

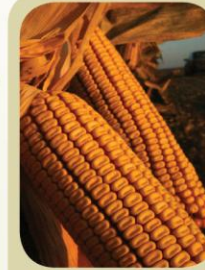


Minnesota

Agri-Growth Council

Annual Meeting & Speakers Conference

November 16th, 2011 • Minneapolis Convention Center



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Raising Food For Thought

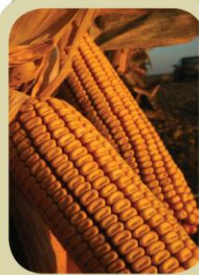
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Monetary Policy and Food Prices

Jason Henderson
Omaha Branch Executive
Federal Reserve Bank of Kansas City



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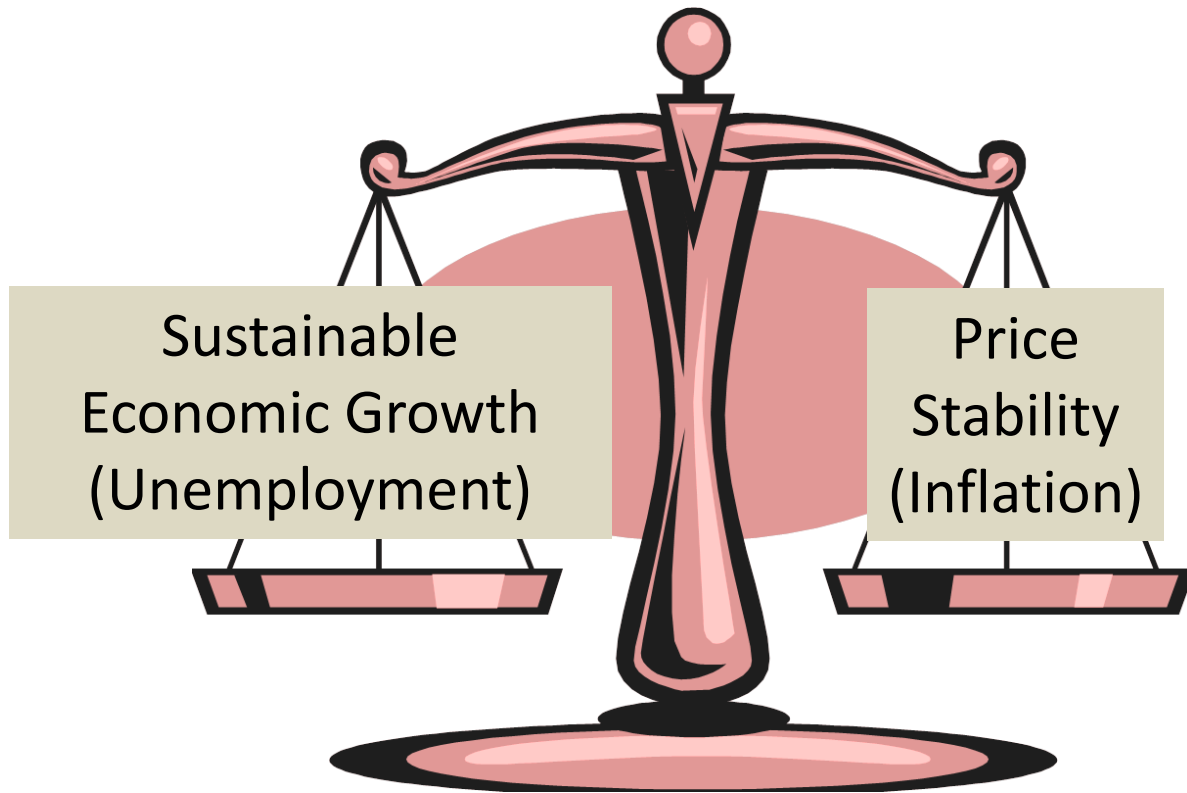
The opinions expressed are those of the author and do not necessarily reflect the views of the Federal Reserve Bank of Kansas City or the Federal Reserve System.

The most asked question of a Fed economist:

- What will interest rates do in the next six months?
- The answer:
 - FOMC Statement, November 2, 2011

The Committee also decided to keep the target range for the federal funds rate at 0 to 1/4 percent and currently anticipates that economic conditions--including low rates of resource utilization and a subdued outlook for inflation over the medium run--are likely to warrant exceptionally low levels for the federal funds rate at least through mid-2013.

