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Agricultural Outlook Forum
U.S. Department of Agriculture

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New Challenges, New Ideas: An Overview of Dairy Issues and Policies Leading to the 2012 Next Farm Bill

Andrew M. Novakovic

New Challenges, New Ideas:

An Overview of Dairy Issues and Policies Leading to the ~~2012~~ Next Farm Bill

Andrew M. Novakovic, PhD

The E.V. Baker Professor of Agricultural Economics

February 2012

Cornell University

Charles H. Dyson School of Applied Economics and Management

Who was DIAC?

7 Dairy Farmers (NH, VT, PA, GA, MI, WI, CA)

4 Dairy Farmer Member Organizations

- Dairy Cooperatives (AMPI, MD/VA)
- Dairy Farmer Organizations (NODPA, ODFA)

1 State Department of Agriculture (WI)

3 Dairy Processor (multinational, national, state)

1 Food Retailer (east coast)

1 University

What Was DIAC Charged to Do?

CHARGE:

- Dairy Farm Profitability
- Milk Price Volatility

MOTIVATION AND STRATEGY:

- Focus on issues most relevant at producer level
- Acknowledge and consider downstream effects
- Try to be as specific as possible but also strive for a super-majority of support
- Not obliged to endorse X or Y, but need to be pragmatic.

How Did DIAC Develop Its Report

8 Public Meetings

- All meetings of the full committee were open to the public
- Public testimony was invited at the first 5
- Written comments were accepted (and there were a lot)
- Various technical experts and advocates were invited to speak to the committee

3 Subcommittees

- Current authorities
- Dairy Farm Profitability
- Milk Price Volatility

Scribes and Editors

- Everyone contributed to the final report
- Primary writing and editing was done by A. Novakovic, P. Stroup, S. Taylor, and E. Maltby

Approvals

- All voting was public, but names were not recorded
- Each recommendation was voted separately
- The final report was accepted by a separate vote, with votes named (endorsing the report does not imply endorsing each recommendation)

DIAC Recommendations – 4 Themes

Existing Authorities

– How can Secretary make most of what he has

Price Stabilization and Regulation

– What can be done to prevent or reduce price volatility?

- Uncertainty, Instability, Inadequacy

Income Stabilization and Protection

– Given volatility, what can be done to reduce its effects on net farm income

Profitability and Market Improvement

– What else can be done to enhance

- Dairy farm profitability
- The markets for milk or dairy products

Issue and/or Problems?

Is Dairy Farm Profitability an Issue? A Problem?

- Is it profitability or cash flow or debt repayment capacity or ?
- Is this problem perennial, periodic, occasional (an over-reaction to 2009 or a wake up call?)
- Is this problem widespread (everybody's problem) or common, or isolated.

Are Milk Prices Volatile?

- What do we mean by volatility (unpredictable, unstable, inadequate, all of the above)?
- Can we quantify it?

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What does fixed look like?

Issue #1: Volatility in Dairy Farm Income

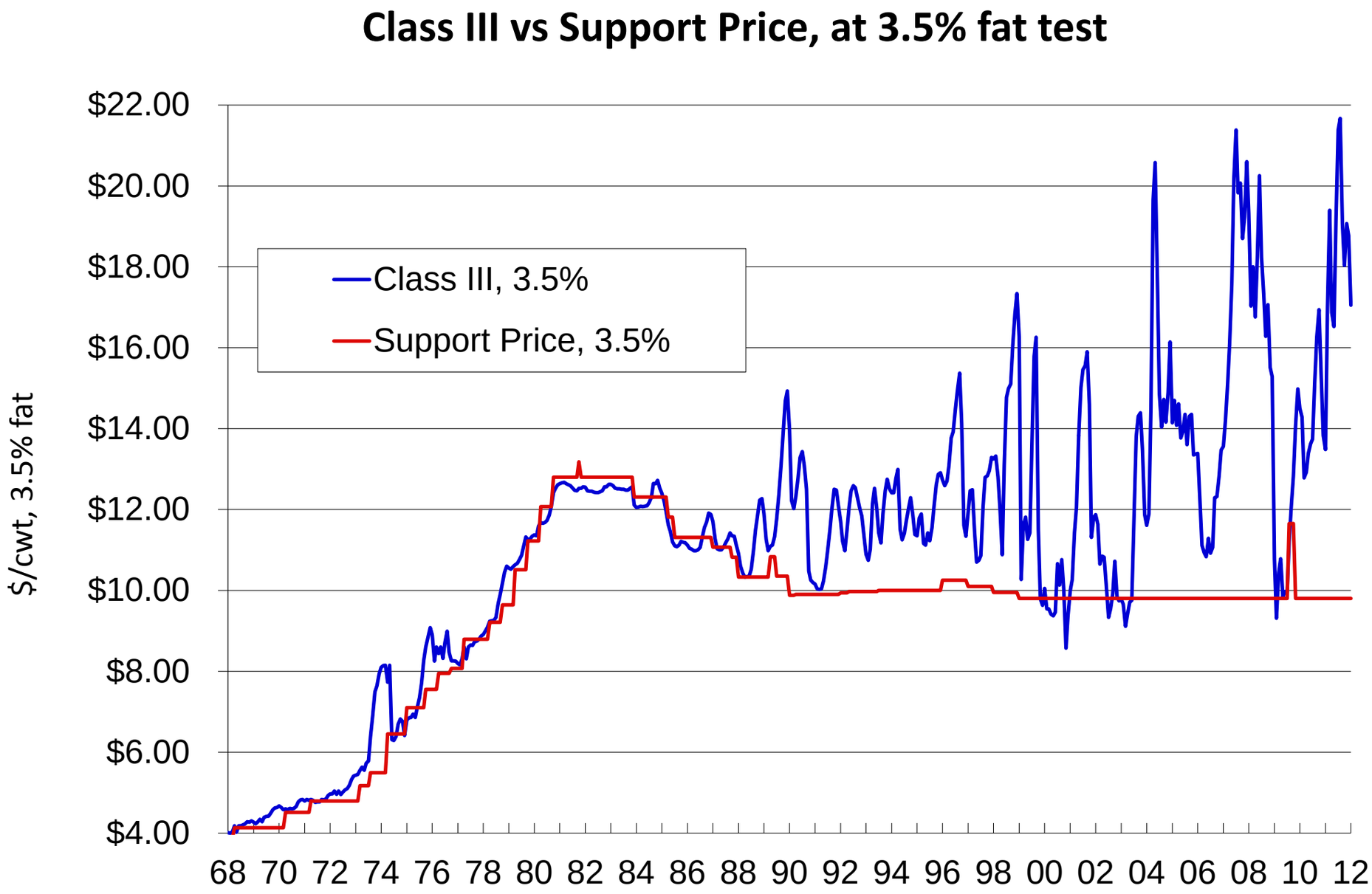
Is it:

- Cyclical?
- Unpredictable?
- Expanding?

Caused by:

- volatile milk prices?
- volatile feed prices?
- volatility in other input costs?
- production risk?

Here's a Pretty Common Depiction of the New Farm Milk Price Volatility



Let's look at "volatility" (stability) in the US Average Price for All Milk

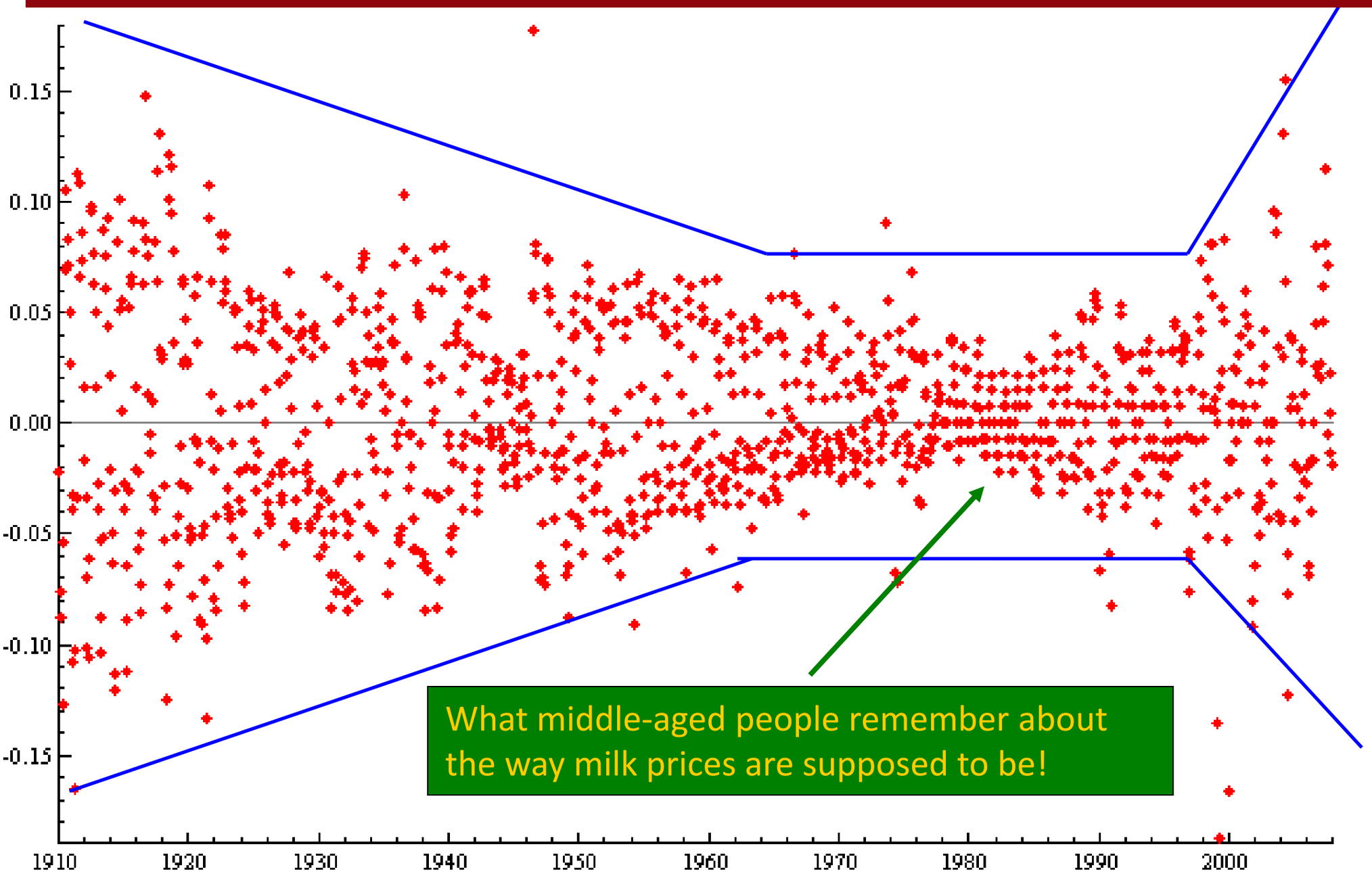
U.S. Average Monthly Price for All Grades of Farm Milk, 1910 to 2010
(not adjusted for inflation)

The chart suggests that this price has become more "volatile", has fluctuated more, since about 1990 than at any other time.

