

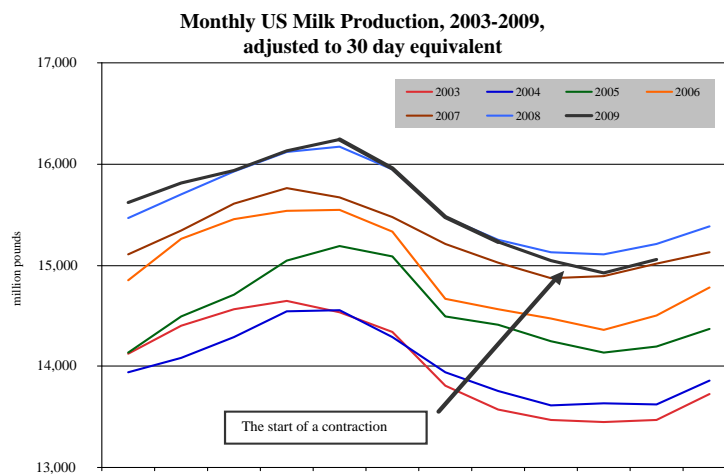
Budgeting for the New Year

Mark Stephenson, PhD

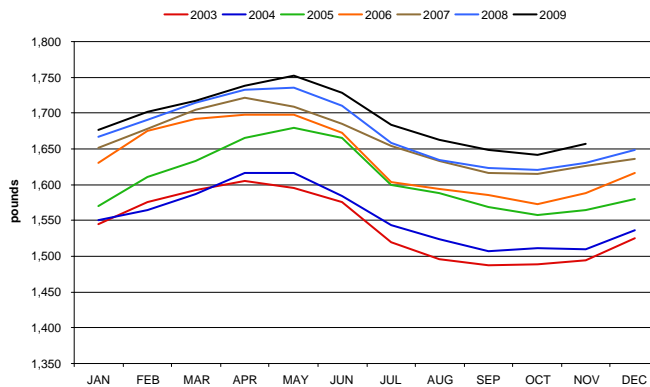
Associate Director, Program on Dairy Markets and Policy
Cornell University

January, 2010

Milk production jumped mid-2005, tapered a bit late 2006, jumped late 2007, slowed early 2009 and now showing signs of contraction - Good



US Monthly Milk Production Per Cow, 2003 to present



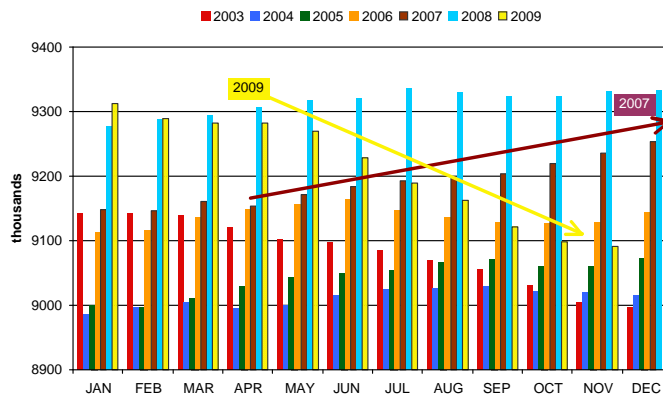
When feed costs are very high relative to price, we have seen an effect on yield in the past (1973), but it takes a very large cost effect.

Apparently this pattern has changed. Current estimates indicate no slowing in yield growth during 2009. (selective culling in large herds versus whole farm exits??)



Average Number of Milk Cows in US is declining after a large build-up in 2007

Average Number of Milk Cows in US During the Month



To the extent production growth is slowing, it is entirely through downsizing the dairy herd.

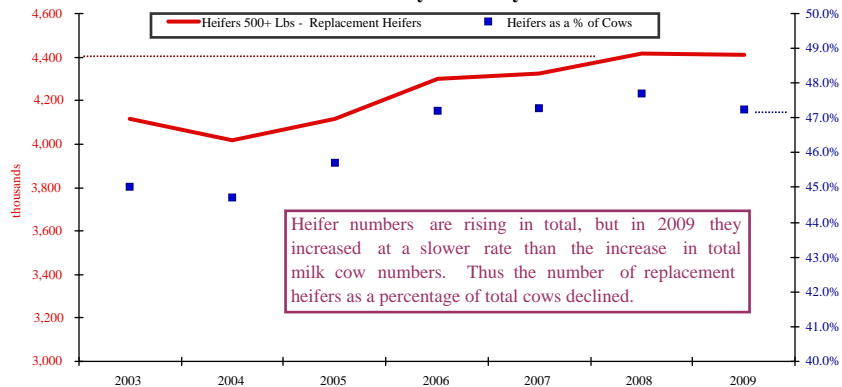
This did not begin until February and culling didn't reach significant amounts until this summer.

