



# *Retail Food Price Outlook: 2008*

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*'Energizing Rural America in the Global Marketplace'*

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# Price Index Basics

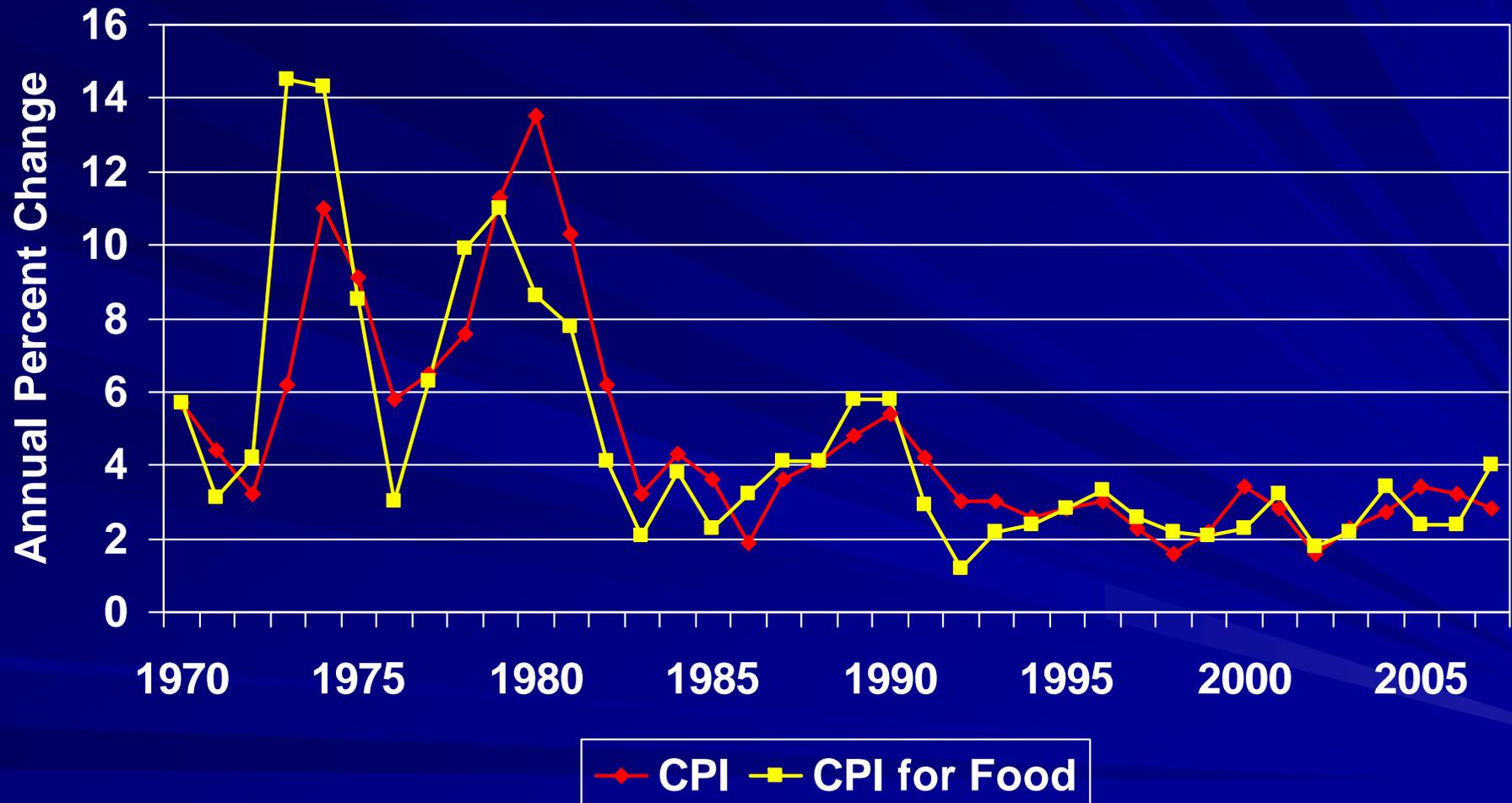
## ■ Consumer Price Index (CPI)

- Average consumer prices collected on a monthly basis
- Nationally representative sample of retail outlets

## ■ Producer Price Index (PPI)

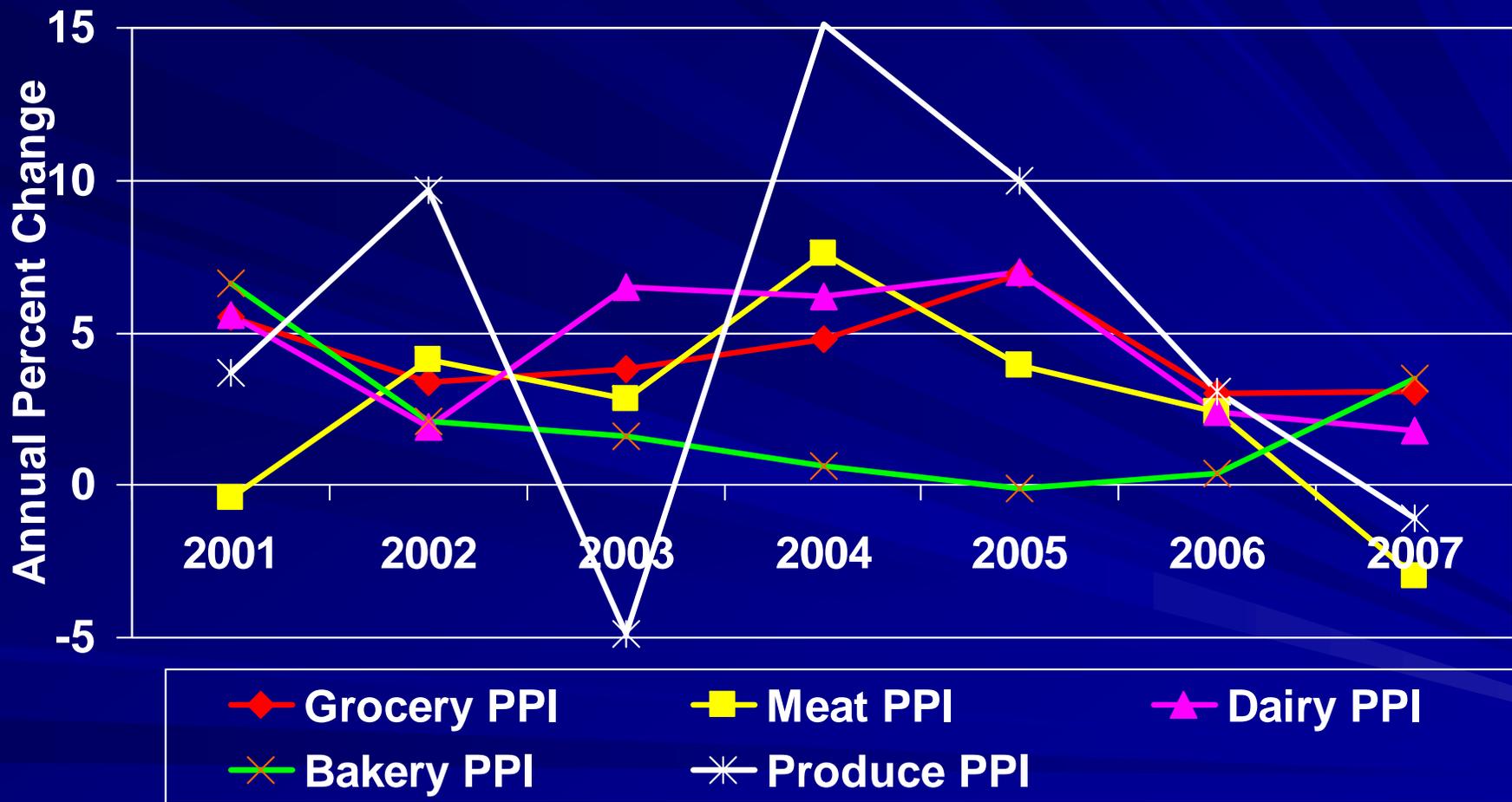
- Average producer selling prices collected on a monthly basis
- Nationally representative sample of producers across the supply chain

# CPI vs CPI for Food 1970-2007



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# PPI for Retail Grocery Departments, 2001-2007



