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Testimony on the Impact of the Northeast Dairy Compact and Market Channel Pricing Strategies on the Performance of the New England Dairy Industry

by

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by

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Submitted to the Senate Judiciary Committee
Washington, DC
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The Impact of the Northeast Dairy Compact and Market Channel Pricing Strategies on the Performance of the New England Dairy Industry

Executive Summary

- Using recently obtained data on cooperative premiums that give us a more direct estimate of the actual prices paid by processors for raw milk in New England, we have recalculated our impact models. The Northeast Dairy Compact's impact on consumers, computed net of changes in cooperative premiums engendered by Compact implementation, is 2.7 cents per gallon. In our original study it was 4.5 cents per gallon. The difference is due to a reduction of 1.8 cents per gallon in cooperative premiums. This reduction occurred because cooperatives deferred to the Compact, eliminated power premiums, and charged only for the cost of actual services provided to milk processors.
- Using the new cooperative pay price series the impact of market power on supermarket retail prices for all New England is 13 cents per gallon. In our earlier study it was 11 cents.
- The increase in the average retail price for all New England during the 3 years after the Compact compared to our estimate of retail price immediately prior to the Compact remains the same at 29 cents per gallon. As in our earlier work, other non-milk impact costs account for 7 cents, and strong raw milk markets account for 6.5 cents of the 29-cent retail price increase. Combined with the Compact impact and market power impact numbers these add to 29 cents per gallon. Table 2 presents these new impact estimates for all New England and each of the four market areas, Boston, Providence, Hartford/Springfield, and Northern New England.

- The 2.7-cent per gallon impact of the Compact is less than 1 percent of the average price for all New England, $2.78 per gallon, during the 3-year post-Compact period. It is less than 10 percent of the observed retail price increase. Alternatively, more than 90 percent of the increase in supermarket retail prices was due to factors other than the Compact.
- During the 3-year post-Compact period we estimate that supermarket consumers paid $122.8 million more for milk due to the 29 cent per gallon actual price increase. They paid only $11.4 million more due to the Compact; however, they paid $54.2 million more due to the exercise of market power and increases in bottom line net profits. (Table 3)
- The increase in net profits contributed nearly 5 times as much to the increase in retail prices as did the Compact.
- The increase in the market margin (other costs and net profits) contributed nearly 8 times as much to the retail price as did the Compact.
- Our impact assessment model depends upon no economic model of pricing strategy. As such it is very general and not due to restrictive assumptions that accompany the specification of a particular model, such as Bailey's markup model.
- Our impact assessment model is a before-after impact model. It measures how consumer prices, raw milk prices, market margins, and net profits changed over time. Therefore, it measures the actual impact of the Compact and market power in New England markets.
- An alternative impact assessment model, the counterfactual model, analyzes a different question and gives a different answer. That question is: If the Compact had not been implemented how would retail prices, raw milk prices, margins, and net profits change

during the after-Compact period? The Bailey (2000, 2001) and the Lass et al. (2000) studies are counterfactual studies that only analyze raw milk and retail price changes.

- Bailey's studies are flawed and not credible for several reasons. However, the most basic reason is that they misuse the proportional markup model. According to Bailey's hypothesized and untested specification of the markup model, retail prices are far more volatile than farm prices when in fact the opposite is true. Observed price conduct rejects his model. Retail prices clearly are not more volatile than farm prices (Figure 1, Figure 4). His estimates of the impact of the Compact, 14 cents per gallon, and in a more recent study, 22.4 cents per gallon are biased, severely overstated, and completely unreliable.
- The International Dairy Foods Association spokespersons are technically correct when they declare that the numbers from the before-after and counterfactual approaches "do not add up." This, however, is not trenchant criticism of either method. It is a perfect red herring, a bogus issue.
- Consumers who purchase milk through the WIC and school lunch programs are better off under the Compact than they would be if there were no Compact.
- Our primary conclusions remain the same as in our original study. The exercise of market power far outweighs the impact of the Dairy Compact on supermarket retail prices and consumers. The supermarket chains, most notably Stop & Shop, and most probably the region's leading processor, Suiza Foods, have used their power in the market place to raise prices. More egregious in our opinion is the fact that in the public relations and political debate surrounding the Compact, the industry attributes increased prices to the Northeast Dairy Compact while they pocket much of that increase as expanded margin and windfall profit gain.

- Compacts can and should use their investigation powers to monitor the milk-marketing channel, conduct research, and promote effective competition. This could benefit non-dominant processors and retailers as well as farmers and consumers.
- The impact of noncompetitive market channels on retail prices is an issue in other regions of the country as well as New England. For the three year July 1997-July 2000 period when the Northeast Dairy Compact was in effect, supermarket milk prices in Chicago averaged $2.89 per gallon, 10 cents more than average price in Boston for the same period. During that period the cooperative price that fluid processors paid for raw milk in Chicago averaged $1.39 per gallon. In Boston, with the Compact it averaged $1.55 per gallon. Thus market channel firms in Chicago paid 16 cents per gallon less for raw milk and charged 10 cents more per gallon than was the case in Boston.
- Midwestern farm interests who are concerned about the Compact's minor impact of 2.7 cents per gallon in New England upon the demand for their milk would be well advised to focus more attention on the exercise of margin widening market power in their own Chicago market and elsewhere including New England and Seattle. The impact of market power throughout the nation is far larger than the 2.7 cent per gallon impact of the Compact in New England.
- Cooperative over order premiums added 16 cents per gallon to the Class 1 price in Chicago during the July 1997 to July 2000 period. The Northeast Dairy Compact and cooperative premiums combine to provide exactly the same price enhancement to Class 1 prices in New England, 16 cents per gallon. Therefore the Class 1 price differential between the two markets was not affected. When viewed in this light the Compact redresses inequities in producer cooperative bargaining power. Highly concentrated

processing markets such as New England where Suiza Foods now accounts for over 85 percent of processing in the Boston Providence market area make producer bargaining more difficult.

- The Northeast Dairy Compact reallocated premiums to low price periods, whereas the Chicago cooperative premium was roughly constant at 16 cents per gallon over the 3-year period. Therefore the Compact reduced the price volatility in the New England market compared to Chicago. Reduced price volatility is a benefit for many farmers.
- The issue at hand is not public power and distortion of otherwise competitive markets. Today many milk marketing channels, including the New England channel, are not effectively competitive. The issue is the public's interest in an effectively competitive milk marketing channel and a dairy price program that promotes family run dairy farms that are technically efficient, preserve open space, protect the environment, and are not in perpetual economic crisis. These goals are inextricably linked.