We aren't done!



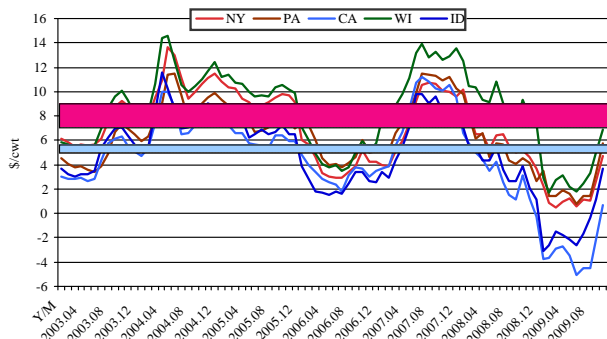
What is the impact of Sexed Semen, at a national level? (not obvious from the data)

Milk Cows that have Calved and Dairy Heifers Over 500 Pounds as a Percentage of Milk Cows, 1 January Inventory



Unprecedented Low Net Revenue Over Purchased Feed Costs

Net Revenue Over Feed Costs in Leading Milk Producing States, 2003-2009



In States, like NY, PA, and WI, where large dairies are also large farms, there has been an advantage to growing feed.

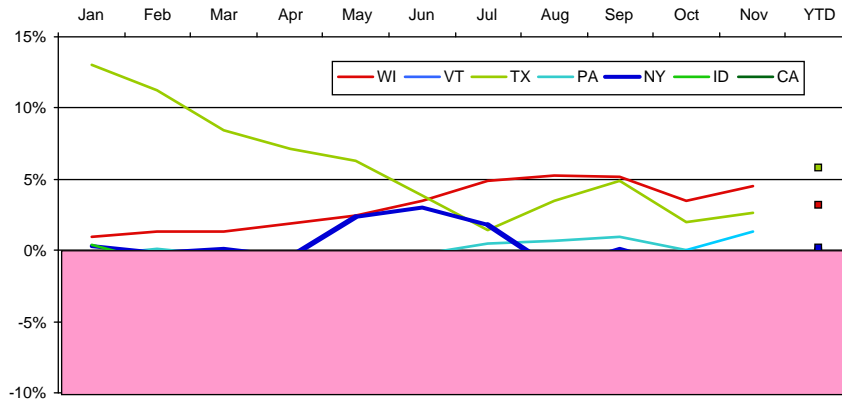
CA, ID and other states that tend to buy feed have been harder hit.

Keep in mind, Net Revenue over feed costs tend to run about \$3 per cwt lower in such states anyway.



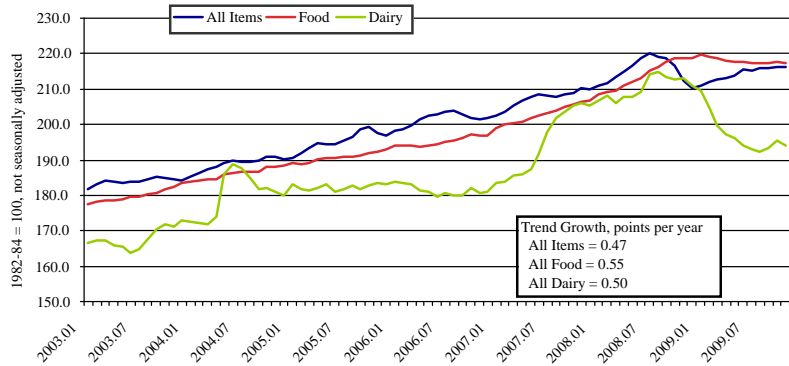
Milk Production for Selected States, 2009 vs 2008

WI increasing, TX plus but declining, NY barely plus and declining, PA level, ID and CA declining but come strength over VT, but improving by month, adjusted for leap year



Consumer Prices Drop in 2009

Consumer Price Indices, US, All Items, All Foods, and All Dairy Products (Milk, Cheese, Ice Cream)



From 1990 to 2000, dairy prices inflated at half the rate of all items or all foods, more recently retail dairy has been more erratic but is averaging comparably to general inflation.

