

Understanding and Addressing Dairy Price Volatility

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Key Points

- Volatility is not always well defined or well understood
- Recent price swings have been engendered by a variety of different forces – some predictable and some a shock, some temporary and some enduring
- There are two distinct approaches to managing the risks associated with price volatility – market-based solutions or public policy prescriptions
- That dairy risk management has come a long way should not be dismissed..but there are impediments to continued development
- Public policy prescriptions that do not address turning supply both off *and on* will not have the intended outcomes

What is Volatility?

- Merriam-Webster says: “ Characterized by or subject to unexpected change...”
- It is important to focus on the word “ unexpected” in the definition of volatility
 - There are many episodes of price change that are largely predictable or expected – allowing market participants to seek and secure protection
 - Supply and demand shocks create true volatility -- but avoiding them requires being able to anticipate them
- As it relates to financial markets – especially commodity markets -- the tendency is to describe as “ volatile” any period featuring *undesirable* prices rather than *widely fluctuating* prices
 - When prices are low, there is little complaint about volatility from end-users; when prices are high, there is little complaint about volatility from producers

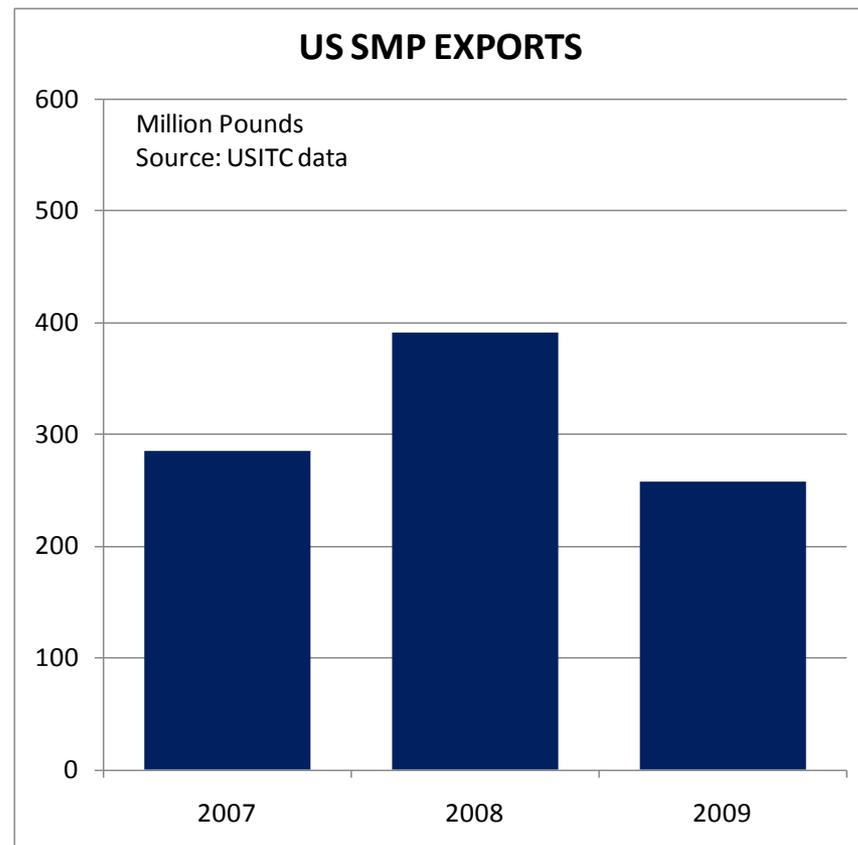
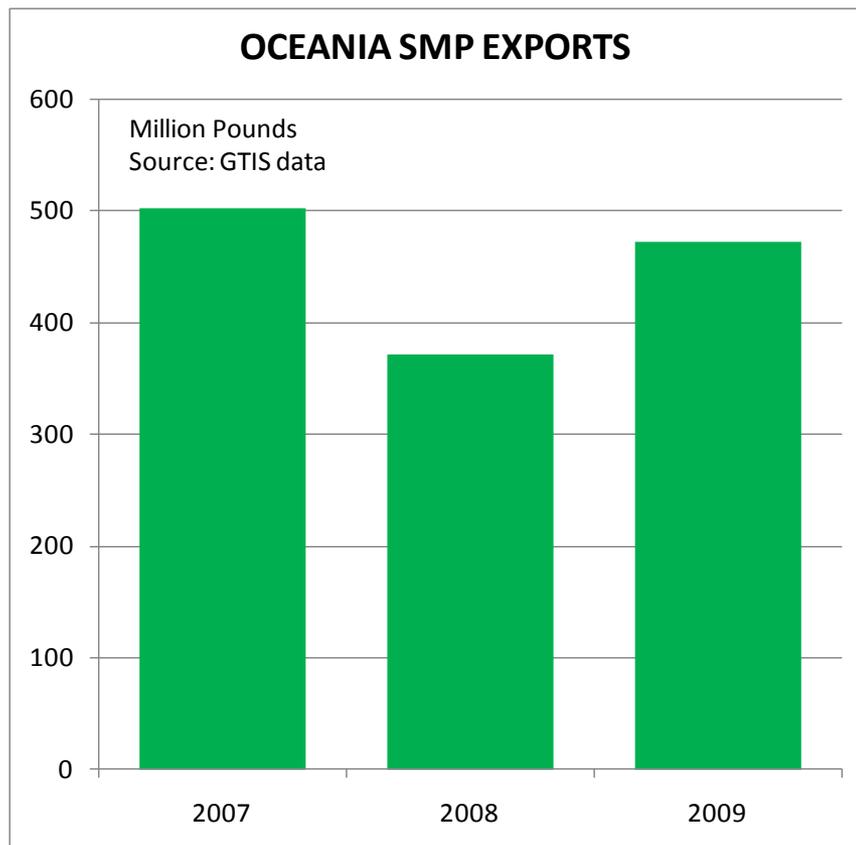
What Causes Price Swings?

