

**Report of the Volatility Subcommittee
to the Dairy Industry Advisory Committee
September 20, 2010**

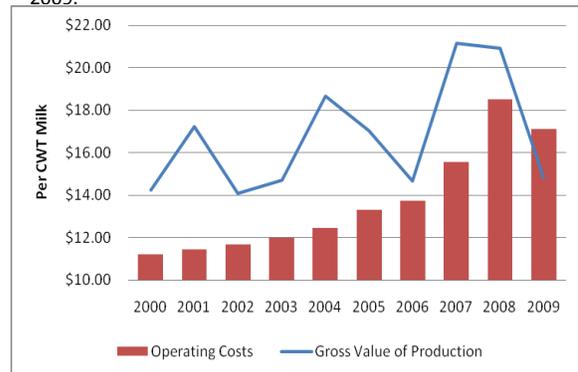
The Volatility Subcommittee of the Dairy Industry Advisory Committee met August 23-24 and convened via teleconference numerous times since mid-July. Subcommittee members are Jay Bryant (Chair), Tim den Dulk, Debora Erb, Bob Schupper and Sue Taylor. The following report highlights the considerations and recommendations of the subcommittee.

Volatility Problem Definition

The subcommittee has defined the nature of the volatility of concern as frequent unpredictable fluctuations in prices that result in detrimental impacts on margins in the supply and demand chain. This chain includes producers, manufacturers and fluid processors, marketers (retailers, food service establishments, and food manufacturers) and consumers. At its extreme, this volatility has the potential to severely impact both supply and demand.

Volatility discussions stimulated by farm sector concerns often center on milk price volatility but the primary concern to producers is more accurately described as margin volatility. High prices in the context of comparatively higher costs are problematic while lower prices in the context of comparatively lower costs can be adequate. A review of USDA ERS Agricultural Resource Management Survey (ARMS) data for the last decade is instructive in this regard. Figure 1 shows the gross value of production (milk, cattle and other income) and operating costs (total operating costs as defined by ARMS plus hired labor, taxes, insurance and general farm overhead) over the last decade. The margin between the gross value of production and operating costs over the decade ranged from negative \$2.28 (2009) to positive \$6.22 (2004) per cwt. On an individual farm basis, margin volatility is largely driven by the relationship between milk prices and feed prices on dairies that purchase feed and the relationship between milk prices and costs of crop production on dairies that primarily grow their own feed.

Figure 1.
Dairy operating costs vs. gross value of production, 2000 - 2009.



Data source: USDA, ERS Agricultural Resource Management Survey (ARMS).

www.ers.usda.gov/Data/CostsAndReturns/testpick.htm

Operating costs include total operating costs as defined by ARMS plus hired labor, taxes and insurance and general farm overhead. Gross value of production includes milk, cattle, and other dairy-related income.

Milk and finished product price volatility impact the balance of the marketing chain in different ways. Manufacturers of the products that are included in the regulated milk pricing system (bulk cheddar, butter, nonfat dry milk) are largely insulated from the direct effects of volatility because the minimum regulated milk price is directly calculated from the prices received for these products. However,

manufacturers and marketers of these products into the retail sector on a branded basis generally sell at relatively stable prices. The relatively stable sales prices in combination with volatile costs results in significant margin volatility. Similarly, manufacturers of other dairy products and food manufacturers using dairy ingredients maintain relatively stable sales prices and, absent a price risk management program to address cost volatility, are subject to significant margin volatility. Food service outlets also tend to maintain stable menu pricing and input price volatility, if left unmanaged, is directly reflected in volatility in their profitability. Price volatility impacts promotion of dairy products and products with significant dairy ingredients in the food service and retail sectors and ultimately impacts consumers and demand.

The diversity in the various businesses in the marketing chain downstream from producers constrains the ability to find a one size fits all solution to address margins in those businesses. Consequently, the ability to customize the management of price risk in a way that addresses individual business needs is critical in these downstream markets. Ultimately, a single answer is not likely to address the needs of the entire supply and demand chain.