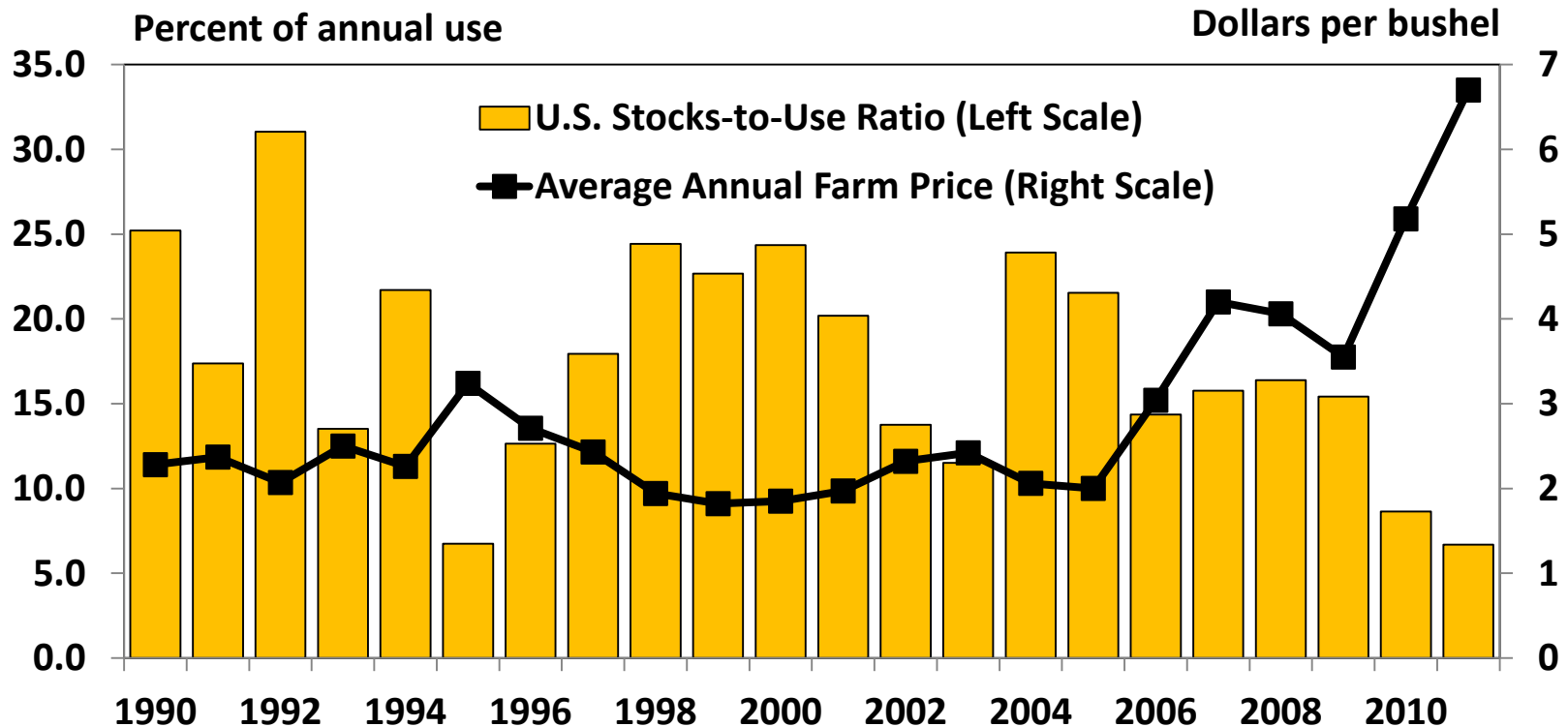
The Balancing Act of Monetary Policy



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Market fundamentals drive ag prices. Monetary policy is an amplifier.