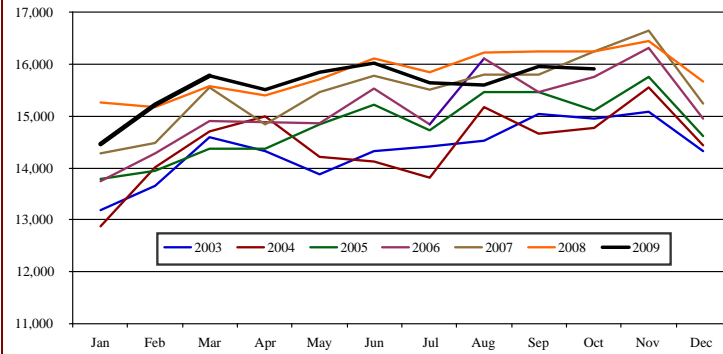


US Commercial Disappearance of All Dairy Products

Commercial Disappearance of All Milk, milkfat equivalent basis, 2000 to present (adjusted to 30-day equivalent)

This number began heading south last Fall. This Spring we saw a rebound but Summer results were weaker than 2007, much less 2008.

There is nothing terribly hopeful in this slide.

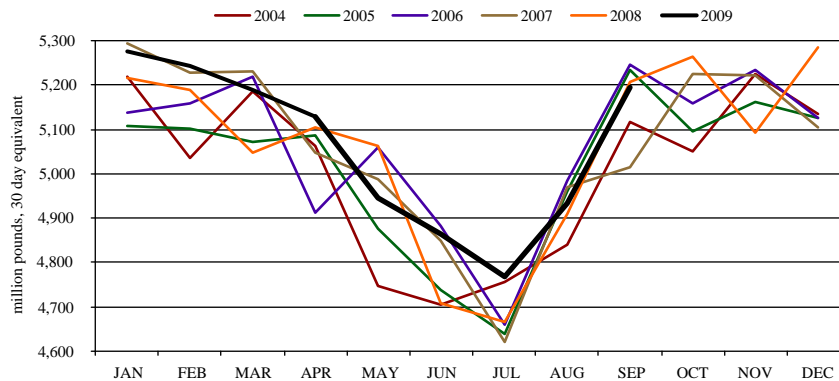


USDA's monthly calculation of the amount of milkfat in dairy products produced and imported, less the amounts we can account for in storage is called commercial disappearance.

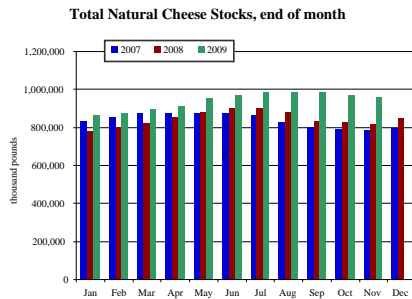


Sales of Fluid Milk Products are holding their own.

Total Production of Class I Milk Products, All Federal Order Markets and California



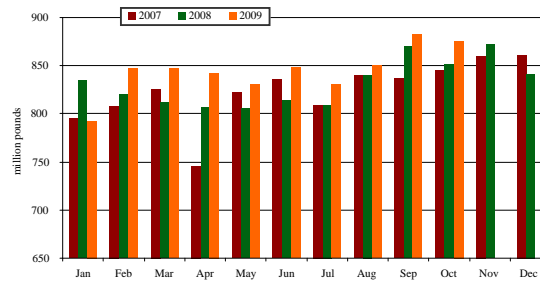
US Commercial Disappearance of All Cheese



A *deteriorating economy* has pulled down cheese sales because consumers are not eating out as much. Cheese is especially affected by Quick Serve and Casual Dining. However, *lower prices* make cheese a more attractive menu ingredient. The net affect has been fairly positive numbers in cheese sales.

There is some concern that seemingly strong cheese markets are in part the result of opportunistic or precautionary stock building by commercial users. The data on stocks tends to support this insofar as stocks are high and growing.

Commercial Disappearance, All Cheese, 2007 to present
(adjusted to 30-day equivalent)