Outlook on Volatility

The subcommittee expects dairy markets to remain volatile due to several factors. These include the biological nature of the production systems, the stickiness in supply and demand adjustments, interplay with international markets, and budgetary considerations that constrain the implementation of price supports at levels that significantly reduce volatility.

First, the biological nature of the supply sector exposes it to direct weather events, such as heat stress which negatively impacts production or a mild winter which positively impacts production. Weather also indirectly impacts milk production through feed quality and availability which, in turn, impacts feeding practices and productivity per cow and drives the supply equation up or down, depending upon the situation. The migration of policy from a cheap grains policy to a food for fuel policy in recent years has exacerbated the feed volatility by increasing the demand and removing buffer capacity that historically reduced volatility. Consequently, feed grains price volatility will continue to fuel milk price volatility at the farm level.

Second, supply and demand adjustments are sticky. Supply adjustments are inhibited by the capital intensity of the farm sector and the lack of competitive uses for dairy facilities. This high fixed cost puts a premium on maximizing utilization of dairy facilities and contributes to a delay in supply adjustment when market signals should otherwise induce contraction. In fact, the immediate response of some dairymen to economic stress is to add cows in an effort to maintain cash flow to absorb overhead. A limited supply response to high price signals may occur quickly through enriched feed rations. More significant supply responses to high prices are delayed given the two year cycle from birth to lactation to the extent that expansion heifers are not queued up and available to address a shortage.

Demand shifts, particularly in the food service and food manufacturing markets, can also be sticky. The majority of hard manufactured products are sold through these channels. Decisions to adjust formulations in ways that necessitate reprinting of boxes or that impact the consumer experience are not done casually but, when done, can impact significant blocks of demand. The cost of consumer testing and packaging changes associated with such a change in combination with concern about future price risk generally leads to a reluctance to reformulate dairy ingredients back into the products from which they are removed. These institutional factors all result in supply and demand adjustments occurring in blocks rather than in a gradual and fluid manner.

Third, international dairy markets will increasingly impact U.S. dairy markets. A review of the price relationship between the domestic and international markets and import / export data substantiates the interplay between U.S. and international dairy prices. Prior to the implementation of the WTO reforms in the mid-1990s, U.S. exports were limited. As the reform implementation resulted in reduced export subsidies from the E.U. and increased animal protein demand in developing countries, convergence of U.S. and international prices over the last decade has resulted in increasing U.S. exports and reduced imports. In fact, international prices have exceeded U.S. prices for meaningful periods since 2005. In turn, exports have increased and imports have decreased during these

periods. Figures 2 through 4 show the U.S. and Oceania prices for cheese, nonfat dry milk / skim milk powder, and butter in combination with the net exports on a monthly basis since January 2005. Net exports are calculated by reducing exports by imports; a negative number is reflective of imports exceeding exports.

U.S. tariff rates are not sufficiently high to isolate the U.S. industry from international market factors. As a residual supplier to international markets, the volatility in the U.S. markets is higher than the volatility that would exist if either the U.S. had sufficiently high tariffs to isolate its markets (e.g., Canada) or if it was a consistent exporter. Existing WTO tariff commitments and the compensation required for impacted WTO members if the U.S. increases its tariff barriers beyond committed levels makes isolation of the domestic market unlikely. Additionally, a protectionist approach that isolates the U.S. markets would isolate the greatest growth opportunities for the U.S. dairy industry. While capitalizing on growth opportunities within our strong domestic market will remain core to the success of U.S. producers and

Figure 2.
U.S. & Oceania Cheddar prices vs. net exports.