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# Sources of Price Changes

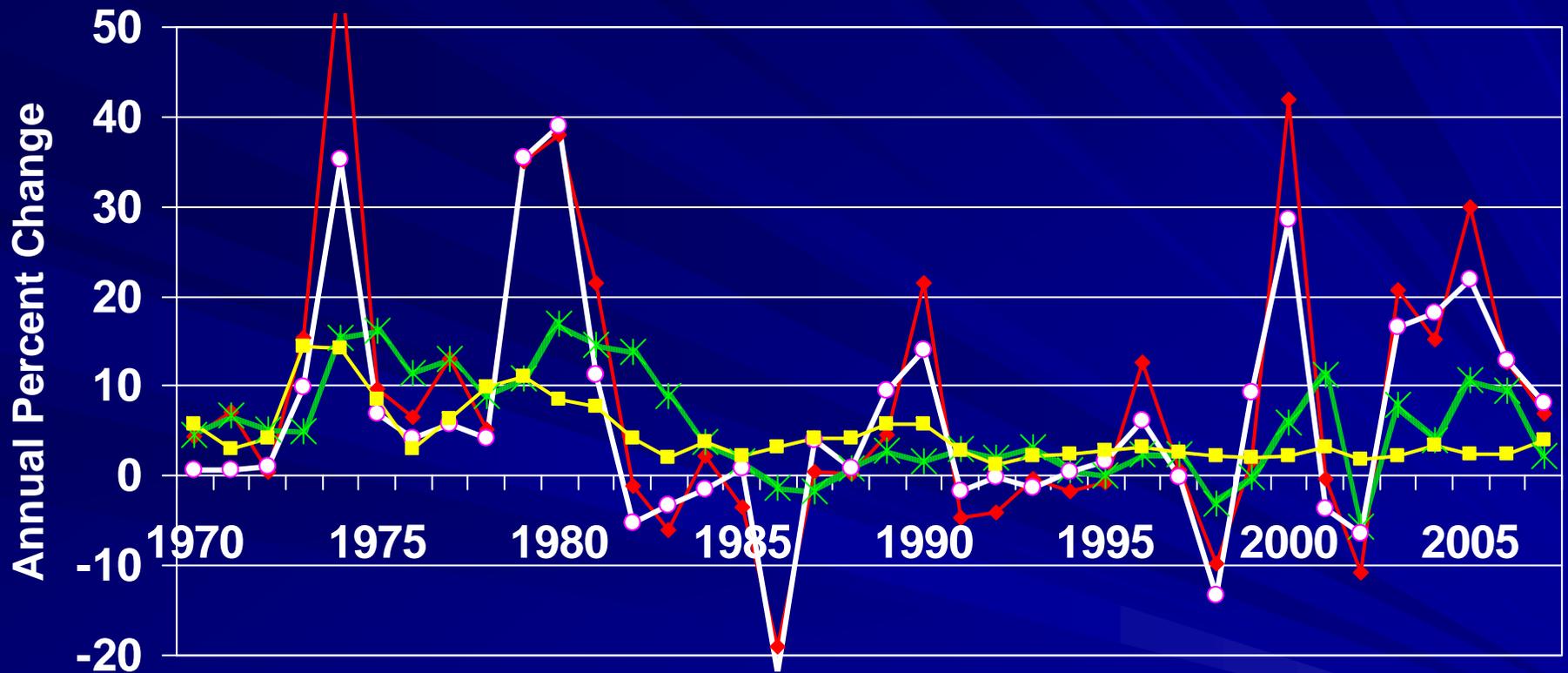
## ■ Changes in Costs

- Operating Costs
- Cost of Goods Sold

## ■ Changes in Retail Market Competition

- Number of retailers in a market
- Type of retailers
  - Specialization
  - Differentiation

# Food vs. Energy 1970-2007

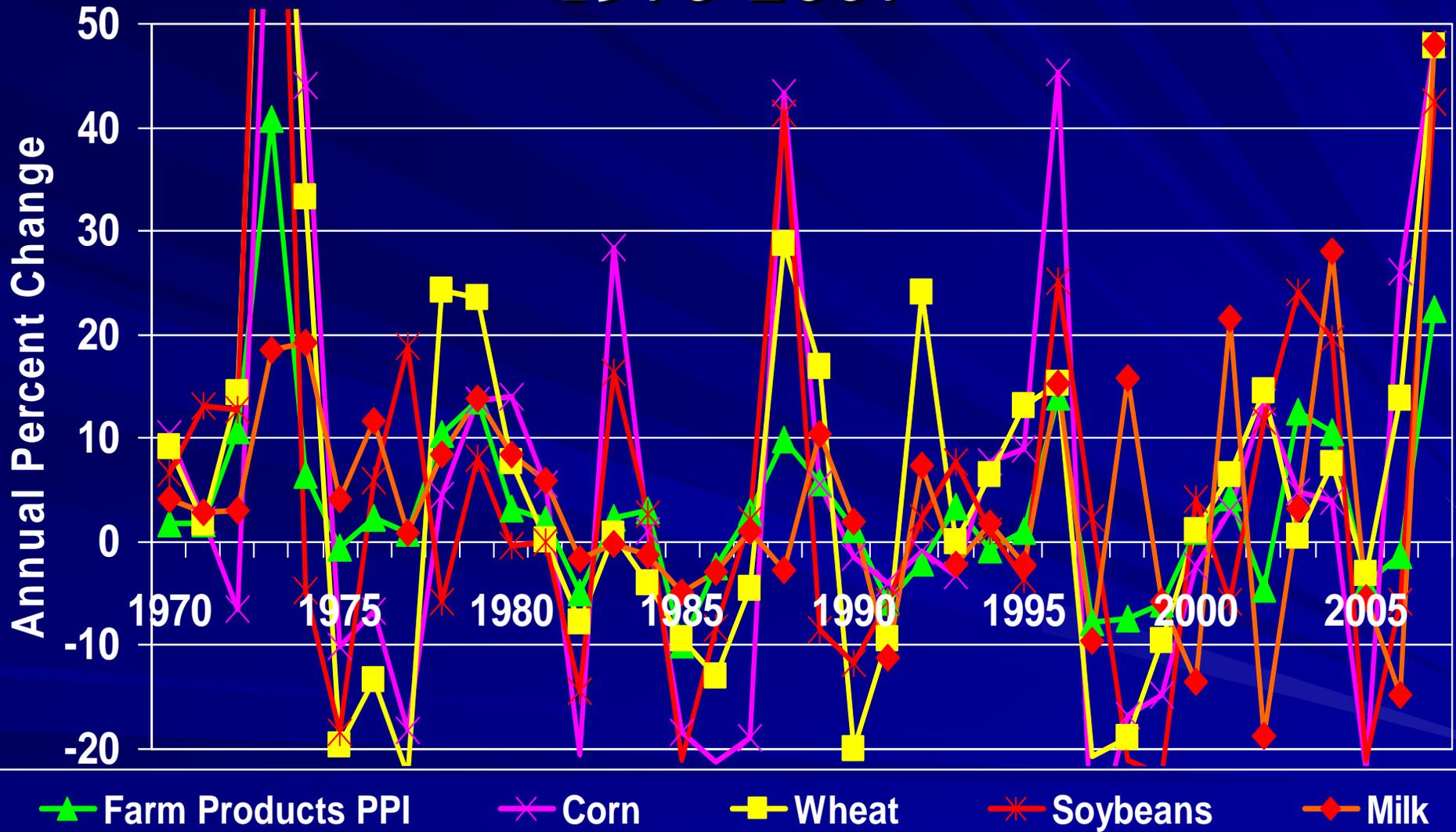


◆ CPI for Fuel Oil    \* CPI for Gas and Electricity    ● CPI for Gasoline    ■ CPI for Food

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# Farm Product PPI Components (a)