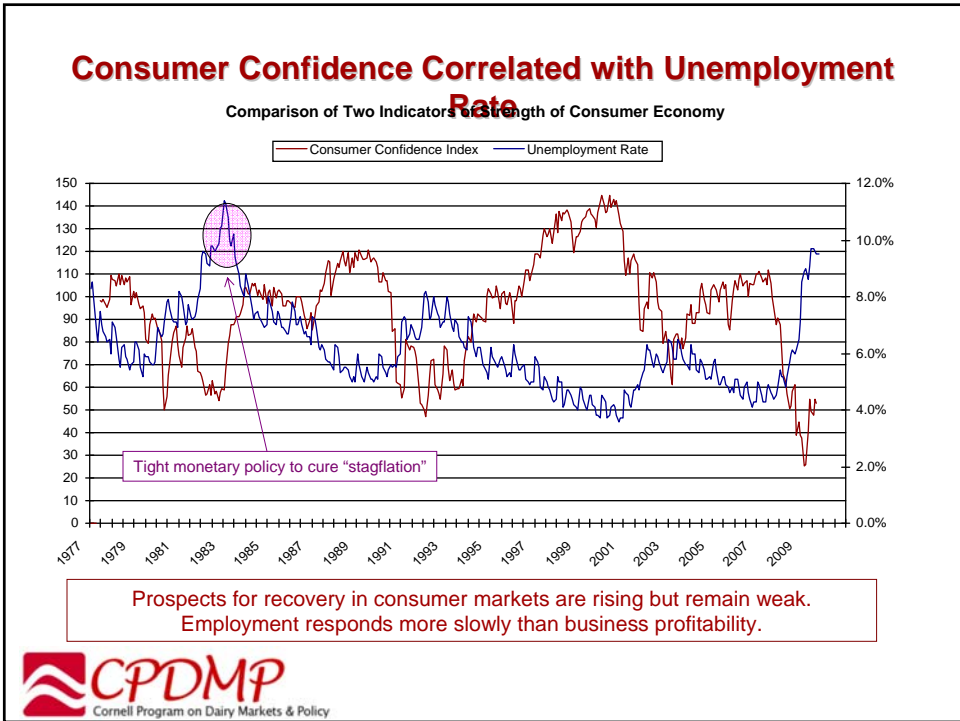
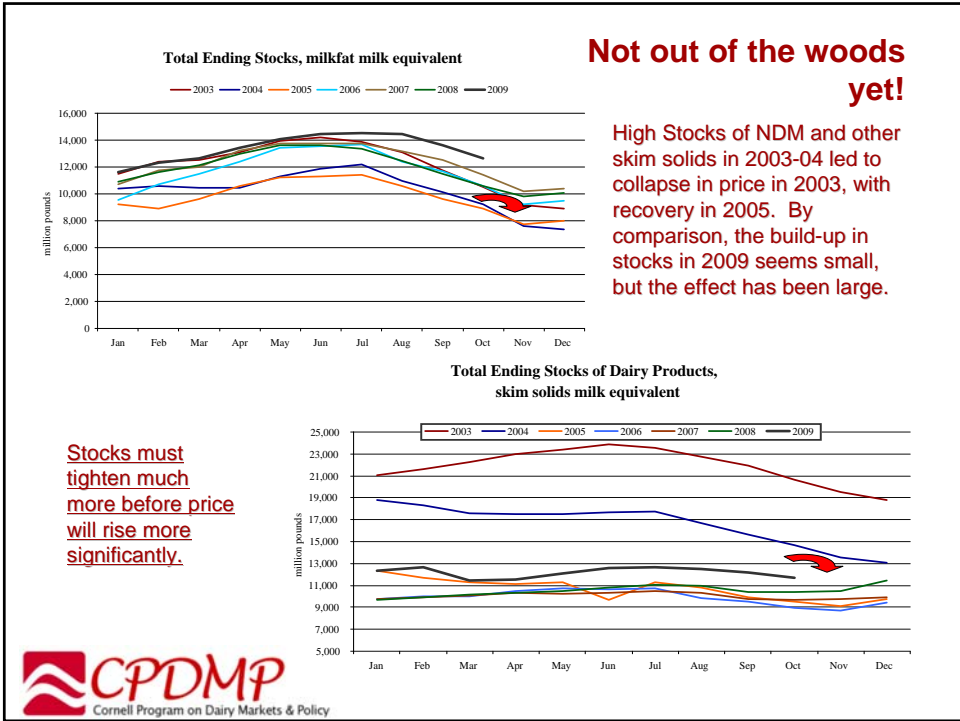
Restaurant sales recovering but still very low.



For all of the last two years, people have been dining out less and shifting to cheaper restaurants.

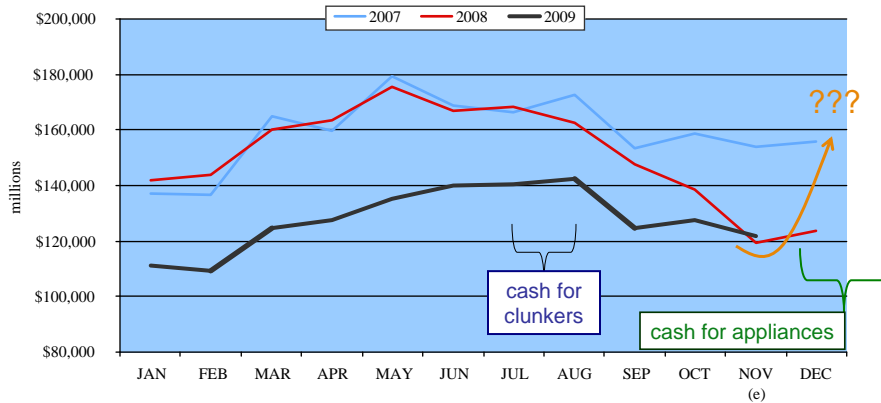
RPI has been recovering since Dec 2008, but it remains very low. In fact, by far the worst period since the RPI was created in July 2002.