Take a closer look….

Relative Variability over time, percent change from one month to the next

Current variability is of similar magnitude to early 20th century – but less predictable?



Measures of Price Volatility

Historical Volatility	1910 to 1942	1942 – 1976	1988 to 2010
Annualized Volatility (%)	22.0%	9.3%	16.1%

Milk prices were more volatile before WWII, but probably more predictable.

- How did producers manage income "volatility"? What was the nature of this risk?

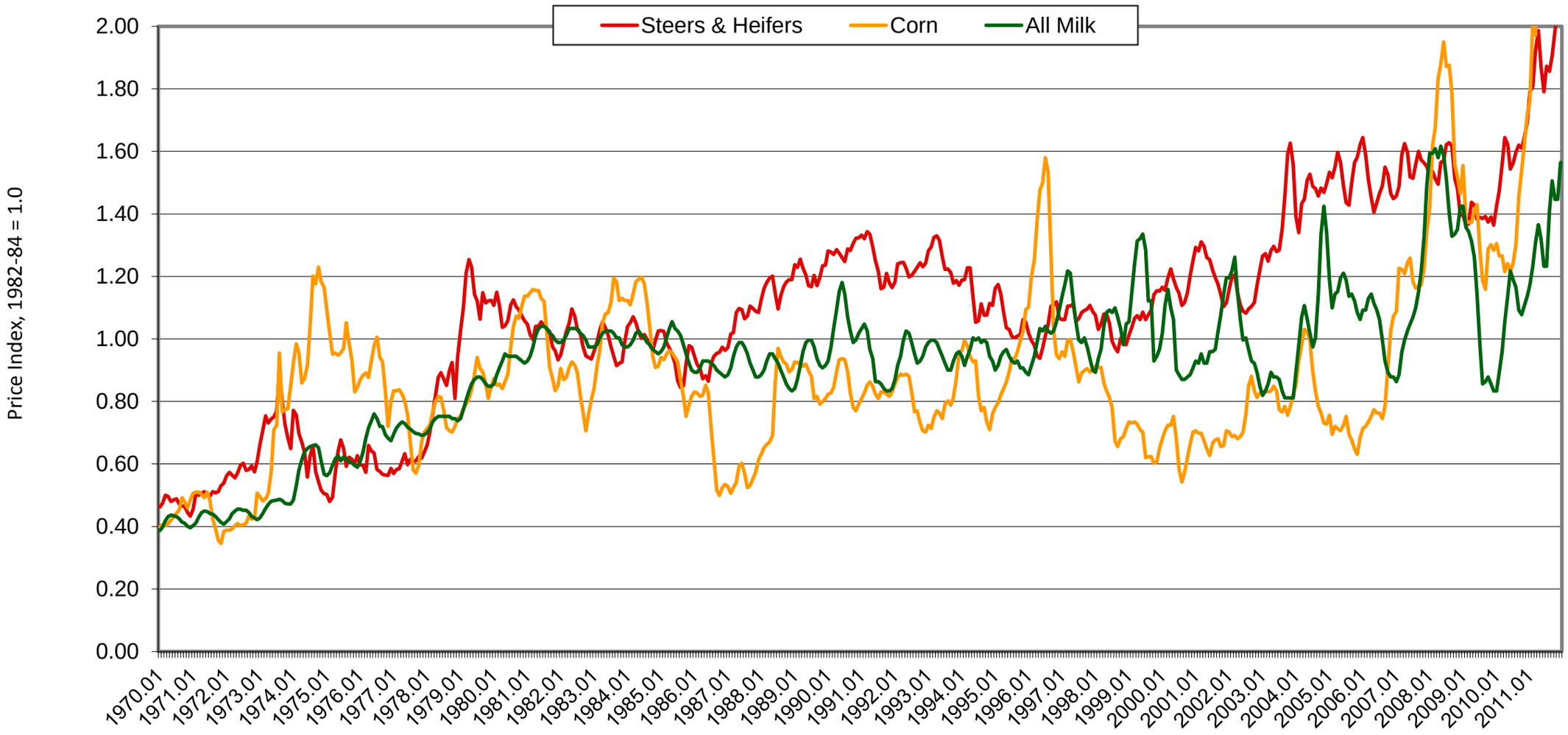
Log Relative Volatility	Class III Price	Class IV Price	All Milk Price	Mailbox Price
2000 to 2009	.088	.058	.052	.055

Is price risk different for processors than producers?

Are these measures of volatility Big?