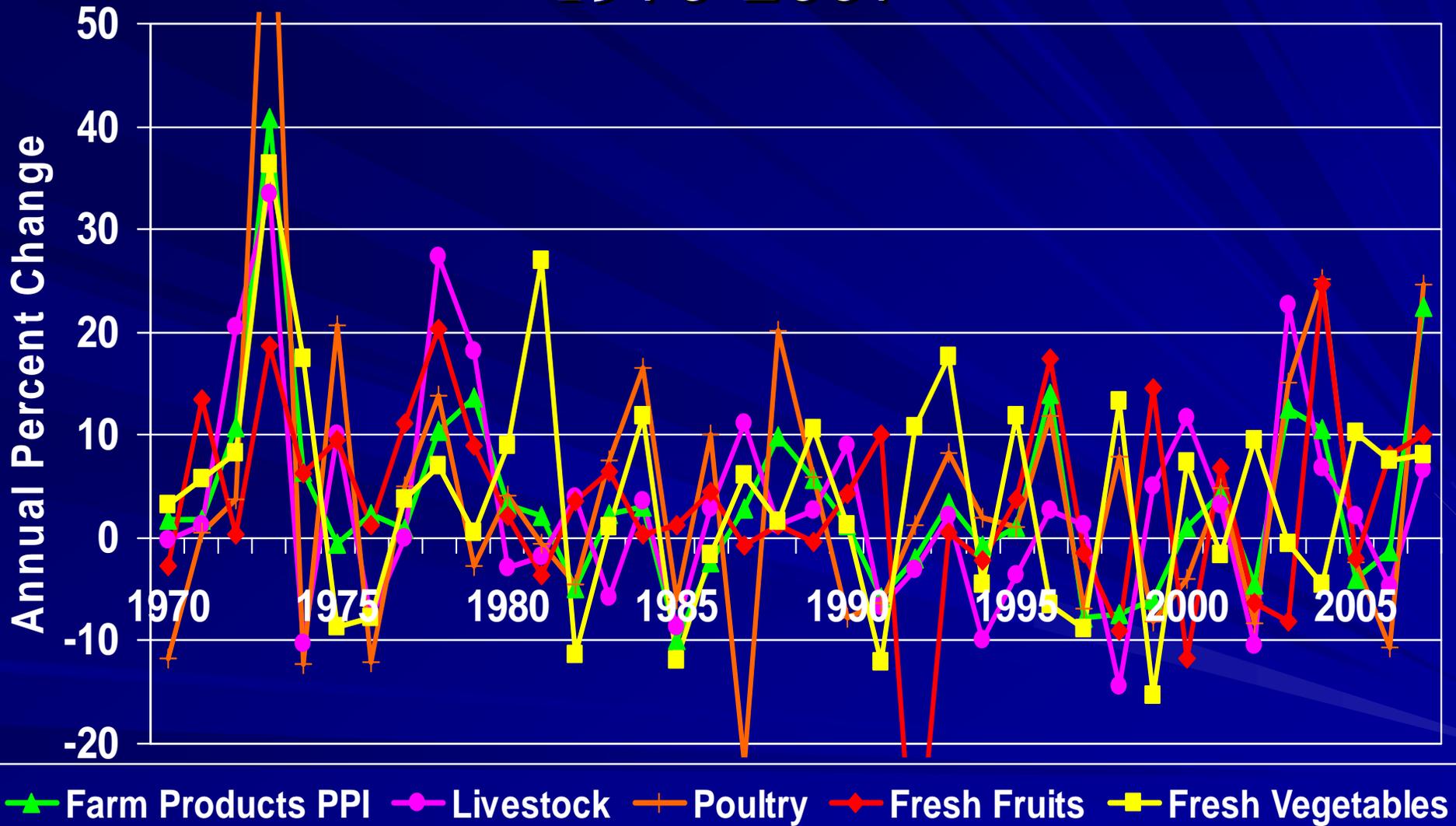
## 1970-2007



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# Farm Product PPI Components (b)

## 1970-2007



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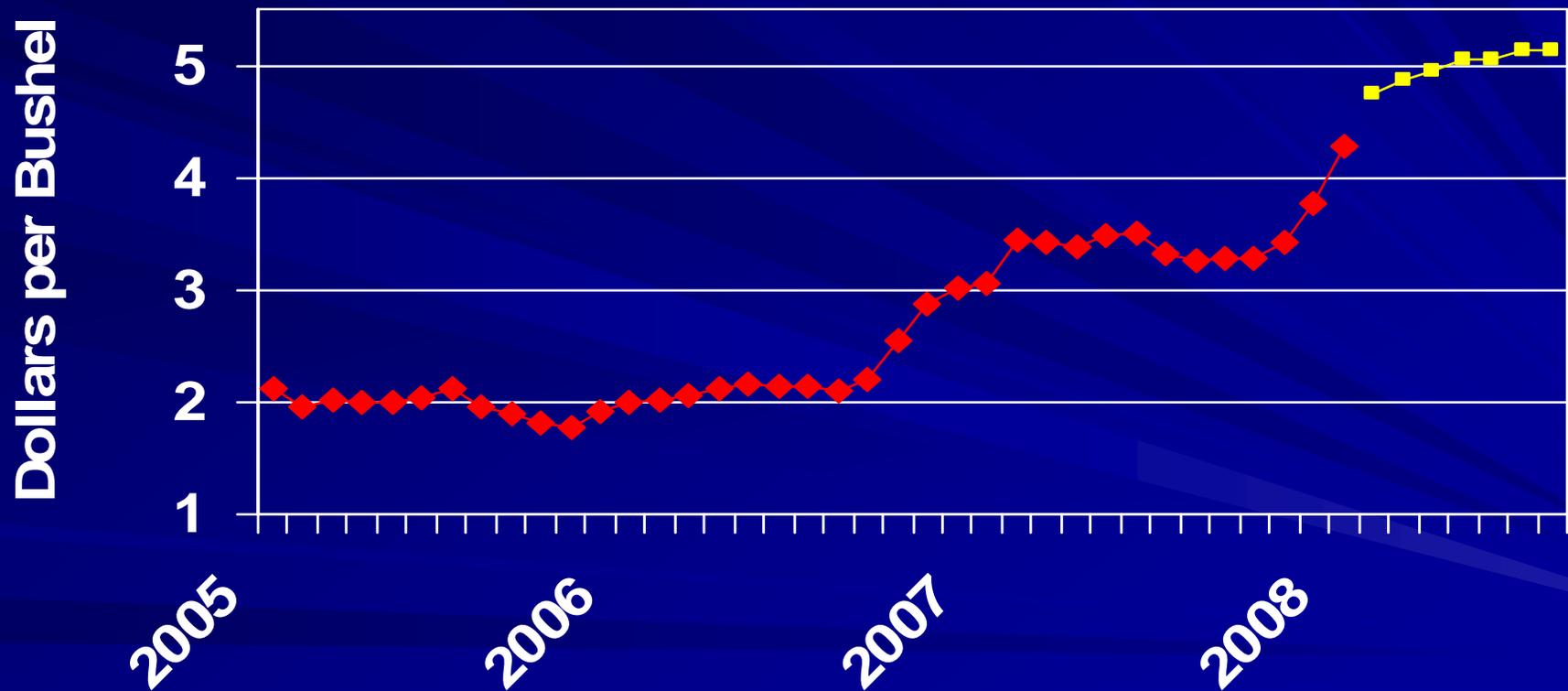
# Declines in Average Percent Change in Farm Prices

Commodity	'70- '07	'97- '07	Commodity	'70- '07	'97- '07
Wheat	6.1	3.6	Corn	5.0	1.2
Soybeans	5.1	2.5	Milk	4.2	4.4
Fruits	3.3	2.3	Livestock	3.1	2.7
Vegetables	4.0	2.3	Poultry	4.1	3.4

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# 2008: Déjà vu?

## Farm Price of Corn



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# Substitution = Higher Soybean Prices

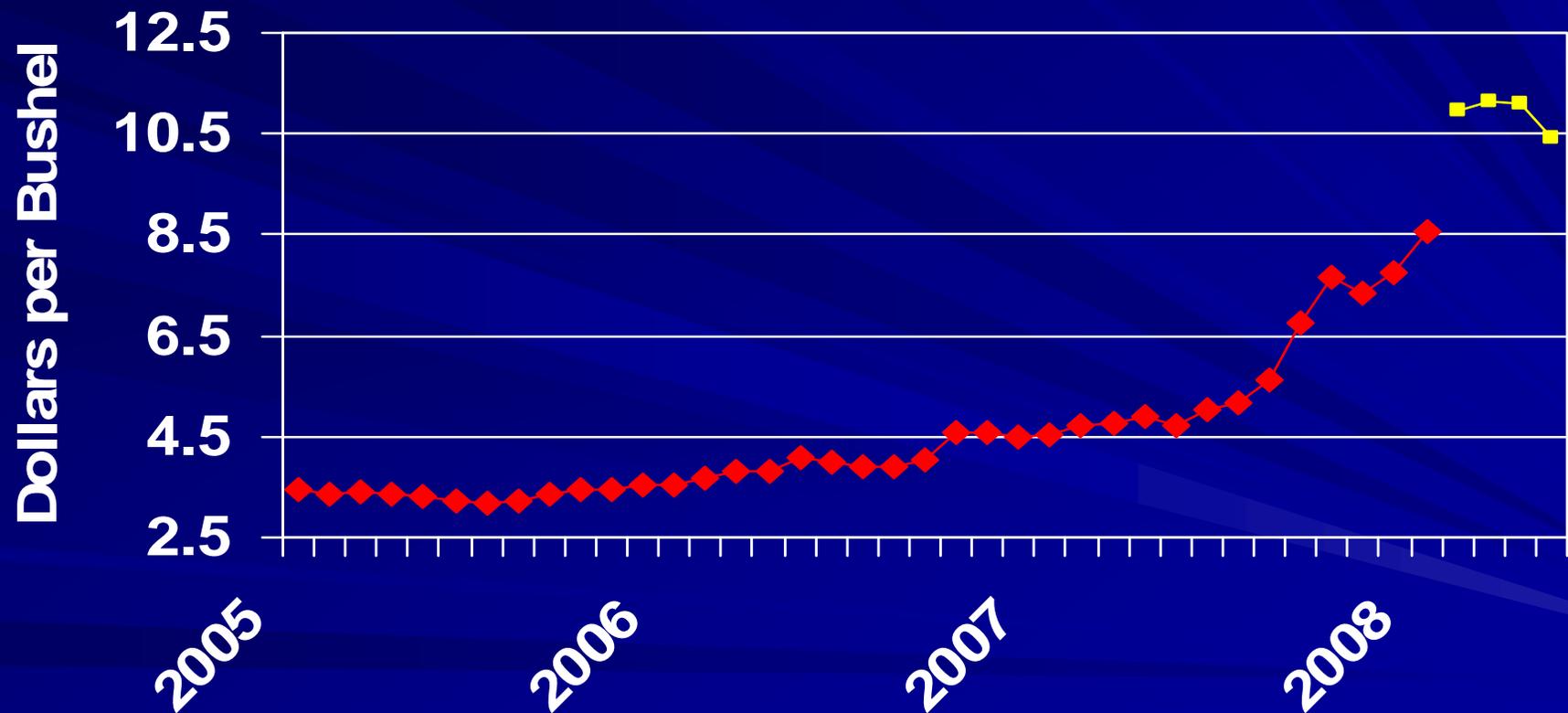
## Farm Price of Soybeans



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# Other Commodities also on the Rise

