

Situation, Outlook and Issues for California Dairy, 2013

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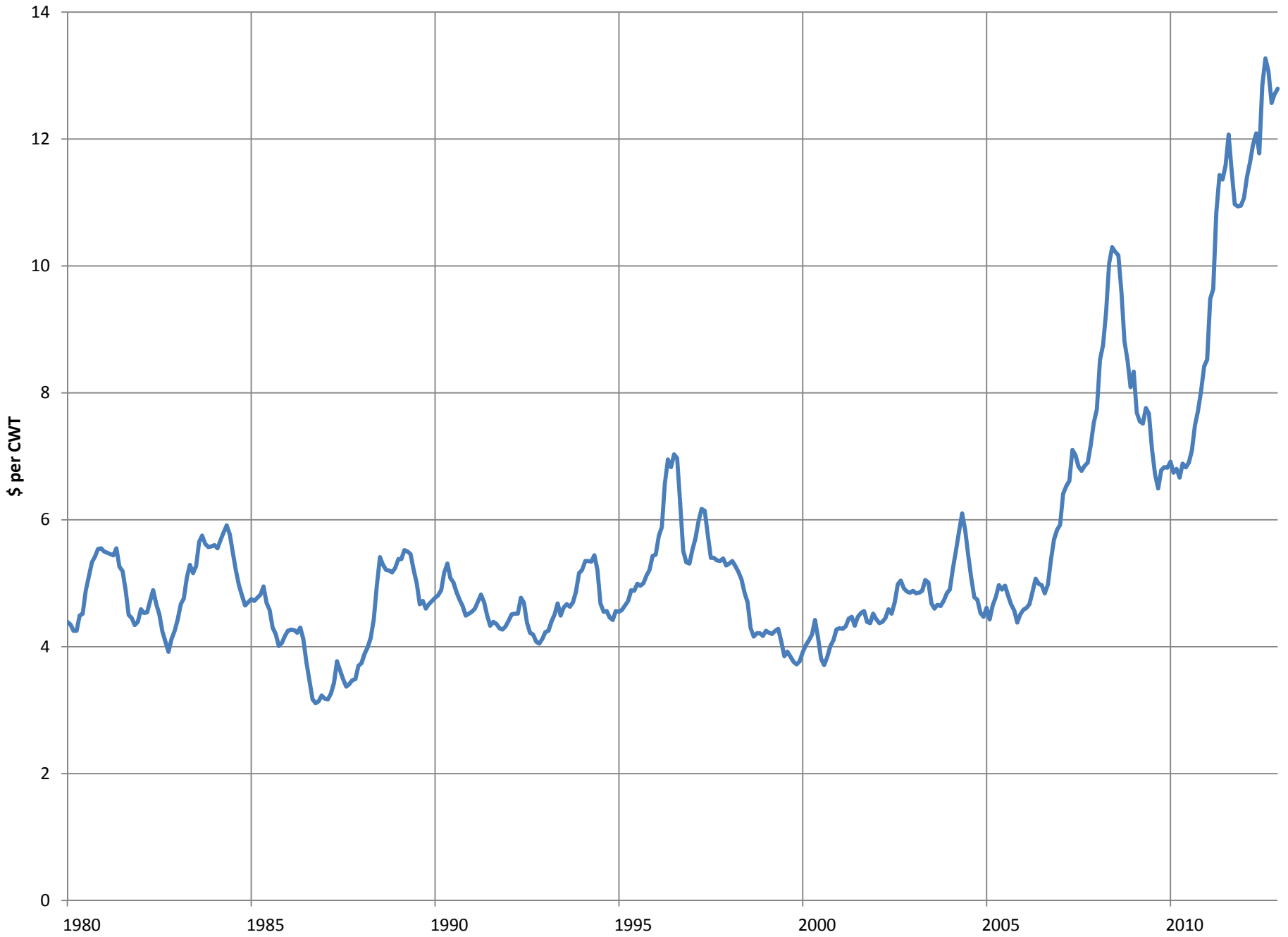
What's Happening in the Dairy Industry?

- High feed costs + Widespread drought →
 - Higher feed costs, particularly corn, soybeans and alfalfa hay →
 - Lack of available dairy quality feed
- High beef prices →
 - Increased culling and dairy cow slaughter
- Reasonably strong domestic sales and exports of dairy products
- Tight supplies of milk →
 - Uptick in milk prices →
 - Reduced urgency to reduce herd size
- Uncertainty due to deepening European debt crisis, lack of a Farm Bill and Congressional gridlock
- Weather?

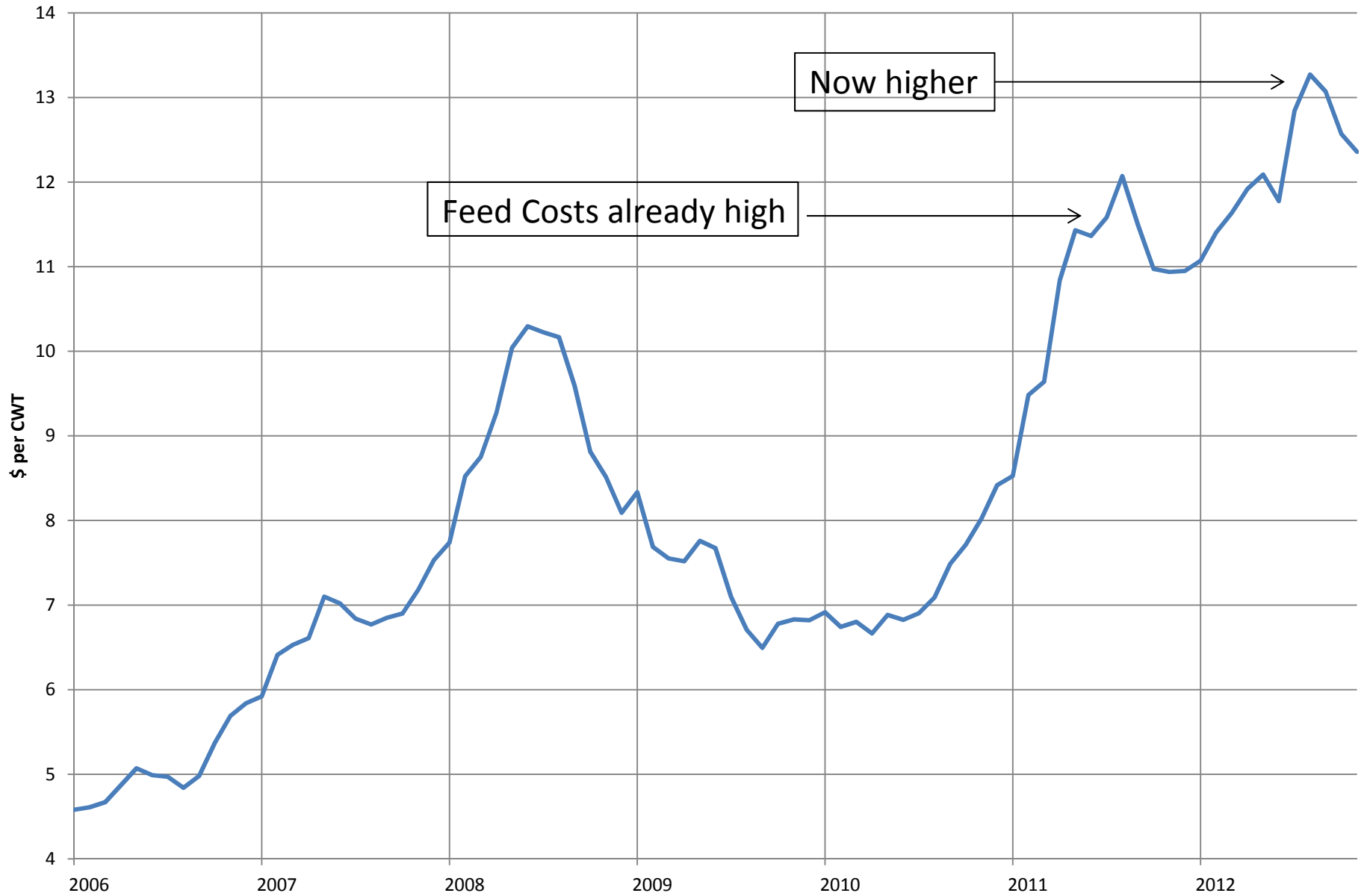
Outline of Talk

- Current Situation in US and California
- Outlook for Dairy in 2013
- Main issues for the California Dairy Industry
 - Feed Costs
 - Milk Prices
 - Margins
 - Cash Flow and Culling Rates
 - Farm Bill