U.S. Corn Inventory and Farm Price



Source: USDA

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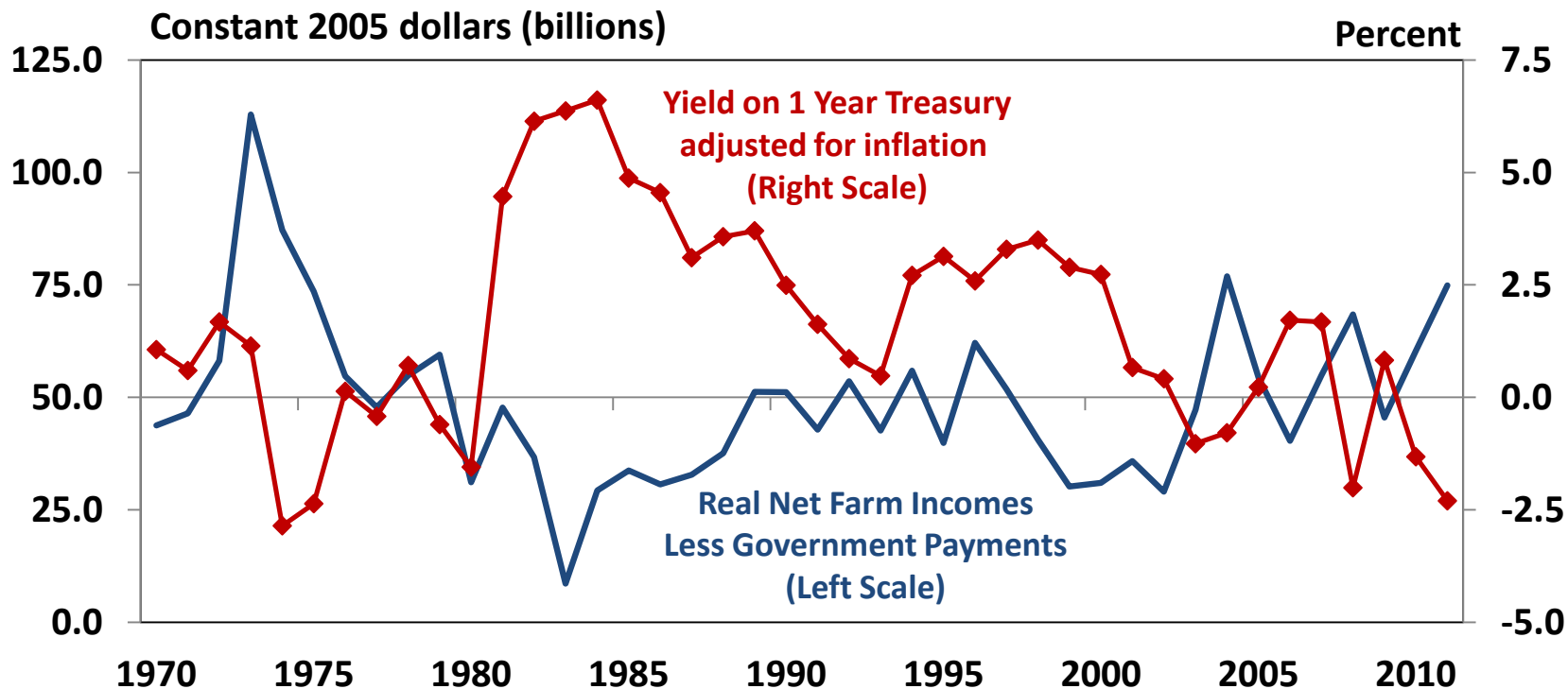
What are the Implications for Agriculture?

Agriculture's "Golden Eras" emerged during low interest rate environments.

- Through a weak dollar, farm incomes surge in low interest rates environments.
- Farmland values boom as low interest rates boost the capitalization of farm incomes.
- The "Golden Eras" of agriculture
 - 1910s: low rates used to finance WWI
 - 1970s: low rates to stimulate growth
 - 2000s: low rates used to combat "Jobless Recoveries"

High farm incomes in low interest rate environments.