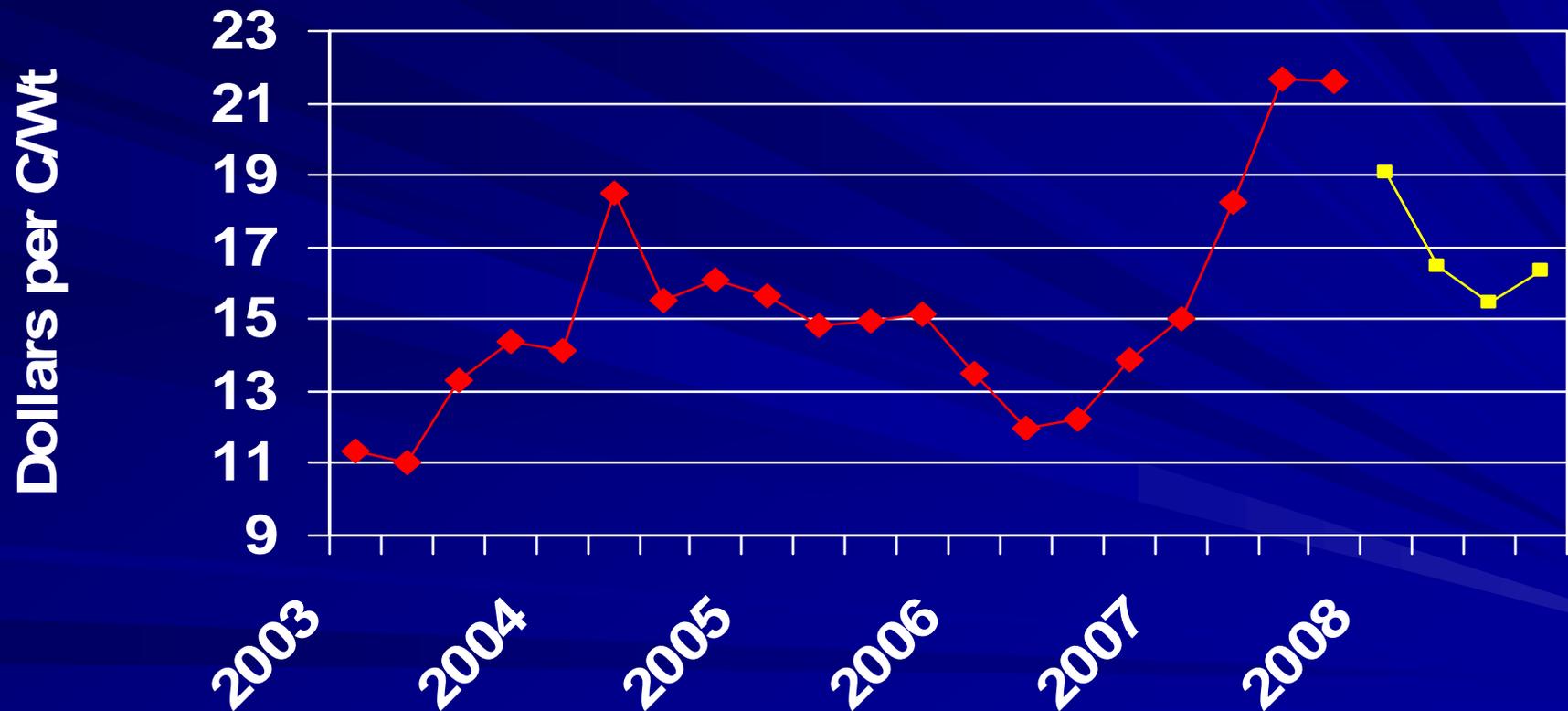
## Farm Price of Wheat



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# Other Commodities also on the Rise

## Farm Price of Milk



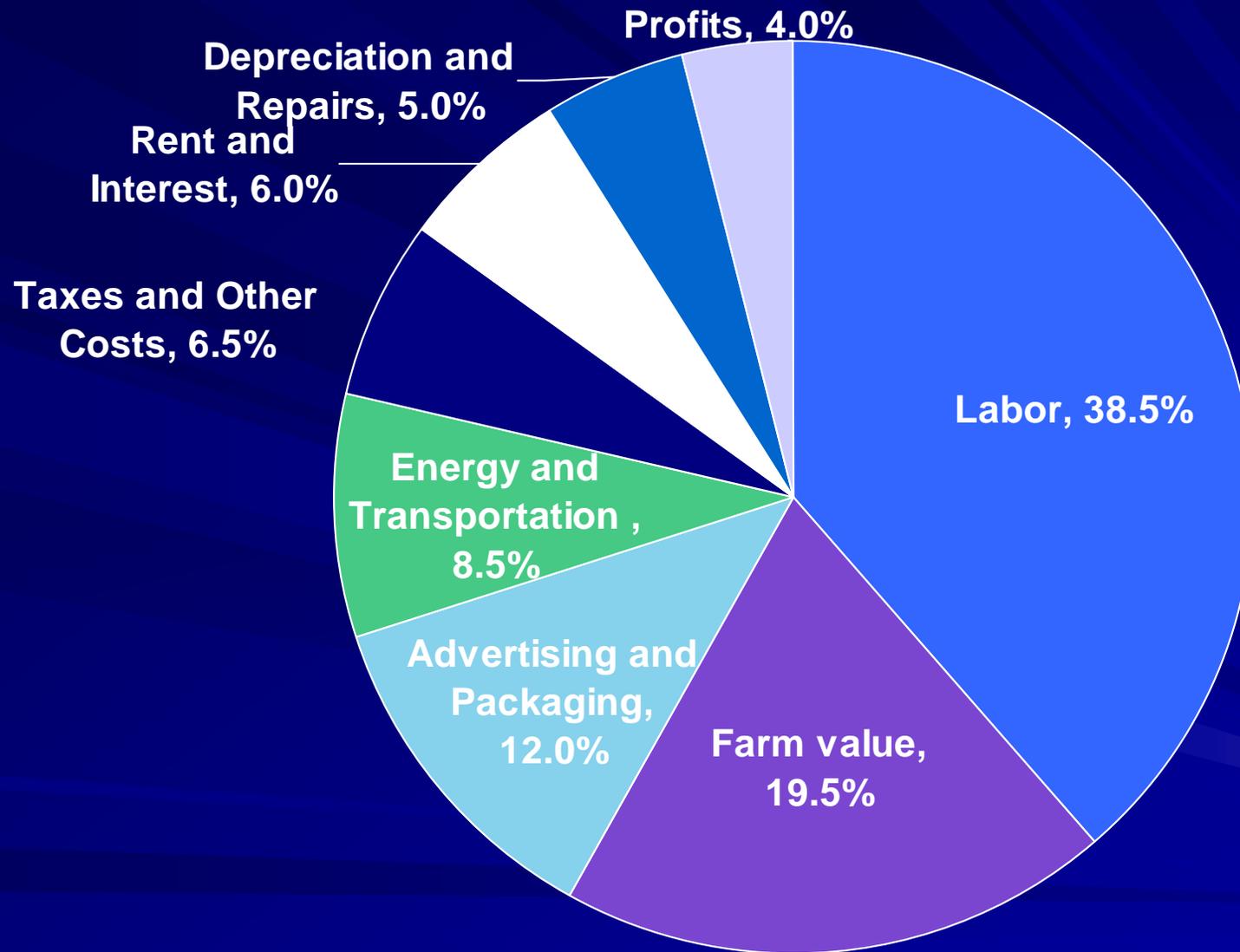
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# Impact on Retail Prices?