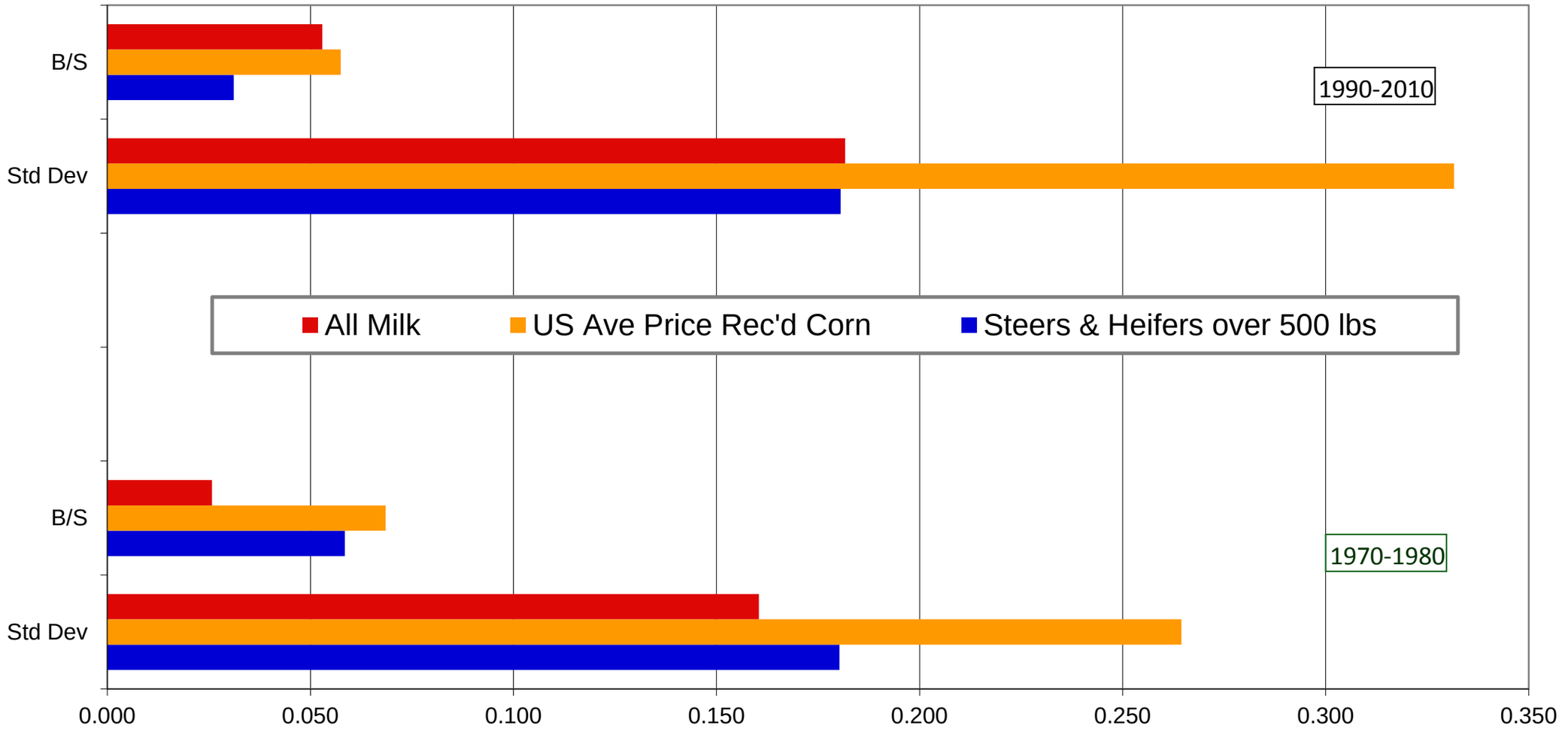
Can we compare price changes across agricultural commodities?