The Impact of the Northeast Dairy Compact and Market Channel Pricing Strategies on the Performance of the New England Dairy Industry

I. Introduction and Initial Analysis

I would like to thank the Committee for the invitation to submit this testimony. Our research focuses upon the impacts of the Northeast Dairy Compact and the pricing practices of supermarket chains and fluid milk processors on New England consumers.[1] We find that the impact of the Northeast Dairy Compact on consumers, adjusted for Compact-related reductions in cooperative premiums, is 2.7 cents per gallon. This is less than one percent of the $2.78 per gallon average price that New England consumers paid for supermarket milk during the 36 months after the Compact. During the same period we find that New England consumers paid 13 cents more per gallon for milk in supermarkets because market channel firms increased their net profit margins. Our primary conclusion is that the exercise of market power by channel firms has nearly 5 times the impact on supermarket milk prices that the Dairy Compact has.

Here we will explain in detail how we have obtained these results and their implication for dairy policy, including future dairy compacts. The Northeast Dairy Compact is a public policy that started on July 1, 1997. Our impact study analyzes what actually happened over time, comparing information from before the Compact to information after the Compact. The measurement of economic conditions that prevail before a policy intervention is as important as the measurement of post-impact conditions. Our study uses the 18 four-week periods from February 1996 through June 1997 to estimate the before-Compact retail price and farm price. The difference is the before-Compact market margin. Is this time period a reasoned and reasonable choice? We maintain that it is because it reflects market conditions accurately and it

[1] See Cotterill and Franklin (2001a, 2001b, 2001c). These studies and many other Compact related documents are downloadable from our website: Http://www.are.uconn.edu/fmktc.html.

enables us to identify pricing conduct immediately prior to the advent of the Compact. Data from 1996 and the first half of 1997 capture major raw milk price movements. This allows us to determine how raw milk price changes affected market channel firm pricing strategy, retail prices, and margins immediately prior to the policy intervention.

Figure 1 displays the Class 1 raw fluid milk price for New England from February 1996 to June 1997. Recently we obtained nonpublic data from the Order 1 Federal Milk Market Administrator on premiums paid by processors to cooperatives that sell approximately 75 percent of all raw fluid milk in New England. We use this information to compute what we call the cooperative farm price series, also in Figure 1. It more accurately reflects what fluid processors actually paid for raw milk. Note that raw milk prices first decline slightly for two months in a weak down phase of the price cycle. Then they rise strongly for seven months, drop precipitously for 2 months, rise for five, and drop for one month. If retail prices respond to contemporaneous moves in the farm price, this volatile price series should elicit response.

As documented in our study, there is no significant statistical relationship between the current retail price, also charted in Figure 1, and the current farm price in the before-Compact period. Market channel firms have decoupled retail prices from contemporaneous moves in the farm price.[2] The average farm price for the entire before-Compact period is a better predictor of the retail price.

To reinforce this point let's answer it again in a different fashion. Looking at the cooperative farm price series one might ask why not use the price in the month immediately prior to the Compact, June 1997, or the average price for the 7 months prior to the Compact to measure the farm price level before Compact implementation? Either of these before-Compact

[2] See Cotterill and Franklin (2001a, p. 10-14) for more extensive explanation of this problem in milk and other agricultural markets.

price measures are lower than the 17 month average that we used. Each would produce a higher Compact impact on processors and consumers.

The reason we did not use the June 1997 farm price or the prior 7-month average is that the retailers did not use them when pricing milk. If they had used one of these prices, assuming only that firms maximize profits, retail prices would have dropped during the corresponding period.[3] Retail prices did not drop in June 1997 and they did not drop when farm prices crashed in late 1996 (see Figure 1). Therefore the firms are not using these farm prices as measures of their costs when maximizing profits. As documented in our study the best predictor of retail price during the before-Compact period is the full period's average farm price.[4]

Shifting attention to the retail price series for the Boston market in Figure 1, what is the best estimate of the retail price that existed prior to the Compact intervention? A prime candidate is the average retail price for the before-Compact period, $2.38 per gallon. Note, however, that unlike either farm price series, there is a clear pronounced upward trend to retail prices in Figure 1. The retail price immediately prior to the Compact is clearly higher than the average. One could use the actual June 1997 retail price, $2.42 per gallon, or one can follow the General Accounting Office (1998) reasoning and use the trend line forecast retail price for June 1997, $2.43 per gallon, as a more accurate estimate of the underlying retail price level. We opt for the latter and call it the forecast retail price. We call the margin derived from it the forecast before-Compact margin. In our work we report both the average and the forecast before-Compact margins. Choosing one over the other does not affect our estimate of the impact of the Compact; however, it does affect the size of the market power impact on consumers. Since the

[3] The profit maximization assumption is the basis for modern microeconomic theory and as such is not controversial.

[4] Also as explained in our study this average price approach is consistent with a mean-variance approach to the theory of the firm with a risky input price. That model allows one to analyze one of the primary goals of the Dairy

forecast margin most accurately reflects conditions immediately prior to the Compact we prefer it; however, others have used the average margin (Bailey 2000a). As we will see using the forecast before-Compact margin reduces the impact of market power 5 cents per gallon because it gives firms a higher before-Compact margin.

II. The Impact of the Compact

Before visiting the data with any specific economic model of pricing strategy these data can tell us a great deal about milk pricing before and after the Compact. Table 1 gives key statistics for Boston.[5] Using the higher of the Class 1 or Compact minimum to define raw milk price (the "Class 1" farm price series) one has an average price at $1.40 before the Compact and $1.51 after the Compact. One can decompose the increase in the raw milk price into the amount due to the Compact's minimum floor price for the Class 1 series at $1.46 per gallon and the amount due to strong raw milk markets when the price moved above the Compact minimum. The Compact added 6 cents per gallon to the before-Compact average raw milk price but it was in effect for only 30 of the 40 after Compact periods. Thus its contribution to the increase in the average farm price for the full after-Compact period is (.75 x 6) 4.5 cents per gallon. Strong milk markets added 6.5 cents per gallon.