- Raises costs of animal feed
  - Beef, Pork, Poultry
- Raises costs of corn as an ingredient
  - Breakfast Cereal and Soda
  
- But...

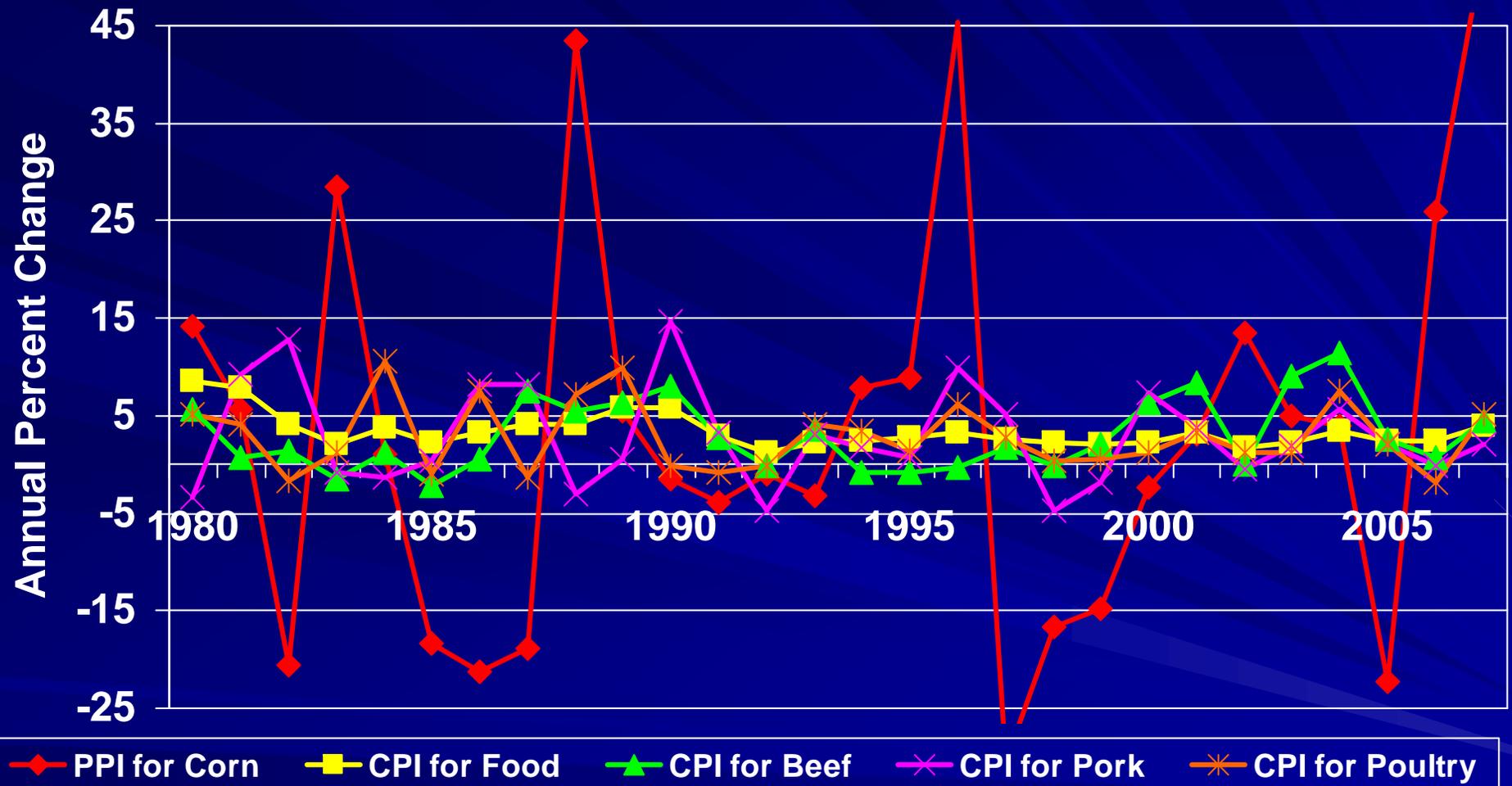
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# Where a Consumer Dollar Spent on Food Goes



Source: Economic Research Service Calculations  
using 2005 Data  
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# Meat vs. Corn, 1980-2007



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# Corn as a Food Ingredient

## ■ Corn Flakes Example

- \$2.28 vs \$3.39 per bushel
- An 18-ounce box of corn flakes contains about 12.9 ounces of milled corn.
- Expected to raise the price of a box of corn flakes by about 1.6 cents, or 0.5 percent.

## ■ Soda ~ Corn Syrup Example

- A 2-liter bottle of soda contains about 15 ounces of corn in the form of high fructose corn syrup.
- Expected to raise soda prices by 1.9 cents per 2-liter bottle, or 1 percent.

# Corn as Animal Feed

- About 55 percent of U.S. corn is used as animal feed for livestock and poultry.
- This analysis uses upper-bound conversion estimates of:
  - 7 pounds of corn to produce 1 pound of beef
  - 6.5 pounds of corn to produce 1 pound of pork
  - 2.6 pounds of corn to produce 1 pound of chicken

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# Simple Pass-Through Model

- A pound of retail chicken uses 10.6 cents worth of corn or about 5.2 percent of the \$2.05 average retail price for chicken breasts.
- Using the average price of corn for 2007 and assuming producers do not change their animal-feeding practices, retail chicken prices would rise 5.2 cents, or 2.5 percent.
- Using the same corn data, retail beef prices would go up 14 cents per pound, or 8.7 percent, while pork prices would rise 13 cents per pound, or 4.1 percent.

# Controlling for Other Factors

Assumes the magnitude of the corn price change does not affect the rate at which cost increases are passed through to retail prices.

Need to account for potential substitution by producers from more expensive to less costly inputs.

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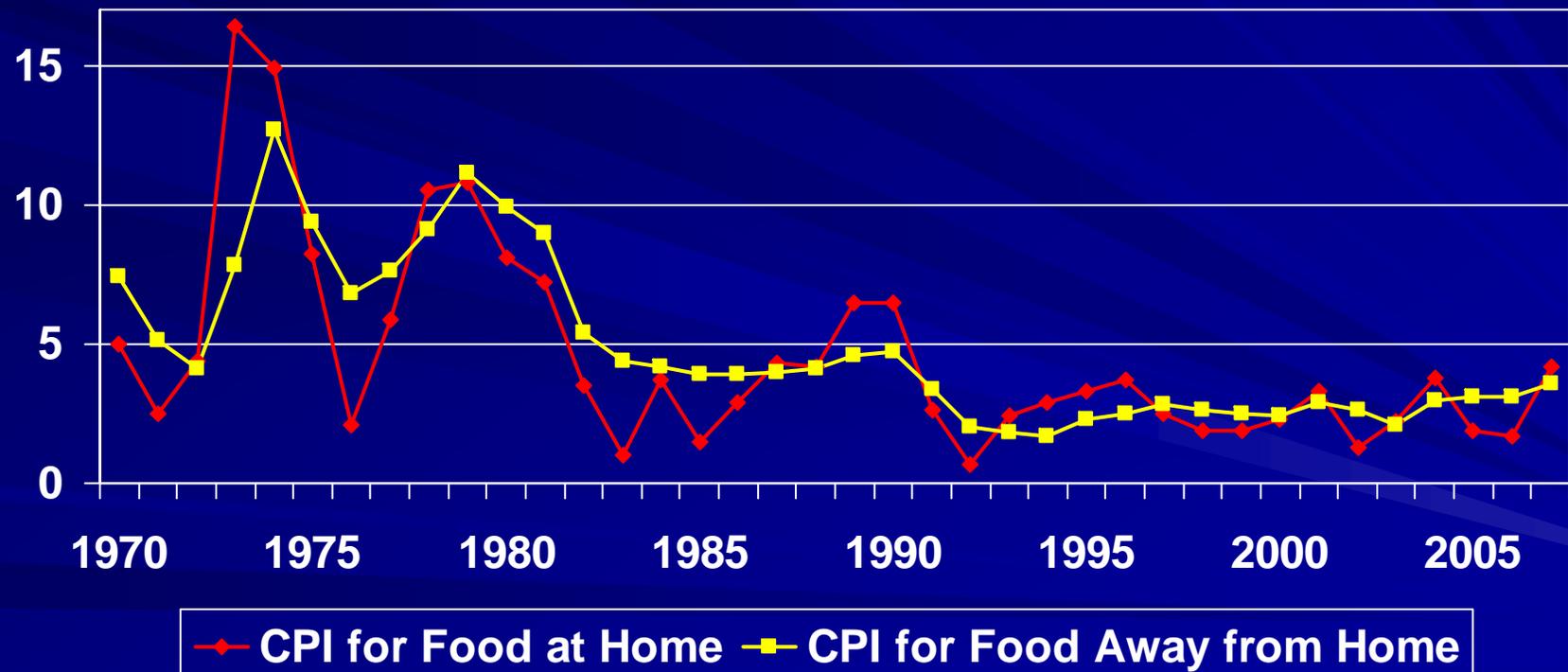
# Preliminary Conclusions

- Higher corn prices pass through to retail prices at a rate less than 10 percent of the corn price change.
- Given that foods using corn as an ingredient make up less than a third of retail food spending, overall retail food prices would rise less than 1 percentage point per year above the normal rate of food price inflation when corn prices increase by 50 percent.
- Even this increase may be partially tempered by changes to corn use in food production.

