Managing Dairy Price Risk in the New Institutional and Economic Environment

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NCCIA 2012 Annual Conference, Rochester, MN 10/12/2011

Shopping List

1) Who is this guy anyway?
2) On the existence of 3-yr milk price cycle
3) I-29 and the dairy OTCs
4) Dairy exports and CME spot cheese market
5) Dairy exports and limited window of opportunity
6) US federal laws (Peterson, Dodd-Frank)

1. How do you pronounce ‘Marin’?

- Education
  - B.A. Macroeconomics, University of Zagreb
  - Ph.D. Agricultural and Applied Economics, University of Wisconsin-Madison

Past Research

Agricultural Futures and Options (Risk Analysis)

Dairy Supply Models

Research Program

(i) **Products & processes:** evaluation of the economic value of new product development, and processing investments

(ii) **Consumer insights:** elicitation of consumer preference and willingness to pay for new dairy food products

(iii) **Price analysis**: analyzing markets existing and new dairy food products

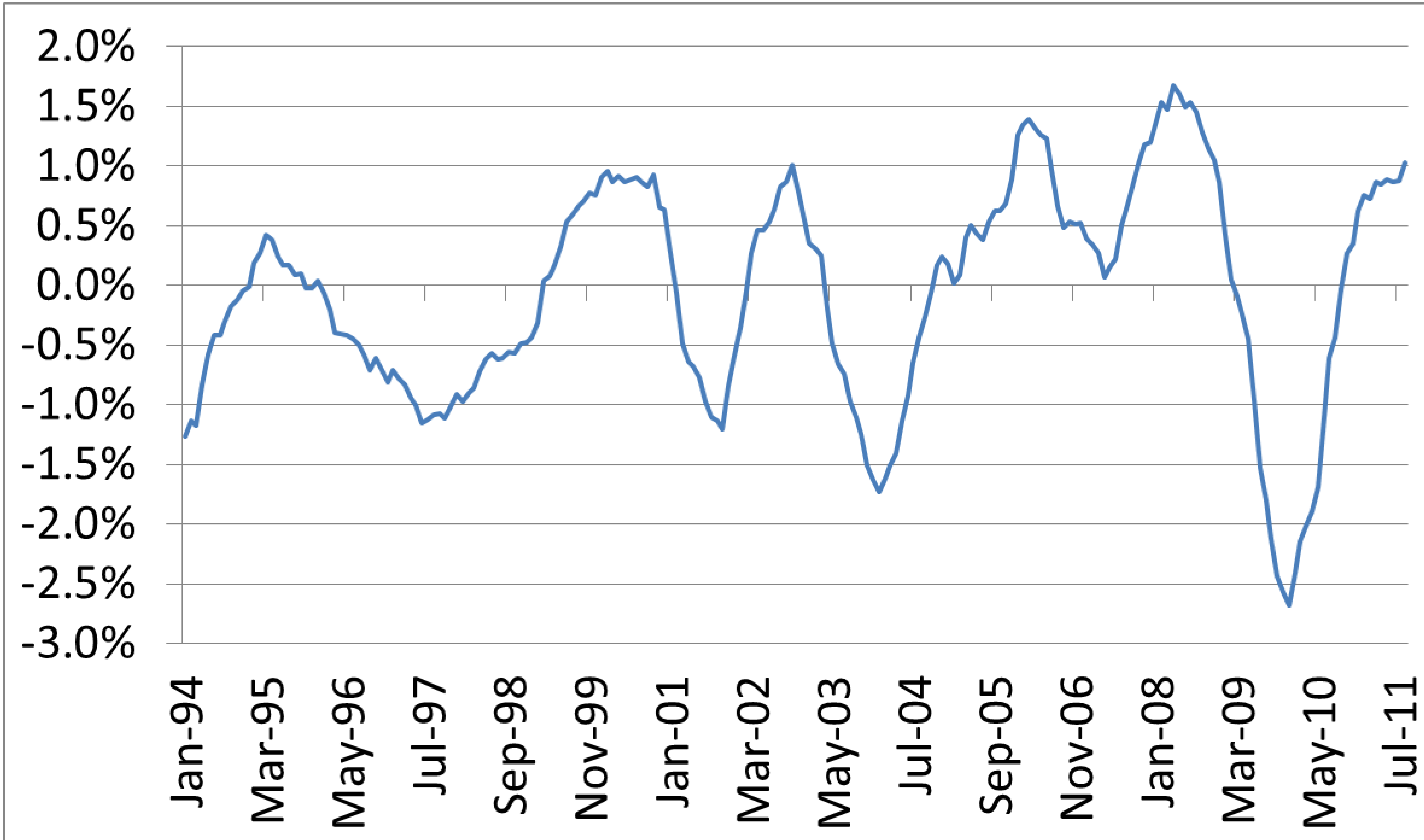
1. On the existence of 3-yr cycle in milk prices