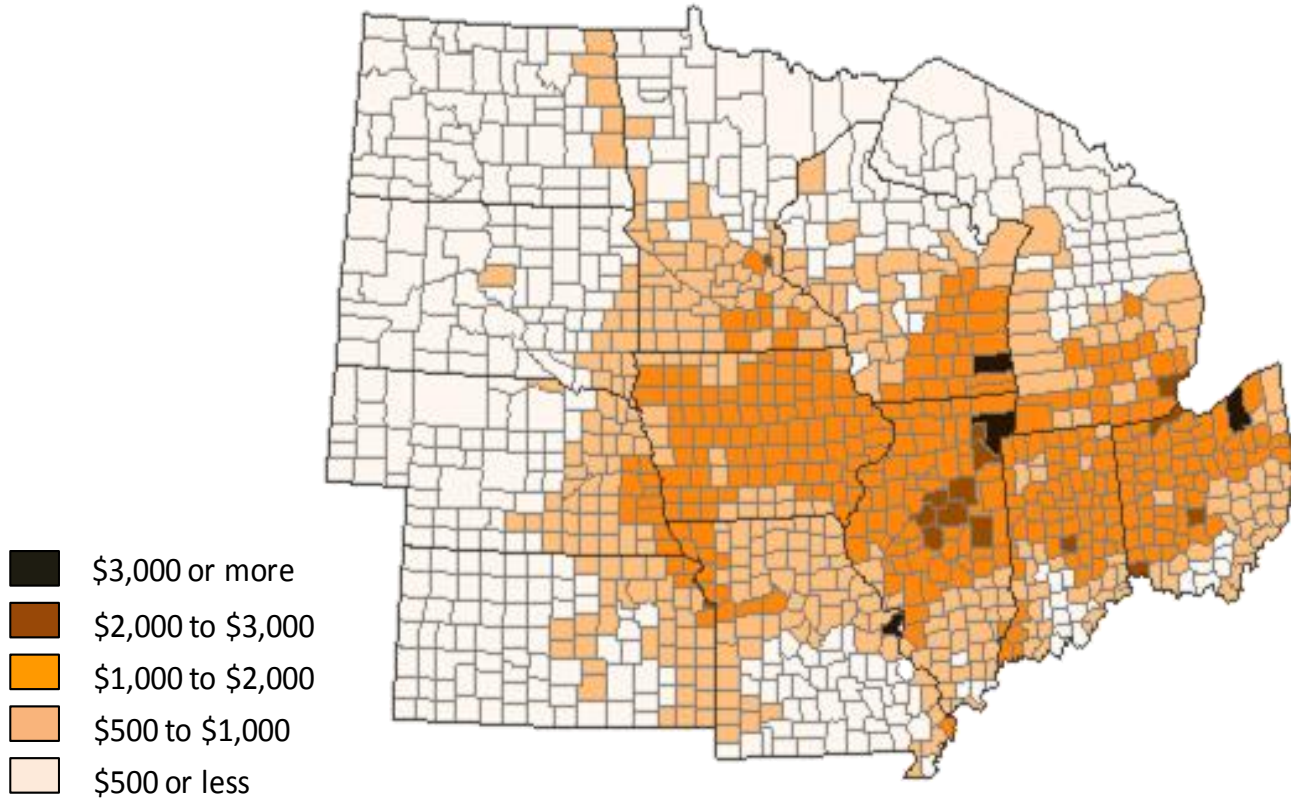
Farm Incomes and Interest Rates



Source: Henderson and Briggeman (2011), "What are the Risks in Today's Farmland Market?" *Main Street Economist*, Issue 1.

In 1900, only a few counties had land values with more than \$1000 per acre.