National Average Monthly Prices Received by Farms for Corn, Beef, and Milk

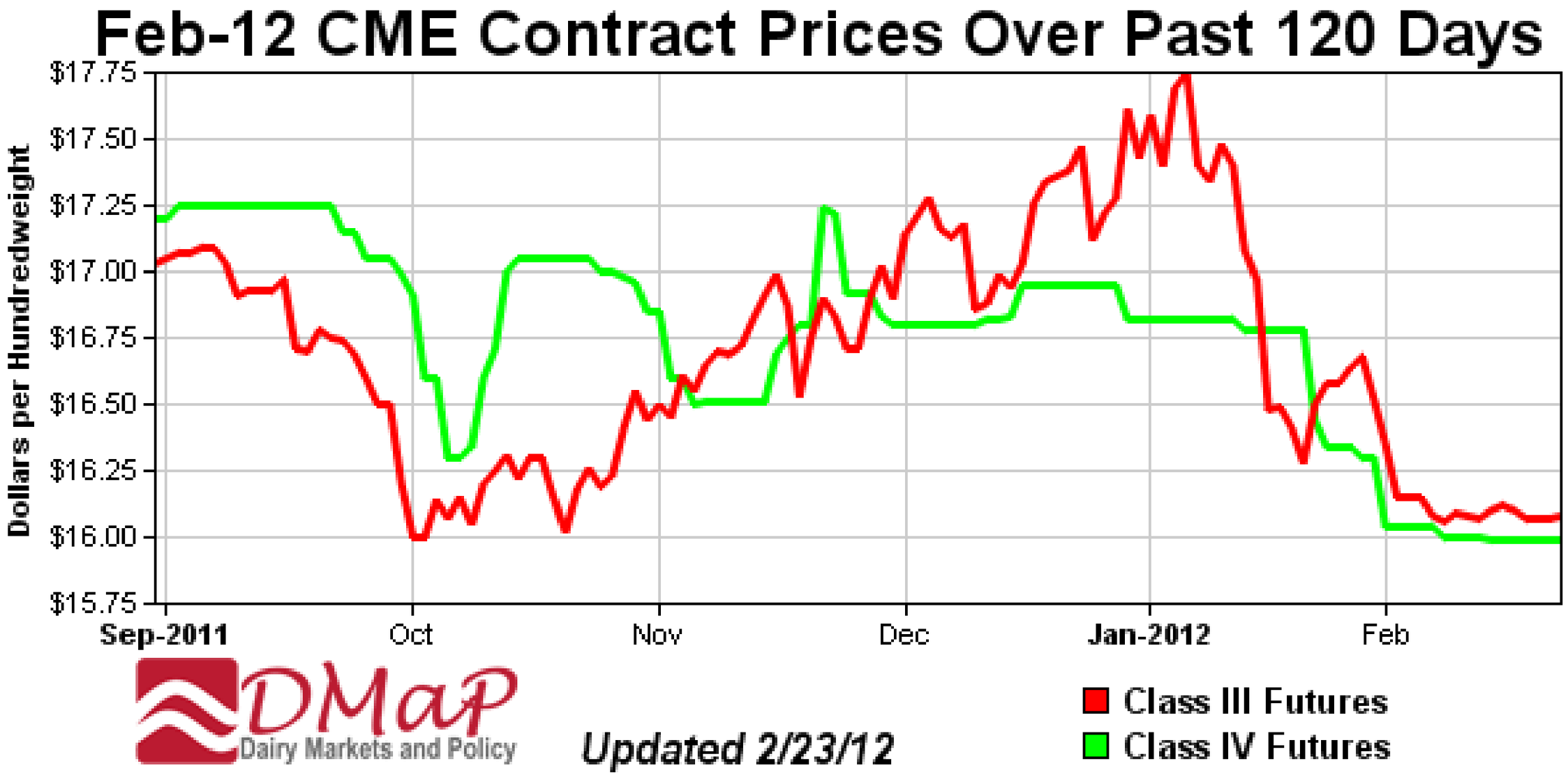


Comparing Volatility Over Time

Volatility and Dispersion Statistics for US Monthly Prices Received for Beef, Corn, and Milk; 1970s and Post Uruguay Round

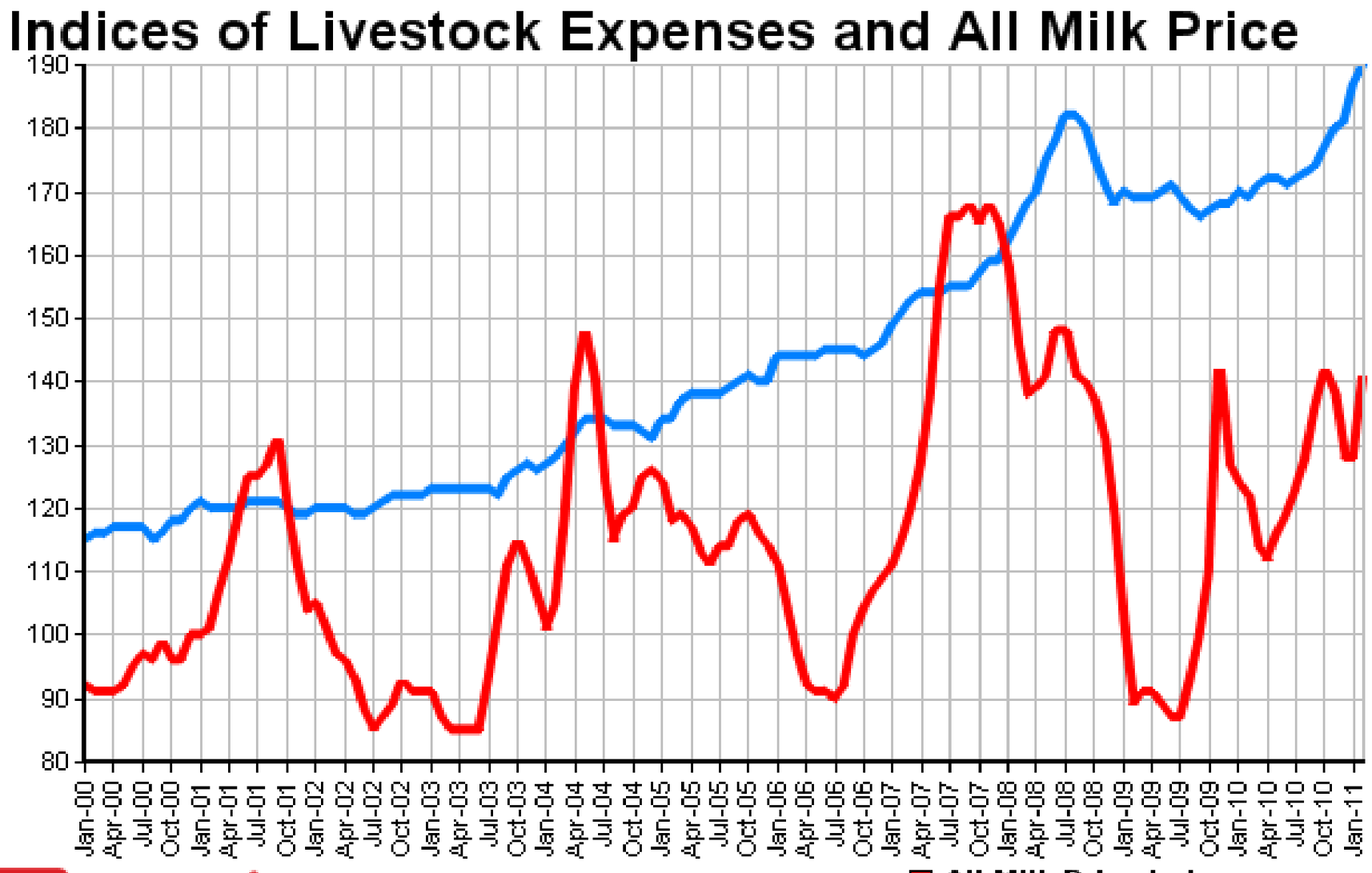


How About Uncertainty?