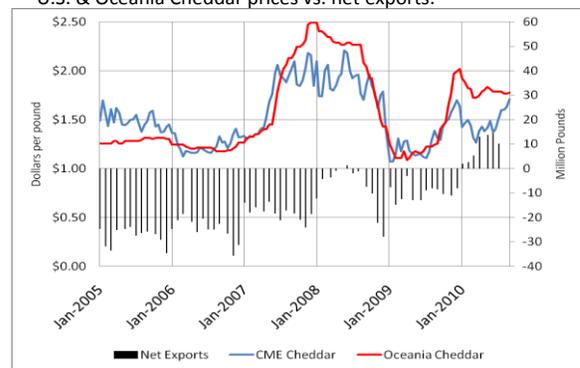
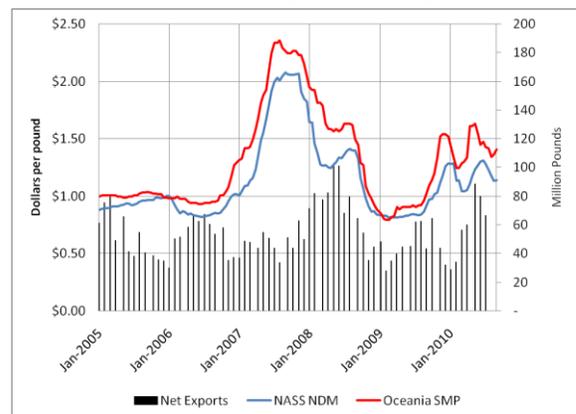


Figure 3.
U.S. & Oceania NDM and SMP prices vs. net exports.



processors, significant growth opportunities exist for the U.S. dairy industry outside of the U.S. Ninety-five percent of the world's population lives outside of the U.S. and improving per capita incomes in developing countries will result in a significantly higher rate of demand growth than that in the U.S.

Fourth, government budget constraints limit the potential use of policy levers such as the price support program at the levels required to significantly dampen volatility. Taken on the extreme, history shows that volatility can be eliminated by setting dairy price

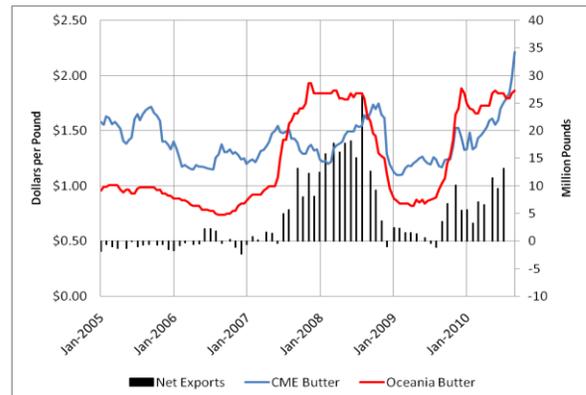
supports at levels that generate market prices in excess of farm cost of production. However, this policy approach results in significant government outlays (peaking at \$2.6 billion in USDA's 82/83 marketing year) and has undesirable market consequences. Government budget constraints make a product purchase program that incorporates support prices set near or at the farm cost of production politically nonviable.

Policy Solution Parameters

As noted, high prices do not ensure farm level profitability and more modest prices do not condemn farms to a lack of profitability. Rather, it is the relationship between revenues and costs that drives farm profitability. Therefore, margin volatility is the most concerning aspect of volatility to farmers. In contrast, robust price risk management tools are critical to the continued development of demand for dairy products through the balance of the marketing chain. Therefore, the subcommittee recommends that policy solutions that are developed to address the farm margin volatility problem not be detrimental to the ability to manage the finished product price risk. Additionally, the subcommittee does not believe that policy solutions should significantly intrude upon the market-driven relative competitive position of dairymen vis-a-vis other dairymen. Full consideration should be given to managing the risks associated with price as well as margin volatility through market-based and/or public policy solutions.