16% Protein Dairy Ration (\$ per cwt), 1980 - 2012

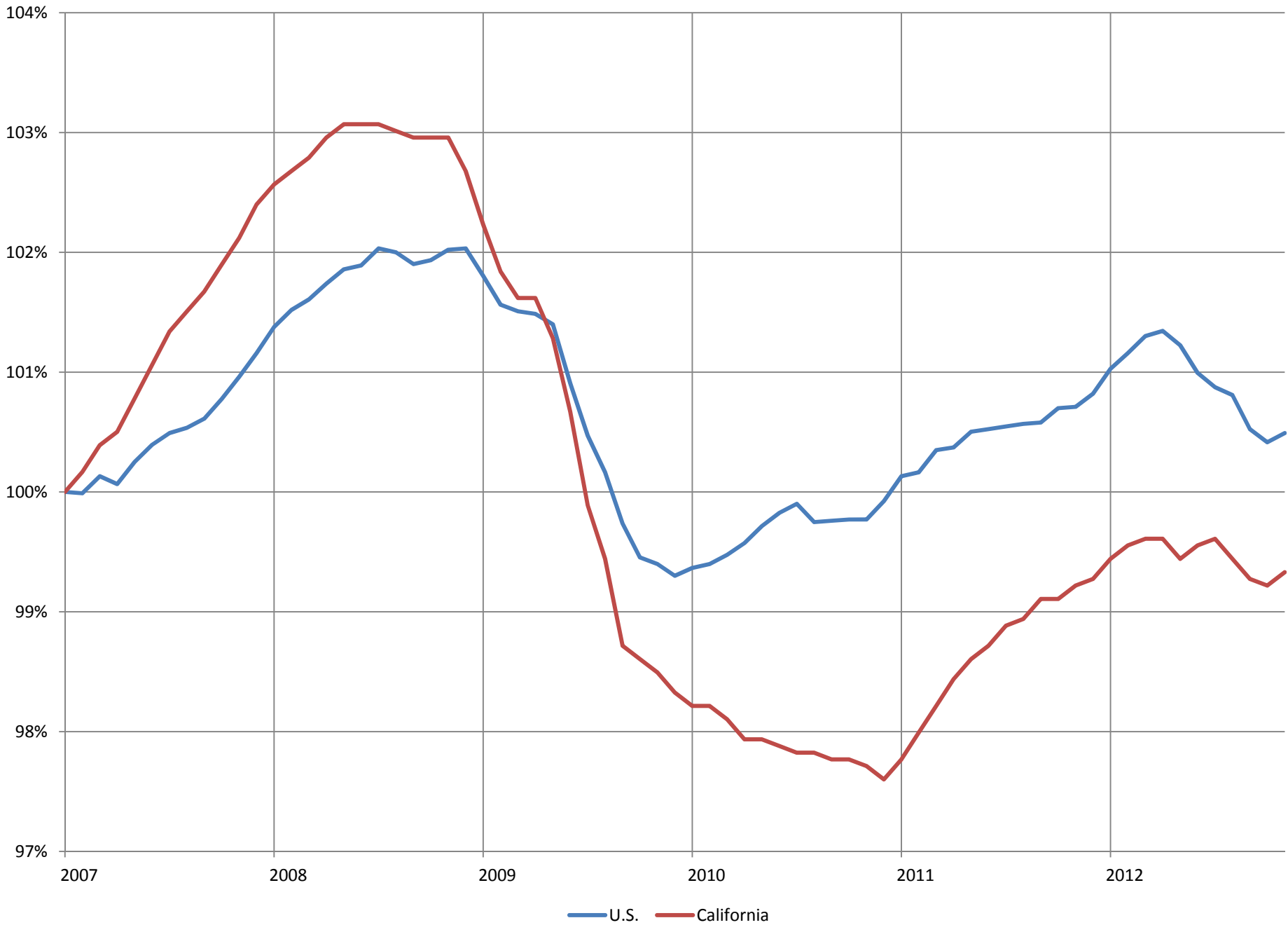


16% Protein Dairy Ration, (\$ per cwt) U.S., 2006-2012



- When feed costs are high, and there is a lack of available (dairy) quality feeds, dairy producers tend to cut back on feed (maintenance) and reduce herd size— aided by higher beef prices....
- This leads to reduced cow numbers...
- And less milk production per cow.

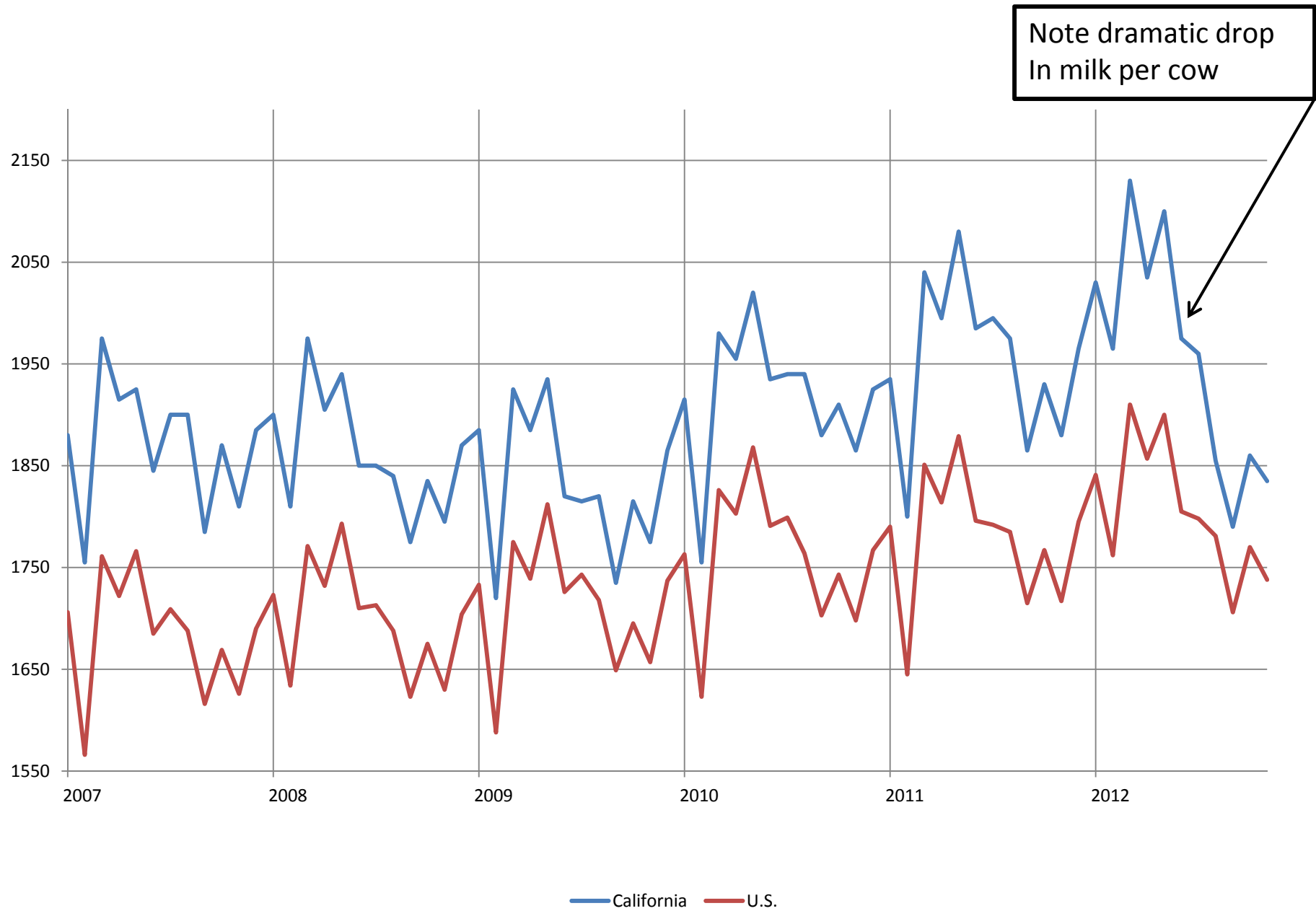
Index of Milk Cows on Farms, U.S. & California, 2007-2012



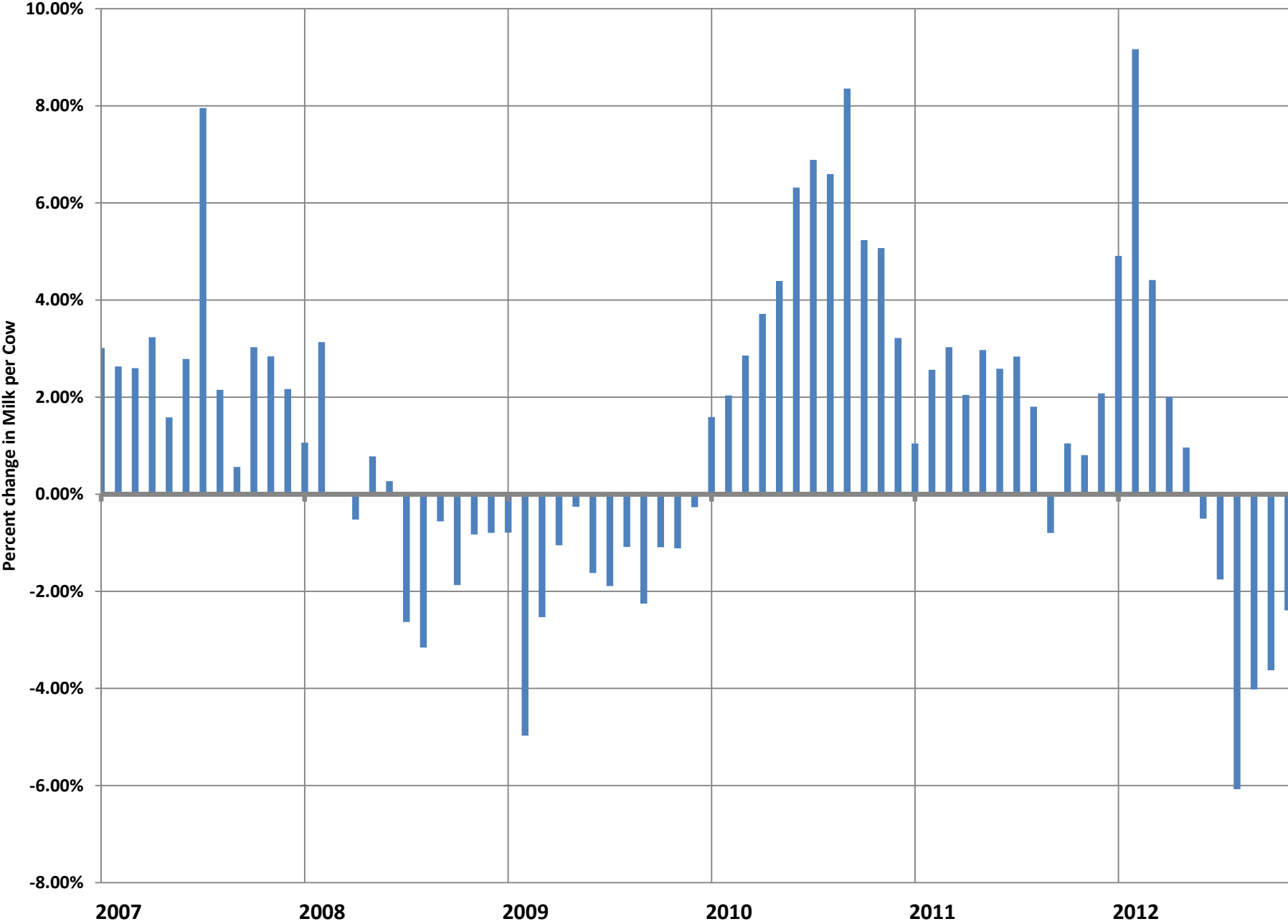
Increased Culling and Milk Production

- It's not always clear why dairy producers reduce herd size when feed prices get high.
- The main reason is that the total feed bill gets so high that they have to sell cows to pay the feed bill.
- The weird thing is that recent observations have shown that reducing cow numbers usually results in increased cow comfort → increased milk production per cow!
- So there may be some lessons to learn from this.

