

Margin Wars: Why the Federal Order ‘‘make-allowance’’ is under fire.

(and why ‘cost indexing’ is not a solution)

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Introduction

By now you are, or should be, well aware that a controversy pertaining to Federal Milk Marketing Order administered pricing rules is in full gear. First a short review of how this started. During the week of January 24 through January 27, 2006, representatives of the United States dairy interests, producers, cooperatives, processors, along with representatives of the United States Department of Agriculture, Agricultural Marketing Services, Federal Order Branch, and the USDA Rural Business and Cooperative Service, met in Alexandria, Virginia, to set forth their respective positions on the ‘make-allowance’ issue. The ‘make allowance’ is the Federal Order term for the amount of money, on a cents per pound basis, which a processor of cheddar cheese, butter, nonfat dry milk and dry whey, may hold out before returning the rest of the money to milk producers. Testifying at the hearing in favor of making changes in the Federal Order pricing rules were these industry representatives.

1. Agri-Mark Dairy Cooperative	2. 0-AT-KA Milk Products Cooperative, Inc.
3. Lactalis American Group	4. Saputo Cheese USA Inc.
5. Alto Dairy Cooperative	6. Northwest Dairy Association
7. Land O'Lakes, Inc.	8. Glanbia Foods, Inc.
9. Associated Milk Producers, Inc.	10. Hilmar Cheese Company, Inc.
11. Foremost Farms, USA	12. Kraft Foods,
13. Davigo Foods International	14. National Milk Producers Federation
15. Michigan Milk Producers Association	16. Leprino Foods Company
17. WestFarm Foods.	18. International Dairy Foods Association / National Cheese Institute

Those taking a position opposed to the hearing, and therefore opposed to making changes in the current make allowance as specified in the Federal Order pricing rules were these industry representatives.

1. Select Milk Producers,
2. Continental Dairy Products
3. Dairy Producers of New Mexico.
4. Progressive Agriculture Organization
5. Pennsylvania Farmers Union (PFU),
6. National Family Farm Coalition's Dairy Subcommittee
7. Ohio Farmers Union
8. National Farmers Union
9. Southeast Milk, Inc.

You can find all of the details from the Federal Order Hearing at this URL: http://www.ams.usda.gov/dairy/proposals/classIII_IV_make_all.htm At this site you will find a wealth of information pertaining to the processing industry for cheese, butter, nonfat dry milk, and whey, however be prepared to read through hundreds of pages of material. After extensive deliberations, the U.S. Department of Agriculture announced an additional national hearing to be held in Strongsville, Ohio, on September 14, 2006. This purpose of this hearing is to allow testimony on a cost of processing study, conducted at Cornell University, to be read into and cross-examined for the formal hearing record.

In this paper I will explain why we have come to this point with respect to the Federal Order pricing rules and the “make-allowance” provisions within these pricing rules. I will provide an economic exposition on this issue, and will illustrate why it will be difficult to resolve this issue. Please keep in mind that in this paper I am not making an argument in favor of one side or the other on this issue. I will be making an argument that the current pricing rules, with fixed processor margins, are flawed and must be corrected by the Agricultural Marketing Service, Federal Order Branch, USDA by returning to sound economics. I will argue that the currently proposed correction, an indexing of the ‘make-allowance’ values, is not a correction at all and will only further complicate the problem. For those who would like a refresher on the Federal Order component pricing rules there is an appendix to this paper which provides such an overview.

Some Background please...

Jesse and Gould, in their paper *Federal Order Product Price Formulas and Cheesemaker Margins: A Closer Look*, Marketing and Policy Briefing Paper, 90, October 2005, provide a valuable introduction to this issue. In their opening remarks, they state “Recent spikes in energy costs have resulted in escalating cheese manufacturing costs. Because of product formula pricing of milk, cheesemakers are largely unable to offset these costs. If they reduce the price paid to dairy farmers, then they violate federal order minimum pricing rules. If they charge customers more for cheese, then the higher cheese price is immediately translated by the Class III pricing formula back to a higher milk cost.” (The Jesse and Gould paper is recommended reading and can be found at <http://www.aae.wisc.edu/future> under Publications)

Jesse and Gould make two important points in the quoted statement. First, as the price for processing inputs change, processors cannot act in an economically rational manner. In a competitive market, rising energy price (or any other non-milk input price) would be reflected in a higher consumer price and a lower farm price. Under normal market conditions, some of this price change is passed on to the consumer and some back to the milk producer. Prior to Federal Order reform of 2000, Federal Order pricing rules did not extend to fixing the price that the processing sector, either for fluid milk products or for manufactured products, could set for their processing / marketing services. In short, federal orders were never authorized to fix prices for processing services. This was left to the market to determine. After reform of Federal Milk Marketing Orders in 2000 this margin price fixing became an enabled part of the new Federal Order pricing rules.

Second, as Jesse and Gould state, any attempt to pass the increased energy or other non-milk input price on the consumer is thwarted under Federal Order pricing rules. All of the increase in the wholesale product price is subsequently passed back to the milk producer in the form of a higher price. Instead of providing the consumer with an appropriate economic signal in the form of new relative prices, the Federal Order pricing system signals only the milk supplier to increase production. The Federal Order pricing rules contribute to garbling the economic signal between a shift in consumer demand, and an upward shift in the cost of processing. The final result is just the opposite of what should happen under normal competitive market conditions.