$1.50 (10%) Price Swing, twice, in 5 months

What was striking about 2009 was not so much how low the price of milk got, but rather how horrible the returns to milk above costs were - hence the focus on Margins, not Milk Price



CPDMP
Cornell Program on Dairy Markets & Policy

Updated 2/28/11

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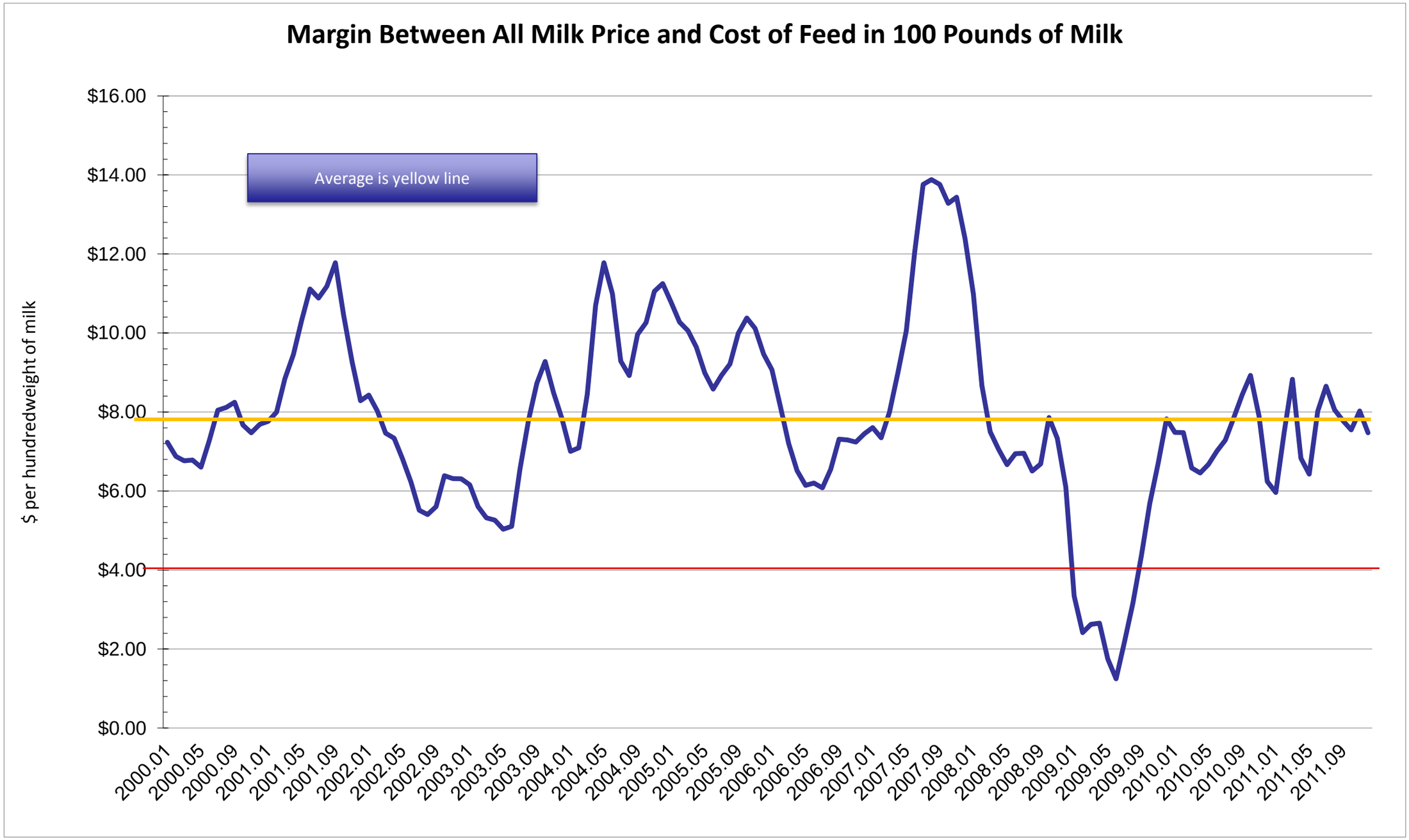
NMPF Methodology Illustrates “Margin” (Milk IOFC) “Volatility”



ERS Estimates of Costs of Production, 2005 (a good year with PAM = $15.13) and the Implications for Profitability

Farms below about 500 cows are not achieving presumed opportunity costs of Land, L&M, K; farms smaller than average have gross income comparable to all farm average net income

Full economic costs of milk production by herd size, 2005

Type of cost	Number of dairy cows[1]					
	Less than 50	50 to 99	100 to 199	200 to 499	500 to 999	1,000 or more
	Dollars per hundredweight					
Full economic costs	30.09	25.50	20.82	17.92	16.07	13.59
Operating costs[2]	12.30	12.94	11.51	11.31	11.07	9.74
Allocated overhead[3]	17.79	12.56	9.31	6.61	5.00	3.85

Note: Organic operations are excluded.

[1]All dairy cows, including dry cows, but excluding calves, heifers, and bulls.

[2]Largely feed costs, purchased and homegrown.

[3]Includes hired labor, opportunity cost of unpaid labor, opportunity cost of land, taxes and insurance, and general overhead.

Source: MacDonald et al. (2007, p. 32).

Is profitability a problem?

Role and Importance of Non-Farm Income, all farms
(from ERS 2005 ARMS data)

All family farm sizes have significant participation in off farm economy

Primarily earned income

Half +/- of Commercial farms, of all sizes, have one or both spouses working off farm

- Most likely to be primary operator's spouse
- Employment benefits likely important in all instances
- On small size farms, earned income compensates for average farm loss
- On medium size farms, earned income augments modest farm income to achieve more common household level
- On larger size farms, off farm employment most likely driven by benefits and personal satisfaction

Do we applaud this as a responsible action or bemoan that it is necessary? Is it a reflection of failure in farm businesses or of a medical and retirement insurance system based on large employers?