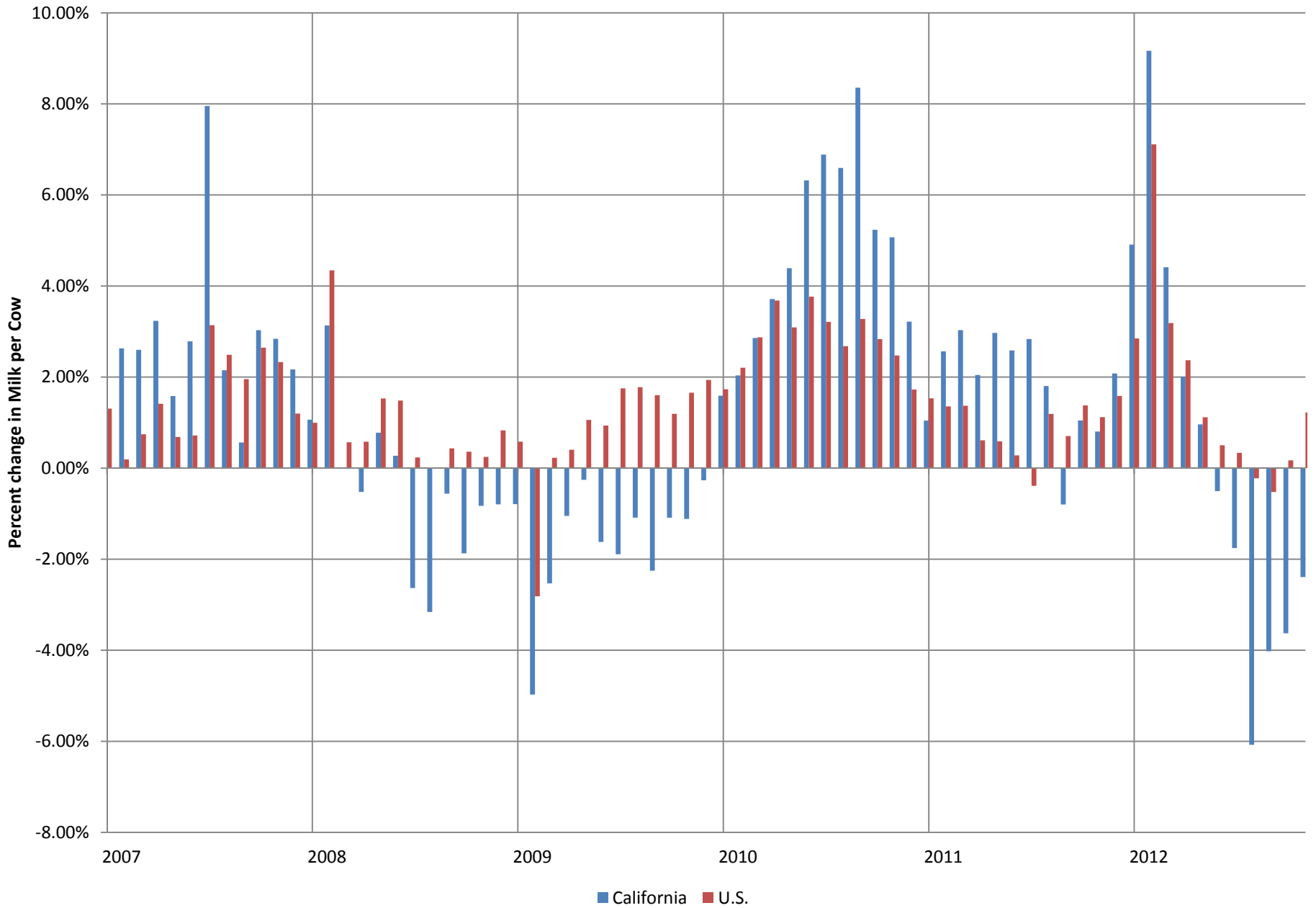
Average Milk Production per Cow, California and U.S., 2007-2012



Year-over-year changes in Milk Production per Cow, California, 2007-2012



Year-over-year changes in Milk Production per Cow, California & U.S., 2007-2012



What about Milk Prices?

- Under normal circumstances, reduced milk supply → higher prices!
- Although milk prices have increased over the last few months, USDA projections, and futures prices, into 2013 are not what we might expect.

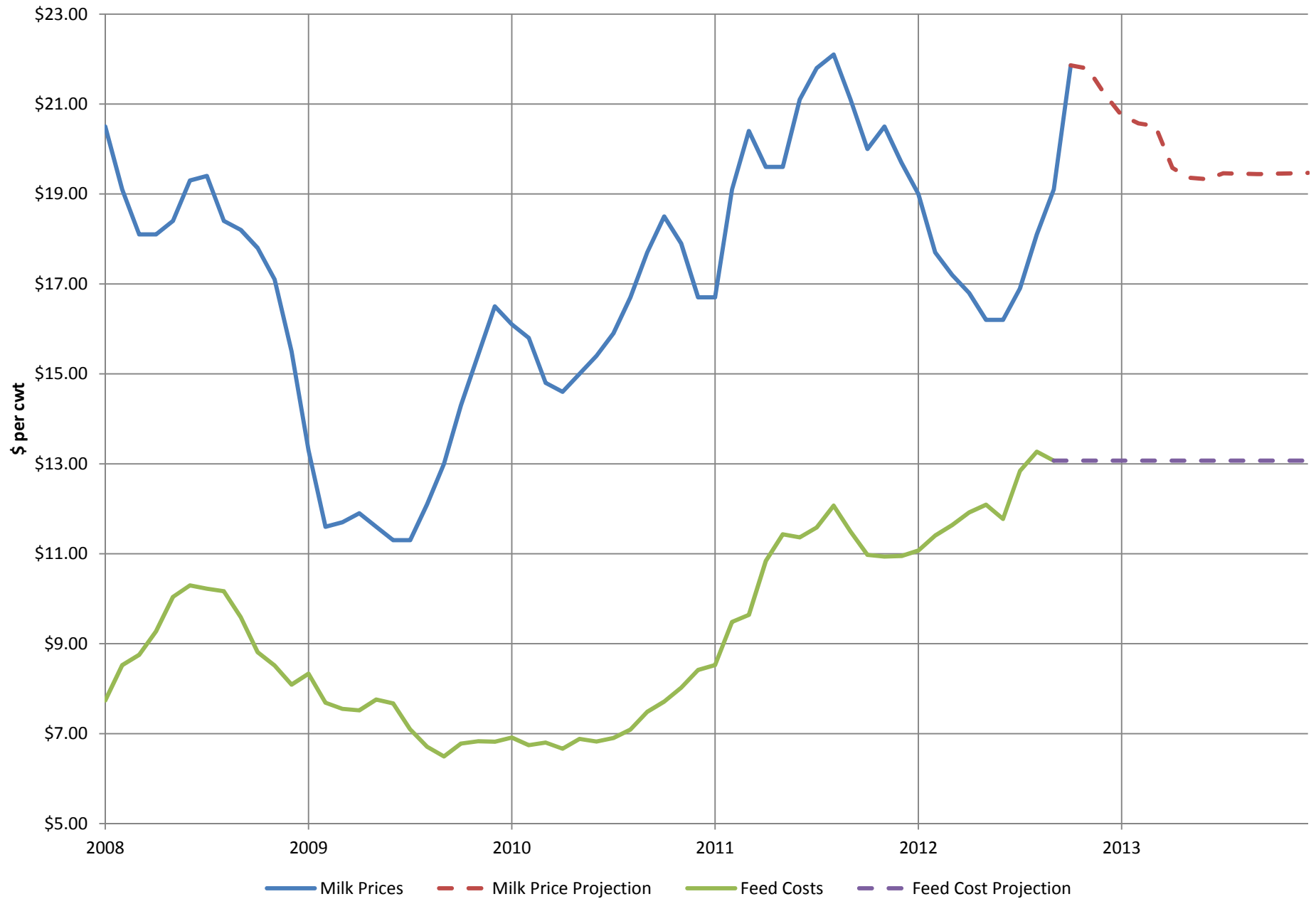
FMMO and California Mailbox Prices, 2006-2012, with Projections to 2013



What about Milk Prices?

- The decrease is not as dramatic as it looks!
- BUT...it will cut into dairy producers margins because feed costs are high and milk prices are trending lower...
- So let's assume that feed costs remain the same as they are at present.....

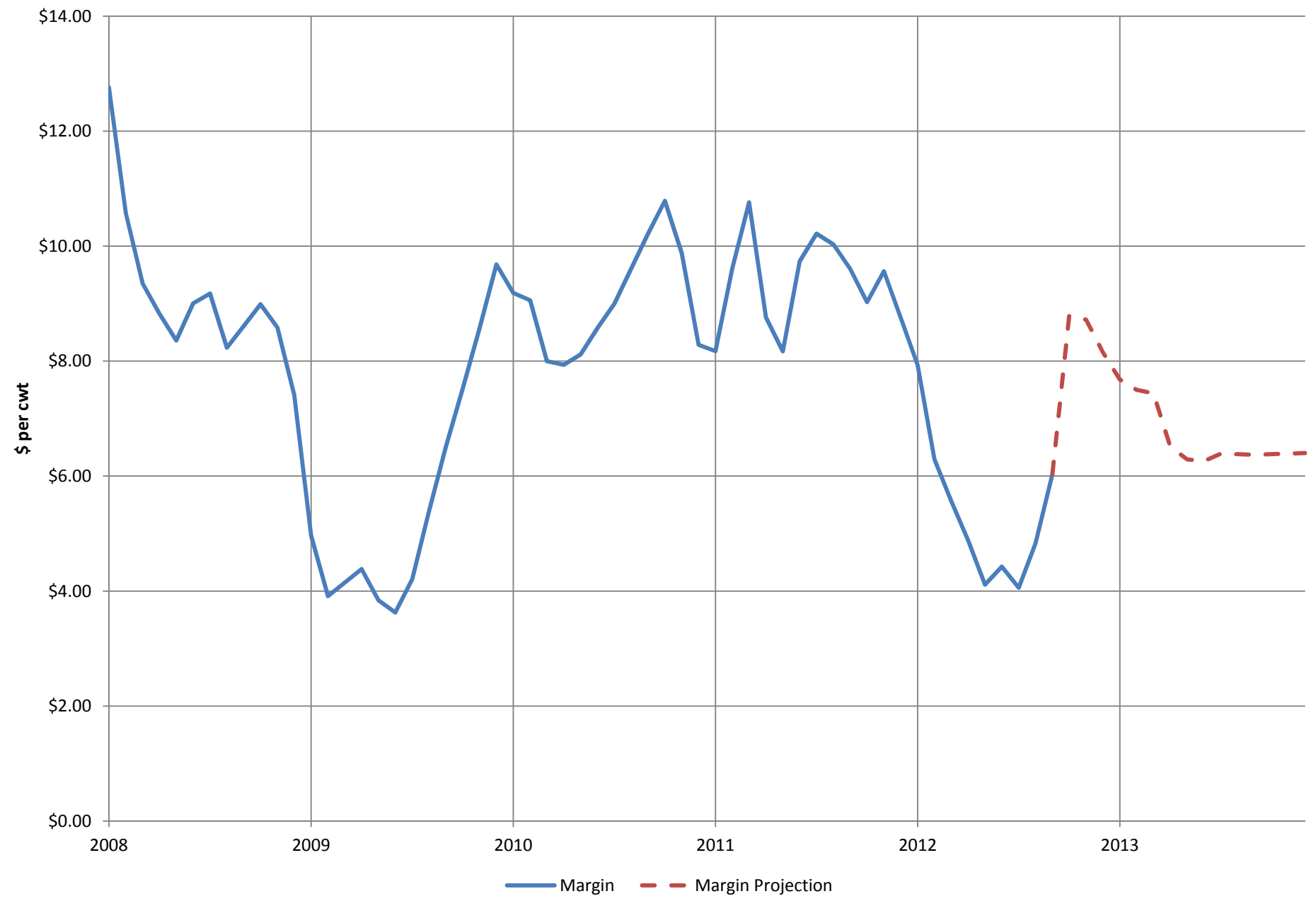
U.S. All Milk Prices and Feed Costs, with Projections (if feed costs remain the same as present), 2008-2013



Margins?