In their paper, Jesse and Gould focus on the impact of the fixed ‘make-allowance’ the imputed cost to the dairy product processing sector and what an indexed pricing rule might accomplish. They do not address the more fundamental problems with the Federal Order pricing structure. In this paper I will argue that with the current structure of fixed processing margin at the manufacturing level Federal Order pricing rules insulate the final consumer from the market for processing and marketing services for manufactured dairy products, distort appropriate relative price signals, both up and downstream and result in the misallocation of resources. The Federal Order administrative pricing rules make the processing / marketing price exogenous rather than endogenous to the competitive system of supplies, demands, and price determination, and this effectively insulates the final consumer from changes in the equilibrium in the market for these processing / marketing services. By doing so, any change, administratively determined, will be born solely by the market price for the farm input, milk and will facilitate the sending of incorrect economic signals throughout the system.

What is the “make-allowance” issue?

Stated as directly as possible, the ‘make-allowance’ issue is the following. With the new milk and milk component (butterfat, protein, other solids, and nonfat solids) pricing rules, implemented with the reform of Federal Milk Marketing Orders, and made effective on January 1, 2000, the gross margin, or ‘make-allowance’ available to processors of cheddar cheese, grade AA butter, nonfat dry milk and dry whey, is set at a fixed value per pound of dairy product manufactured (see the appendix for a review). Any change, on a month-to-month basis, in the wholesale selling price for these specific products, is credited back to dairy producers as a change in the value of the milk components used to

manufacture these specific products. Setting the ‘make-allowance’ at a fixed value is equivalent to fixing the price for all non-milk inputs used to manufacture the product. This price fixing at the manufacturing sector level was a new addition to Federal Order rules instituted with Federal Order reform 2000. With rising cost for non-milk component inputs, such as energy or labor, processing plant management cannot recoup these higher costs because the price for these inputs is fixed and can only be changed through the Federal Order hearing process. Any attempt (and there has been at least one such action by adding an energy surcharge to the product price) to increase the effective ‘make-allowance’, results in a direct transfer of this amount back to dairy producers in the form of higher component pay prices.

Why has the fixed ‘make-allowance’ become an issue for debate?

There are two points that need to be understood in order to see the issue clearly. First, the concept of using administered pricing rules which incorporate a fixed price to cover the cost of non-milk inputs used in the processing of milk components into a finished product was new to the Federal Milk Marketing system. Before this change, the prior method for determining the price to milk producers, known as the Minnesota / Wisconsin and then the Basic Formula Price (BFP) method, relied on a pricing survey, taken from manufacturing plants, of the negotiated pay price per hundredweight of milk purchased from dairy farmers. The value of the processing margin extracted by the manufacturing plant was determined by the economics of supply and demand for the finished product and the supply and demand for non-milk marketing services, and not set by administered pricing rule. The BFP method contained a provision which translated changes in wholesale level product prices into farm input price changes. This provision functioned as if all wholesale product price change was a direct result of a shift in final demand. It is this BFP adjustment provision, adopted as a way to tie farm input price signals more directly to wholesale market price signals, which initiated the logic of translating all wholesale product price change back to the price of the farm milk input and thereby fixing the price for non-milk inputs.

Margins, marketing services and make-allowance

Marketing services (hereafter referred to as processor margin or ‘make-allowance’) is an inclusive term which encompasses the total cost of transformation of raw milk into the manufactured product sold at the next level and would typically include all variable and fixed cost charges. Under the MW price reporting system, and to a lesser extent the BFP price reporting system, changes in the difference between the wholesale value for each of these products and the pay price for milk (and by implication its components) was a matter left to the competitive market for determination. Chart 1 and Chart 2 depict an approximation to the cheddar cheese processor margin over the period 1996 – 2005. Chart 1 shows the aggregate margin, per 100 pounds of milk, calculated to include the value of by-products. The margin values prior to January 2000 assume typical industry standards for cheese plant yields and use product market prices to determine gross revenue derived from each 100 pounds of cheese milk. The margin values beginning January 2000 assumes that a typical cheddar cheese plant earns revenue from the sale of cheddar cheese and by-products butterfat and whey, priced at NASS reported prices, and at yields determined by Federal Order pricing rules. Both of these are very strong

assumptions. Chart 2 maintains the same assumptions but calculates the revenue and the margin based on cheddar cheese value only, as the whey by-product is treated as a waste product. This would be most typical of an older technology cheese plant which does not have whey product processing capability.