- Periodic mismatches in supply-demand balance at your chosen price
 - Markets are always in balance ... But at what price?
 - Quickly addressing these price swings requires the ability to turn production on or off on short notice
 - Providing for one and not the other will only exacerbate volatility
 - One of the largest causes of low prices is the inevitable response to high prices, constraining supply without the capability of turning it back on again will ultimately threaten demand
 - Turning production off is not that difficult
 - For example: CWT, current supply management proposals
 - Increasing supply on short notice is equally important, however..and much more difficult
 - Additional production requires cows, facilities and/or ways to quickly increase output per cow.

Recent Price Swings Have Been Triggered By...

- Weather issues in Oceania – *a true shock*
- Emotion: fear of shortages/fear of surpluses – *somewhat predictable*
- Reformulation to avoid high priced dairy ingredients – *predictable*
- Incentives/ Disincentives Created by Public Policy – *predictable*
 - MILC
 - Pooling
- Recession – *somewhat predictable but the magnitude was a shock*
- Flawed price discovery vehicles – *predictable*

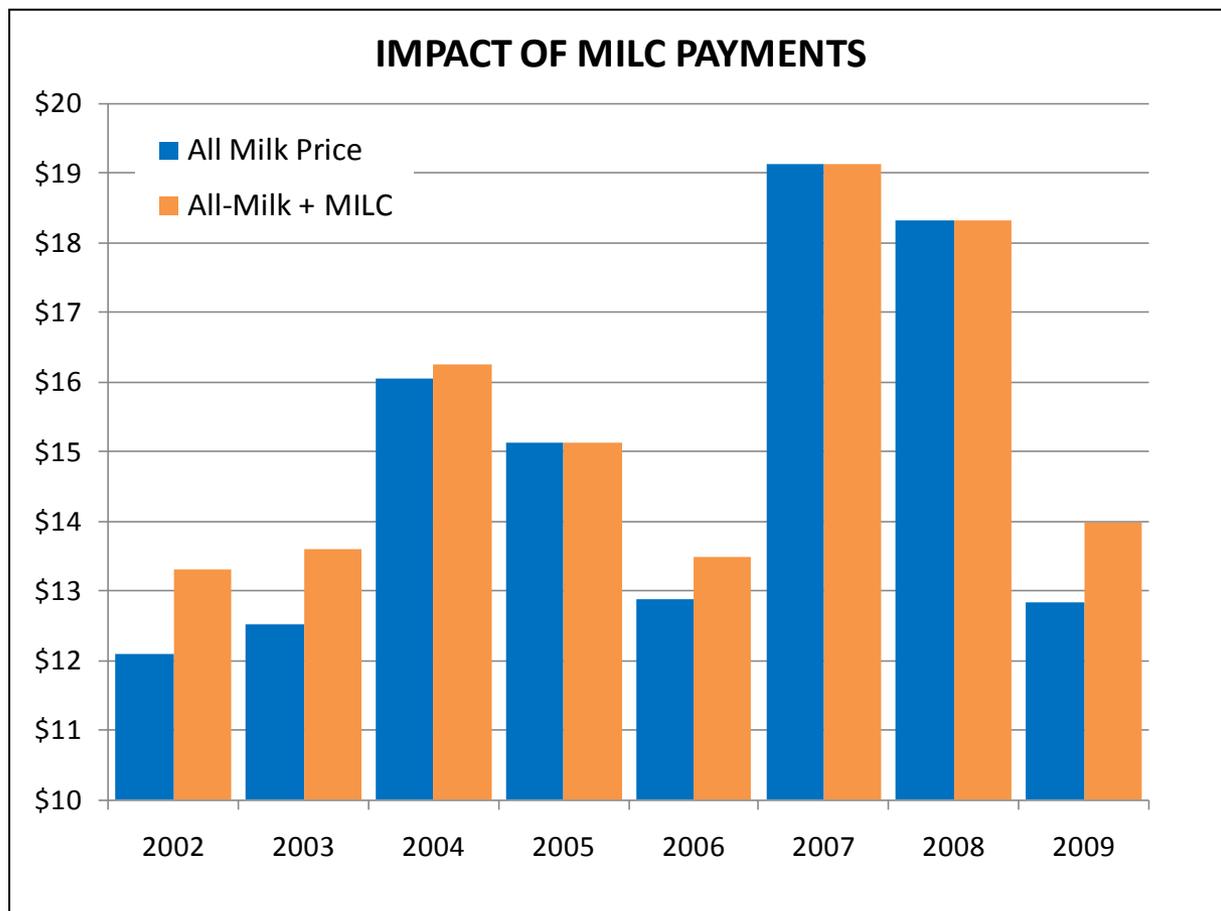
Oceania: Drought Drove 2008 US Export Opportunities