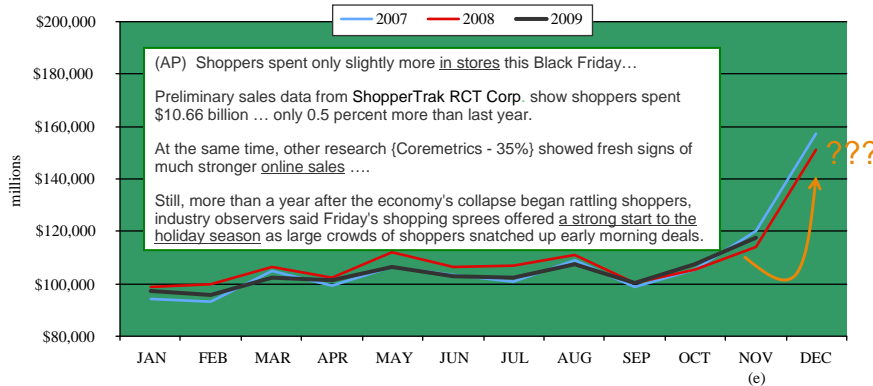
Retail Sales: In times of recession, people hold back on sales of appliances, furniture, automobiles, home improvements, and the like. This is also why federal stimulus money targets auto purchases and home improvements. When will they rise for real?

Retail Sales in Durable Goods Stores, 2007 to present



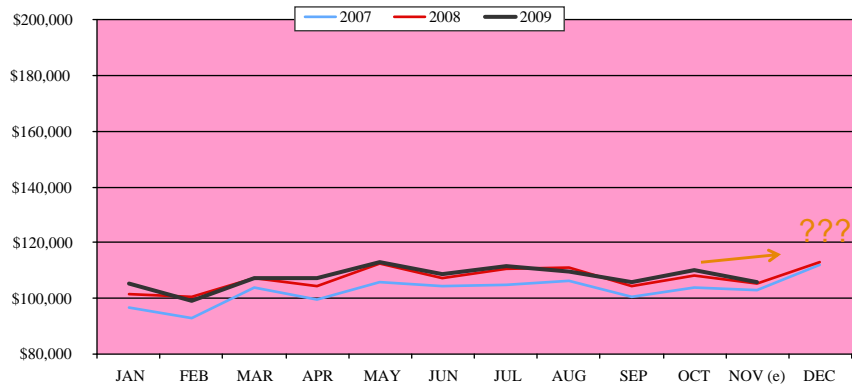
Retail Sales: Clothing, sporting goods, books, music, other consumables are less affected than durable goods. These are also the goods that we buy for Christmas. Strong holiday sales will indicate that consumers markets are indeed recovering.

Retail Sales in Non-Durable Goods (Other Than Food) Stores, 2007 to present



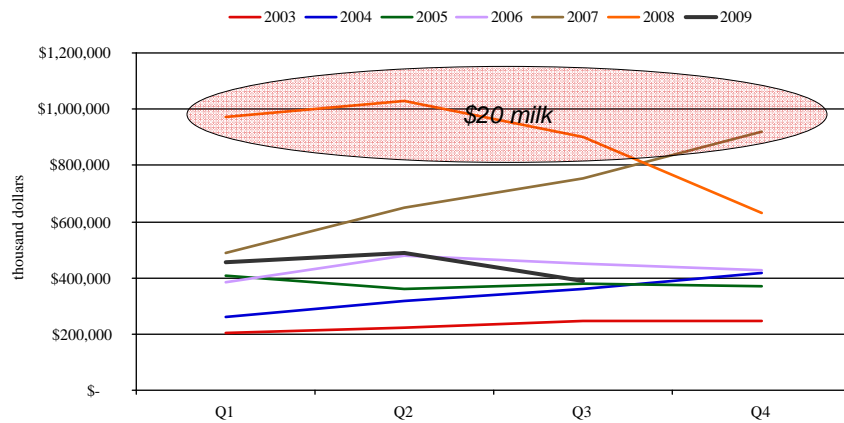
Retail Sales: Food and beverage sales, both at home or in restaurants are more resistant to recessionary effects, but even flat growth is price depressing.