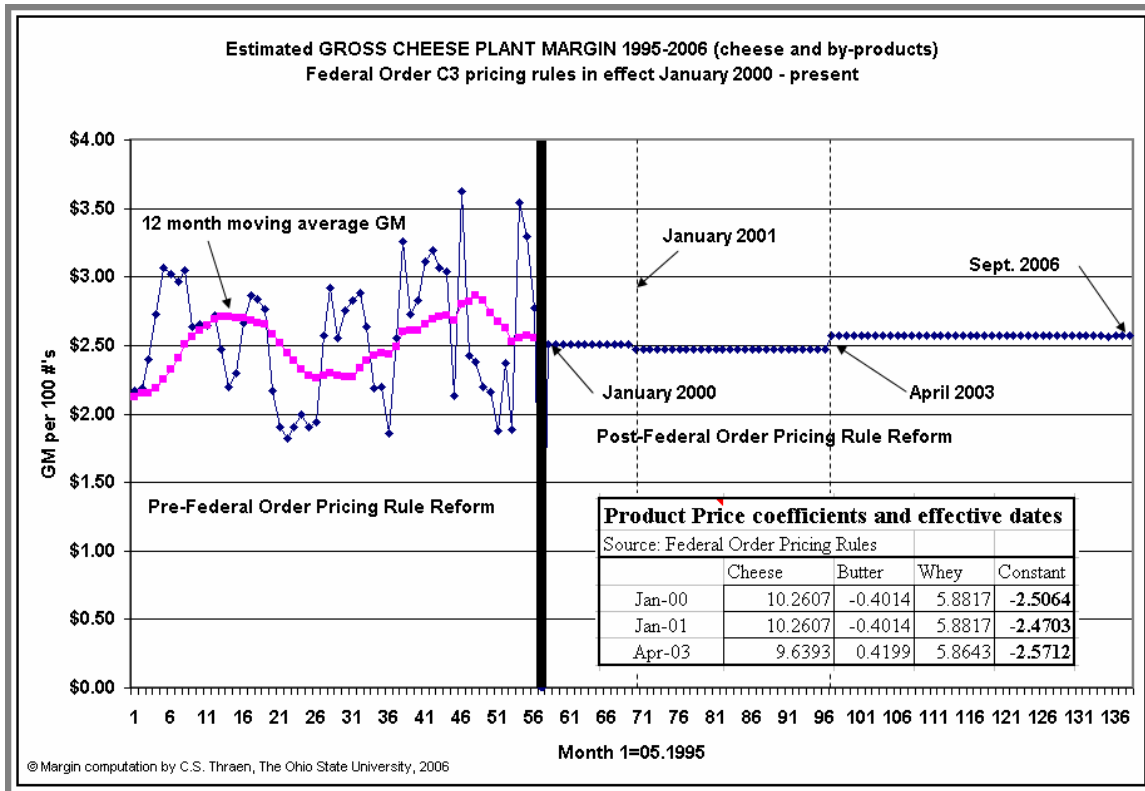


Chart 1. Gross Cheese Plant Margin 1995:01-2006:08 (cheese and by-products).

What can we learn from Chart 1?

The aggregate margin depicted in Chart 1 is calculated as the gross revenue from the sale of 9.63 pounds of cheddar cheese plus 0.42 pounds of butter and 5.87 pounds of dry whey less the basic formula price for milk. Notice that the variability in the gross margin before and after federal order reform - and in particular after the April 2003 adjustments to Class 3 and Class 4 pricing. The observed variability in the aggregate margin prior to Federal Order reform is what economic logic would lead us to expect. With the pay price to producers determined primarily by competitive forces and reflected in the BFP, shifts in wholesale demand for cheese, shifts in input supply of milk, and shifts in the supply of non-milk inputs, result in variability in the wholesale product prices and farm milk prices and therefore the relative wholesale to farm price margin.

Some have interpreted the observed shift in variability from the processing sector to the farm input sector as a pricing policy shift. This interpretation suggests that prior to Federal Order reform, farm level input prices were stabilized, as a matter of policy, by the variability in processing margins. Federal Order reform has had the effect of transferring price variability to the farm sector. This is a partially correct assessment of the changes

brought about by Federal Order reform but does not go far enough. Under competitive conditions variability in the input prices, milk and non-milk is to be expected. This variability reflects changes in equilibrium market prices due to shifts in supply and demand over time. A measure of relative variability used in statistics is the coefficient of variation. Using the CV allows us to make a direct comparison between the BFP and the cheese margin, before and after Federal Order reform. Using data over the pre-reform period May 1995 to December 1999, and post-reform period January 2000 to August 2006, the CV's for the milk input price measured by the BFP and the cheese plant margin are presented in Table 1.

Table 1. Input Price Coefficient of Variation for Pre and Post Federal Order Reform

Period	BFP	Cheese Margin
Pre-reform	0.134	0.183
Post-reform	0.205	0.053

The CV for both the milk input and the non-milk inputs are similar in the pre-reform period. After Federal order reform, with the fixing of the non-milk input price, the CV for the cheese plant declines to 5.3%, while the CV for the milk input rises to 20.5%. Thus Federal Order reform pricing rules have effectively fixed the non-milk input price. Prices that cannot change to reflect new economic realities lead to inappropriate economic decisions and misallocation of resources.

Aggregate margin may underestimate the problem

Chart 2 depicts the gross margin calculated by using only the value of cheddar cheese. This would represent the gross margin for a cheddar cheese plant which derived zero value from by-products. Many of the older existing cheese plants in the United States are not designed to capture the revenue stream from by-products. Chart 2 shows an approximation to a 'typical' margin (per pound of cheese) for such a cheddar cheese plant. The margin is calculated as gross revenue generated by the sale of cheddar cheese less the Federal Order Class 3 minimum pay price. The calculation uses a cheddar cheese yield of 9.63 pounds per 100 pounds of milk. Notice the pronounced downward trend in the gross margin after federal order reform - and in particular after the April 2003 adjustments to Class 3 and Class 4 pricing rules.

Those in the commodity cheese industry (cheddar) are making the point that for many manufactures there is very little or zero value in by-products (for them) and that after the post April 2003 period, under current FO pricing rules, there is no ability for the cheese manufacturer to absorb increasing processing costs. Furthermore, as the margin is derived directly from cheddar cheese value only but the plant is accountable under Federal Order pricing rules to pay for milk on a total component value basis, the effective margin has collapsed by a factor of 5.