- Remember – margins are now the most important consideration for survival in dairying.
- So margins will decrease over the next year if feed costs remain essentially the same as they are at present!
- But taking a closer look...if feed costs remain about the same as they are now, the margin (and therefore, Income over Feed Costs (IOFC)) should be “reasonable” for 2013.
- About \$1.50 - \$2 lower than 2010 & 2011 margins
- A bit low – but “reasonable” in comparison to the recent past!

Simple Margin between Milk Prices and Feed Costs (if Feed Costs remain the same as present), 2008-2013



Qualifications?

- All of the above assumes that milk prices will decrease slightly in 2013, and that feed costs will remain about the same!
- Are milk price projections too pessimistic??
- Will feed costs come down??

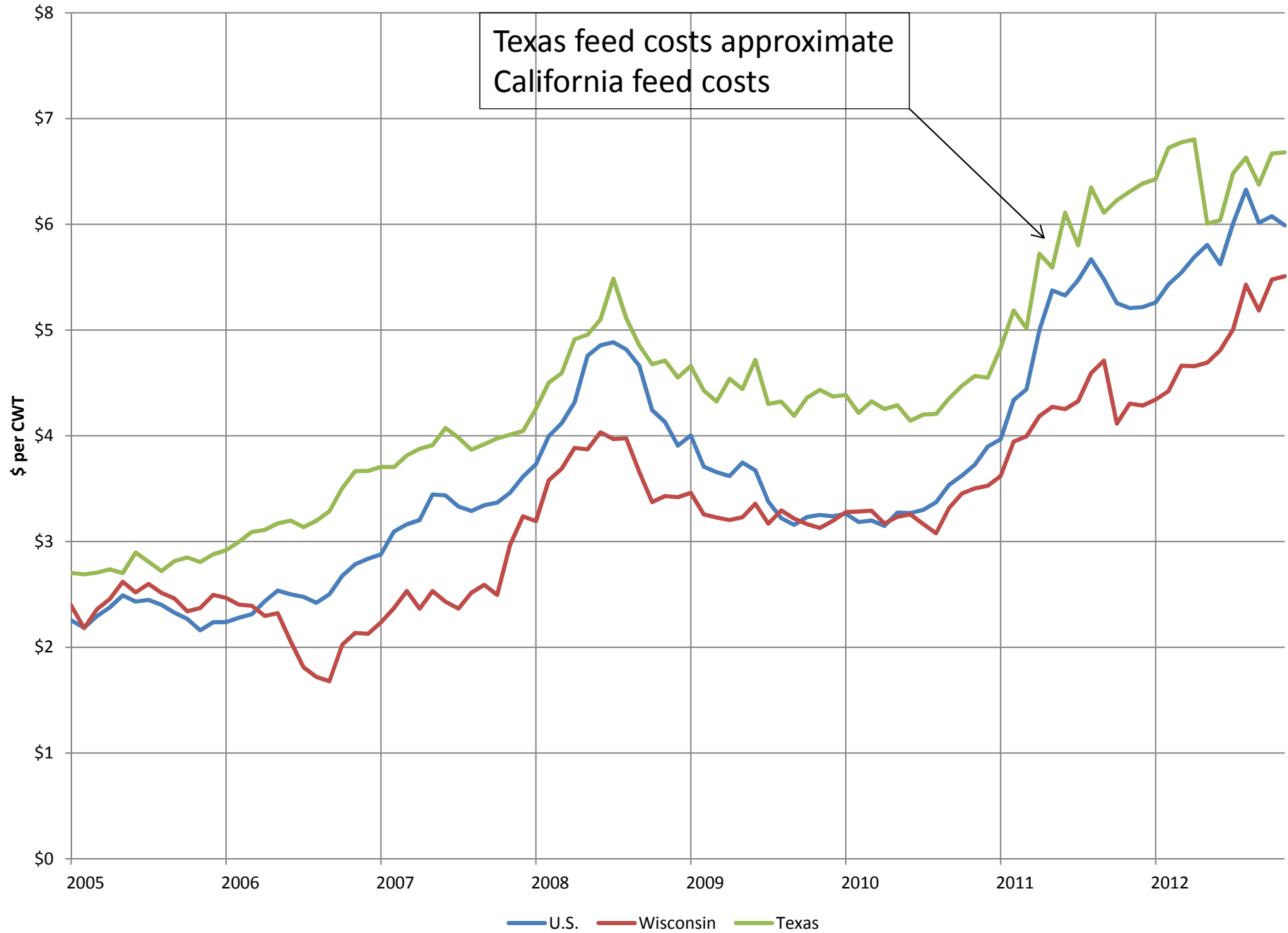
Issues for California Dairy

- 1. Feed Costs**
2. Milk Prices
3. Margins
4. Cash Flow & Culling Rates
5. What can we do about it?
6. Farm Bill

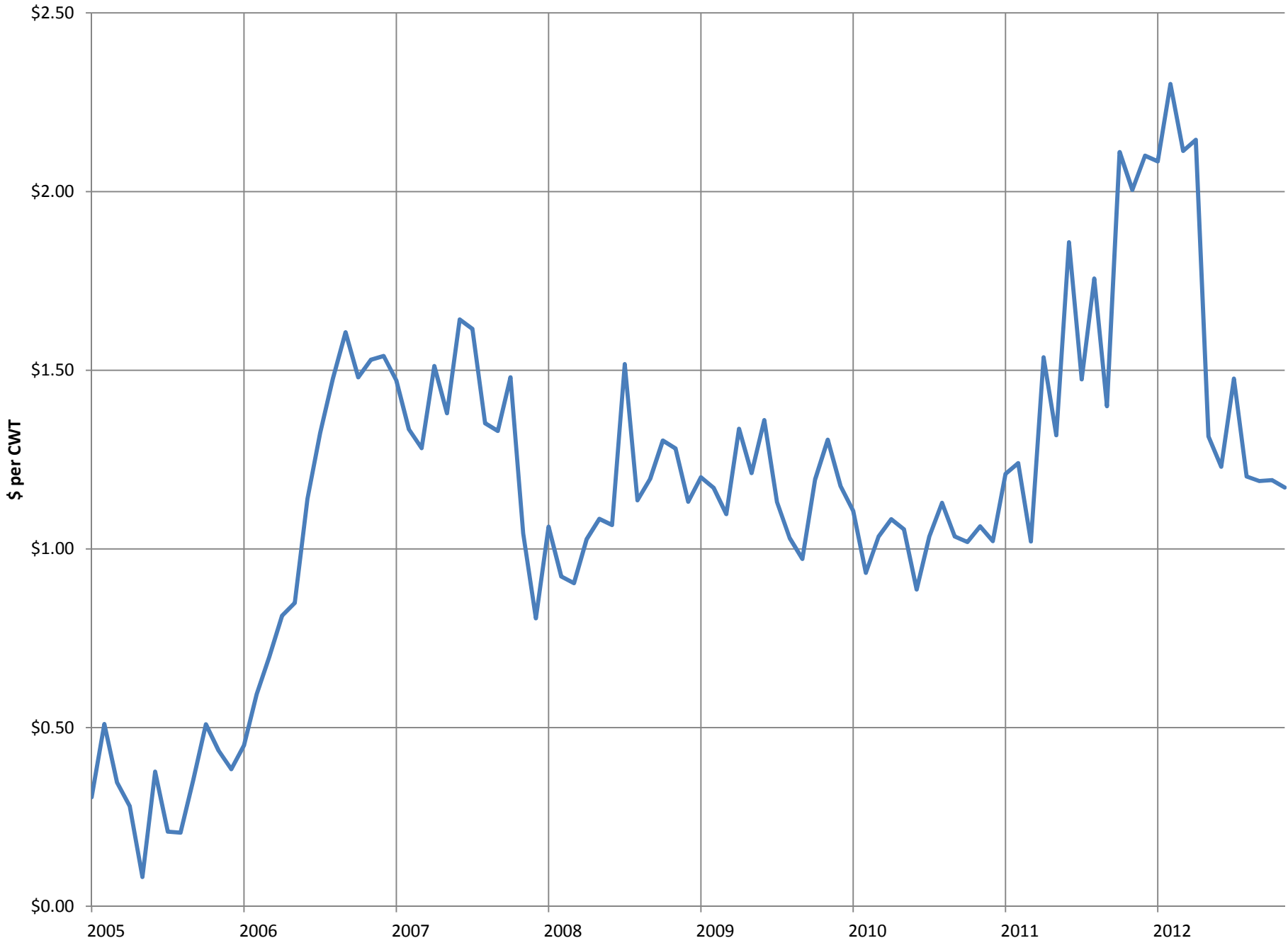
Feed Costs

- California used to be a relatively low cost producer of milk – mainly because we had sufficient feeds here – and in surrounding states – to satisfy demand.
- Reasons for higher feed costs now:
 - Increasing commodity (feed) prices due to:
 - Strong export market for ag products
 - Drought
 - Use of traditional feeds for biofuel
 - Transportation of feeds from further away.