Reformulation: Priced Out of The Mix

- Cheese slice reductions – 0.75 ounce slice to 0.50 ounce slice
- QSR chains remove a slice of cheese from their double cheeseburgers
- Ice Cream containers to 48 ounces
- Replace cheese with fillers and sauces in frozen dinners
- Switch from natural to process cheese
- Whey replaced with dextrose or maltodextrin
- Once dairy is formulated out, it does not tend to come back quickly
 - Cheap cheese in 2009 did not put the second slice back on the McDouble

Policy: MILC Creates Two Different Pricing Realities



- A major factor in the prolonged lows in 2002-2003 as well as 2009-2010
 - There are two pricing realities during downturns

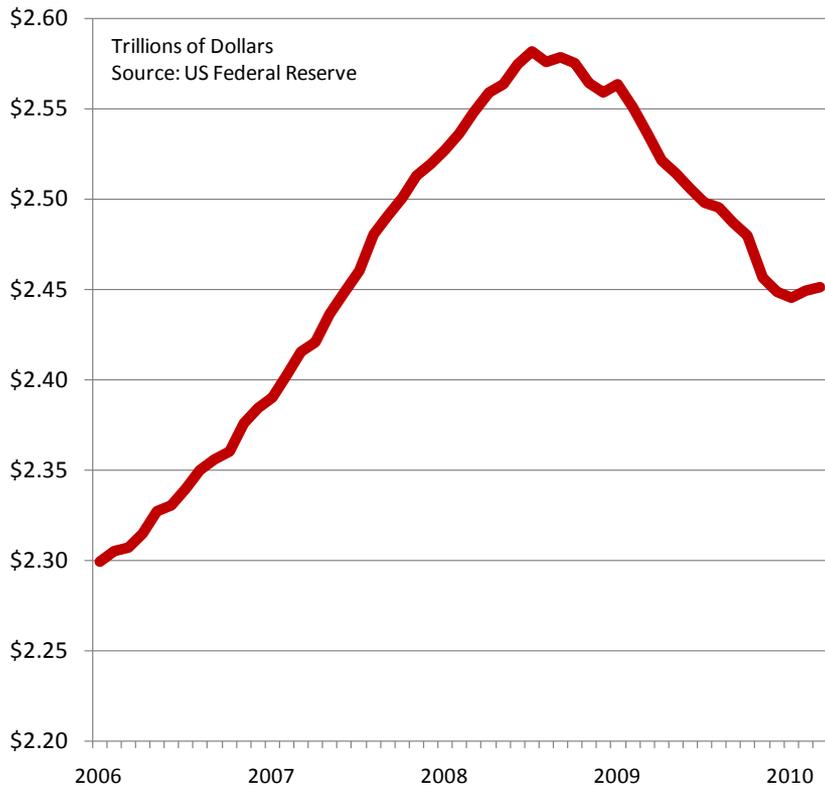
- Not a particularly sound economic policy as the program dramatically mutes price signals to some dairymen. As a social policy?

Policy: Milk Pooling' s Contributions

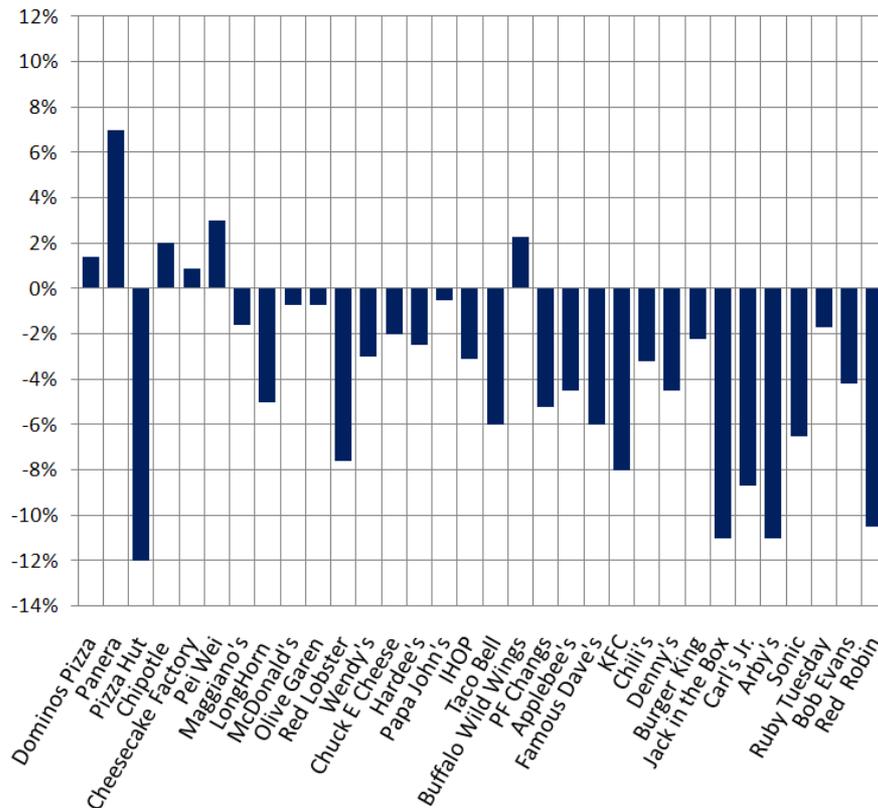
- Pooling insulates individual producers from the direct implications of their individual production decisions
- Pooling also creates inefficiencies and costs that rob revenue from the marketing system
- Pooling creates a patchwork of regulations that have been used to the advantage of some producers and against others
- The lack of individual accountability has been identified by supply management proponents as the chief cause of volatility. Curiously, they fail to recognize the pooling system as the cause of the lack of individual accountability and suggest another set of regulations be layered on top as the cure.