This can be illustrated by the experience of the January 2004 – May 2004 period. Cheddar cheese value, as reported by the National Agricultural Statistical Service, NASS, increased from \$1.30 to \$2.12 per pound. The announced minimum Federal Order Class III milk price increased from \$11.61 to \$20.58 per hundredweight. Using 9.63 pounds of

cheese per 100 pounds of milk the gross value of cheese to the plant was \$12.54 in January and \$20.48 in May. The gross margin, the difference between the gross value based on cheese only and the Federal Order minimum milk pay price declined from \$0.93 per cwt milk for January to \$-0.10 for May 2004. Based on Federal Order Class 3 pricing rules the value of the cheese was less than the mandated minimum pay price for the milk.

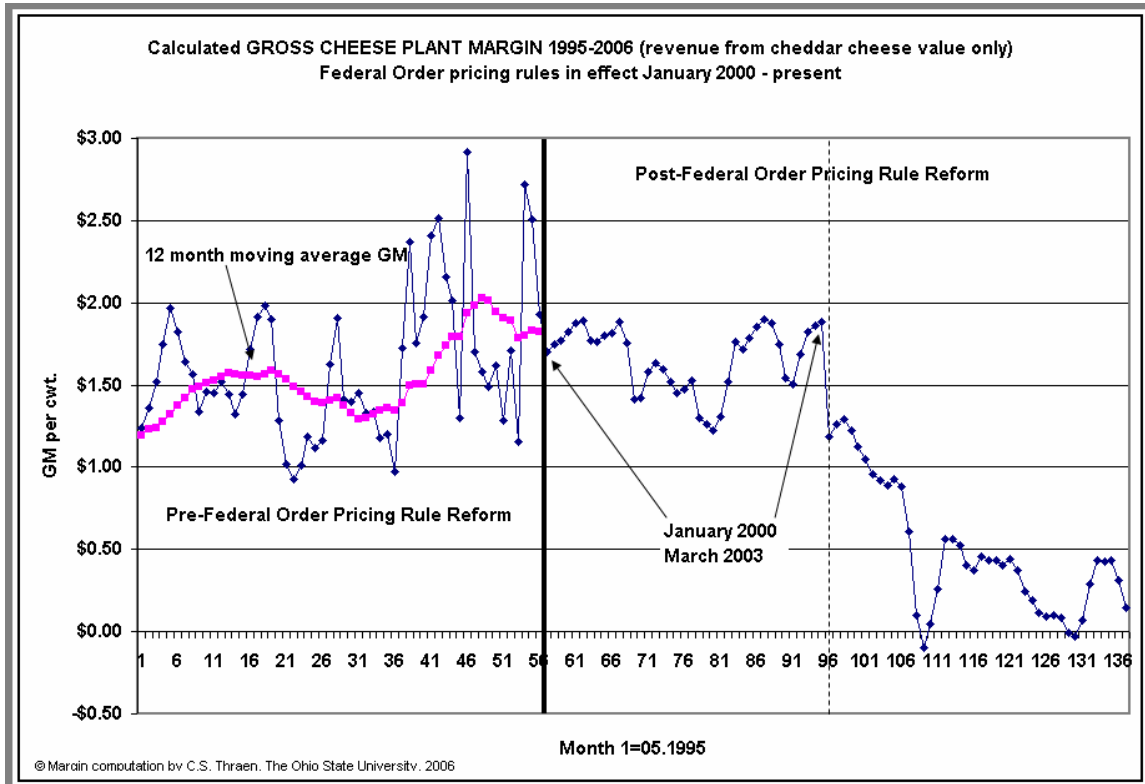


Chart 2. Estimated Gross Cheese Plant Margin 1995-2005 (cheddar cheese value only).

Why the change in Federal Order Pricing Rules?

During the federal order reform period, 1996 – 1999, and prior to implementation of the final pricing rules, reform debate centered on replacing the BFP system with one which made the connection between the value of dairy products at wholesale and the value of milk components at the farm level more direct and more transparent. To accomplish this end, those charged with the reform process, decided that all of the value of a pound of product could or should be viewed as value of the milk components used to make the product, less an appropriate ‘‘make-allowance’’ to cover all of the other input cost and financial returns to the manufacturing process. By fixing the value of this input cost, the process was effectively fixing the composite price that could be paid for all other non-milk inputs.

This determination left begging the question of what level or value to use to set these ‘‘make-allowance’s’ for each product? After much debate, Federal Court intervention, followed by USDA /AMS pricing rules revision, these gross margins where set at the fixed values shown in Table 2. These fixed values represented at the time a consensus of

opinion as to the average amount per product pound required to cover the non-milk input costs and financial returns. As an average, it is clear that less efficient plants will lose money and more efficient plants will make excess profits on each pound of product produced.

To the economist, the use of average values for margin determination is not a very satisfactory way of determining prices, not to mention fixing the price itself. Only in the event that the all plants are identical in size and in both technical and managerial efficiency, which is highly unlikely, would such an average ‘make-allowance’ scheme be workable. (In fact the use of an average value requires much more by way of restrictive economic assumptions on plant and industry structure, but let it suffice to say it is not a good idea.) At the Federal Order reform hearings, in the late 1990’s, during which the specific values for these ‘make-allowance’s where debated, most of the discussion centered on the technical issues such as product yields, plant cost survey methods, etc, and very little on the underlying economic issues of plant size, technical and managerial efficiencies in plants, and processing industry structure. Clearly absent was debate on what process would be followed to accommodate rising non-milk input costs incurred by these manufacturing plants nor was there any discussion of the likely changes in the structure of the cheese processing industry in the coming decades.