Using the cooperative farm price series one finds that the Compact's contribution to increased retail prices is even lower. Now the average farm price increases only 9 cents per gallon. It is lower than it was for the Class 1 farm price series because New England cooperatives eliminated their power premiums when the Compact took effect. As Bailey (2000, p. 17, Appendix Table 1) and others have noted, this price reduction can be factored into the

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Compact, the reduction of price risk in the raw fluid milk market. The reduction of raw fluid milk price risk in theory clearly benefits market channel firms as well as dairy farmers.

[5] Data for Hartford/Springfield, Providence and Northern New England are in Cotterill and Franklin 2001a.

Compact impact analysis. In Table 1 it is a 1.8 cent per gallon price reduction. Thus the net impact of the Compact is a 2.7 cent increase in the average price of a gallon of milk.

Using the cooperative farm price the increase in the average dollar margin, before versus after the Compact, is 26 cents. Using the forecast before-Compact forecast margin the increase in the margin is 5 cents less, 21 cents per gallon. Those debating the merits of the Compact should carefully consider the following fact. Even with our more conservative estimate, the widening of the margin contributed nearly 8 times as much to the retail price increase as did the Northeast Dairy Compact.

III. The Impact of Market Power

If one wants to know whether the widening of the dollar margin is due to increases in the costs of the other inputs or whether it is due to an increase in retail price in excess of these cost increases, i.e. an exercise of market power, one needs more data. We review information on the increases in other inputs (labor, fuel, electricity) as well as changes in the general price level in Boston (consumer price index, producer price index). These data justify specifying a 3 percent growth rate in the margin during the after-Compact period (Cotterill and Franklin 2001a, Section XI). Once we control for this cost-justified expansion in the dollar gross margin, we find that the market channel firms exercised market power. In other words the actual retail prices in the after-Compact period increased by more than the amount needed to cover the increase in raw milk costs and the increases in all other market channel costs. For all New England, the market channel firm net dollar profits are 13 cents per gallon higher in the after-Compact period than they are in the before-Compact period. Since we regard this analysis with the forecast margin and the cooperative price series as our best estimate of the impact of the Compact and channel

firm pricing practices on consumers, we have updated Table 14 from our report (Cotterill and Franklin, 2001a) and provide the new version here as Table 2.

Our benchmark before-after analysis does not rely upon specifying or testing any theory of tacit collusion, markup pricing, or other pricing theory. Now we can evaluate alternative pricing hypotheses to determine which ones explain observed pricing conduct. Clearly observed conduct in this market is not consistent with competitive pricing. Assuming a perfectly elastic supply curve, competition requires that the change in price equal the change in marginal cost. The change in the farm price for raw milk and the change in other input costs, in total, are in excess of the change in marginal cost. This is because some non-milk costs are fixed and do not vary with output. Therefore the change in retail price should be less than the sum of our measured change in farm milk price and other inputs. It is not.

Consider the only other possible supply situation. If the raw milk supply curve is upward sloping, in a competitive market the change in retail price would also be less not more than the change in the farm price and other costs. Since supply curves are not downward sloping, under no conditions does a competitive market generate an increase in retail price that is greater than the increase in marginal costs. But that is exactly what we observe.

One must look beyond competitive markets to explain actual observed price conduct and the widening of the margin post-Compact. In our case study approach, we document that the data and historical events in the New England milk industry support a tacit collusion strategy at Compact implementation. That event served as a focal point for joint retail price elevation. The industry's public responses in opposition to the Compact enabled them to signal each other and unite behind a retail price hike equal in size to any government imposed increase in the price of raw milk on July 1, 1997. This enabled the industry to change its pricing strategy and to lock in

a margin increase in excess of increases in non-milk costs (Cotterill and Franklin 2001a, Sections IV, V). Later in the after-Compact period asymmetric pricing at retail also widened the dollar margin. When farm prices dropped, retail prices decreased but they decreased by much less than the farm prices (Cotterill and Franklin 2001a, Section XI).

IV. Impact Analysis: Before-After Versus Counterfactual Results

Impact analysis can ask what happened over time, comparing information in the before period to information in the after period. Impact analysis can also ask what would happen during the after period if the program did not exist. This is counterfactual analysis. Before-after and counterfactual impact analyses answer two distinctly different questions. The answers that they give are also distinctly different.

The difference between impact over time and counterfactual impact has eluded many players in the Compact debate to date and resulted in considerable confusion (Tipton 2001, Cotterill and Franklin 2001d). Counterfactual studies such as Bailey (2000a, 2001 and Lass et al 2001) address the question that Compact opponents wish to see put on the table, the demise of the Compact rather than the actual impact of the Compact on consumers over time. Our research examines the latter.

Figure 2 focuses exclusively on the raw fluid market and illustrates the difference between these two analytic approaches on a per gallon basis using the cooperative farm price series. Before the Compact the cooperative price averaged $1.461 per gallon. After the Compact the actual average cooperative price paid by processors increased to $1.553 per gallon. This actual 9.2 cent increase was due to the actual impact of the Compact, 2.7 cents, and the actual impact of strong milk markets, 6.5 cents. Again we stress that this is what actually happened in New England markets.

Next we shift to hypothetical or counterfactual analysis. If there had been no Compact the price farmers would have received would have been 10.1 cents lower. This $1.449 per gallon cooperative price consists of the average Class 1 price for the period, $1.388, and the average cooperative premium from the before-Compact period. We use the before-Compact cooperative premium because, as Bailey (2000, Appendix Table 1) and others assume, we also assume that absent the Compact, cooperatives would resume their practice of charging power premiums as well as charging for the costs of services performed.

Under this counterfactual approach what do we know prior to specifying any economic model that relates farm to retail prices? We know that if there were no Compact, farm revenue would decrease 10.1 cents per gallon (Figure 2). This amounts to a loss of 111.8 million dollars for all Class 1 milk and 42.8 million dollars for supermarket channel milk. This is the amount that processors would have saved on their milk procurement bill if there had been no Compact. It has absolutely nothing to do with what actually happened over time to the market channel firms' raw milk bill and profits.

V. An Answer to "The Numbers Don't Add Up" Charge by IDFA

The International Dairy Foods Association (IDFA, 2000) claims that "the numbers do not add up." The IDFA is correct when they declare that these two different approaches do not add up. This, however, is not trenchant criticism of either method. It is a perfect red herring, a bogus issue. They confuse the difference between a before–after and a counterfactual policy impact analysis. The numbers in the before-after analysis, as reported in Table 2, add up.