Acute short term pressure on dairy farm margins sometimes stimulates a push for short term policy intervention that result in greater downward pressure on farm margins over the long term. A prime example of this is a temporary increase in the support price. USDA and politicians understandably want to be responsive to requests for help in periods of farm stress but it is important to recognize that additional support may impede a supply adjustment and may, in fact, result in lower sector profitability over the long term. USDA should support long term dairy policy reforms in the Farm Bill that result in less need for ad hoc efforts to patch national dairy markets and drive a healthier and more resilient industry.

Figure 4.
U.S. & Oceania butter prices vs. net exports.



Tools to Manage Volatility

Farm Savings Accounts

The subcommittee recommends amending the tax laws to provide for farm savings accounts. These savings accounts can provide a platform through which farmers can defer taxable income in profitable years by placing funds in a qualified account. This tool is likely to reduce the level of investment in expansion and other capital projects that is made under current tax law with the objective of avoiding tax liabilities. This reduction in tax-avoidance driven investment in profitable years should reduce the production surge that typically leads to a down cycle. Additionally, funds that have been deposited will be available to assist a producer when margins are squeezed. Funds withdrawn from the farm savings accounts would be taxed at the rate applied in the year in which the funds are withdrawn. Since producers would likely draw upon those funds in low profitability years, tax liabilities on the withdrawals would be low or may be nothing at all.

An ancillary but important benefit of the farm savings accounts is that producers will more likely have a reserve cushion of cash available to weather low margin years. This cushion can relieve pressure on USDA for short-term crisis intervention.

With those considerations in mind, the volatility subcommittee recommends the following provisions related to the farm savings accounts:

- No limits on the dollars deferred per year.
- Provide government match on contributions up to \$20,000 contributed on annual basis.
- Require money to remain in account a minimum of six months and allow withdrawal at account-holder's discretion thereafter.
- Taxes are payable upon withdrawal from the account.

Risk management margin lines of credit

Risk management tools available through the futures markets will play increasingly critical roles in managing price and margin risk for farmers, manufacturers and end users. In contrast with other segments of agriculture in which robust futures markets have existed for decades, use of futures to manage price and margin risk in the dairy industry has largely been limited to the period since cash-settled dairy futures were introduced in 1997.

Several factors, including lack of historical experience, minimum contract sizes that exceed some individual farm's production, complexity, and margin requirements limit direct participation by farms in futures market risk management activities. Programs offered by milk buyers, both cooperatives and proprietaries, that address these constraints are critical to the utilization of these tools by producers. However, the ability for many entities to offer these programs that facilitate producer risk management could be constrained by margin call encroachment on credit facilities.

Therefore, the subcommittee recommends that USDA seek authorization in the 2012 Farm Bill to provide risk management margin lines of credit to cooperatives and proprietary processors with valid

risk management programs in order to facilitate risk management. Although the subcommittee does not yet have an opinion regarding the lending mechanism, implementing such margin lines of credit through commercial credit guarantees rather than through direct lending warrants further consideration.

Supply management

A properly structured supply management program could reduce volatility. However, an improperly structured supply management plan could contribute to increased volatility. Several supply management plans have been put forth in recent months by various industry advocacy groups. The subcommittee is aware that some model analysis concludes that volatility is reduced under some of these plans and is anxious to have a direct opportunity to review and fully understand the model capability and results. In addition to better understanding the modeling results, the committee feels there are potential long term negative impacts which require further discussion, including:

- Stifling investment in processing and manufacturing plants and new product development due to uncertainty of production levels.
- Potential to retard development of milk supplies in regions that are deficit, even if supply and demand conditions support development of additional milk supplies in that region.
- Potential that proposals will introduce increased volatility if intervention lags result in corrective action occurring concurrently with or subsequent to market correction.
- Devaluation of livestock by decreasing cattle demand due to reductions in expansion cattle market.
- Inhibiting the farmers' ability to manage risk by increasing production when needed.
- The potential of increasing imports and decreasing exports.
- The potential to incent market disruptive behaviors at the end of measurement periods, such as:
 - Dumping skim
 - Moving cows
 - Reduced marketings
- The unintended consequence of driving a race for the base mentality, incenting producers to increase production during periods in which penalties are not incurred.
- The potential that supply management inhibits growth of dairies to the scale necessary to address environmental and global competitiveness requirements.
- The potential that supply management may increase volatility by forcing greater uniformity in production decision making than exists today.
- Taken as a whole, the subcommittee is concerned that supply management is 180 degrees in the opposite direction of the growth-driven strategies that most industries undertake to create a dynamic and thriving industry.