The Long Term Drivers and Sense of Inadequacy in Milk Prices

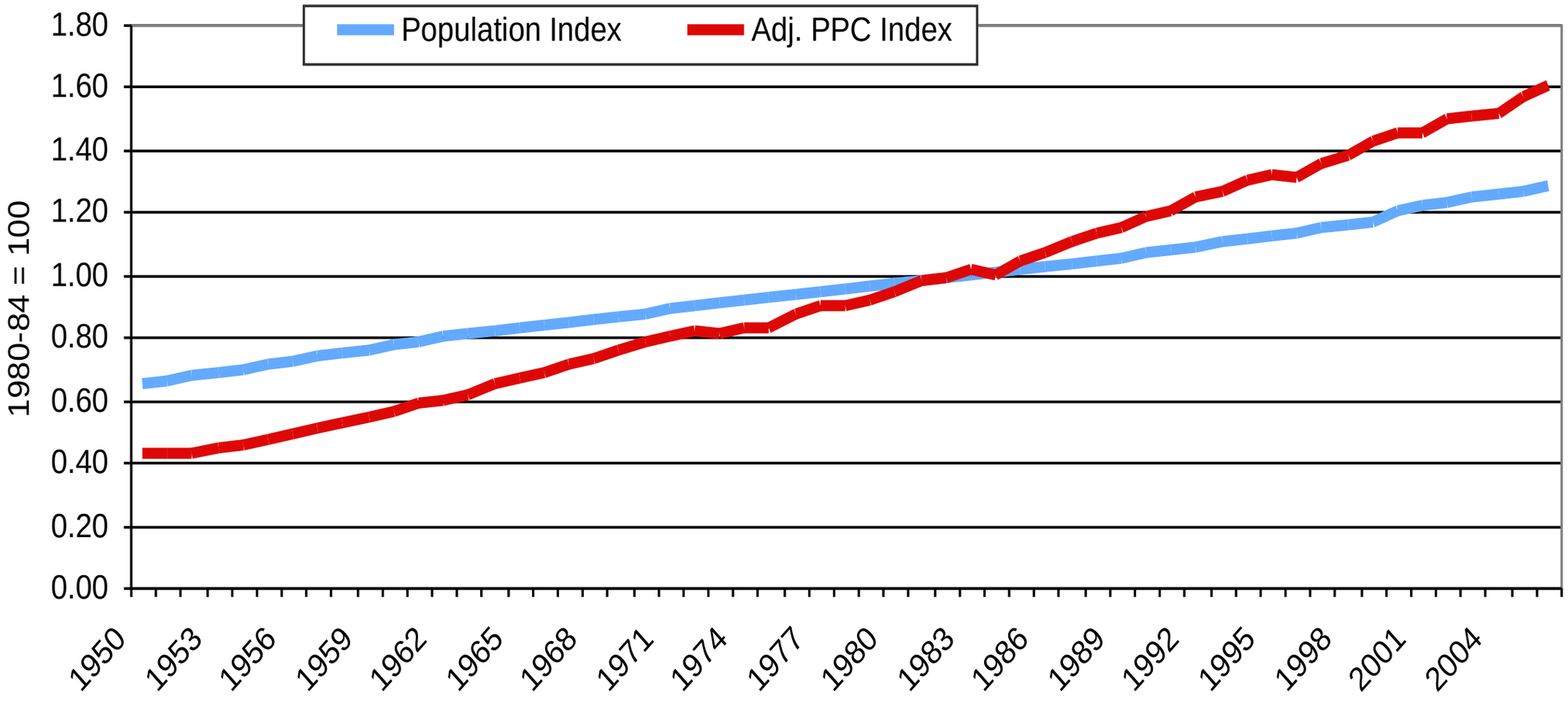
– Milk price trends are driven by linear trends in productivity and population.

– Productivity has grown more quickly than population.

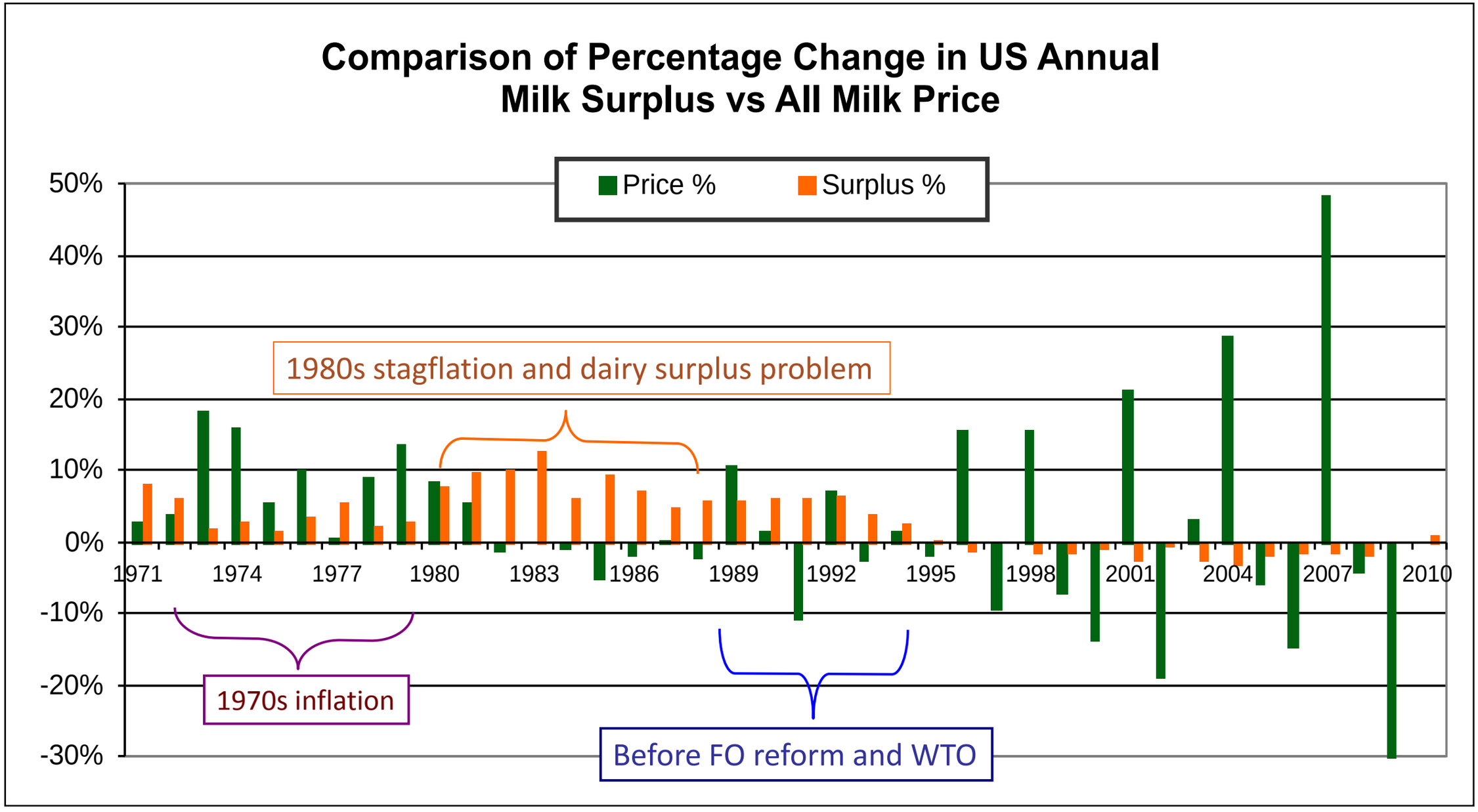
– Thus, farm milk prices increase at a lower rate than inflation or declining "real" farm milk prices