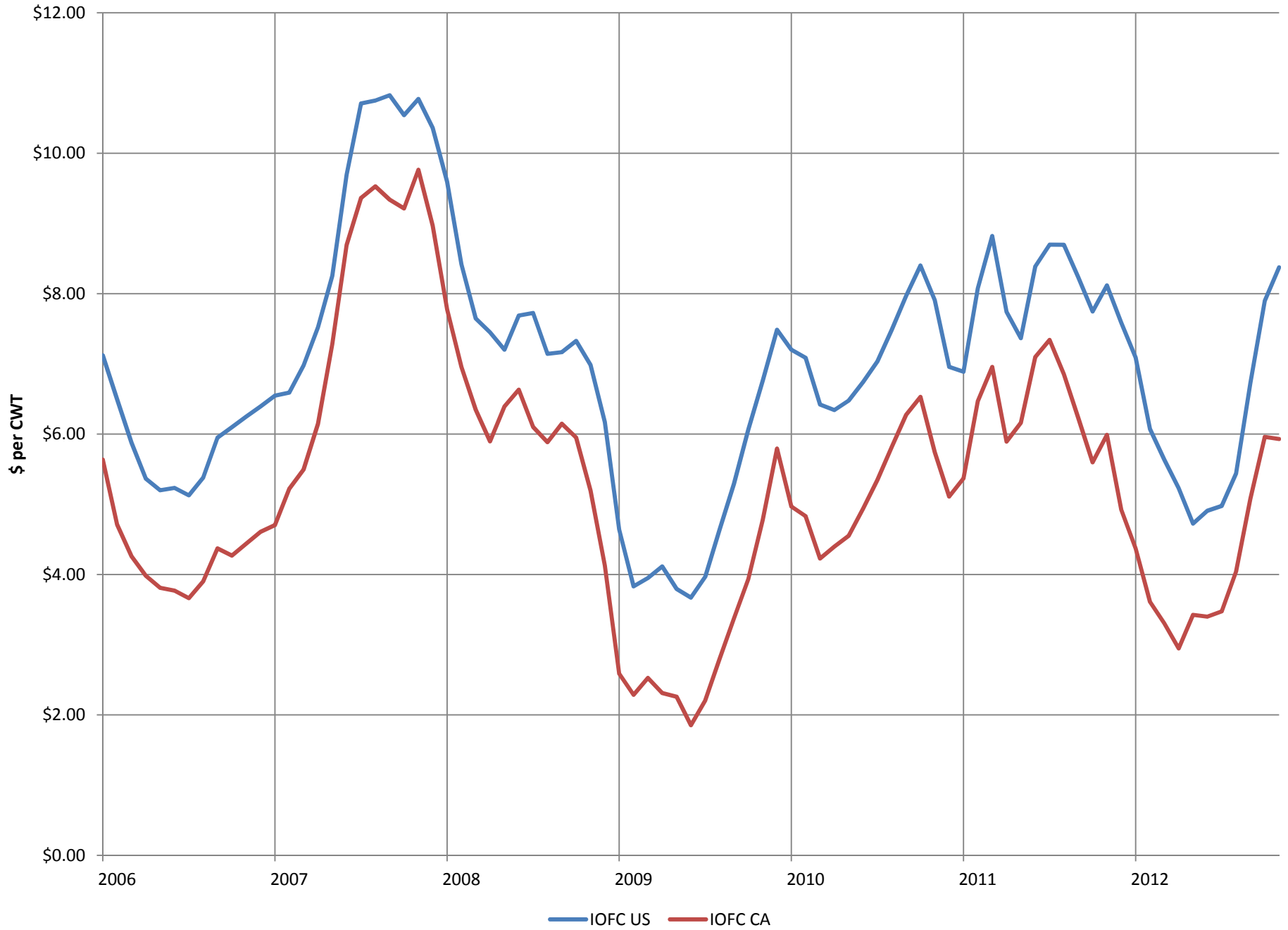
Dairy Feed Costs (DFC65) for U.S., Wisconsin & Texas, 2005-2012



Differential Between Texas and Wisconsin Feed Costs (DFC65), 2005-2012

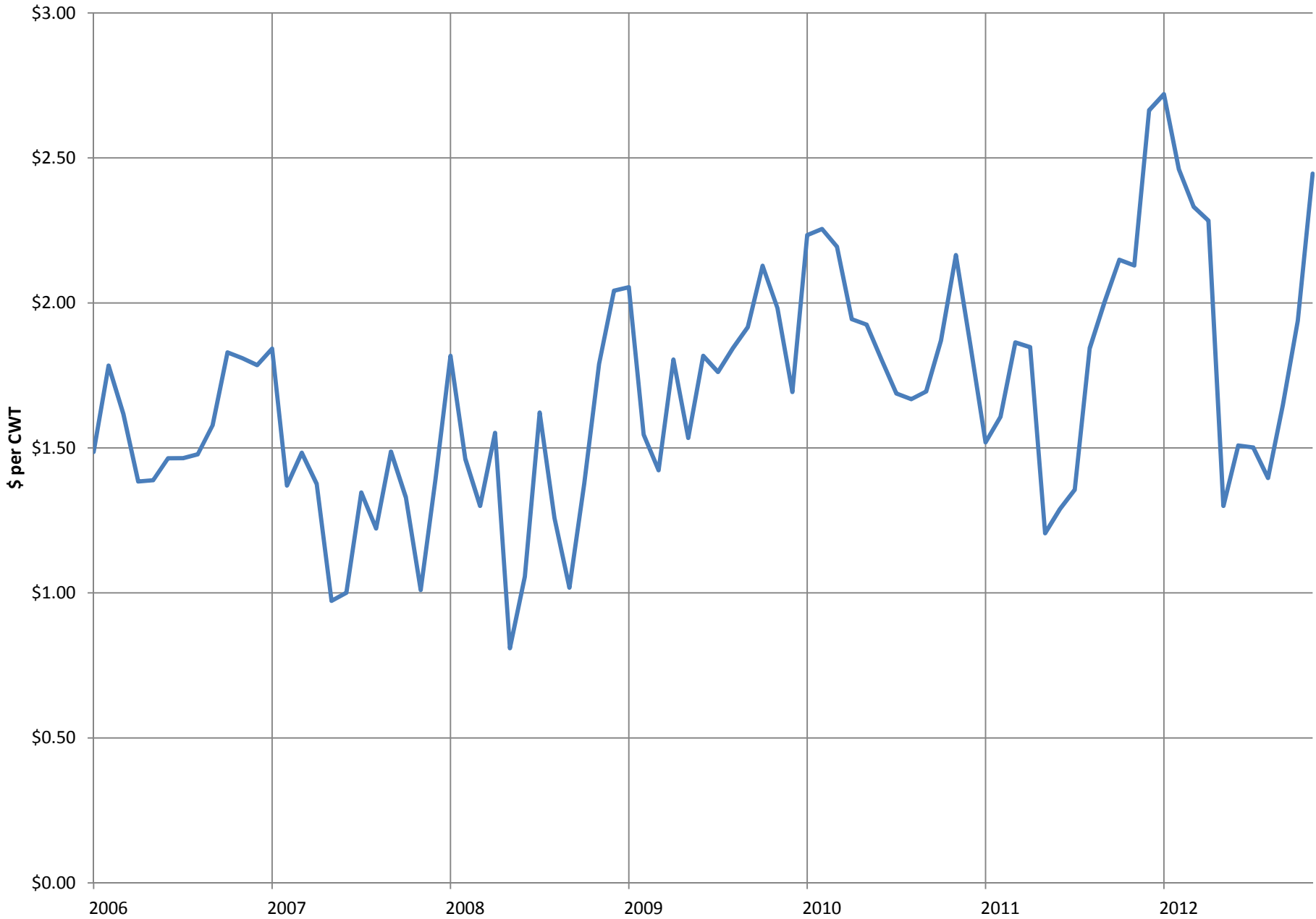


Income over Feed Cost (IOFC) for US and California, 2006-2012



- Income over Feed Cost (IOFC) = All Milk Price*0.65 - DFC65
- There is no consistent DFC65 for California.
- I used Texas feed costs (DFC65) to estimate the California IOFC.
- The differential between the IOFC for the U.S. and for California has implications for the Gross Margin Insurance proposed in the new Farm Bill.

Differential Between US and California Income over Feed Cost (IOFC), (\$ per Cwt), 2006-2012



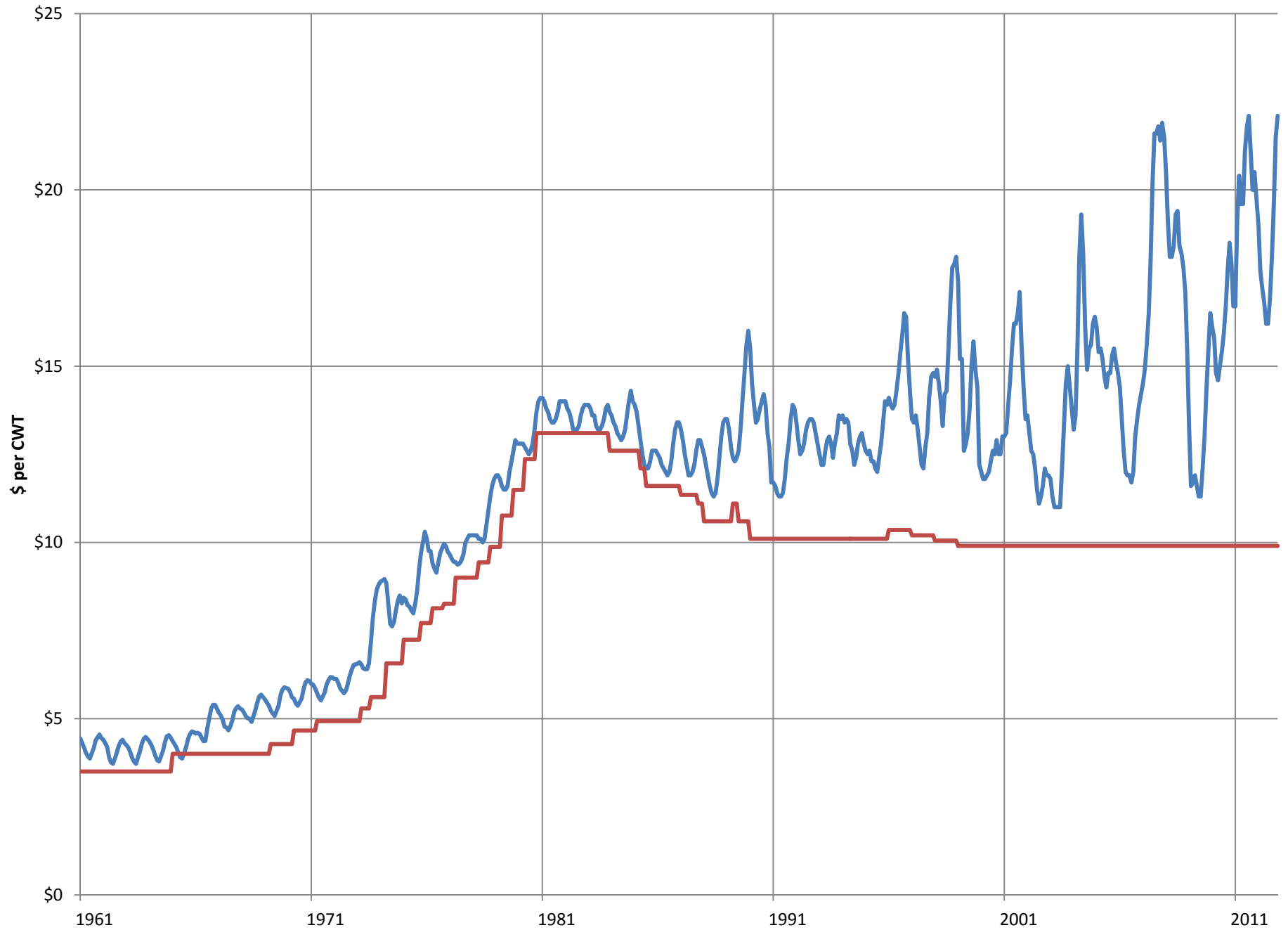
Feed Costs Vary extensively between Farms

- Many producers grow up to 30 – 40% of their feed requirements. Some even more.
- Those who make extensive use of pasture for feed are not affected to the same degree as those who purchase ALL their feed.