Addressing rural economy goals

The subcommittee believes that it is important to segment market issues from social issues as it relates to the policy debate and proposed solutions. Rural development and farmland preservation goals may be better addressed through green payments or other mechanisms that are less market intrusive and are not considered trade distorting under world trade agreements. Although green payments may facilitate the viability of dairy operations, decoupling these payments from future production has the effect of limiting their impact on future production systems. Further, these payments can be structured to more directly achieve a specific objective, such as the maintenance of open space. Several green program approaches are under review and consideration by the subcommittee but no conclusion has been reached.

Policy contributors to volatility

The subcommittee recognizes the contributions of several government and industry-funded policies or programs that contribute to greater volatility in price or farm margin but has not reached consensus on recommended changes. These include milk pricing policies, price supports, MILC and CWT.

Milk Pricing Policy

The existence of multiple classes for milk used in manufacturing and the pooling and redistribution of the revenue in the Federal Milk Marketing Orders and in most state-administered milk pricing systems mutes the economic signals that otherwise would incent milk to move to the highest and best use. The stifling of market signals that otherwise would pull milk into products in short supply increases price volatility for individual dairy products. Additionally, the use of the “higher of” construct to move Class I prices limits Class I processors’ ability to manage price risk. The subcommittee has not reached consensus regarding policy reform recommendations for milk pricing policy.

Replacement of Price Support Program and MILC Payments with Margin Insurance

Margins (the relationship between income and expense) are a more critical factor in farm profitability and viability than are absolute price levels. As a consequence, replacing the dairy product price support program and the milk income loss contract (MILC) program with a margin insurance program warrants further consideration. On the surface, a margin insurance program more directly addresses farm viability policy objectives in a size-neutral way than do the existing programs. However, subcommittee members need to further study the viability of margin insurance in the absence of payment limitations and program costs prior to developing consensus around a recommendation.

Summary

Volatility is of concern throughout the dairy industry. The volatility of concern is frequent unpredictable fluctuations in prices that result in detrimental impacts on margins in the supply and demand chain, including producers, manufacturers and fluid processors, marketers (retailers, food service establishments, and food manufacturers) and consumers. Stress at the farm level is related to margin volatility. Price volatility significantly impacts formulation and consumption decisions downstream in the marketing chain.

Volatility will continue to be a factor in the dairy markets due to several factors. These include the biological nature of the production systems, the stickiness in supply and demand adjustments, interplay with international markets, and budgetary considerations that constrain the implementation of price supports at levels that significantly reduce volatility. Therefore, full consideration should be given to managing the risks associated with price volatility through market-based and/or public policy solutions.

The subcommittee recommends further development of the following policy options to help market participants manage volatility:

- ❖ Farm Savings Accounts
- ❖ Risk Management Lines of Credit

The subcommittee believes that further study is warranted prior to solidifying recommendations regarding:

- ❖ Green payments or other mechanisms that address rural economy goals in minimally market distorting ways
- ❖ Supply management
- ❖ Replacing the dairy price support program and MILC with a margin insurance program
- ❖ Reforming Federal Milk Marketing Orders

The subcommittee recognizes that much work needs to be done before coalescing behind enduring policy recommendations that will facilitate a vibrant and thriving dairy industry that can weather the cycles of volatility that will continue to impact all sectors of the dairy industry and is committed to continuing that work.