Although the long term is quite predictable and stable, the short term is not and can be quite tumultuous.

Comparison of US Population vs Milk Production Per Cow Trends, Index 1982-84 = 100



Is Milk Price Volatility Caused by Excess Production or Fluctuations in Demand?



Some Bottom Lines...

Milk Price volatility isn't really new, but

- It was more predictable before (and then DPSP began to smooth prices out)
- Cash flow was likely still a challenge, but with most farms growing their own feed, the problem was different than today. (role of cash reserves?)

Volatility in Margin or Net Income or Profitability is the challenge today, because:

- Milk prices are volatile but so are
- Prices of inputs, especially, but not only, feeds

This isn't likely to change soon

- Economic instability in the world
- Political instability in parts of the world
- Climate issues (whether they are short term or long term)

What else????

Issue #2: Labor Availability

Availability is a function of

- price: wages, benefits
- non-pecuniary benefits: housing, work environment, work requirements
- number of people who have the necessary skills, aptitude, and attitude

Immigration Policy

- Immigrant labor is a practical necessity
  - documentation is an ongoing challenge
- Ag Jobs or similar solutions are not that big a political controversy
  - but, it is held up by more controversial issuses
    - Republicans, generally, don't want to solve the easy ones first and are more interested in
      - » controlling immigration entry
      - » limiting accessibility to naturalization

Issue #2: Environmental Policy

- Current status is uncertain but expect it to be tougher
- Are stricter environmental controls "right": is there really an underlying problem
- Are stricter controls "good": is what you want me to do actually a solution
- Is it "fair"
  - what is the cost vs the benefit
  - how much should I have to pay (vs government/society)

Issue #3:
Regional, Product Sector and Structural Issues

Regional

- Milk production systems and/or marketing systems
- State regulations

Product Sector

- Product category, production system, marketing system

Structure

- Size and ownership
- Production system
- Marketing system

Degree and Nature of Competition.
Is Competition Good?

Competition with whom? Of what kind?

Do Competitive Markets mean:

- low prices, constrained choices
  - few cooperatives is a bad thing
  - few processors is a bad thing
  - the CME is a bad thing
  - few retailers and restaurants are a bad thing
  - new products are a threat
  - we need strong regulation
- higher prices, new markets
  - strong cooperatives are a good thing
  - strong processors are a good thing
  - healthy competition keeps us lean and on the cutting edge
  - we are better positioned relative to external competitors and international markets
  - new products are an opportunity
  - we don't need a lot of regulation, especially of the economic variety

Competition and Policy

Do our fences hold us in or keep the bad guys out?

- Product Identity Standards
  - defend the purity of core dairy products
  - inhibit innovation
- Trade restrictions - market access, tariffs, quality and safety standards
- Price or income supports
- Federal Milk Marketing Orders

What is our optimal strategy in international markets

- opportunistic seller (of commodities)
- consistent and committed seller (commodities or ?)
- active player (value added products?)

What Happens Next?

Markets will continue to struggle towards a new solution. Prospects for:

- a continuation of macroeconomic challenges and sluggish economic growth.
- Price risk on inputs is on the upside (more or less a consensus)
- Price risk on outputs is on the downside (my opinion)

Fervor for "fix it quick" has hit DC quicksand

- Always tough sledding within industry
- Congress is unusually dysfunctional but also facing huge budget challenges and disappointing economic prospects
- Plenty of other things need/want fixing
- Agriculture is in good shape anyway, right?
- The election could change everything – or nothing.

Conclusion - Perceived economic need will be urgent. Policy progress will be slow.

Where do <u>you</u> go from here?

Where do you want to go?

What paths are paved and clear?

What could get in the way?

Great time to figure out what you can do on your own!

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