Recession: Brutal for Producers and Consumers

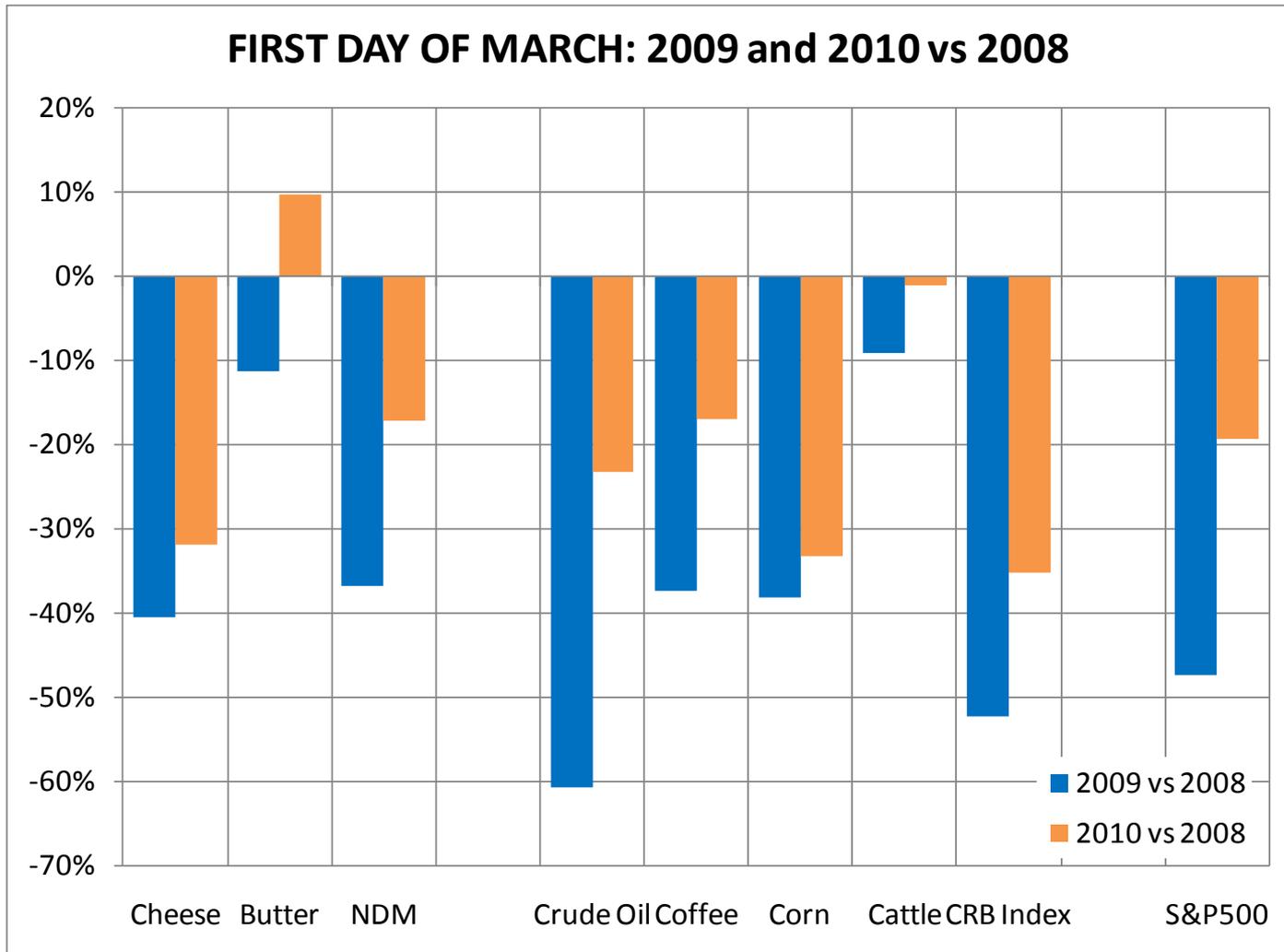
CONSUMER CREDIT OUTSTANDING



RESTAURANTS: SAME STORE SALES Q4'09VS Q4'08