Milk Prices

- **Volatility**
- Milk Price Issues in California
- Milk Prices and Commodity Prices
- Milk Prices and World Trade
- Consumer Confidence
- Milk Prices for 2013

All Milk Prices and Support Price, 1961-2012



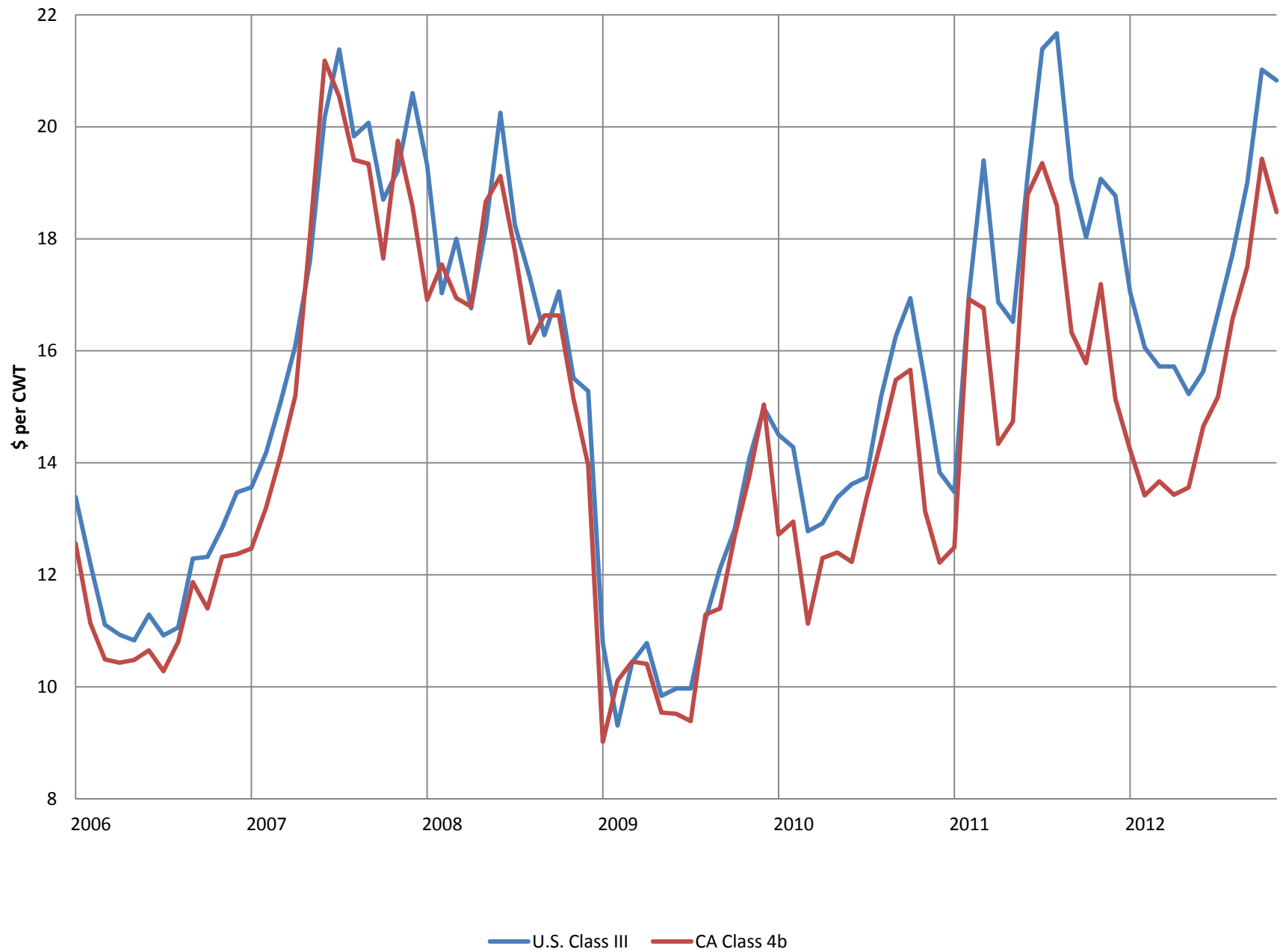
Milk Prices

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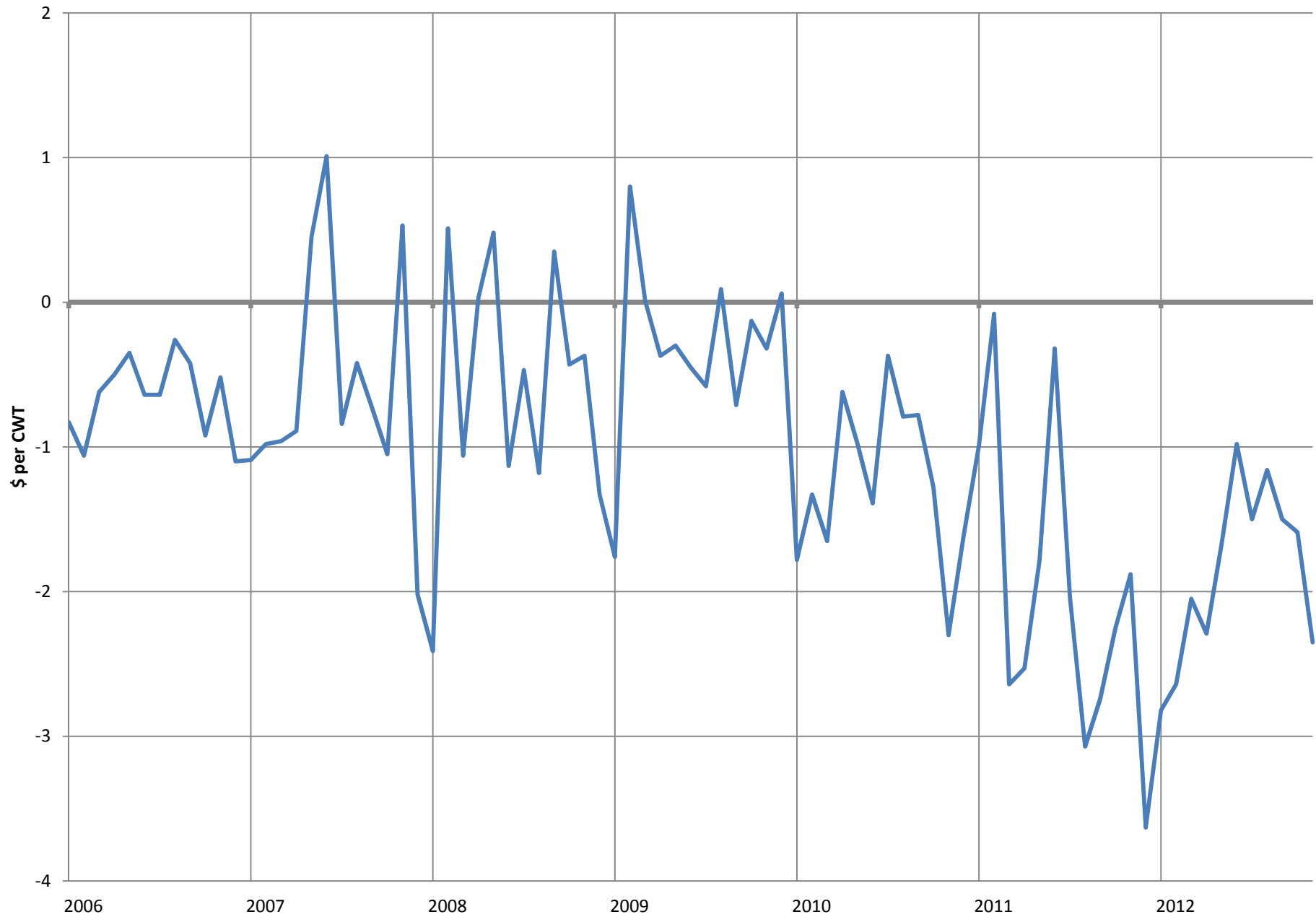
FMMO and California Mailbox Prices, 2006-2012, with Projections to 2013



U.S. Class III Milk Price vs. CA Class 4b Milk Price, 2006-2012



Difference between CA Class 4b Milk price and FMMO Class III Milk Price, 2006-2012