Retail Sales in Food and Beverage Stores and Services, 2007 to present



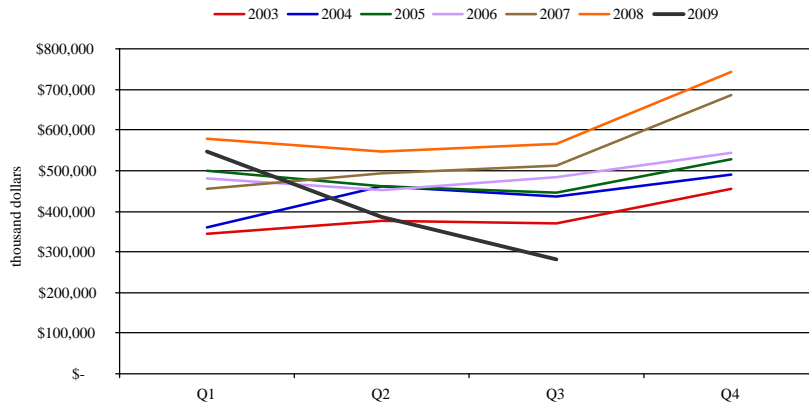
The Value of Dairy Exports skyrocketed in 2007 but plummeted back to earth in 2009

Total Value of US Dairy Exports, quarterly, 2003 to present



Purchase Value of Dairy Imports have decreased sharply in 2009 - partly due to decline in prices and partly reduced quantities

Total Value of US Dairy Imports, quarterly, 2003 to present

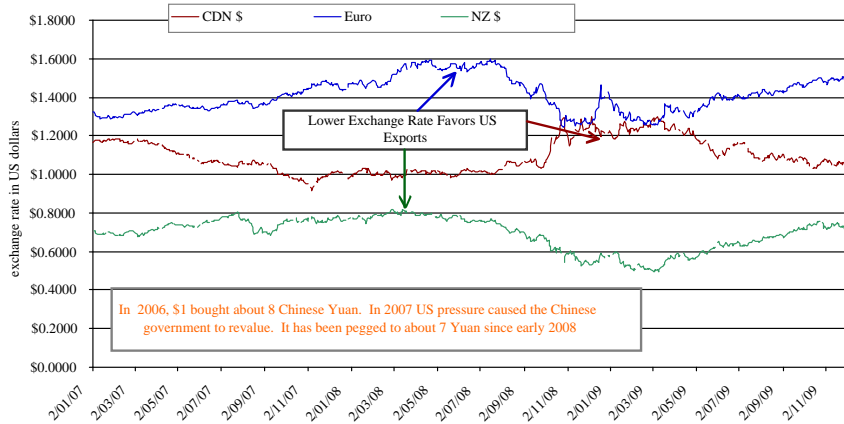


Imports were at record highs when exports were at record highs, but exports were MUCH higher. Now imports are crashing and exports are just average. MPCs are a more prominent part of total imports now because we are relatively short on protein, not fat.



In 2008, a Weak Dollar Favored US Dairy Exports. The US \$ has steadily strengthened in 2009. Canada is an exception. So is China.

How Many US Dollars Are Needed to Buy One Unit of a Foreign Currency .

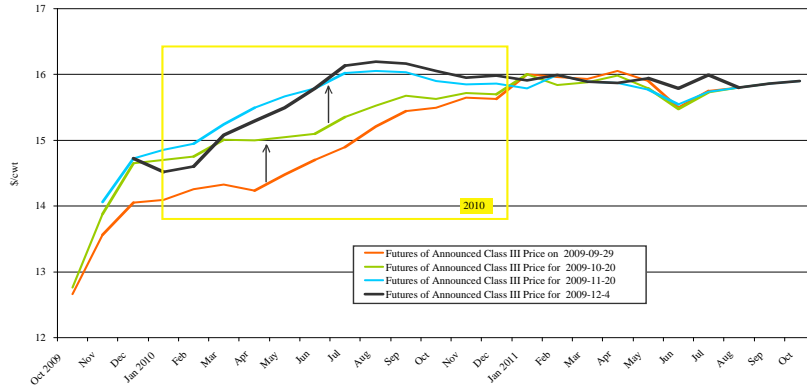


In 2006, \$1 bought about 8 Chinese Yuan. In 2007 US pressure caused the Chinese government to revalue. It has been pegged to about 7 Yuan since early 2008



What is "the market" anticipating for the future?