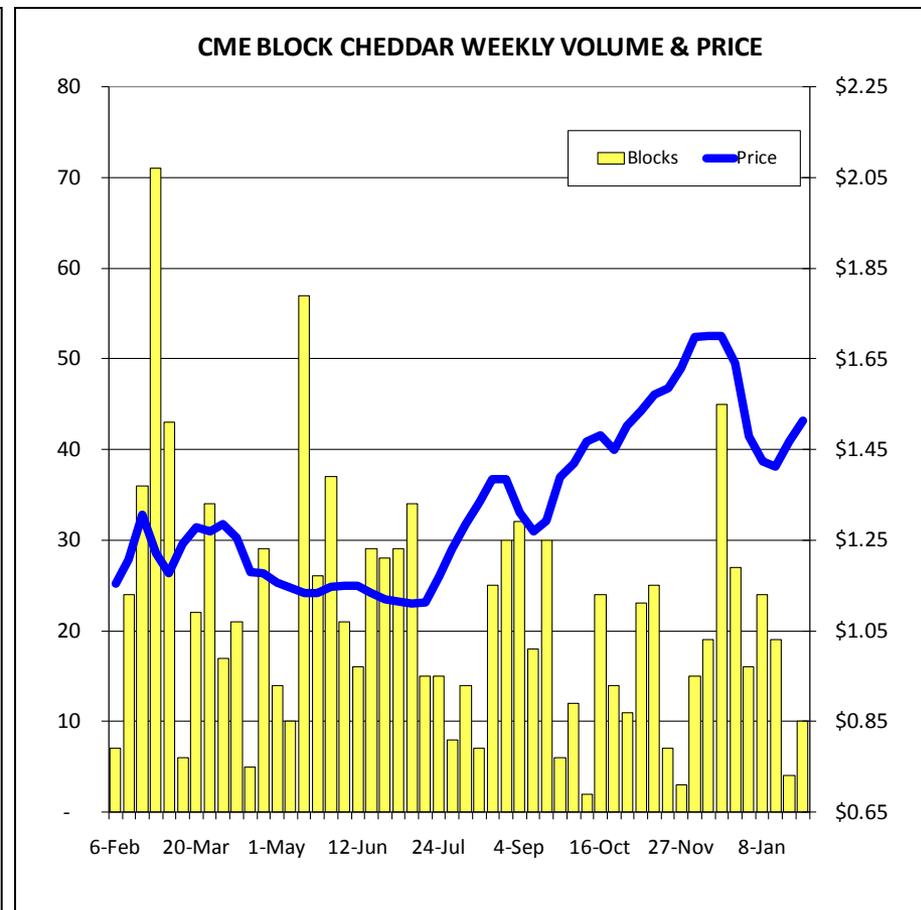
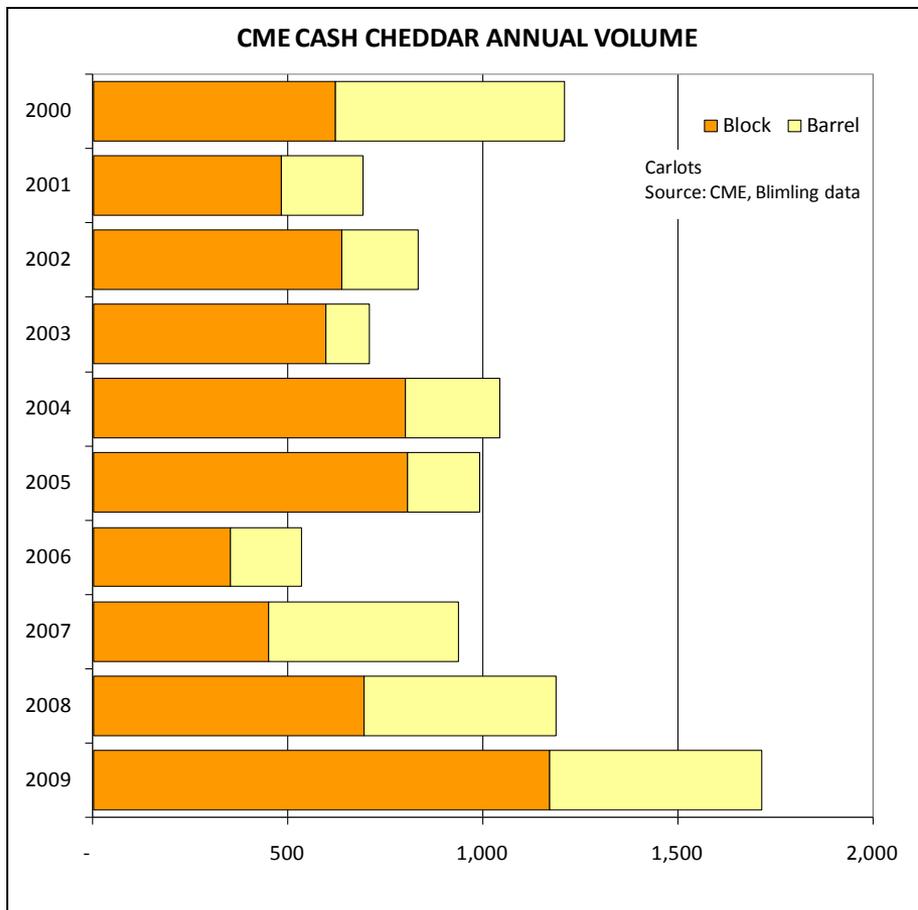
Recession: Devastation to Price Felt Well Beyond Dairy