Table 2. Wholesale product and ‘make-allowance’ for Class 3 and Class 4 pricing, effective April 1, 2003.

Wholesale Product	Federal Orders ‘make-allowance’
Grade AA Butter	\$0.115
Nonfat Dry Milk	\$0.14
Dry Whey	\$0.159
Cheese	
Sales weighted average	\$0.165
[40# Block Cheese + 500# Barrel Cheese (38% Moisture) + \$0.03]	

A fundamental flaw in the FMMO pricing concept

Now let us consider the second point of difficulty with the current Federal Order pricing rules. Even if, by some outside chance, the arrived at “make-allowance” values where reflective of the cost incurred, the concept of fixing these values through time has proved to be unworkable. The obvious assumption is that these ‘make-allowance’ values represent some longer-term average which will, in some unspecified manner, cover any changes in the cost of manufacturing these dairy products. While not directly addressed at the time these rules and values where set, it was most likely the intention to use the Federal Milk Marketing Order hearing process to revisit these values if these values proved to be unworkable. Given the administered pricing structure which is Federal Milk Marketing Orders, this may appear to be a reasonable approach. Within this public policy framework, the interested parties in the U.S. dairy industry have a long history of working out many such issues within this framework. Why not this one?

Beyond the issues raised in the first point, it is here that a fundamental flaw in the concept of “make-allowance” must be recognized. Consider what happens, if, after the Federal Order hearing of January 24-27, 2006 or September 14, 2006, any or all of the “make-allowance’s” are adjusted, either up or down, through a process of indexing to energy or some other cost factor in the provision of the processing services. Any change in these gross margin values, for whatever reason, such as increasing energy cost, higher labor cost, increased efficiency due to economies of scale (larger plants), etc., will be transmitted directly to the derived value of the milk components. This is to say that all of the adjustment will be transmitted to changes in the prices for the milk components utilized in the manufacturing process. None of the change, either up or down, will fall on the final consumer through altered relative prices for these products.

This insulation of the final consumer is a fundamental economic flaw in the concept of the Federal Order pricing rules after reform. This flaw has nothing to do with the specific level that the “make-allowance” is set. Changes, over time, in the cost of processing milk components into wholesale products should be shared between the principal economic actors in the process: dairy farmers, plant owners (demanding both milk and non-milk inputs) and consumers. The extent to which a change is absorbed by any of these segments depends on their market power and the sensitivity to price change. This was inherent in the Minnesota-Wisconsin pricing and the Basic Formula Pricing, but not in today’s Federal Order price rules.

The California System: Why not adopt this process?

The State of California, through the Department of Food and Agriculture, has been conducting cost of processing studies for many years. (most recent CDFA Manufacturing Cost Unit data can be found at:

http://www.cdfa.ca.gov/dairy/manufacturing_cost_exhibits.html

At the January 2006 Federal Order hearing, the CDFA/MCU provided testimony about their cost study methods and provided data on the most recent study for November 2005. The CFA is substituting accounting cost methods for the functioning of a competitive market for non-milk inputs. The CDFA/MCU is fixing the non-milk input price, just as the Federal Order systems is doing, but they are allowing a change to occur through the regulatory process. The following Table 3 shows the weighted average manufacturing cost for butter, nonfat powder, cheddar cheese and skim whey powder presented as testimony at the Federal Order hearing.

Table 3. CDFA Dairy Product Manufacturing Cost Data, November 2005.

	Weighted Average Cost (cents per lb.)	Range of unit cost as average for low and high cost plants	Percent of total plant production represented by lowest cost plants	Number of plants included in CDFA cost study
Butter	13.68	12.30 – 17.93	75.2	8
Nonfat skim powder	15.43			10
Cheddar Cheese	17.69	17.1 – 19.63	76.9	7
Skim whey powder	26.73			3

We can get an idea of the immediate price impact that the adoption of a CDFA/MCU type process would have on farm level prices for butterfat, protein, other solids and nonfat solids by substituting these values for the currently specified Federal Order ‘make-allowance’s. For example consider replacing the 11.5 cent ‘make-allowance’ for butter with the CDFA/MCU cost of 13.68 cent per pound for the period January through December 2005. This change raises the Federal Order ‘make-allowance’ by 19 percent. Also, replacing the current Federal Order cheese ‘make-allowance’ with the CDFA/MCU value of 17.69 represents a 7.2 percent increase in this value.

An estimate of the impact of using the CDFA/MCU butter and cheddar cheese cost values as the Federal Order ‘make-allowance’ is shown in Table 4. The new prices are calculated by a simple substitution of the CDFA/MCU values for the Federal Order ‘make-allowance’ values. The results in the table assume no change in the amount of milk produced, consumed, or in any other aspect of the Federal Order including allocation of milk to the four classes. From the recalculation we see that the butterfat and protein values have declined and each of the Federal Order class prices have also declined. The Class 3 price shows a decline of 12.3 cents per cwt. and the Blend price a decline of 11.75 cents per cwt. The Producer Price Differential is effectively unchanged in this exercise.

Table 4. Impact of CDFA/MCU values on Federal Order component and class prices 2005.