Table 3 reports the total dollar impacts for the July 1997 through July 2000 period. Before versus after the Compact, processors and ultimately consumers paid $11.2 million more (only 2.7 cents per gallon more) for milk in supermarkets because of the Compact. If the

Compact had not existed (counterfactual) then the processors during the after Compact period would have paid $42.8 million less for milk sold in supermarkets than they actually paid. This is not an additional real cost that processors incurred. Processors/retailers "ate" no increased milk costs.[6] In fact we show that in addition to passing on to consumers the 2.7 cents per gallon net increase in their cost of raw milk due to the Compact, supermarket channel firms increased retail prices to cover increases in other costs and widened their net profit margins 13 cents per gallon. This added $54.2 million to their net profits (Table 3).

VI. The Bailey Studies are Flawed

Recently the industry has relied upon Professor Kenneth Bailey's estimates of the Compact impact. Elsewhere we have explained in detail how he misuses the proportional markup model and improperly mixes before-after and counterfactual analysis (Cotterill and Franklin 2001c, pp. 10-13). In a July 2000 paper Bailey reports a 14 cent per gallon Compact impact on consumers, and in a July 2001 paper he increases it to 22.4 cents per gallon. These estimates have found their way into several editorial page condemnations of the Compact including Murdock (2001) and *Wall Street Journal* (2001).Neither estimate is credible because of several flaws in his analysis.

According to Bailey's hypothesized and untested specification of the markup model, retail prices are far more volatile than farm prices. In fact the opposite is true. Observed price conduct rejects his model. Retail prices clearly are not more volatile than farm prices (Figure 1, Figure 4).

Think about it for a moment. Even if one accepts Bailey's claim that the Compact raised price 12.3 cents, this is the amount that they are taking from downstream firms and consumers. Why should other input suppliers and the owners automatically get another 10.1 cents, which is

[6] Bailey concludes that processors ate costs. See Cotterill and Franklin, 2001d, p.16.

the case with his estimated 82% markup rate (Bailey 2001, p.12). In a policy impact analysis of this sort they should not. Moreover, under no circumstances should one attribute, as Bailey does, such increases for others to the Compact and farmers. Alternatively, when the farm price drops 12.3 cents do market channel firms demand another 10.1 cents of wage, other input price and profit givebacks and drop the price 22.4 cents? They do not.[7] Bailey clearly misuses the proportional markup model in both studies.

To illustrate how incorrect Bailey's proportional markup model is for policy analysis, consider an application of it to the breakfast cereal market. The grain, e.g. wheat, that goes into a box of cereal typically costs less than 10% of the retail price. If wheat in a box of Wheaties is 30 cents and the box costs $3.00, the markup is 1,000 percent. Now if the price of wheat doubles because a government program limits planting to benefit farmers, Bailey would use the percent markup to conclude that the price of Wheaties doubles to $6.00 per box. Bailey would conclude that a 30 cent increase in the price of raw wheat for the box of cereal causes a $3.00 increase in the retail price. No one accepts this conclusion as a valid measure of farm-to-retail price transmission. Moreover Bailey would assert that the wheat farmer program is responsible for the full $3.00 increase in the retail price when within his own model all of the margin increase goes to other factors of production. Clearly this is unacceptable and flawed economic reasoning.[8]

VII. Impact of the Compact on the WIC and School Lunch Programs

[7] See Figure 1 and Figure 4. Note that when the farm price drops before the Compact retail prices do not drop. After the Compact, when farm prices drop, retail prices drop by less not more than farm prices.

[8] Bailey errs in his counterfactual analysis because, unlike Lass et al., he does not estimate the relationship between farm and retail prices. Rather he assumes that percent markup gives the cost pass through relationship between the prices. It does not.

The Dairy Compact paid to the Women, Infants and Children (WIC) program and school lunch programs the difference between the Compact minimum price and the Class 1 raw milk price when the latter was lower, i.e., they paid the "over order obligation" for each gallon of milk that these programs used. As reported in Figure 2, the order obligation averaged 10.1 cents per gallon for the July 1997 to July 2000 period. When viewed in this light over time, the Compact redistributed income from all consumers, who paid 2.7 cents more due to the Compact to these groups who paid 10.1 – 2.7 = 7.4 cents less due to the Compact. Absent the program, there is no guarantee that the market channel would have reduced price this much, so consumers in these groups are also better off with, rather than without, the program. Over time the Compact program consumers in these key groups did not pay 29 cents more per gallon for their milk. The Compact reduced their milk price increase 10.1 cents. Thus WIC and participating school lunch programs paid 18.9 cents per gallon more for milk, on average, during the 3 years after the Compact.[9]

VIII. Primary Conclusions

Professor Bailey, the International Dairy Foods Association, their paid consultants, the Consumer Federation of America, the Food Marketing Institute, and the firms themselves have avoided the fact that the widening of the margin contributed nearly 8 times as much to retail price increases as did the Northeast Dairy Compact. They have avoided the fact that the increasing net profits alone contributed nearly 5 times as much to retail price as did the Northeast Dairy Compact. The supermarket chains, most notably Stop & Shop, and most probably the region's leading processor, Suiza Foods, have used their power in the market place to raise prices

[9] This assumes that WIC participants purchased their milk in supermarkets and that the increase in supermarket price is an accurate measure of the increase in the price paid for school milk. It also is based upon the observation that supermarket firms in the Boston and other New England markets during the 1996 through 2000 period never passed on raw milk price decreases at a level equivalent to the Compact's reimbursement.

(Cotterill and Franklin 2001a, Section ix, 2001g, pp. 15-19). More egregious in our opinion is the fact that in the public relations and political debate surrounding the Compact, the industry attributes increased prices to the Northeast Dairy Compact while they pocket much of that increase as expanded margin and windfall profit gain. One might quibble over the exact magnitude of our monetary impact estimates but the basic conclusions of our research are robust.[10]

IX. Some Observations For Dairy Policy: Consumer Welfare, Midwestern Farmer Welfare, and the Antitrust Linkage

To date nearly all analysis of milk price policy issues has assumed that the alternative to public programs is a competitive market channel. This simply is not true. Private economic power exists and is coalescing in the dairy marketing channel with serious implications for pricing (Cotterill 2001, Sexton and Zhang 2001). Today we have a dominant milk milking cooperative, Dairy Farmers of America, a dominant dairy processor in many regional markets, Suiza Foods, and dominant supermarket chains in local market areas, e.g. Stop & Shop in Southern New England, and Jewel Supermarkets in Chicago. A Compact Commission can use its investigation power to uncover noncompetitive milk pricing practices and promote effective competition. It can help to redress the unbalanced power relationship between farmers, market channel firms and consumers.