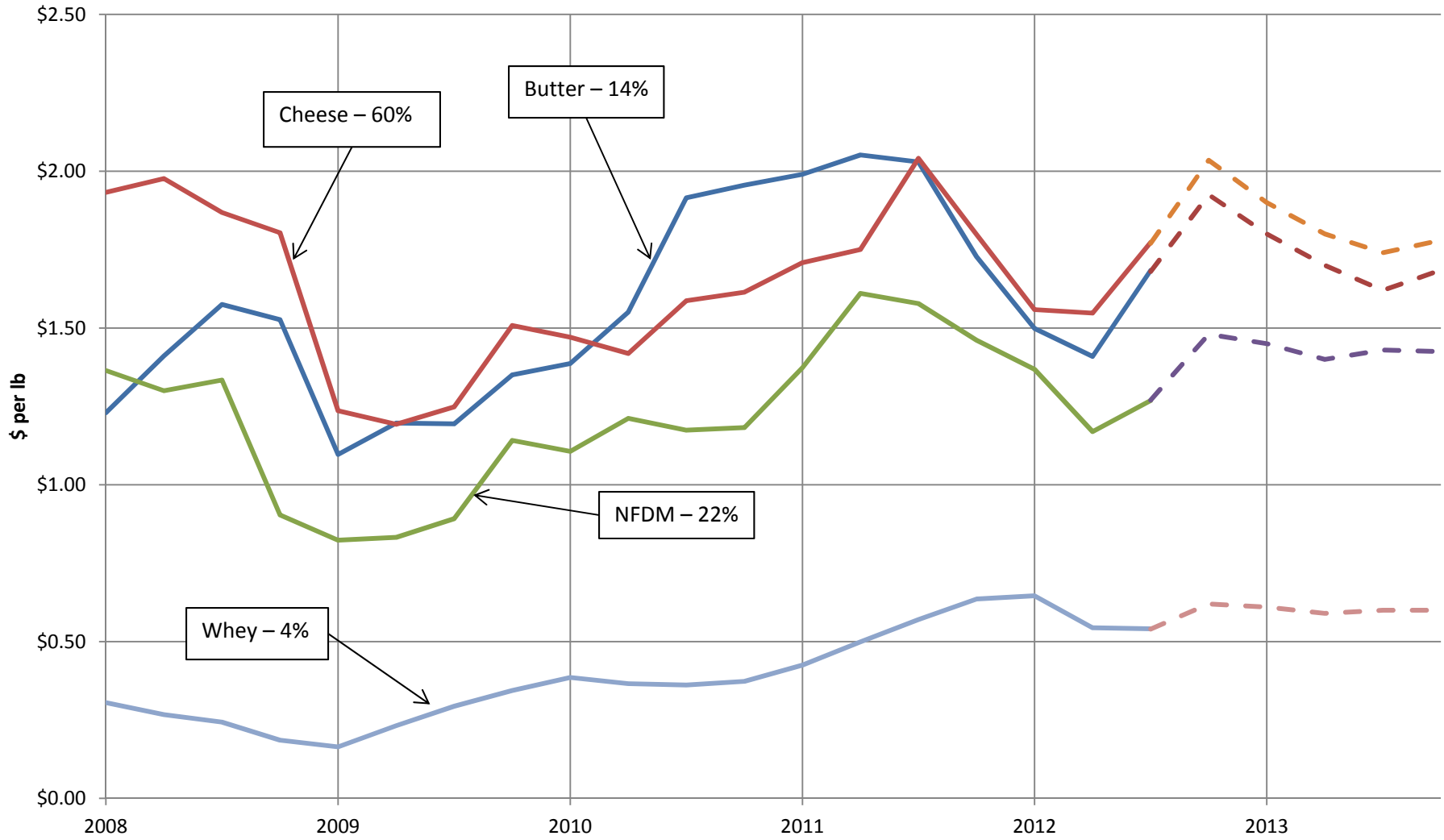


Milk Prices

- Volatility
- Milk Price Issues in California
- **Commodity Prices, World Trade and Consumer Confidence**
- Milk Prices for 2013

- Final milk prices are determined by commodity prices for:
 - Cheese
 - Butter
 - Nonfat Dry Milk (NFDM)
 - Whey (by-product of cheese)

Butter, NFDM, Cheese & Whey Prices, with Relative Marginal Weights and Projections, 2008-2013

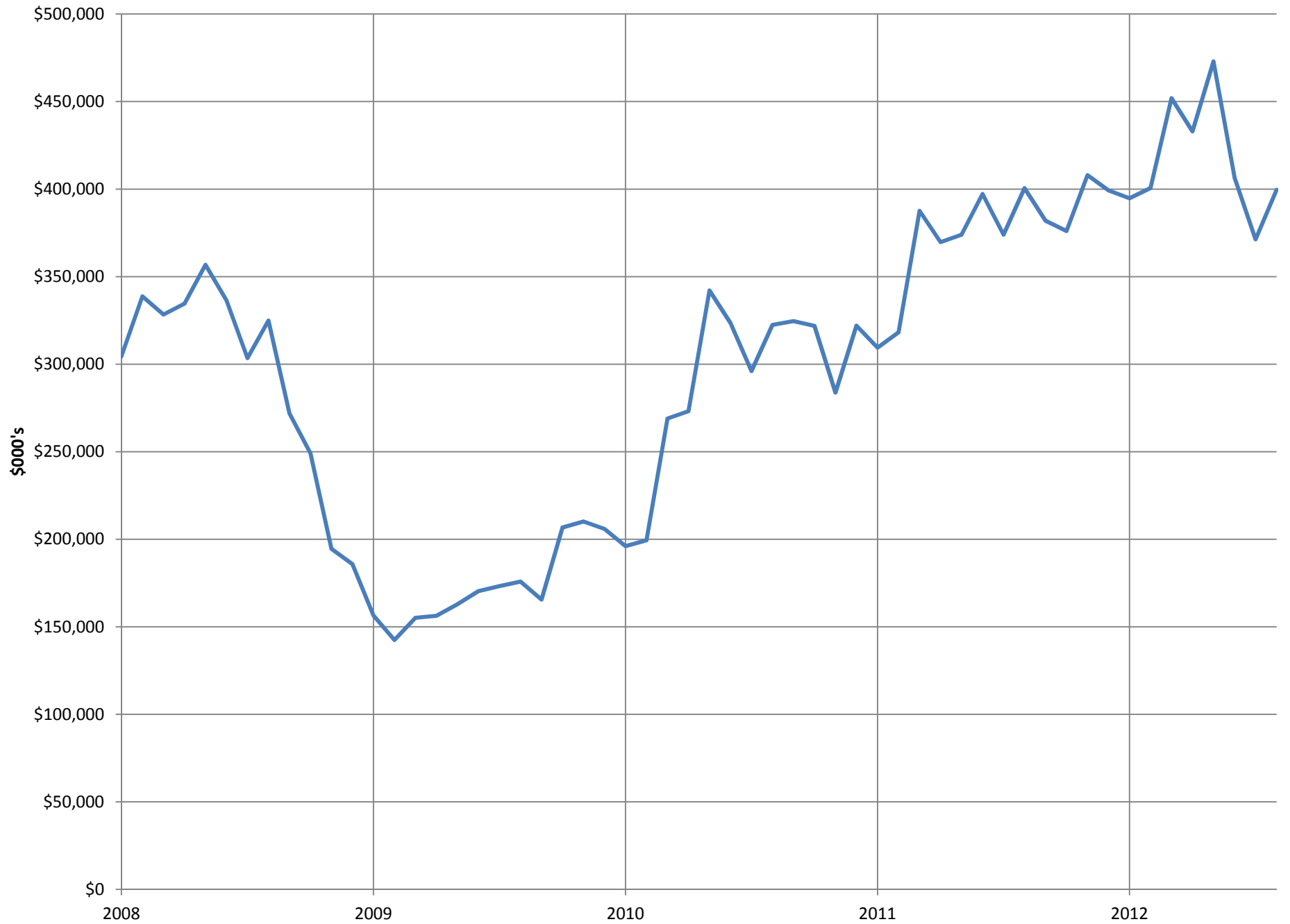


— Butter
 - - - Proj Butter
 — NFDM
 - - - Proj NFDM
 — Cheese
 - - - Proj Cheese
 — Whey
 - - - Proj Whey

World Trade

- Domestic milk prices are also impacted by world prices...
- Which also affect U.S. Dairy Exports...
- The U.S. currently exports 12 – 14% of all milk (in the form of butter, NFDM, cheese and other products)
- Prior to 2000, dairy exports amounted to less than 3% milk equivalent.

U.S. Dairy Exports (Value in \$000's), Jan 2008 - Aug 2012



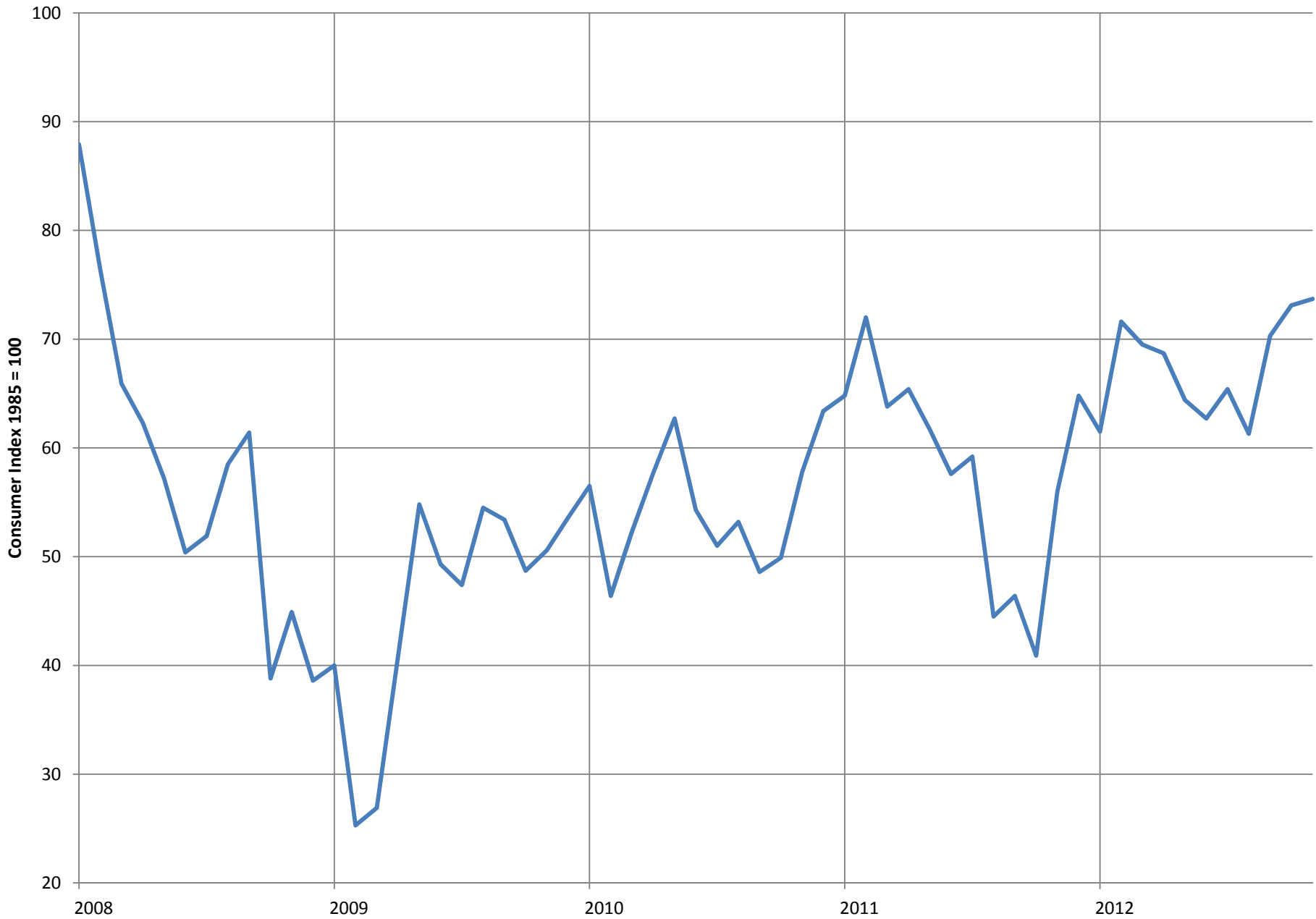
BUT...it is also important to understand that world prices (and the value of the \$US) is a limiting factor in how high U.S. milk prices can increase without affecting our domestic markets.