‘make-allowance’ Source	Average Butterfat Value	Average Protein Value	Average Other Solids Value	Average Nonfat Solids Value	
Federal Order Values	1.710375	2.46082	0.1228	0.79385	
CDFA/MCU Values	1.684225	2.45001	0.1228	0.79385	
Absolute change	0.02615	0.01081	0	0	

Percent change	-1.54	-0.44	--	--	
Federal Order 33 Prices: Mideast Order					
Federal Order Prices	Average Class 4 Price	Average Class 3 Price	Average Class II Price	Average Class I Price	Average Blend Price
FO 33	12.88	14.04	13.47	16.90	14.89
CDFM/MCU	12.79	13.92	13.38	16.77	14.78
absolute change	-0.09	-0.123	-0.09	-0.13	-0.1175
Percent change	-0.7	-0.8	-0.6	-0.7	-0.7

An extension to the price impact analysis

Federal Order pricing rules are specified such that the impact of alternative ‘make-allowance’ values are not independent of the relative price levels for butter and cheese. These impacts are shown in the Chart 3 and Chart 4. The impact on the farm level value of protein depends on the ratio of the cheese price to the butter price and whether or not one or both the butter and cheese ‘make-allowance’s are changed from the Federal Order values.

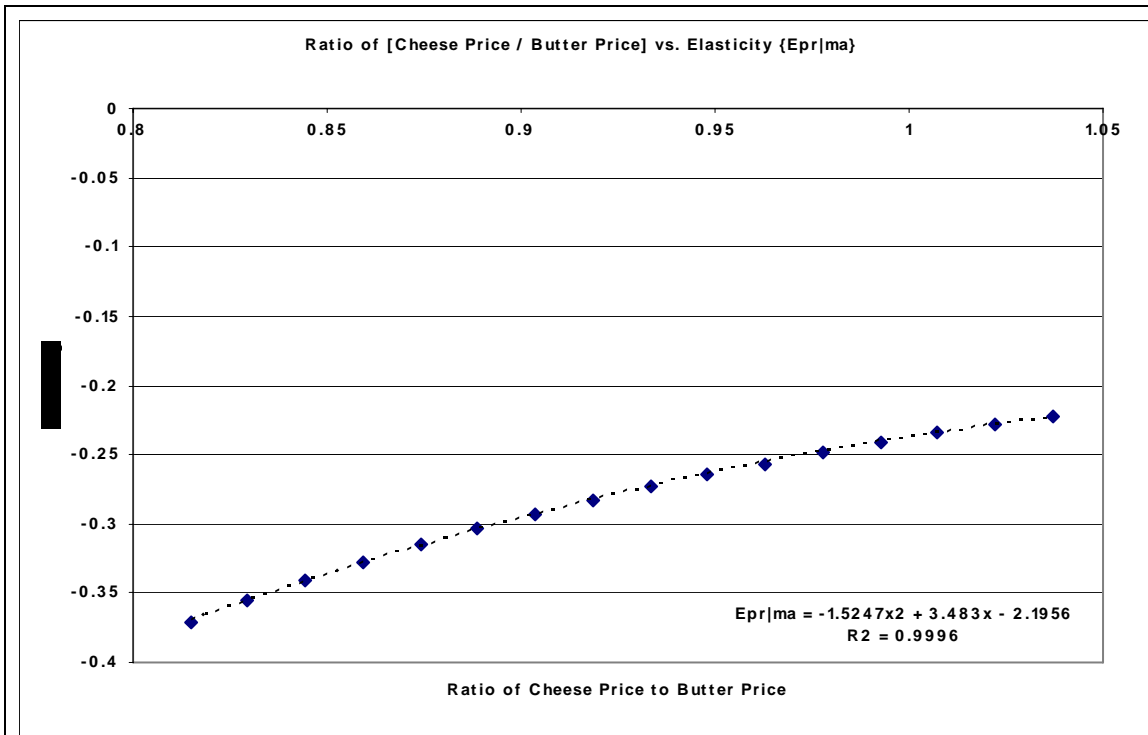


Chart 3. Elasticity of Protein by Cheese / Butter Price Ratio.

In Chart 3, only the cheese ‘make-allowance’ has been increased. The impact is measured by the elasticity of protein to ‘make-allowance’. The elasticity is a ratio used in economics to discuss relative changes. The elasticity represents the percent change in the farm level protein price for a 1 percent change in the cheese ‘make-allowance’. The negative value tells you that increasing the ‘make-allowance’ will decrease the protein price. The Federal Class 3 and Class 4 pricing rules make these elasticities non-constant and a function of the ratio of the cheese price to the butter price. The negative impact on the protein value is greater the lower the cheese price relative to the butter price. For example, at a ratio of cheese to butter price of 0.8 the elasticity is -0.37 which means that a for a 10 percent increase in the ‘make-allowance’ for cheese, the protein price will decline by 3.7 percent. At cheese to butter price ratio of 1.0 or greater, the same ten percent increase in the ‘make-allowance’ decreases the protein price by 2.3 percent.