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# Food at Home vs Food Away from Home 1970-2007

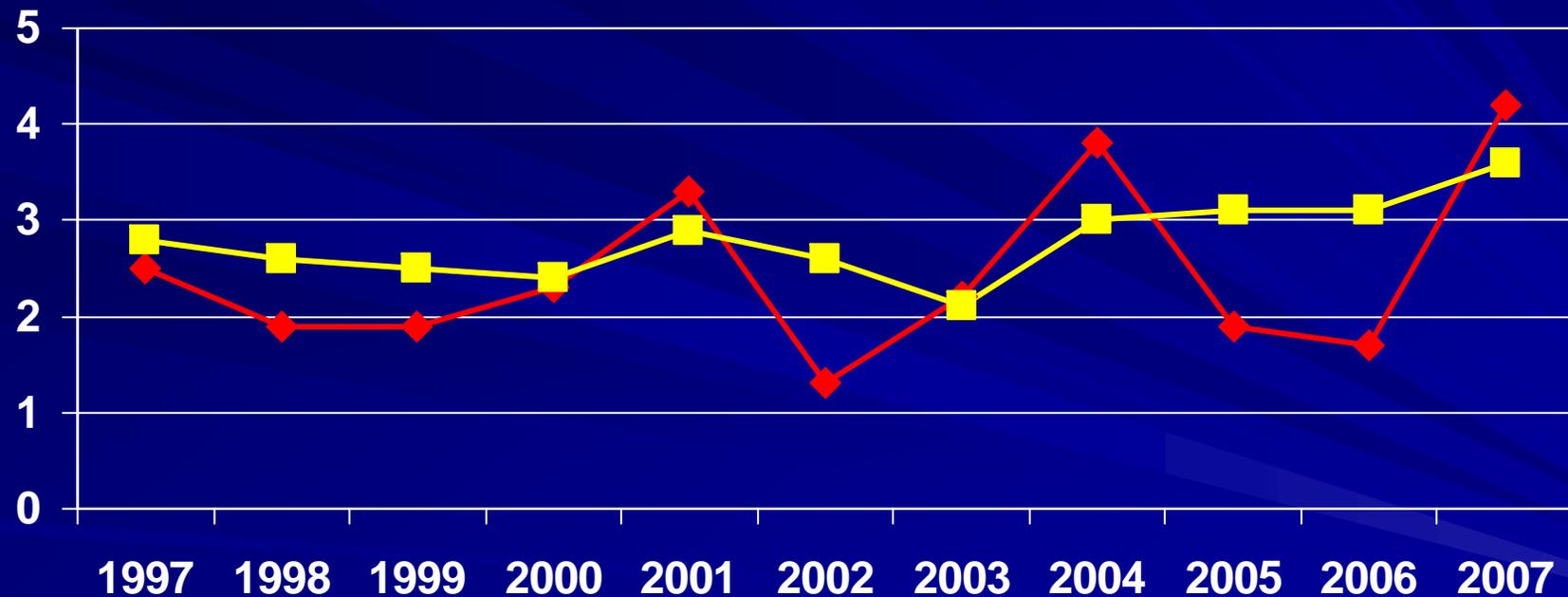
## Annual Percent Change



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# Food at Home vs Food Away from Home 1997-2007