Consumers are, in our opinion, better served by milk pricing oversight in the public interest by the Congress and a Compact Commission rather than the exercise of private economic power in the milk channel. The Consumer Federation of America wants consumer benefit, as they should. We would like to think that our work would cause them to reverse their position. If

[10] For further proof or refutation of our margin widening and net profit results, the committee might consider subpoenaing the gross and net margins for fluid milk from the leading retailers and processors.

they continue to support dismantling the Compact they will capture a modicum of consumer benefit by lowering farm income rather than capturing a much larger consumer benefit by eliminating the increase in market channel profits that comes with market power. This choice validates the self-proclaimed right of channel firms to ever increasing profits at the expense of dairy farmers. The farmers only counsel is to get more efficient. The dubious counterpart of this counsel is the often forwarded claim that the increased profits of the processors and retailers are evidence of their efficiency. Power and the lack of power to control prices and output are the issues today. Efficiency has always been the powerful dominant agribusiness corporations' counsel for the effectively competitive agricultural sector.

Midwest dairy farm interests have expressed opposition to the Northeast Dairy Compact. We have not studied the interregional impacts of dairy compacts; however, to date such studies have not addressed the channel competition issue (Cox et al., 1999, Bailey 2000b). We would offer some observations that may contribute to that discussion. Figure 3 charts the Chicago supermarket retail milk price, the Class 1 raw milk price and the cooperative raw milk price for the February 1996 to July 2000 period. If one compares this chart to Figure 4, which is Figure 1 from our study (Cotterill and Franklin 2001a), one will observe that supermarket retail milk prices, and market margins, are consistently higher in Chicago than Boston. In the post-Compact period (July 1997 to July 2000) the retail price in Chicago averaged $2.89; in Boston it averaged $2.79. Why are retail prices consistently higher in Chicago if the Midwest is a low cost production region?

Note also in Figure 3 that retail milk prices in Chicago remain very high and in fact average $3.21 per gallon from October 1997 through July 2000. The initial price elevation was due to an increase in raw milk prices; however, retail prices do not decline when farm prices

subsequently decline. A class action lawsuit on behalf of consumers, filed in August 2000, alleges that the leading two supermarkets Jewel (owned by Albertson's) and Dominics (owned by Safeway) violated Section 1 of the Sherman Act, elevating prices in restraint of trade during this time period. There are 8.47 million people in the Chicago market area. Those consumers purchased 60 million gallons of milk from supermarkets during the October 1999 through July 2000 period. These data suggest that Chicago supermarket consumers may have been overcharged tens of millions of dollars for milk during this single, relatively short eight-month period. Private milk pricing power is real, and even sporadic strikes can generate millions in consumer damages.

If Midwestern farm interests are concerned about the impact of retail price elevation on the demand for their milk they might start closer to home. A Midwest Compact Commission seems in order to promote competitive milk pricing for Midwestern consumers and dairy farmers.

The same is also true for Seattle, Washington (Cotterill and Brundage 2001). Undoubtedly this is the case for other urban milk markets if one had the data to study them. Our basic point is that today dairy farmers might be further ahead if they united behind a set of institutions that promote effective competition in milk processing and retailing rather than argue over interregional differences in the dairy farm program.

Shifting to the Chicago Class 1 and cooperative raw milk price series in Figure 3, note that there is a hefty and reasonably stable cooperative premium in place. Over the July 1997 to July 2000 post-Compact period it averages 16 cents per gallon. Permit us to compare Chicago and New England raw milk pricing during this period. In Chicago the federal market order Class 1 price for the period averaged $1.23 per gallon. In New England it averaged $1.39 per gallon,

16 cents more than Chicago. These are averages of the Congressionally mandated minimum prices for Class 1 milk in these two markets. Note that cooperative premiums in Chicago offset the full amount of the Boston Class 1 differential.

In New England, absent the Compact, we estimate that cooperative premiums would elevate price only 6 cents per gallon (Figure 2). With the Compact, the raw milk price was increased 16 cents per gallon from $1.39 to $1.55. When viewed from this perspective the Compact offsets the Chicago cooperative premium and preserves the Congressionally mandated Class 1 differential between Chicago and New England. The Compact's impact is more powerful than the New England cooperatives by themselves yet it is only commensurate to the impact of the Midwest cooperatives.

The Compact also redistributed the 16 cent average premium to concentrate it in periods where milk prices were low. The Chicago premium is uniform over time (Figure 3). Thus the Compact tends to stabilize raw milk prices compared to the Chicago premium. Nearly all farmers prefer this sort of stabilization because it produces a smoother cash flow over time. Again we stress that on a per gallon basis the combination of cooperative and Compact premiums in the Northeast elevated the average raw milk price no more than cooperative premiums did in Chicago. What is good for the goose is good for the gander.

In the depths of the great depression Franklin Delano Roosevelt observed that some of his economists were resisting agricultural policies that would elevate farm income because those policies would give private firms, in that case farmer cooperatives, the power to set market prices. President Roosevelt's response essentially was the following statement. We will sanction agricultural price elevation to give farmers a fair income but we will have the

government do it. The public interest not private economic power will serve as the governor of the agricultural economy (Schlesinger, 1957), Chapter 2).

In conclusion we face the same issue of private economic power; that we faced in the 1930's; however, we face it in triplicate. Private power exists at the farmer cooperative, processor, and retailer level. Based on our economic research we think Franklin Delano Roosevelt's solution is more timely and appropriate than ever. The public interest should supercede private cartels including tacit collusion of the sort observed in this industry. The fact that the industry has exercised market power in an attempt to defeat the Northeast Dairy Compact argues for a stronger Compact, not the demise of the Compact. Compacts could promote effective competition in the market channel as well as a fair income level for farmers in all regions of the country. They can be an important component of a wider program that seeks to promote family operated dairy farms that preserve open space and protect our environment.