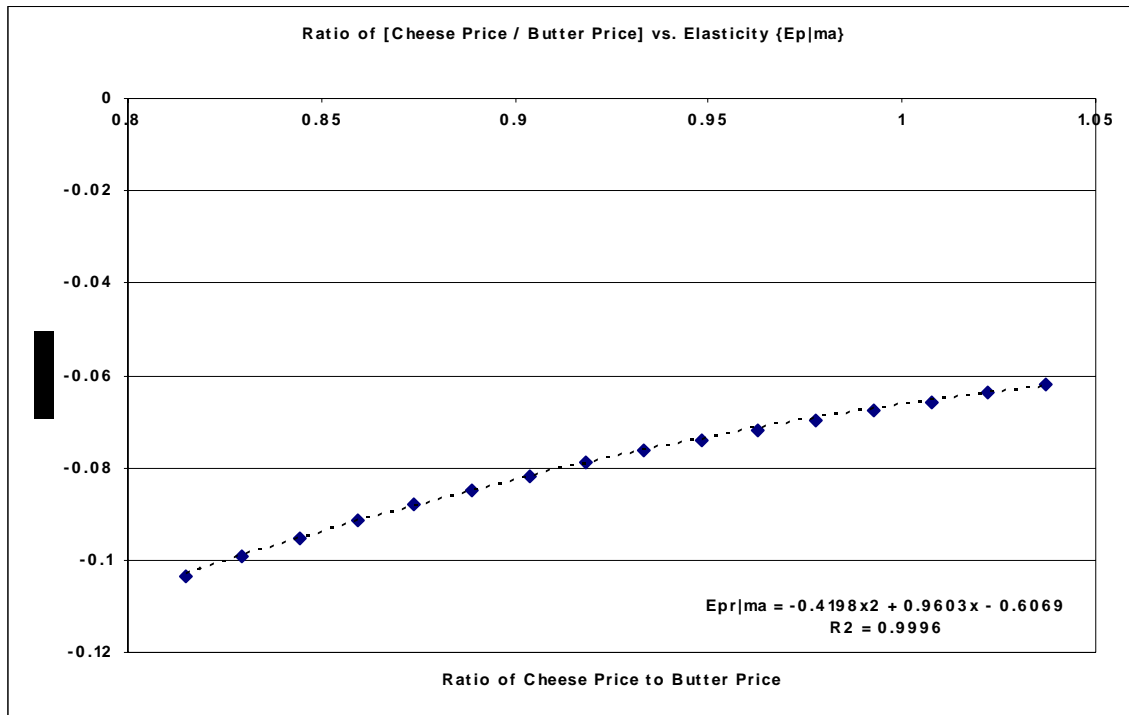


Chart 4. Elasticity of Protein by Cheese / Butter Price Ratio.

In Chart 4, both the butter and cheese ‘make-allowance’ have been increased to the CDFA/MCU levels. The negative value tells you that increasing these ‘make-allowance’s will decrease the butterfat and protein values. The elasticity of butterfat is -0.09 implying a ten percent increase in the butter ‘make-allowance’ will lower the butterfat price by 0.9 percent. The first point to notice is that the elasticity of protein value has been reduced by a factor of 3 when both the butter and the cheese ‘make-allowance’s are increased. The Federal Order rules for calculating the value of protein specify that the value of butterfat must be subtracted from the gross value of protein. The increase in the butter ‘make-allowance’ results in a lower butterfat value and a therefore a smaller reduction in the value of protein. Of course now both butterfat and protein are reduced in value and so the total effect will be a decline in the component value of milk. Notice that the effect of the ‘make-allowance’ change is greater the lower the cheese price relative to the butter

price. For example, at a ratio of cheese to butter price of 0.8 the elasticity is -0.103 which means that for each ten percent increase in the 'make-allowance' for cheese, the protein price will decline by 1 percent. At high cheese to butter prices, represented by a ratio of 1.0 or greater, a ten percent increase in the 'make-allowance' decreases the protein price by 0.6 percent.

What is required to 'fix' the problem?

Obviously the answer here calls for a complete revamping of the current Federal Order pricing rules and the price fixing for non-milk inputs utilized in the processing industry. Given the current climate to view the Federal Order pricing system as one of price support at the farm level, correcting the make-allowance problem will be difficult. It will require a return to a procedure whereby the market determines the pricing of milk and non-milk inputs in the manufacturing sector. A new form of Basic Formula Price or BFP is what is called for to correct this problem. It will be very difficult to replicate the workings of a competitive market through the application of administered pricing rules.

The CFDA approach is not a solution. A question may be raised as to why the CFDA approach worked during the period of time that the Minnesota / Wisconsin or the Basic Formula price rules of the Federal Order system were in effect? The answer is that the CFDA appeared to work only because it had the market determined pricing from the Federal Order M/W or BFP to use as a calibrating benchmark. As evidence that the CFDA system is not working correctly we only have to observe two points. First, the two newest and largest capital investments of new plant and equipment in the cheese and processed whey industry have been located outside of the CFDA pricing system and in the Federal Order pricing system. The ownership of these plants has opposed modifications to the Federal Order system to reflect the CDFA/MCU pricing system. Second, the official processing cost numbers announced by the CDFA/MCU on February 9, 2006 were withdrawn after Western United Dairymen raised serious concerns about the methodology used to derive the processing cost data. This objection by Western United Dairymen resulted in a complete review of the CDFA/MCU Dairy Product Manufacturing Cost Study methodology by CPS Human Resource Services. (the CPS report can be found at: http://www.cdfa.ca.gov/dairy/manufacturing_cost_exhibits.html)

CPS recommendations include significant changes to the methods used by which CDFA Manufacturing Cost Unit determines processing costs. In fact, CPS cites a July 2002 consulting report wherein similar recommendations were made to MCU. Given the difficulties now surfacing with the comparatively self-contained CDFA/MCU it is difficult to imagine that the much larger and diverse Federal Milk Marketing Order system will be able to implement and maintain a CDFA/MCU type process which regularly audits all cheddar cheese, butter, nonfat dry milk and whey manufacturing plants operating in the 10 Federal Milk Marketing Orders to determine unit processing costs.