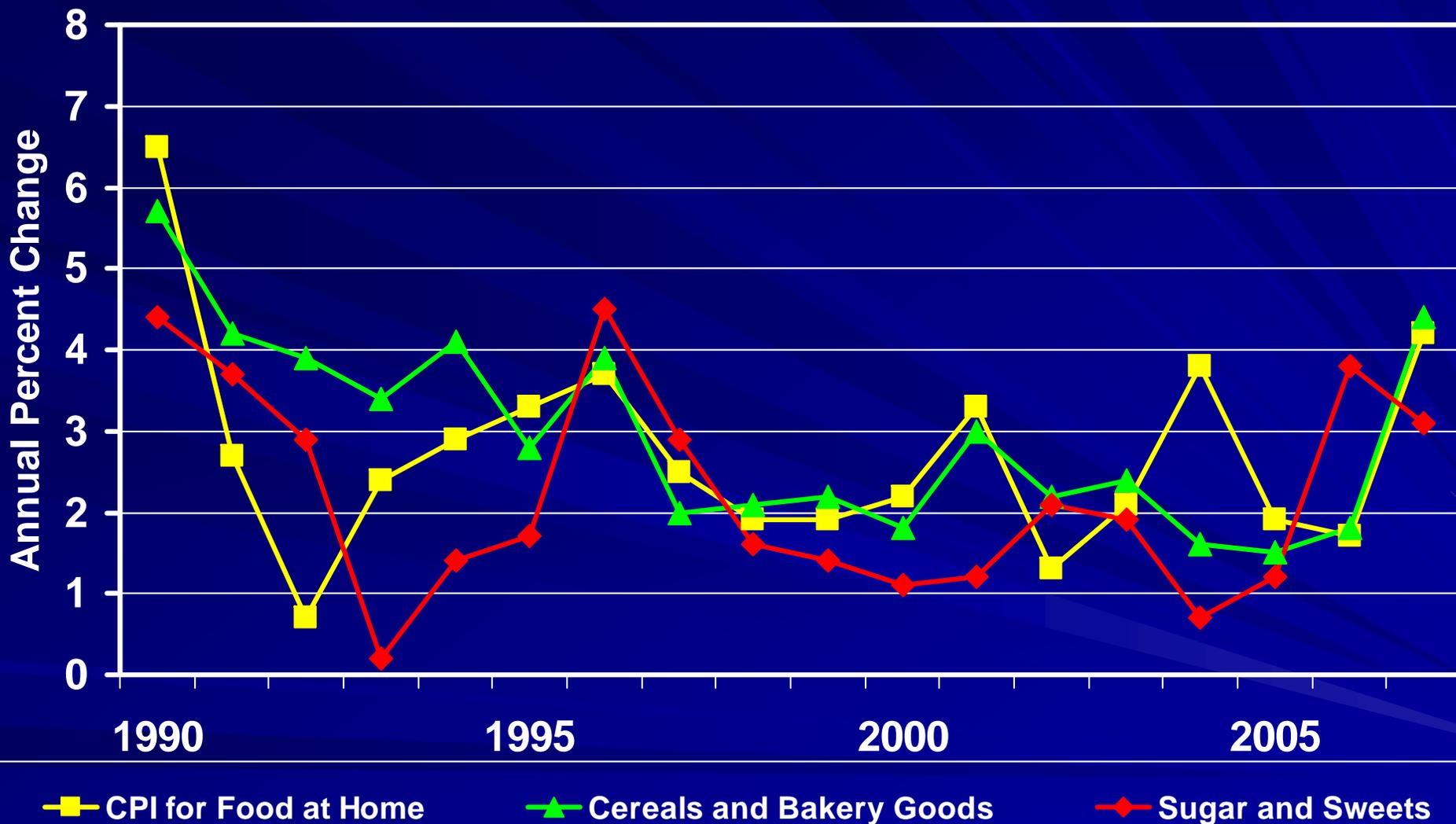
## Annual Percent Change



◆ CPI for Food at Home ■ CPI for Food Away from Home

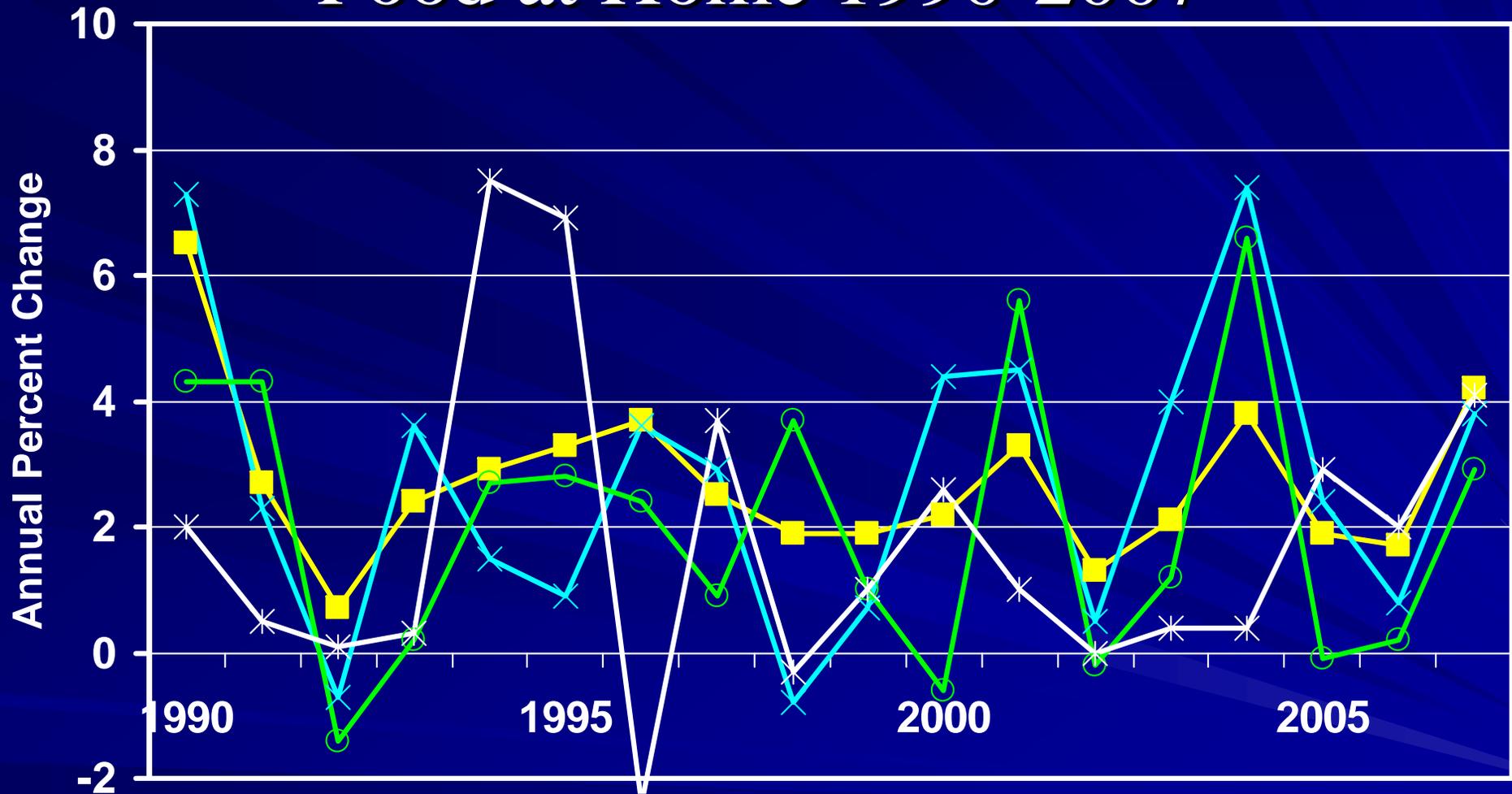
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# 'Stable' Components of the CPI for Food at Home 1990-2007



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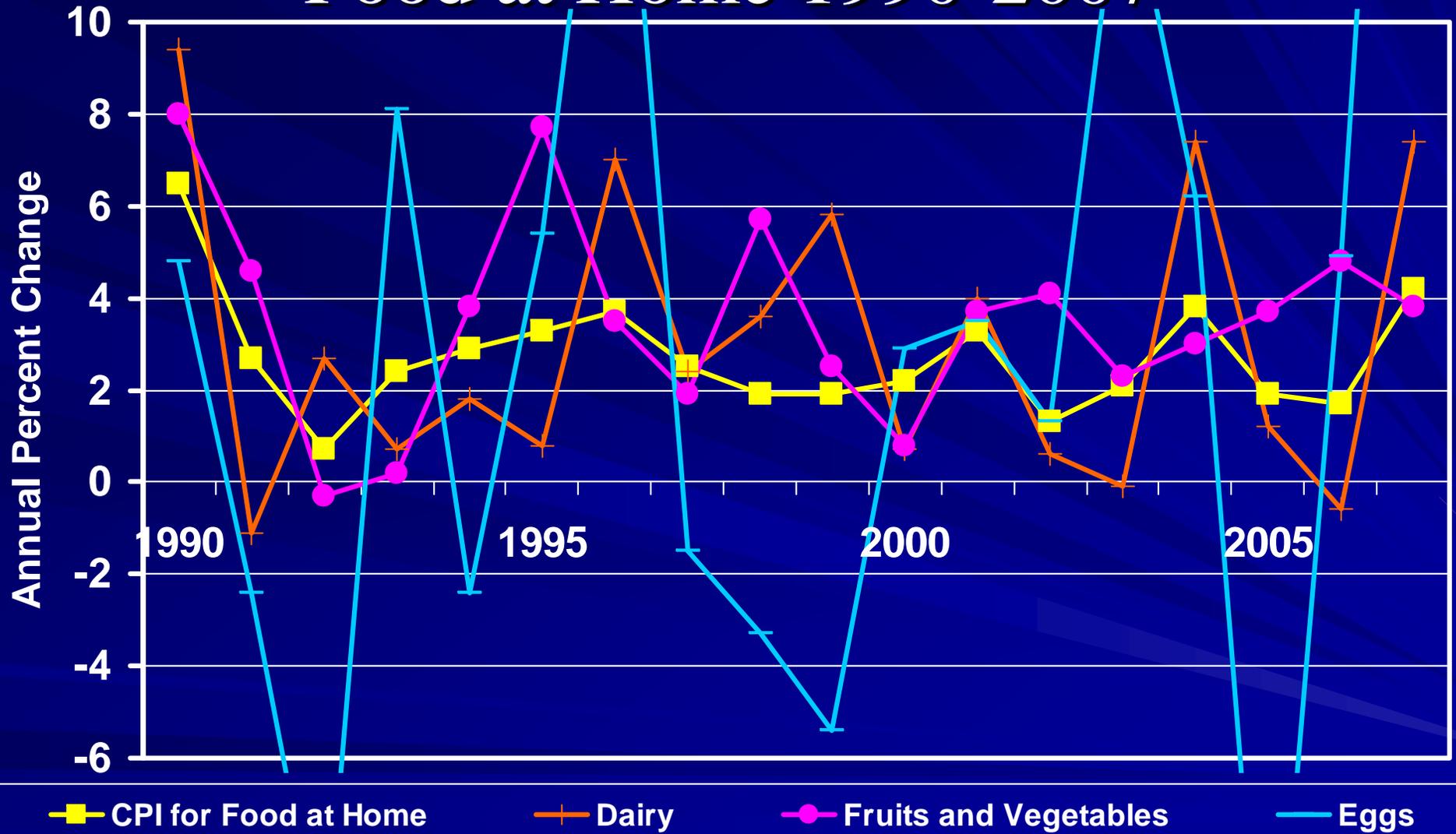
# Less Stable Components of the CPI for Food at Home 1990-2007



■ CPI for Food at Home 
 ✕ Meat, Poultry, Fish 
 ○ Fats and Oils 
 ✱ Nonalcoholic Beverages