Price Discovery: Flawed Mechanisms

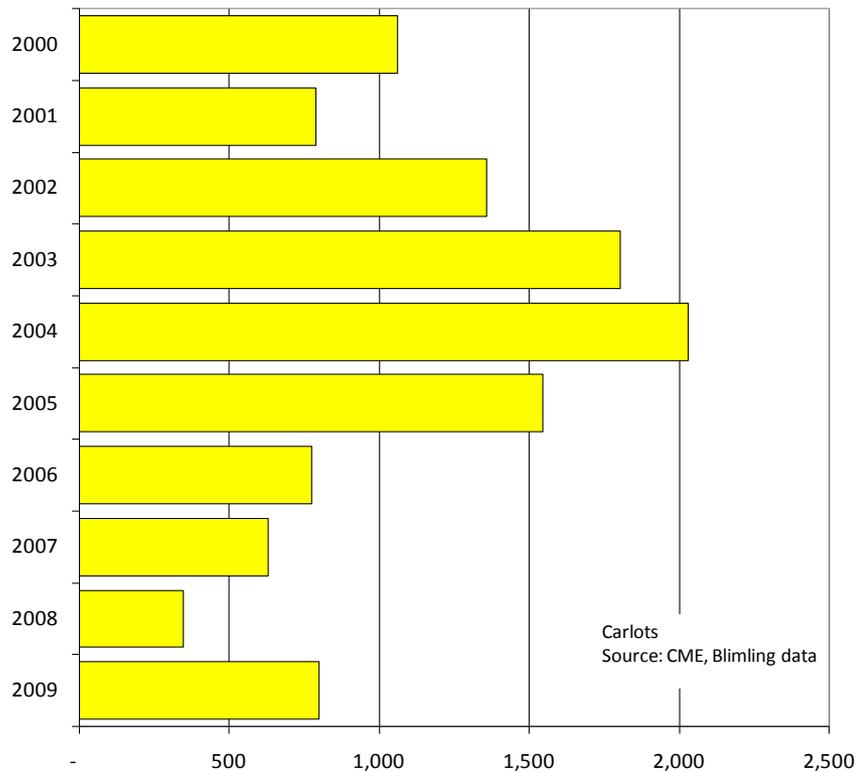
- With the possible exception of dry whey, each of the dairy industry's significant price discovery mechanisms has problematic issues
- Lack of participation in the CME spot cheese and butter markets can allow comparatively isolated issues or various agendas to drive pricing for the entire industry
- Nonfat dry milk market has endured allegations of pricing irregularities