A dairy economist's view of the issue

In the field of economics the study of the relationship between the production of food products, the demand and supply for farm and non-farm inputs used in that production, and the relative wholesale to farm price ratio is known as margin analysis. For example,

in the current situation, where it is being argued that rapidly rising energy costs are increasing the actual plant cost well beyond the stipulated “make-allowance”, this increased processing margin should be shared by all in competitive markets. In the simplest of cases, a share of this increase should be passed on to the final consumer by way of the wholesale market and a share passed back to the farm level milk producer. For the reader interested in an economic exposition on this point please see the companion paper: [Economics of Margins and Federal Milk Marketing Order Pricing Rules](#).

How much or what share of the total increase is absorbed by each segment depends on how sensitive each is to the change. At the wholesale (consumer) level, the greater the sensitivity to the price increase, the less of the change in the required margin will be absorbed at that level. In the extreme, if the price sensitivity at the wholesale level is great all of the change will be passed back down to the farm level. With the current Federal Order pricing rule structure, the implicit assumption is that the price sensitivity at the wholesale level is infinite which means that all changes must be absorbed by the farm level input suppliers.

Insulating the final consumer from changes in the cost of manufacturing milk components into final consumer products is not good economics. If processing margins need to be higher to cover increased energy costs the final consumer needs to know this in the form of higher product price. If processing margins should be smaller because new plants coming on-line are more efficient in scale and scope, then the consumer should see this signal in the form of lower product prices. Unfortunately this will not happen with the current Federal Order pricing structure and this will lead, over time, to distorted signals, and continued misallocation of resources.

This will not happen with any of the indexing schemes introduced at the January 24-27 Federal Order Hearing on ‘make-allowance’s. It does not take much imagination to see that indexing the “make-allowance” to some measure of energy cost will only serve to transfer the variability in the energy market (or any other non-milk input market) to the milk producers pay prices. Any effective indexing scheme would have to account for differences in plant size and plant efficiency (technical and managerial). And why stop at indexing based on energy costs. Clearly there are other non-milk inputs such as labor and cost of capital that will increase and decrease over time. Why not include these in the indexed ‘make-allowance’s?

The industry is already witnessing the consequences of these inappropriate signals and misallocation of resources over the last six years. At the January Federal Order hearing, representatives of the newest and largest cheddar cheese manufacturing plants and whey product manufacturing plants in the United States, and their milk component suppliers, argued against making changes in the currently specified ‘make-allowance’s. This in spite of the fact that their processing cost must be increasing along with the rest of the industry.

Why would they take this position? One obvious answer is that the currently specified 'make-allowance' is high enough to cover non-milk input cost and financial returns and the expectation that they will earn a positive profit into the future. One could only conclude that the current 'make-allowance's are set at an average value that is sufficiently high to satisfy both producers and plant management for new entrants to the industry. Why not go along with the request to increase the 'make-allowance' for an even greater economic benefit? Another obvious answer is that by favoring a change in the 'make-allowance' values this would take the economic pressure off those in the industry with plants that have non-milk inputs costs that are substantially above the stipulated average 'make-allowance'. We will be able to determine if I am correct when the Cost of Processing study, being conducted at Cornell University, is completed and made public.

As reflected in the testimony at the Federal Order hearing, firms operating older, less efficient and higher cost plants are in real danger of becoming insolvent. At the present time it was revealed that the supply price for milk components was reduced as a means of covering this shortfall. This is a process of taxing the milk input market to subsidize the non-milk price because of the Federal Order price fixing in the non-milk market. Any increase in the Federal Order 'make-allowance' values will return these unprofitable plants, and their milk input suppliers, to a competitive stature in the industry. It only make good economic and business strategy sense to be opposed to changes in the current level of 'make-allowances'.

Where to from here?

The Federal Order pricing system is under pressure to come up with something that mimics the market in price discovery and price signaling or continue to distort the price signals and resource allocation decisions. The CFDA/MCU approach, or any other audited accounting approach, no matter how elaborate the procedure, will not be the solution to this thorny problem. Any administrative pricing rule devised cannot capture the dynamic complexity inherent in the United States cheese, butter, nonfat dry milk and dry whey markets. Markets work because they can and do reflect these complexities and dynamics quickly and efficiently over time. Market prices adjust to shifts in supply and demand and these changes are signaled through the system in the most efficient manner possible. The solution to this problem lies in returning to a market driven system similar to that which existed prior to Federal Milk Marketing Order reform which, given the current set of pricing rules will be very difficult to achieve.

Will there be a return to the market oriented pricing system?

This is the key question. I do not know the answer to this but I do know that with the Class 3 and Class 4 make allowance values now up for debate, all of the particular parts of the Federal Order pricing rules will be fair game. As I complete this second draft, one only has to note that proposals have been submitted to the Federal Order Branch, Agricultural Marketing Service, USDA, on every aspect of the Federal Order pricing structure, from make allowances, to yield rates, to producer cost indexing. It's amazing how the competitive market system gets this pricing done and in such an efficient manner!

References

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