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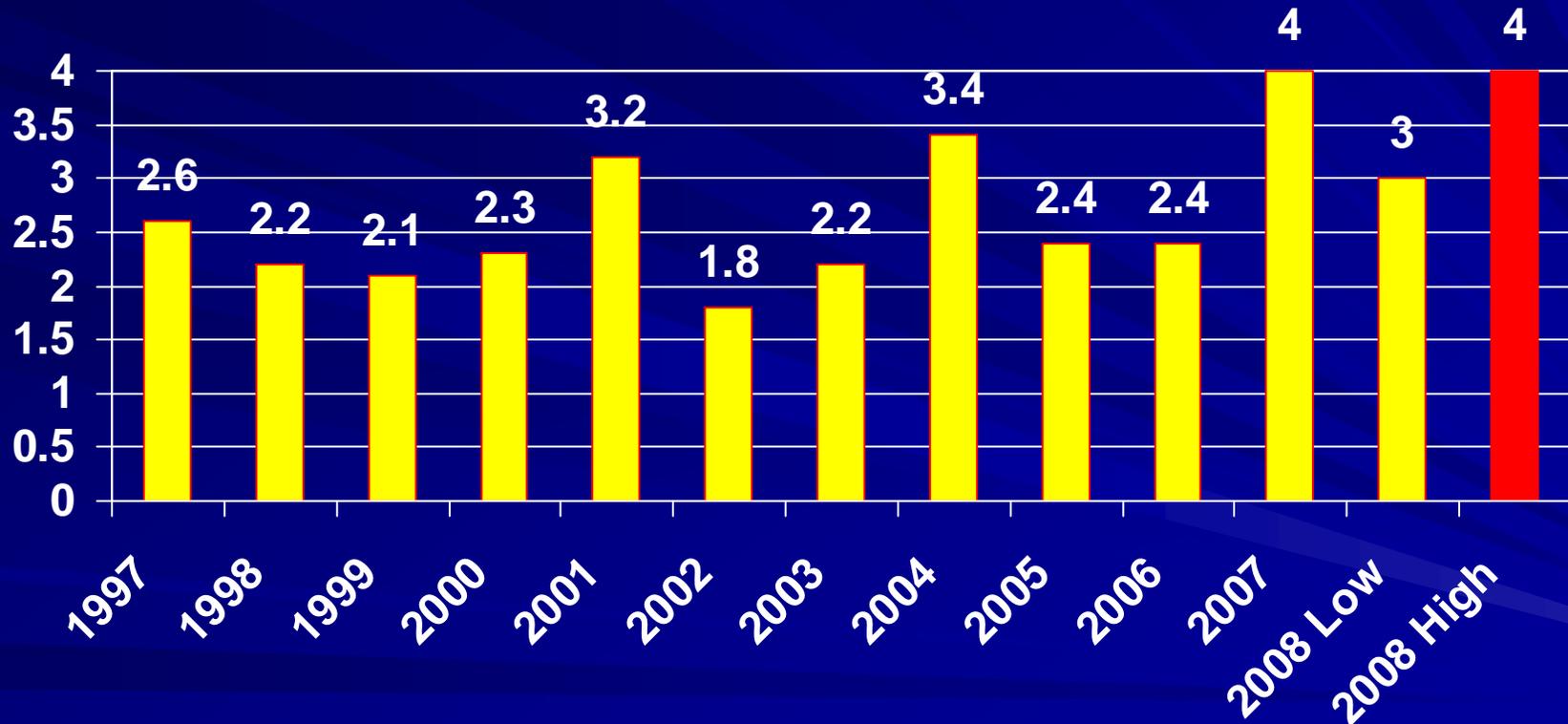
# 'Volatile' Components of the CPI for Food at Home 1990-2007



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# CPI for Food Above Historical Average Again in 2008

## Annual Percent Change in CPI for Food



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# Why?

## ■ Upward Pull on Retail Food Prices:

- Higher commodity costs (corn, wheat, soybeans, etc.)
- Higher energy and transportation costs
- Increased U.S. exports due to weaker dollar
- Rising labor and healthcare costs

## ■ Stabilizing Forces:

- Increased competition from nontraditional retail formats.
- Better inventory management/cost saving technologies
- Globalized trade: year-round availability
- Demand by consumers for convenience, quality, *and* low prices.

# Percent Change in Food CPI 2005-2008(a)

Items	2005	2006	2007	Forecast 2008
All Food	2.4	2.3	4.0	3.0 to 4.0
FAFH	3.1	3.1	3.6	3.0 to 4.0
Food at Home	1.9	1.7	4.2	3.5 to 4.5
<b>Beef</b>	<b>2.6</b>	<b>0.8</b>	<b>4.4</b>	<b>2.0 to 3.0</b>
<b>Pork</b>	<b>2.0</b>	<b>-0.2</b>	<b>2.0</b>	<b>1.5 to 2.5</b>
<b>Other Meats</b>	<b>2.4</b>	<b>1.8</b>	<b>2.3</b>	<b>0.0 to 1.0</b>
<b>Poultry</b>	<b>2.0</b>	<b>-1.8</b>	<b>5.2</b>	<b>1.5 to 2.5</b>

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# Percent Change in Food CPI 2005-2008 (b)

Items	2005	2006	2007	Forecast 2008
All Food	2.4	2.3	4.0	3.0 to 4.0
Food at Home	1.9	1.7	4.2	3.5 to 4.5
<b>Fish and Seafood</b>	<b>3.0</b>	<b>4.7</b>	<b>4.6</b>	<b>3.0 to 4.0</b>
<b>Dairy</b>	<b>1.2</b>	<b>-0.6</b>	<b>7.4</b>	<b>2.0 to 3.0</b>
<b>Fats and Oils</b>	<b>-0.1</b>	<b>0.2</b>	<b>2.9</b>	<b>6.5 to 7.5</b>
<b>Sugar + Sweets</b>	<b>1.2</b>	<b>3.8</b>	<b>3.1</b>	<b>2.0 to 3.0</b>
<b>Eggs</b>	<b>-13.7</b>	<b>4.9</b>	<b>29.2</b>	<b>0.0 to 1.0</b>

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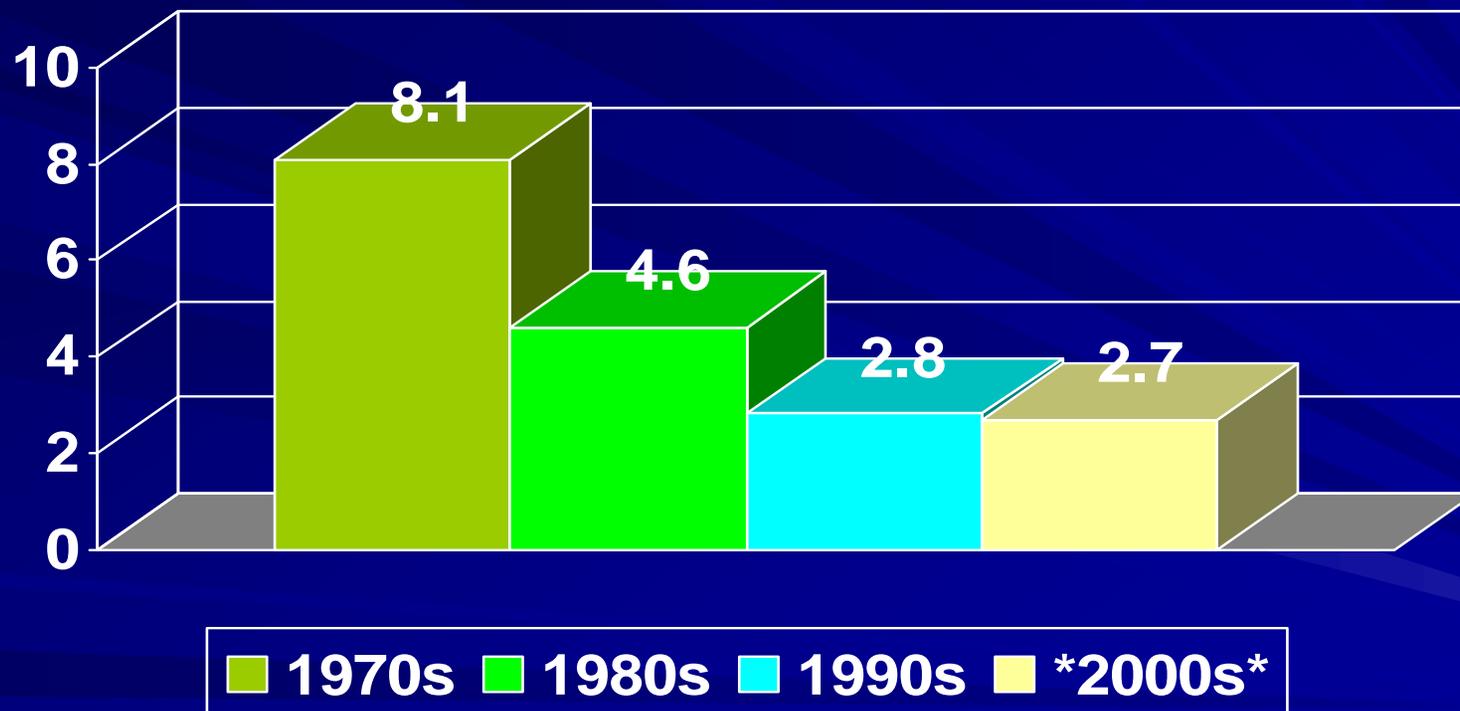
# Percent Change in Food CPI 2005-2008 (c)

Items	2005	2006	2007	Forecast 2008
All Food	2.4	2.3	4.0	3.0 to 4.0
Food at Home	1.9	1.7	4.2	3.5 to 4.5
Fresh Fruits	3.7	6.0	4.5	3.5 to 4.5
Fresh Vegetables	4.0	4.6	3.2	2.5 to 3.5
Processed F + V	3.3	2.9	3.6	3.0 to 4.0
Cereals + Bakery	1.5	1.8	4.4	5.5 to 6.5
Nonalcoholic Bev.	2.9	2.0	4.1	3.5 to 4.5

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# Food Price Inflation Stabilizing

## Average Annual Percent Change in Food Price Inflation by Decade



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# Questions



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# Contact Information

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For more information, see

<http://www.ers.usda.gov/Briefing/CPIFoodAndExpenditures/>

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