Price Discovery: Flawed Mechanisms

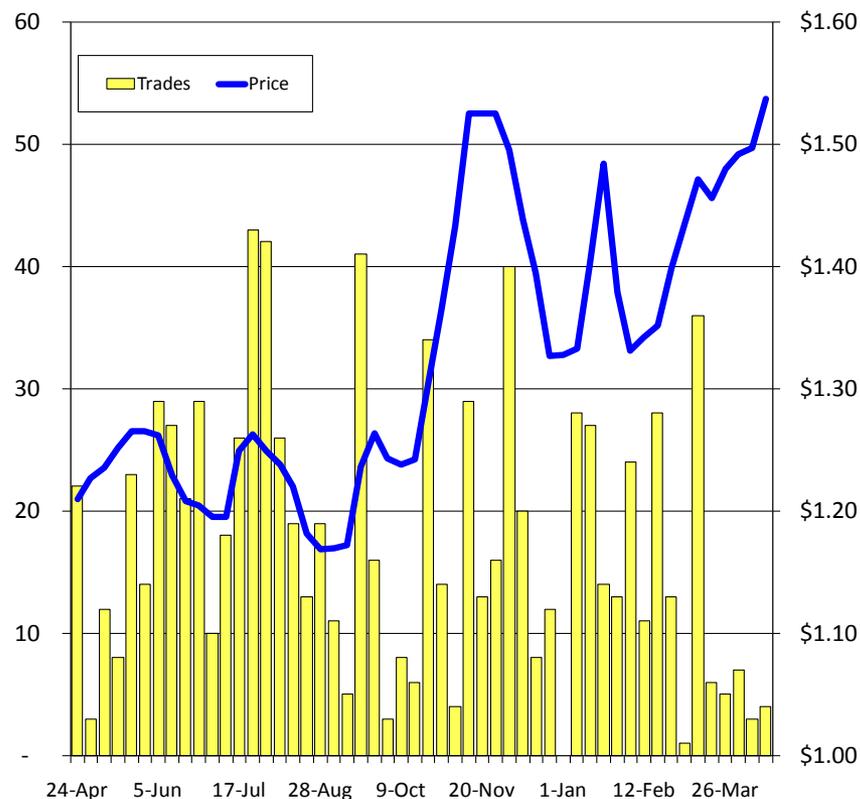


Price Discovery: Flawed Mechanisms

CME SPOT BUTTER ANNUAL VOLUME



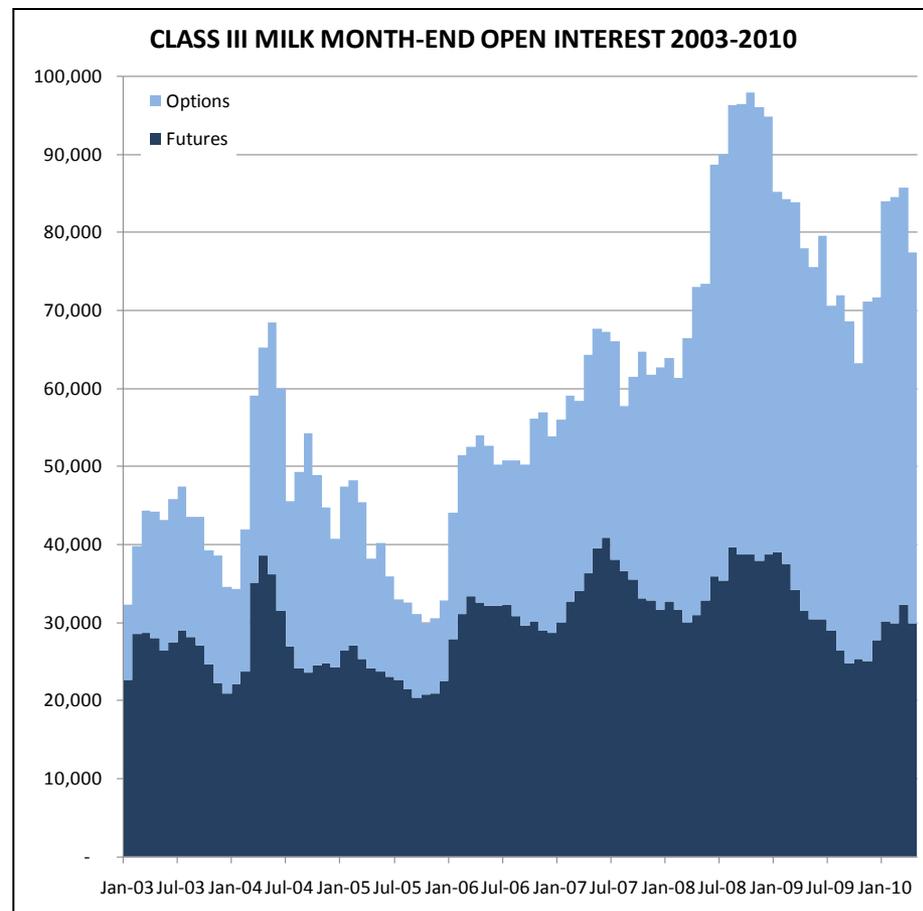
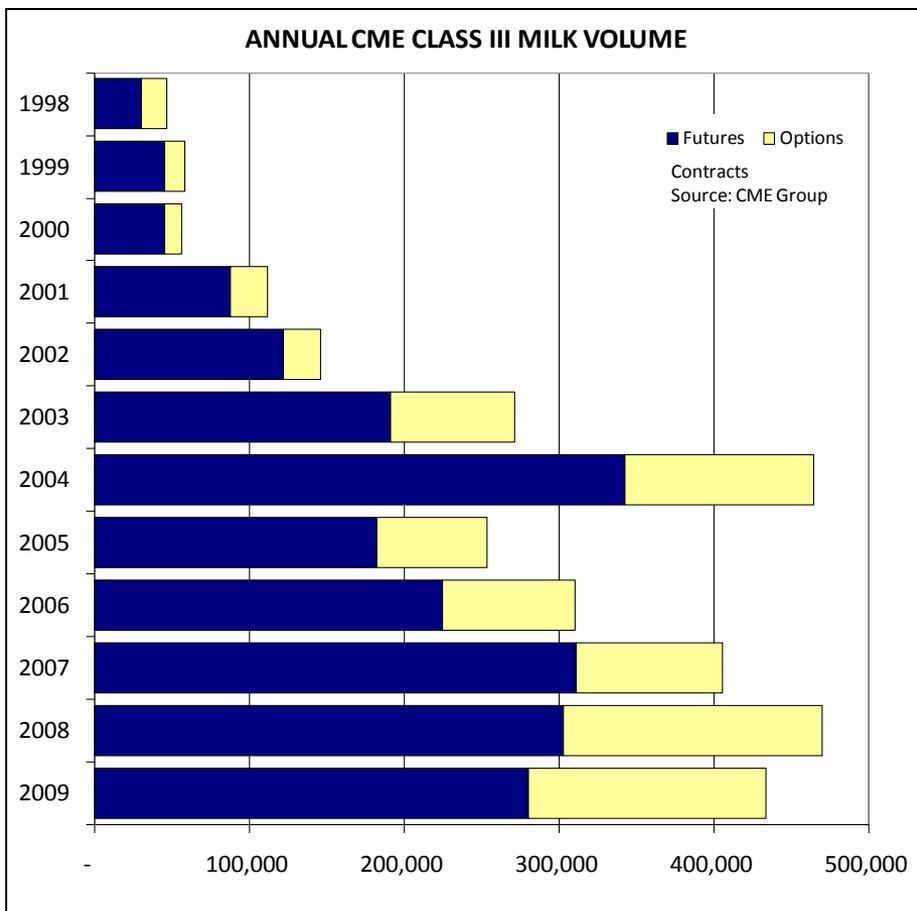
CME BUTTER: WEEKLY VOLUME AND PRICE