- “Will the three-year price cycle sack milk prices?” (Mary Ledman, latest Hoard’s)
- “The 3-year cycle (2000, 2003, 2006 and especially 2009) has drained U.S. dairy producers’ equity. Most people agree another 2009, continuing the 3-year cycle in 2012, would be devastating. “ (MPC Newsletter)
- “It takes about 36 months—three years—for dairy farmers to cull their herds as milk prices fall and then build their herds up again as milk prices rise.” (Mark North, interview in AgriNews)

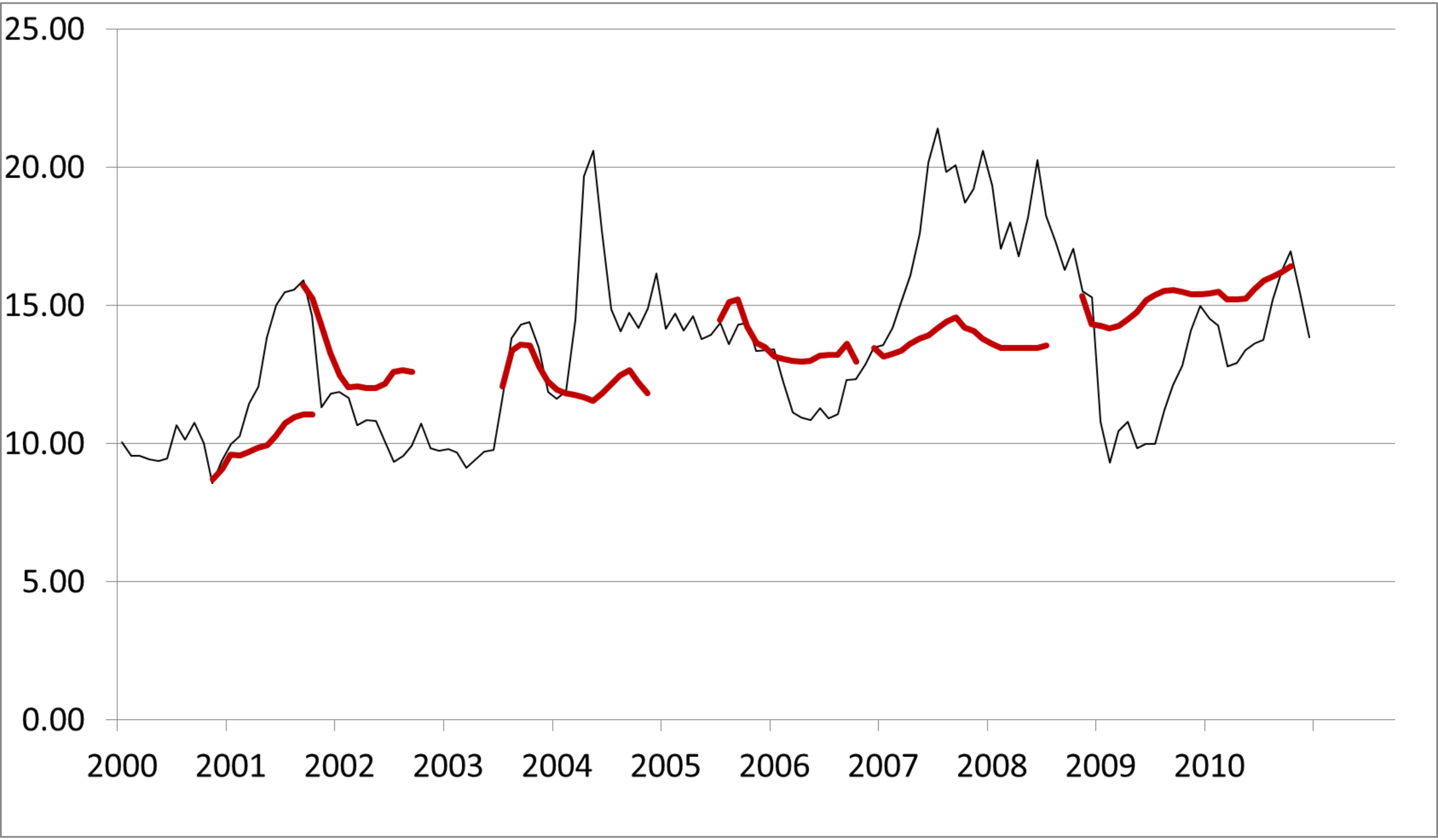
What could create cycles?