- High commodity prices discourage consumers
- More importantly...If we lose our export markets due to high domestic prices, then milk prices will drop dramatically because of the **inelastic demand** for milk....
- This is what happened in 2008-2009

Consumer Confidence

- Finally...the demand for milk is also affected not only by the price of milk, but by how confident consumers feel about the economy...
- Increases in the consumer confidence index often indicates consumers willingness to increase purchases....in this case dairy products.

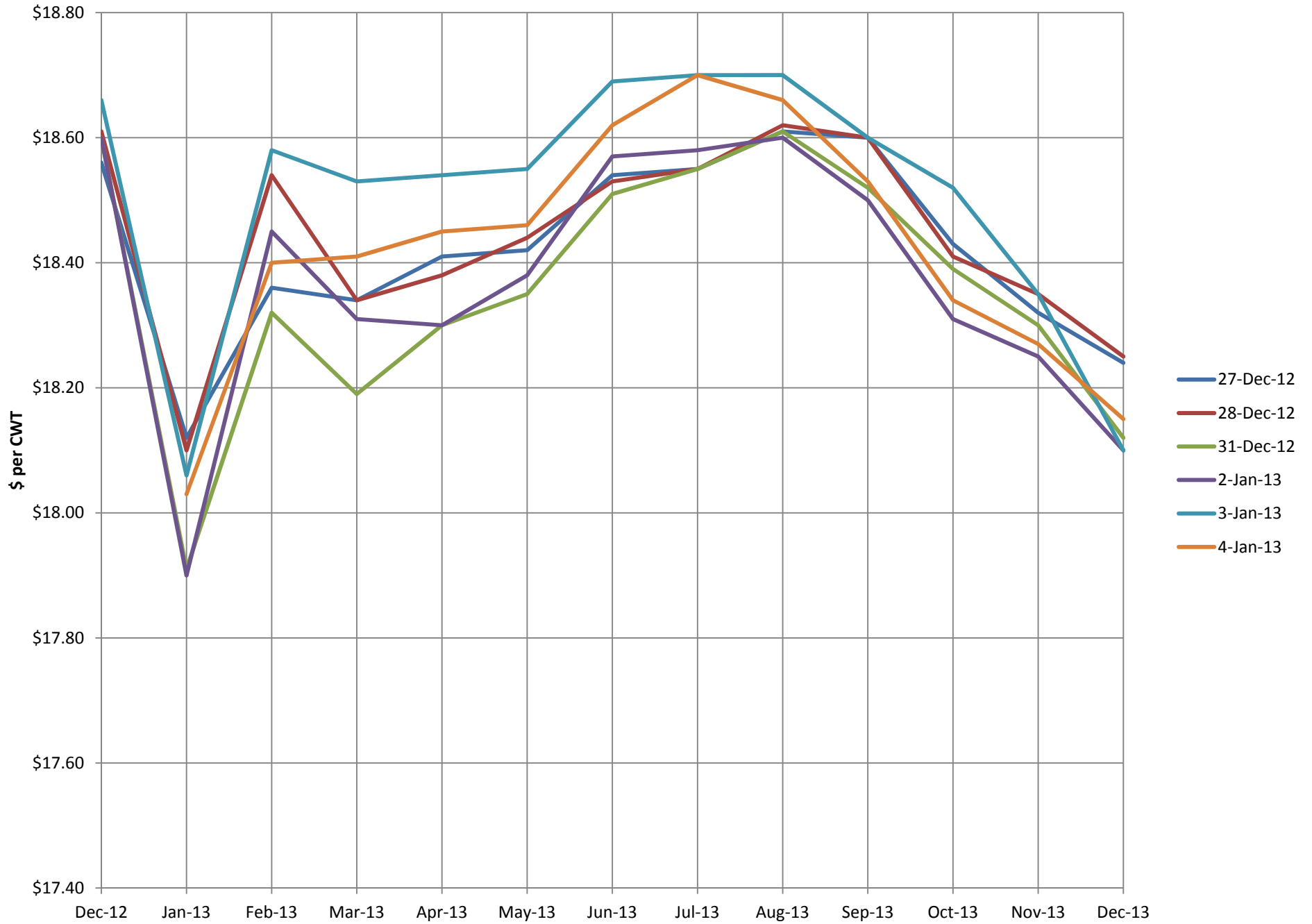
Consumer Boards Consumer Confidence Index, (1985=100), January 2008 - November 2012



Milk Prices

- Volatility
- Milk Price Issues in California
- Commodity Prices, World Trade and Consumer Confidence
- **Milk Prices for 2013**

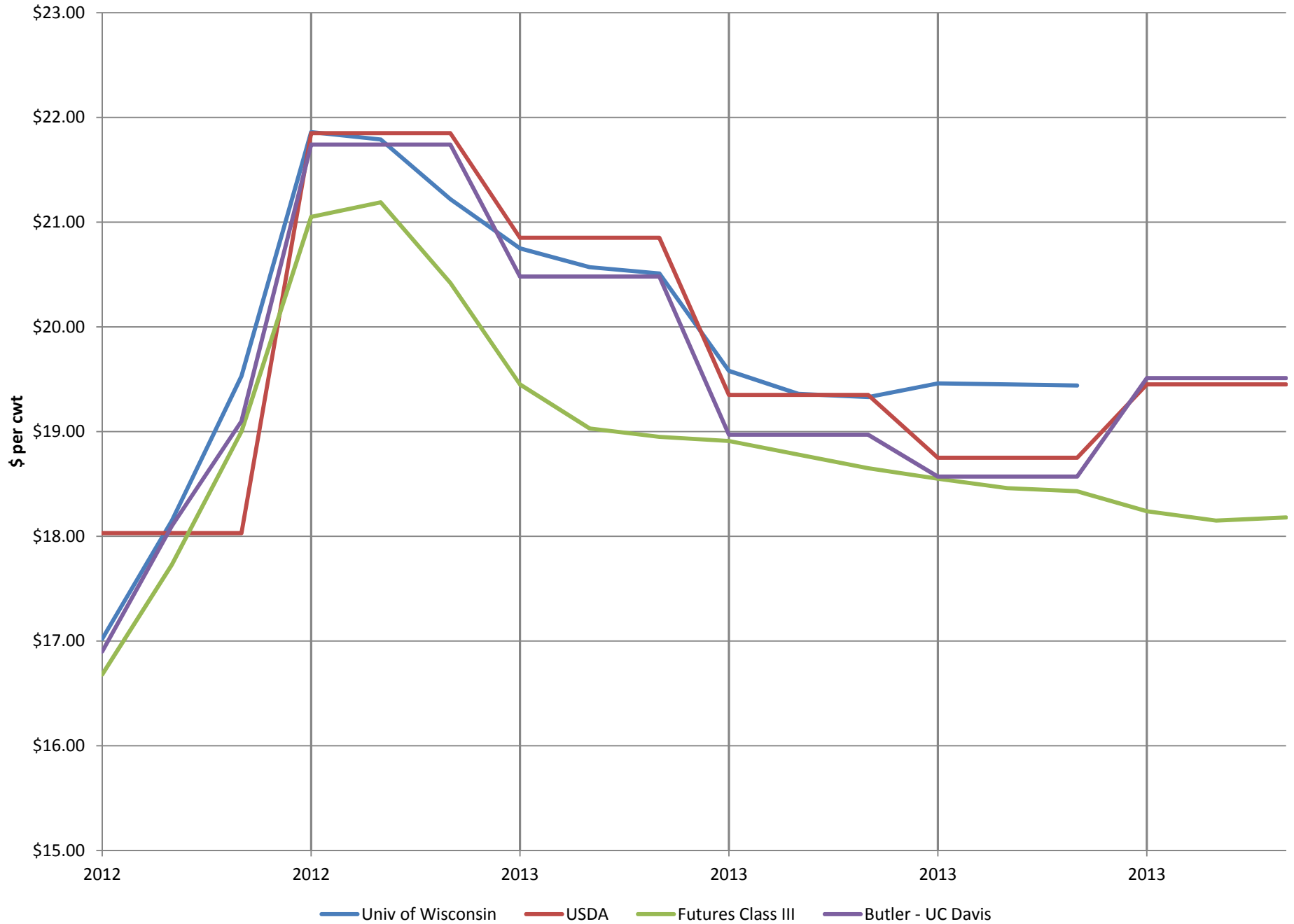
Class III Milk Futures Prices



Summary of Price Predictions

- The following graphic shows milk price predictions by 4 different methods:
 - University of Wisconsin
 - USDA (quarterly)
 - Futures Class III prices
 - Butler (me) University of California-Davis (quarterly)

Milk Price Predictions by various entities, July 2012 - Dec 2013



Conclusions

- High feed costs + drought is limiting feed availability and causing dairy producers to reduce herd size – aided by higher beef prices.
- But recent uptick in milk prices is slowing the culling momentum.
- Decreases in the milk supply, together with stabilizing commodity prices, strong exports and increasing consumer confidence portend steadier milk prices.

Conclusions

- On the other hand, price predictions and slowing world market conditions show moderate decreases for milk prices in the short and medium term.
- Continuing market uncertainty will depend on:
 - Export markets and the value of the \$US
 - Consumer confidence
 - Action on the Farm Bill and dairy policy
 - Weather

A couple of qualifications

- Not all dairies are experiencing the rather dire conditions we have described here.
- Good managers have managed to find a way through this mess by engaging in good risk management practices, and making use of the risk management tools available.
- Organic dairies have experienced high feed costs, but most rely on pasture, and also do not experience the monthly volatility of milk prices.

Dairy Policy

- With elections over, and the Farm Bill temporarily extended, there are several urgent issues for Congress:
 - Spending sequester
 - Federal debt limits
 - Farm Bill

Farm Bill

- The 2008 Farm Bill expired on October 1st, 2012. It has since been extended for 9 months until September 30th, 2013.
- Dairy programs are NOT the source of debate about costs.
- Ongoing debate about the affordability of subsidies and safety nets, including food stamps.
- And whether crop insurance should be administered through Federal agencies or private industry.

Farm Bill

- The new, proposed Farm Bill is expected to replace Dairy Price Supports and the MILC program (and other aspects of the Dairy Provisions) with a subsidized insurance program that provides a safety net for margins (the difference between milk price and feed costs, or the IOFC).
- Other aspects of the debate include:
 - Inclusion of a supply management program
 - Changes in Federal Milk Marketing Orders
 - Elimination of the DEIP program

Farm Bill

- The general feeling is that there will probably be no Farm Bill until Congress confronts the debt limits and spending sequester.
- It is expected that we will go without a Farm Bill until at least April, 2013 and probably not until September.
- Spending limits will impact it's outcome.
- In the meantime, uncertainty about dairy markets will continue to affect milk production and milk prices.