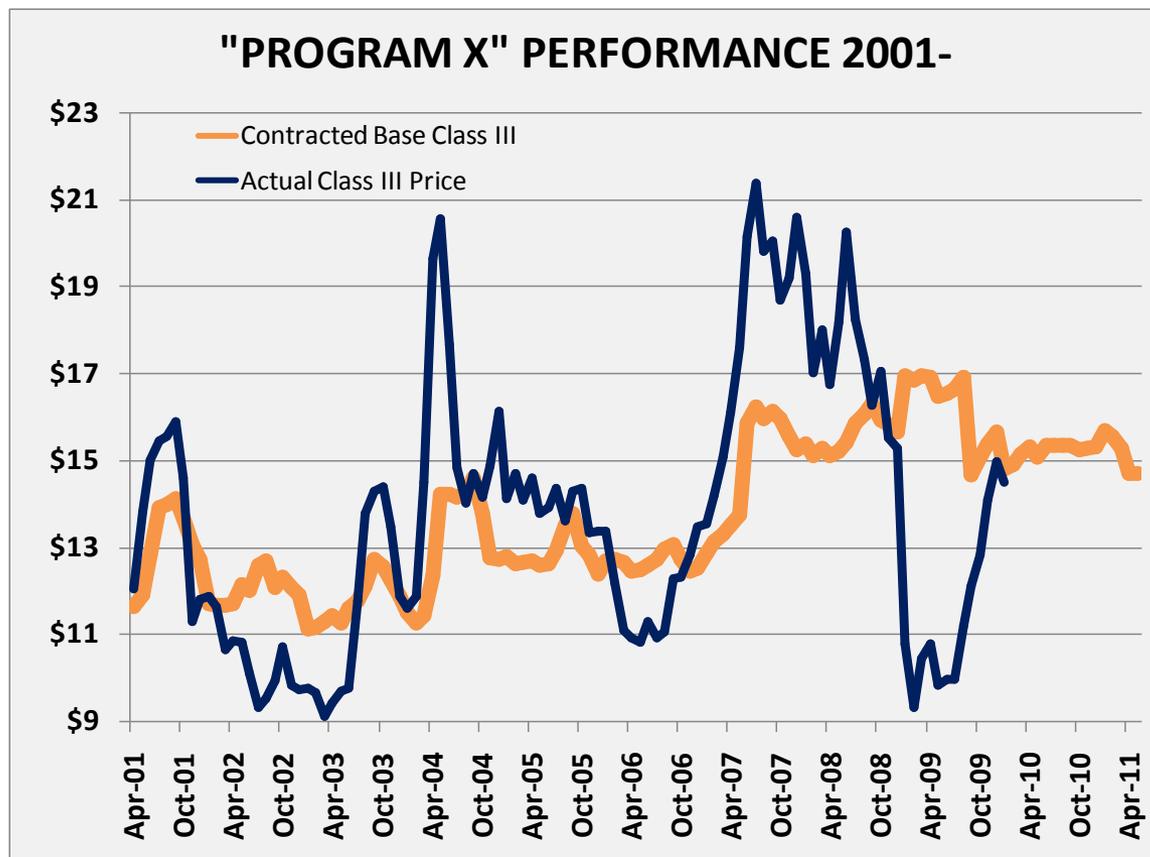
Managing the Risks Associated With Volatility

- Price risk is managed in two ways: with private tools such as futures, forwards and options markets or with public policy prescriptions
- Market-based tools provide for addressing impact of volatility on a farm-by-farm or firm-by-firm basis
 - Strategies can be pursued (or not pursued) according to risk tolerance, individual financial circumstances/goals, evolving market conditions
 - Allows strongest producers to thrive and compels weaker produces to either improve or...
- Public policy prescriptions seek to address the impact of volatility on a market-wide basis
 - Impact is theoretically equal for all producers
 - Aids weaker producers by “leveling the playing field” (and can punish stronger producers in the process)

Let's Not Dismiss Where Risk Management Is Today ...



..And It Works As Intended...



- Data from one of the more active farmer programs we manage
- Contracted milk: \$13.61 average with \$16.96 high and \$11.14 low
- Market milk: \$13.77 average with \$21.38 high and \$9.11 low
- Huge difference: \$5.83 high/low spread versus \$12.27
- This experience has been repeated across several programs in several geographies
- We presume end-user experience is similar

..But There Are Impediments to Further Development

- Liquidity is divided into too many pools with little overlap
 - Five CME contracts currently cover the complex (soon to be six)
 - Difficult to pair a dairy producer and, say, an ice cream maker or a dairy producer in California with a cheese marketer in Wisconsin
 - Fewer classes of milk would break down barriers and make for fewer liquidity pools with more natural trading partners

- Farm milk pricing is generally too complicated
 - For example, while dairy producers in the Northeast have significant exposure to Class III fluctuations, the connection is not always obvious or intuitive
 - Advance pricing, NASS lags, pool premiums, etc.
 - Depooling and impact on basis has at times been a major issue

..But There Are Impediments to Further Development

- Culture and exposures are continually evolving
 - Low production costs in western states have meant low prices were an inconvenience rather than a threat to the business (though this is changing)
 - Producers currently receive the annual average price in twelve installments which is far less risky than a corn grower who markets a year' s worth of product all at one time
 - Culture of marketing is entrenched in the grain world, much newer in the dairy world

- Confidence in markets is lacking

Issues With Public Policy Approach

- At present, policy simultaneously promotes volatility and hampers its management..and it is unlikely that the various proposals being contemplated will change that

- There has not been a policy suggestion that addresses increasing production when needed as well as decreasing production when needed
 - Without a means to increase production rapidly there is no means to build inventory and head off upside volatility

Issues With Public Policy Approach

- No better tool than the markets to predict future production needs
 - Would a board of 5 or 10 or 30 have done better than the market in predicting the events of the past two years?
 - Plans that seek to manage volatility by limiting production will surely lead to higher price levels and continued volatility at higher levels...which will drive customers away from dairy
 - Plans to limit supply without quota or hard caps (such as CWT), if effective, become a victim of their success by raising overall price level and creating more production to remove

Concluding Thoughts

- *Some* volatility in price can be healthy
- Dairy is not notably more or less volatile than other agricultural commodities
- Producers have the tools to manage price volatility – and have gained considerable experience in recent years
- Dairy pricing policy currently creates volatility, lengthens the duration of low price periods and confounds the hedging process
- Current situation is an anomaly, we should be careful of long-term policy solutions to short term problems

Concluding Thoughts

- As a goal, reducing price volatility is wise...but we should start with an honest and detailed discussion of the causes of volatility before we start crafting solutions
- We should not be surprised that a set of policies that are designed to “ pool” the gains/ losses from individual production decisions shield producers from the individual accountability for those production decisions
- Given the fact that current policies inhibit accountability and complicate the application of risk management tools might the best solution for reducing volatility and better equipping producers to deal with risk be to streamline and simplify current regulations?