- Cow biology?
  - 2 yrs needed to raise a heifer
  - But can be culled quickly
- Tax treatments of farm income?
  - Farmers reinvest profits to avoid taxes
- Delay in transmission of price signals?
  - Advanced pricing of Class I smooth decline, delay increase in milk check
- Exports
  - Occasional New Zealand droughts

U.S. Dairy Herd Year-to-Year % Changes



Futures Market Does Not See Cycles



Predictability vs. Overshooting

- World is ever changing, not repetitive
  - Shrinking number of U.S. dairy farmers
  - Melanin contamination
  - The Great Recession
  - E-verify? Sexed semen? Foot-and-mouth?
- One can rely on past price behavior only to forecast the magnitude of price uncertainty, not long-term price oscillations

Which price risks to manage?

- Low equity →
  - low ability to tolerate risk
- Catastrophic risk →
  - LGM-dairy; FFTF
- Inventory
  - Cheese futures increasingly active

3. Risk management and I-29

- Some plants may feel the need to add more cows
- Attracting farmers from Europe, Canada, or California is seen as a viable business plan
- Relocating or major expansions may be expensive, and long-term fixed contracts may be more important in the first three years than later
- While futures markets trade for up to 24 months, there is really no activity beyond 12 months out.

Over-the-counter risk tools may help

- Cheese plant wants to expand and to do so wants to attract more producers to come to the area.
- New farmers would come, but demand a fixed price for the first three years because their equity would be low to start with.
- Cheese plant has a sales agreement that has a price tied to CME formula.
- SWAPS - In order to offer farmers fixed-price purchase agreements, it can try to contact a brokerage firm that will find a counterparty interested in receiving a fluctuating cash flow in return for fixed payments. Such ‘service’ may not be ‘for free’ if the fixed amount of receipts is lower than the expected payouts to the counterparty. The difference is the price paid to do transfer the price risk.

4. Dairy Exports: What have we learned from CME spot cheese market?

- Need for price discovery is huge, and even very thin market becomes a focal point.
- CME dairy futures tied closely to cash market
  - Information flow from cash to futures is strong
  - Only cash-settled futures have survived
- globalDairyTrade – price discovery for the new global dairy marketplace

gTD – the new center for price discovery

- Cheddar Cheese, Anhydrous Milk Fat
- Powders: Butter Milk, Skim, Whole
- Proteins: Rennet Casein, MPC

NZX dairy futures

- Started with WMP in Oct 2010
  - today is the first anniversary
  - NZX just crossed 5000 contracts in cumulative volume
- SMP, AMF followed earlier this year
- Cash-settled against gTD Contract 2.

I don’t trade on gTD – should I care about NZX?

- As gTD becomes more and more adopted as international price discovery vehicle, it is possible that more export contracts would be tied to gTD average winning price
- NZX futures can provide a way to manage your risk

More on dairy exports

- Need to move fast in order to capture the "limited window of opportunity" (USDEC)

What is our selling point? Product differentiation? First-mover advantage? Cost advantage? Reliable supplier?

1) In the long run, costs will matter the most: New Zealand has 3.9 mil beef cattle, and if price of milk goes high relative to meat, conversions will happen.
2) Climate change could mean Oceania becomes unreliable supplier; even more volatility to US; also demand advantage?

We may capture the window, only to be thrown out through the window later on. Unless our exports are de-commodified, in the long run, production costs will rule the game.

Changes to U.S. laws

- Dodd-Frank
  - Rulemaking is in the process.
  - Swaps will be regulated, and only those swaps that are executed according to rules of Dodd-Frank Act will be legal.
  - Clearing, Margin requirements, Position limits
    - Will it affect the working capital requirements?
    - Will it divulge the corporate strategy?
- Peterson bill
  - Growth management → can be hedged too!
  - Competitive pay → may increase risk processors face

Thank you!

Help is gratefully acknowledged from…

- Robert Chesler, FC Stone
- Katie Krupa, Rice Dairy
- Phil Plourd, Blimling & Associates
- Steven Schalla, Stewart-Peterson