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Table 1. Average Farm-to-Retail Margins and Mark-ups Before and After the Compact: Boston

	Before Compact Feb. 1996–Jun. 1997	After Compact Jul. 1997–Jun. 2000	Increase*
Using Class 1 Farm Price			
Avg. Retail Price	2.384	2.732	0.348
Avg. Class 1 Price	1.400	1.510	0.110
Change due to compact			.045
Change due to strong market			.065
Dollar Margin	0.984	1.222	0.238
Percent Markup	70.3%	80.9%	+10.6
Using Coop Farm Price			
Avg. Retail Price	2.384	2.732	0.348
Avg. Coop Price	1.461	1.553	0.092
Avg. Coop Premium	0.061	0.043	-0.018
Change due to Compact			0.045
Net Change Due to Compact			0.027
Change due to Strong Markets			0.065
Dollar Margin	0.923	1.179	0.256
Percent Markup	63.2%	75.9%	+12.7

Source: Food Marketing Policy Center Information Resources, Inc. scanner data set as reported in Cotterill and Franklin, 2001c.

*Substituting the forecast retail price, $2.43, for the average retail price, $2.38, reduces the increases in total retail prices and dollar margins 5 cents per gallon. The increase in the percent markup also drops slightly.

Table 2. Who Gained from the Retail Milk Price Hikes: July 1997 to July 2000

	Before the Compact	After the Compact	Change per gallon
All New England			
1 Average Coop Farm Price	$1.46	$1.55	0.09
Net Increase due to Compact*			0.027
Increase due to Strong Raw Milk Market			0.065
2 Increase due to non Milk inputs			0.07
3 Total Cost Increase (1+2)			0.16
4 Retail Price	$2.49	$2.78	0.29
Increase in Profits (4-3)			0.13
Boston			
1 Average Coop Farm Price	$1.46	$1.55	0.09
Net Increase due to Compact*			0.027
Increase due to Strong Raw Milk Market			0.065
2 Increase due to non Milk inputs			0.06
3 Total Cost Increase (1+2)			0.15
4 Retail Price	$2.43	$2.73	0.30
Increase in Profits (4-3)			0.15
Hartford-Springfield			
1 Average Coop Farm Price	$1.46	$1.55	0.09
Net Increase due to Compact*			0.027
Increase due to Strong Raw Milk Market			0.065
2 Increase due to non Milk inputs			0.08
3 Total Cost Increase (1+2)			0.17
4 Retail Price	$2.60	$2.94	0.34
Increase in Profits (4-3)			0.17
Providence			
1 Average Coop Farm Price	$1.46	$1.55	0.09
Net Increase due to Compact*			0.027
Increase due to Strong Raw Milk Market			0.065
2 Increase due to non Milk inputs			0.07
3 Total Cost Increase (1+2)			0.16
4 Retail Price	$2.54	$2.87	0.33
Increase in Profits (4-3)			0.17
Northern New England			
1 Average Coop Farm Price	$1.46	$1.55	0.09
Net Increase due to Compact*			0.027
Increase due to Strong Raw Milk Market			0.065
2 Increase due to non Milk inputs			0.06
3 Total Cost Increase (1+2)			0.15
4 Retail Price	$2.47	$2.71	0.24
Increase in Profits (4-3)			0.09

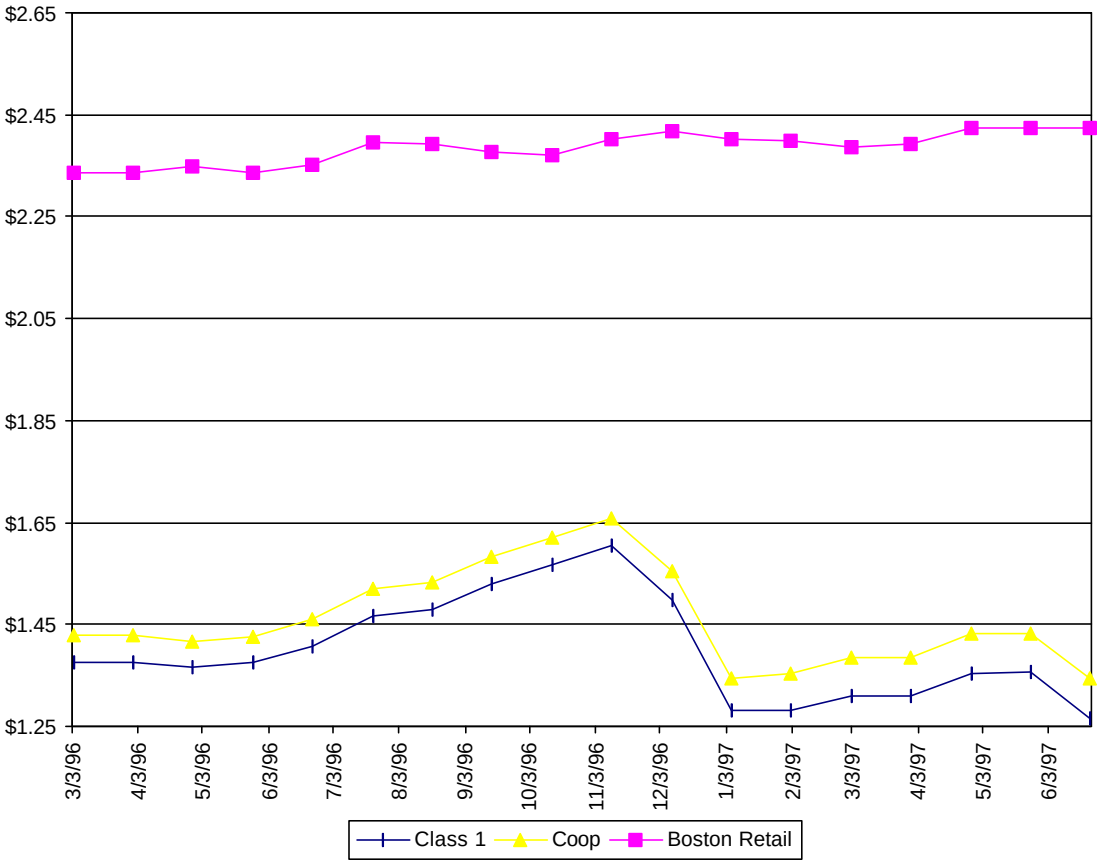
* Net change due to compact is 0.045 change due to compact minus change in Coop Premium 0.018.