CME Settlement of Class III Price for All Future Contracts, at different points in time



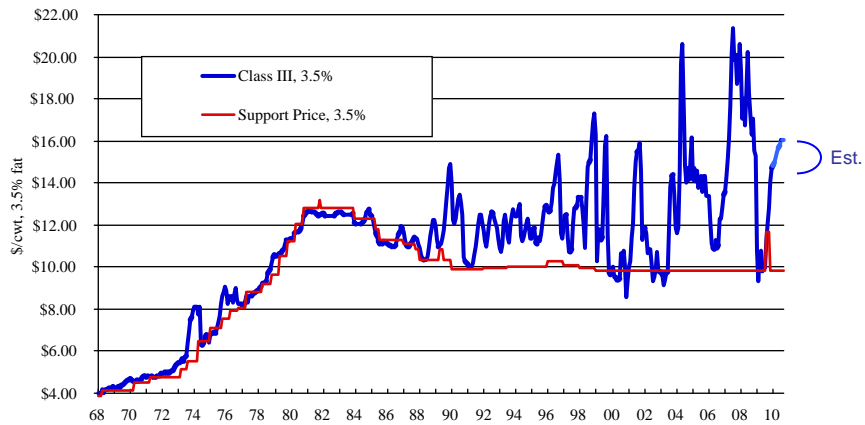
open interest for 3-4 months out is relatively large - open interest of 3,000 + contracts
 open interest for the next 3-4 month is much smaller but still significant - 1,000 + contracts
 after that the open interest tapers dramatically, by 12-15 months out it drops to 1-20 contracts

Interpretation? About one quarter out, this is probably a fairly good or broad "market opinion", for another quarter out, the opinion is perhaps a general indication of expected trend (up, down, flat) but the month-to-month is meaningless. Any farther out it isn't even a SWAG.



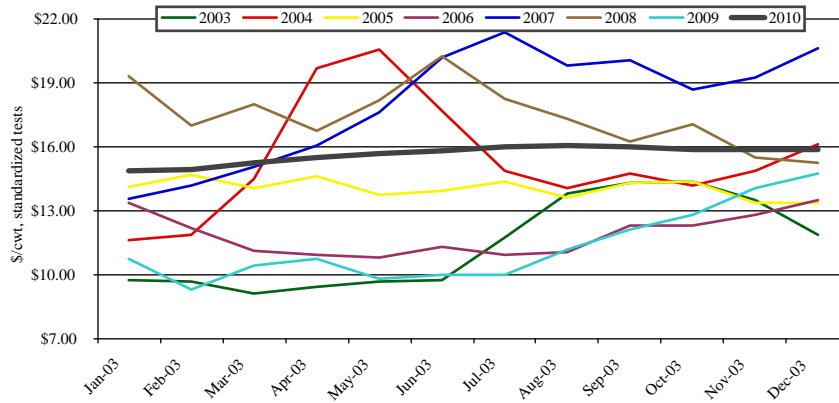
If the CME Class III Price is Close to Right...

Class III vs Support Price at 3.5% fat test



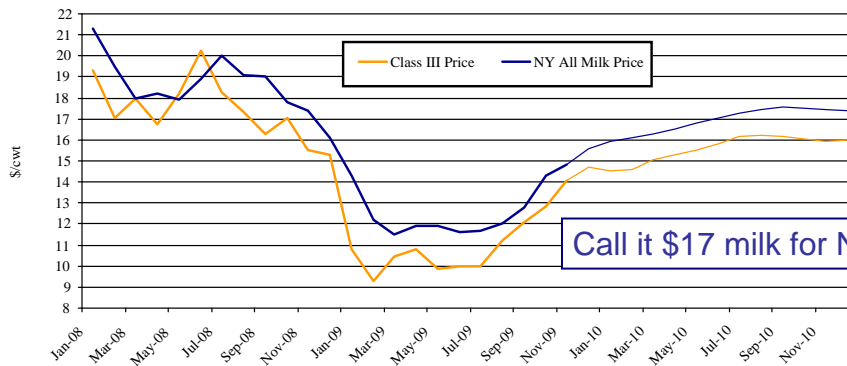
What if we look at it this way? Look reasonable? Likely?