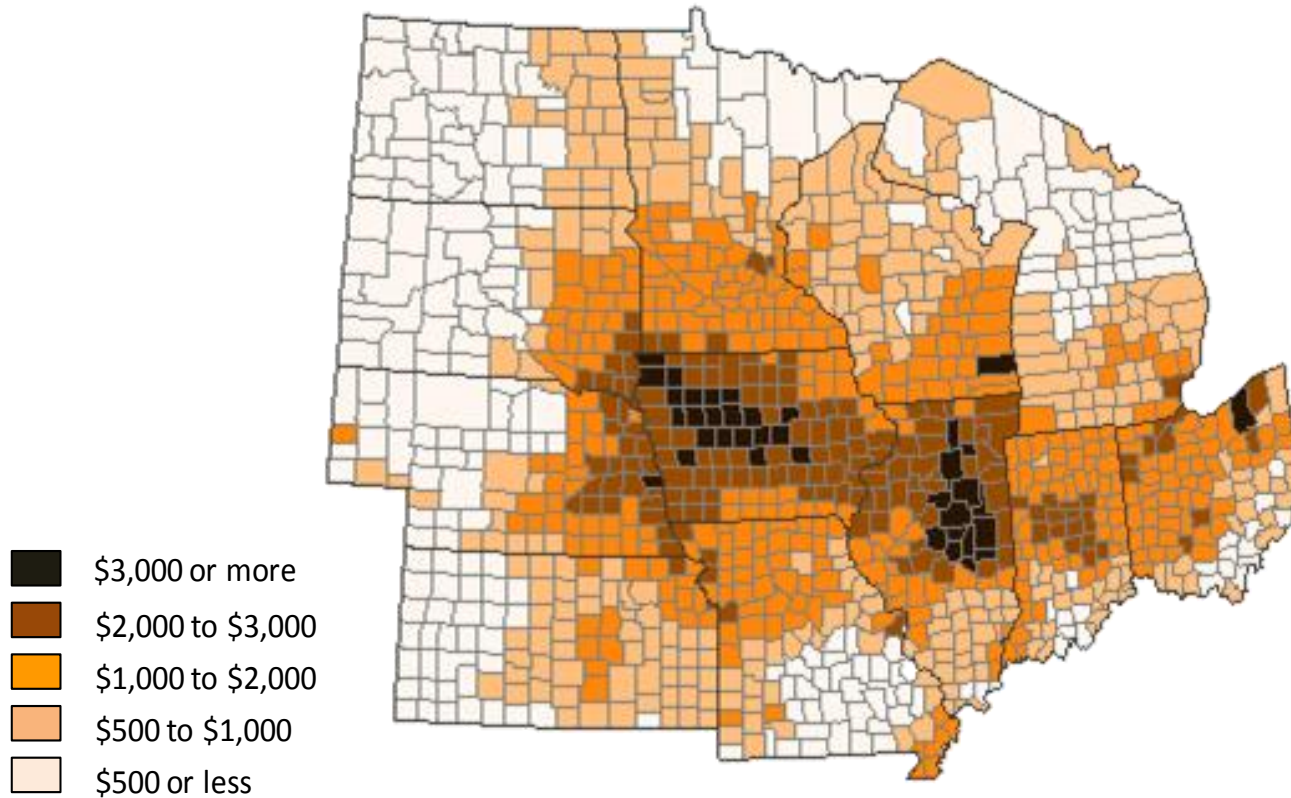
Real Farmland Values in 1900



Source: USDA

**By the end of WWI,
\$2000 to \$3000 per acre was common.**

Real Farmland Values in 1920

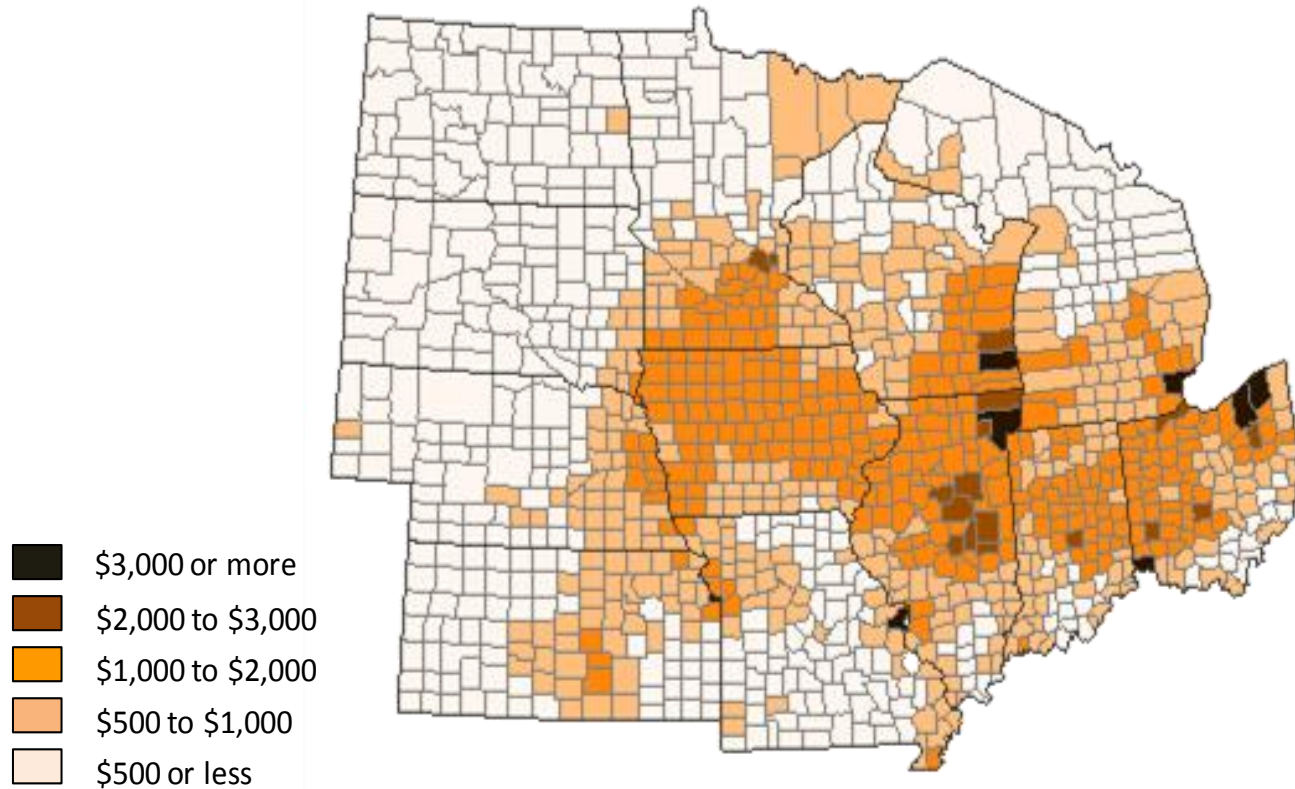


Source: USDA