Table 3. Dollar Impacts on Supermarket Consumers and Farmers: All New England*

	$ Million	Percent
Actual increase in consumers supermarket milk bill ($0.29 x gals)	122.8	100.0
Increase due to Compact	11.4	9.2
Increase due to strong Milk Markets	27.5	22.4
Increase due to other costs	29.6	24.1
Increase in profits	54.2	44.1
Decrease in Farm Revenue from Supermarkets	42.8	
Sales of milk if no Compact ($0.101 x gals)		

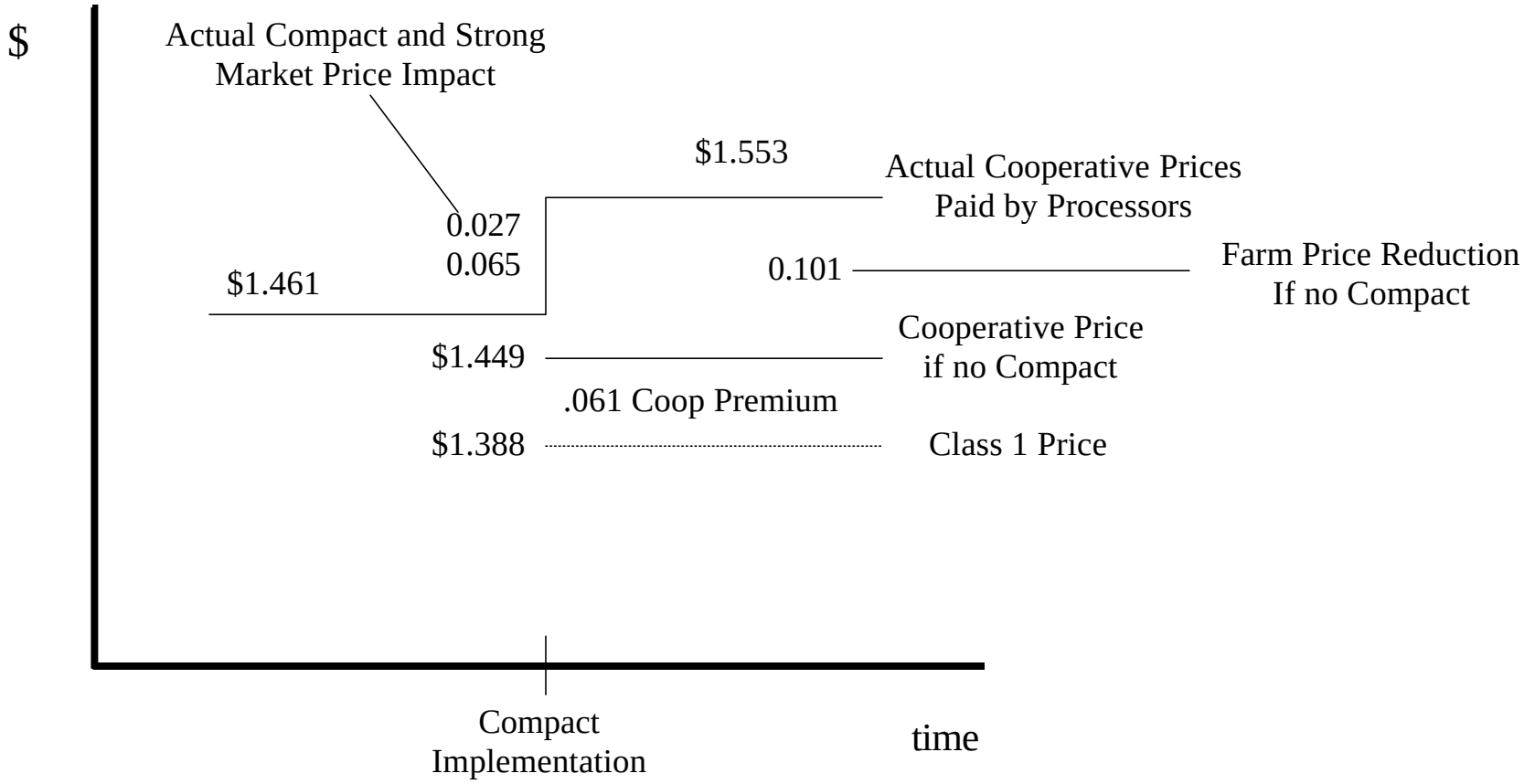
* based on Table 3 results and 423.5 million gallons of supermarket milk purchased in the after Compact period.

Figure 1. **Boston IRI Retail Prices, Class 1 Farm Price and Cooperative Farm Price Series: February 1996- June 1997**



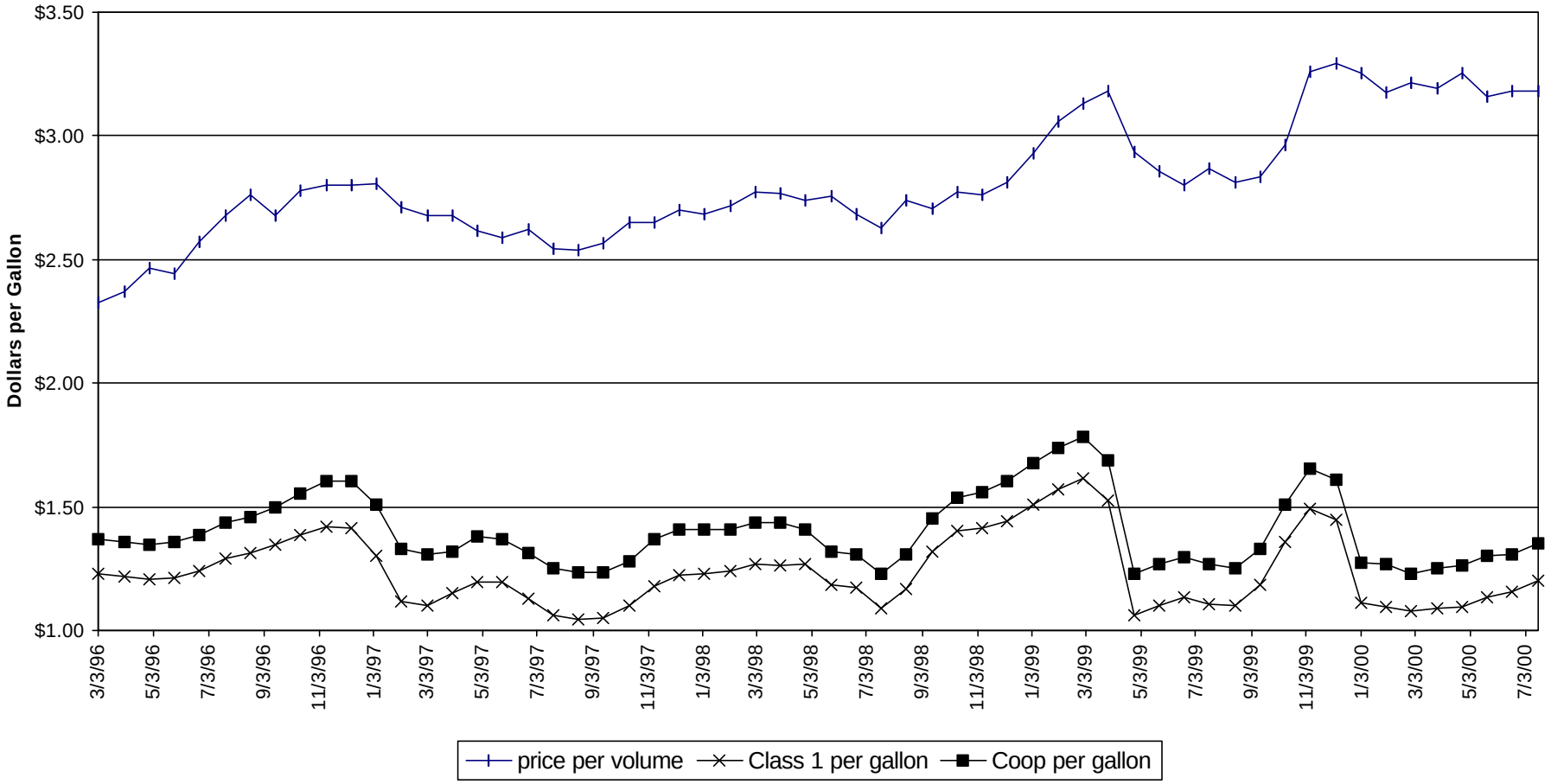
Source: Food Marketing Policy Center IRI database, Federal Milk Market Administrator's Office: Boston.