Actual and Estimated Class III Price, 2003 to 2010



Implication for NY Farm Price for All Milk

**Actual and Future Class III Price plus
Actual and Estimated NY All Milk Price, 2008 to 2010 .**



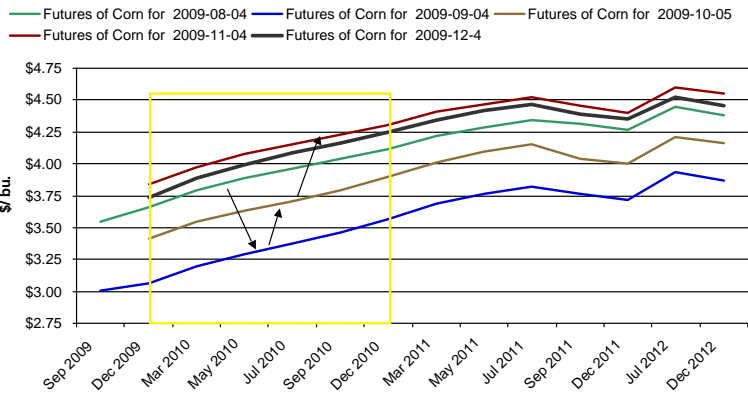
Dec 2009 to Dec 2010 Class III price is CME settlement price as of 4 Dec 2009 and Dec 2009 to Dec 2010 NY All Milk Price is estimated statistically from Class III.



Will Reductions in Corn Price Help in 2010?

Expected Future Price of Corn, 2009-12, CME Settlement Price

Corn plantings were large but weather was cool and progress slow in early summer. By late summer, we began to talk about a bumper crop. Since then the market became bullish on news of late harvest (wet). In the last week, new concerns have risen related to export demand.

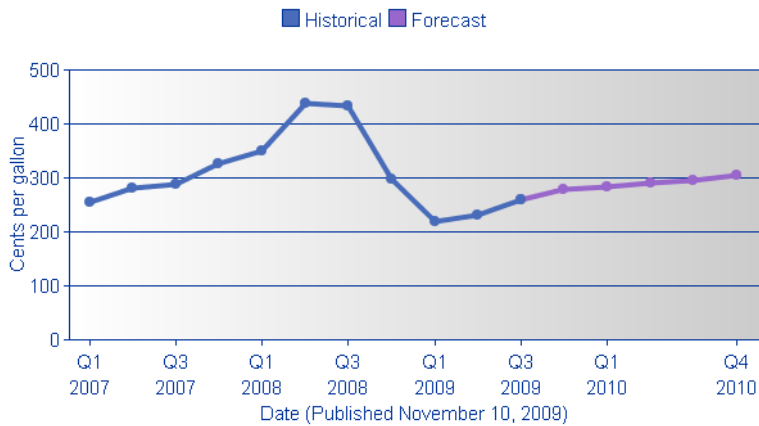


Expected future prices are bullish and increasing. 7 Dec 2009 prices for 2010 range from \$3.75 - \$4.25 per bushel (#2 yellow)



Other Input Prices will likely increase at a modest rate, e.g., US DOE Forecast of Diesel

Quarterly On-highway Diesel Fuel Retail Price



Bottom Lines

Almost everything is going in the right direction

- ↳ Milk production is shrinking
- ↳ Dairy Product sales are ok
 - ✓ Domestic is a bit unclear, tepid
 - ✓ International has shown signs of life, but
 - Will it persist
 - Will we benefit
- ↳ Milk prices are heading up
- ↳ General economic indicators are improving

But, despite improvements, many indicators are still at very low levels -- how much demand boost will we really see?

Input costs are not going in the right direction for dairy farmers. Will rise in milk price more than compensate?



Risk Factors - in what directions are we likely to be wrong?

Production will not contract enough or too slowly?

- ↳ Possible, especially if prices improve enough

Demand is less than hoped/expected?

- ↳ Domestic demand is not expected to be a big help. Thus, we could be pleasantly surprised, but I wouldn't bet on that.
- ↳ World demand will likely be better: skim milk powder sales have been up and recently softened, butter sales are strengthening. Current expectations are strong, thus, the risk is in being disappointed.

Feed (corn) prices will rise more?

- ↳ Corn market should stabilize with the certainty of the harvest, but recently markets have dropped due to lower expectations of export sales - price could go either way.

Milk Prices will increase more than currently indicated?

- ↳ "normally" we should expect milk prices to increase more and faster, but supply and demand risk factors could change that. I suspect there is more potential for prices to rise higher than futures markets suggest.



Budgeting Number...

For planning purposes, I have a Boston uniform price averaging \$17.36 in 2010

For budgeting purposes, this suggests that your farm price would be about \$4.00 higher than in 2009



Returns Risk Management Suggestions

Producers

- ↳ If you see a hedge opportunity on milk AND feed that works for you, you might want to take it
- ↳ For milk price-only hedges, the risk may be in locking in a price that will undershoot the actual price. Protect on downside with a Put Option?
- ↳ Might consider Cash Forward Contract for a portion of your milk.
- ↳ Perhaps not a good time to hedge a high percentage of your sales
- ↳ Consider LGM