Figure 2. Actual and Counterfactual (if no Compact) Average Cooperative Prices Paid by Processors*



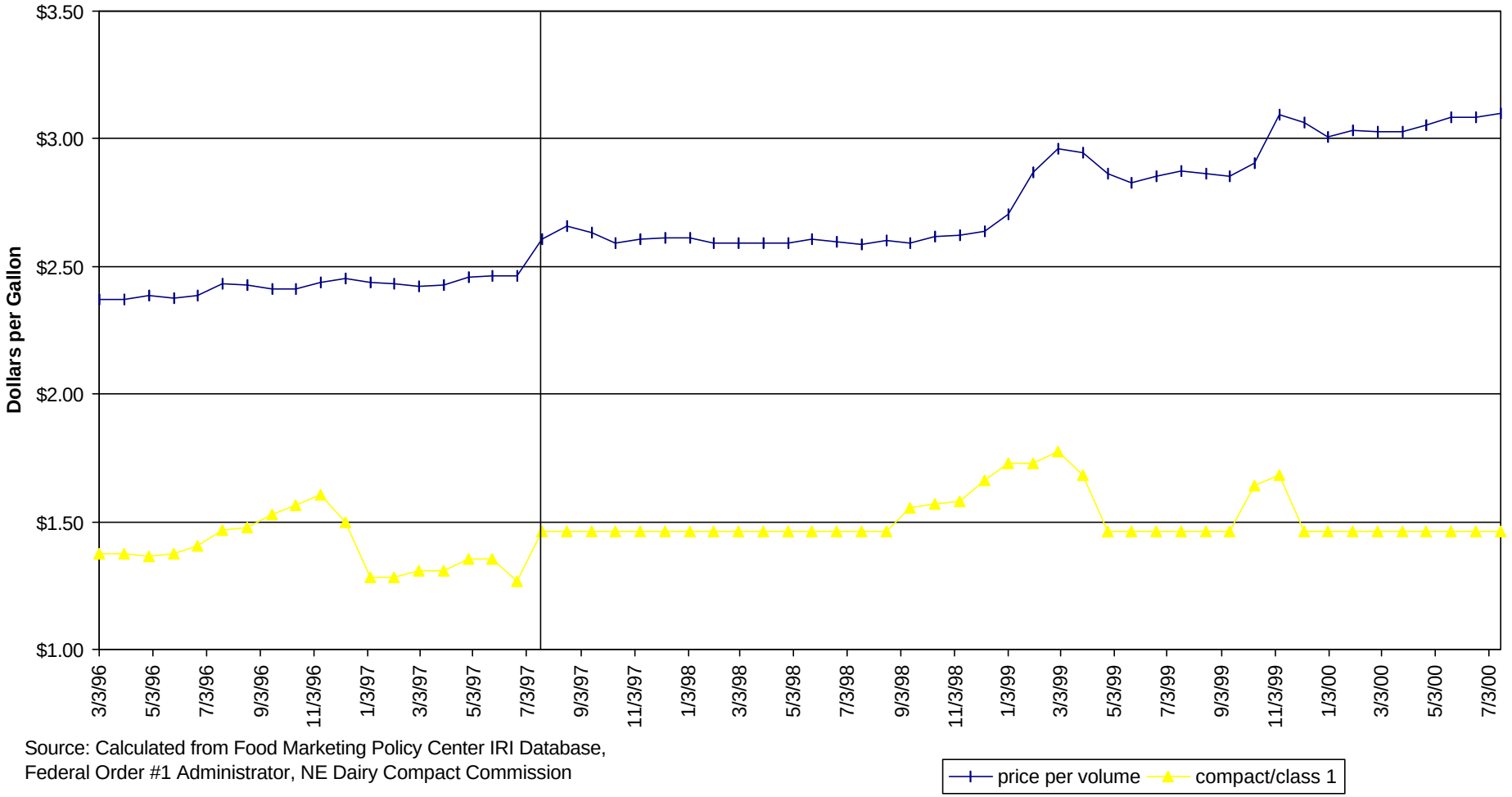
* All prices are averages for the 17 months prior to the Compact (Feb. 1996-June 1997) or the 36 months after the Compact (July 1997-June 2000).

Figure 3. Retail vs Farm Level Milk Price, Chicago
March 1993 - July 2000



Source: Calculated from Food Marketing Policy Center IRI Database,
and Agricultural Marketing Service, USDA

Figure 4. Retail vs Farm Level Milk Price, Boston
March 1996 - July 2000



Source: Calculated from Food Marketing Policy Center IRI Database,
Federal Order #1 Administrator, NE Dairy Compact Commission