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By the end of the Great Depression, land values were back to 1900 values.

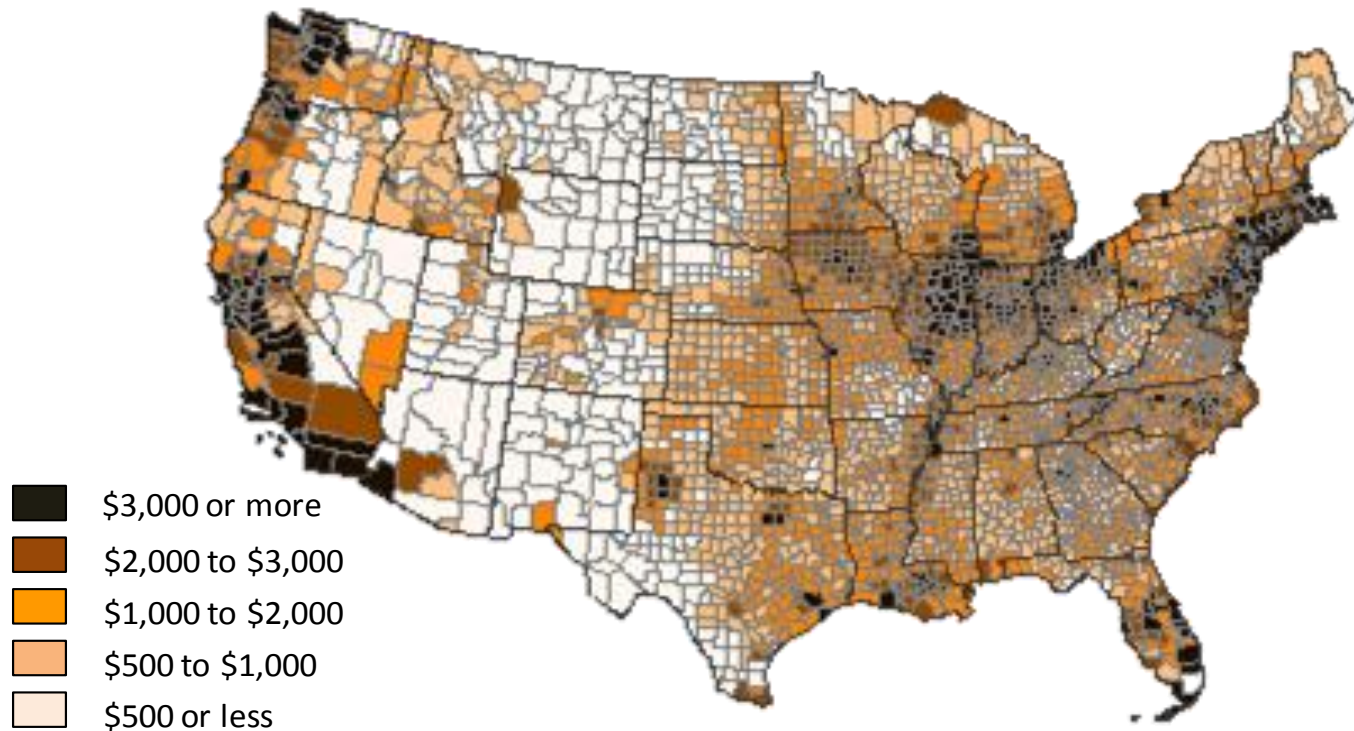
Real Farmland Values in 1940



Source: USDA

By 1970s, productivity gains had boosted farmland values.

Real Farmland Values in 1969

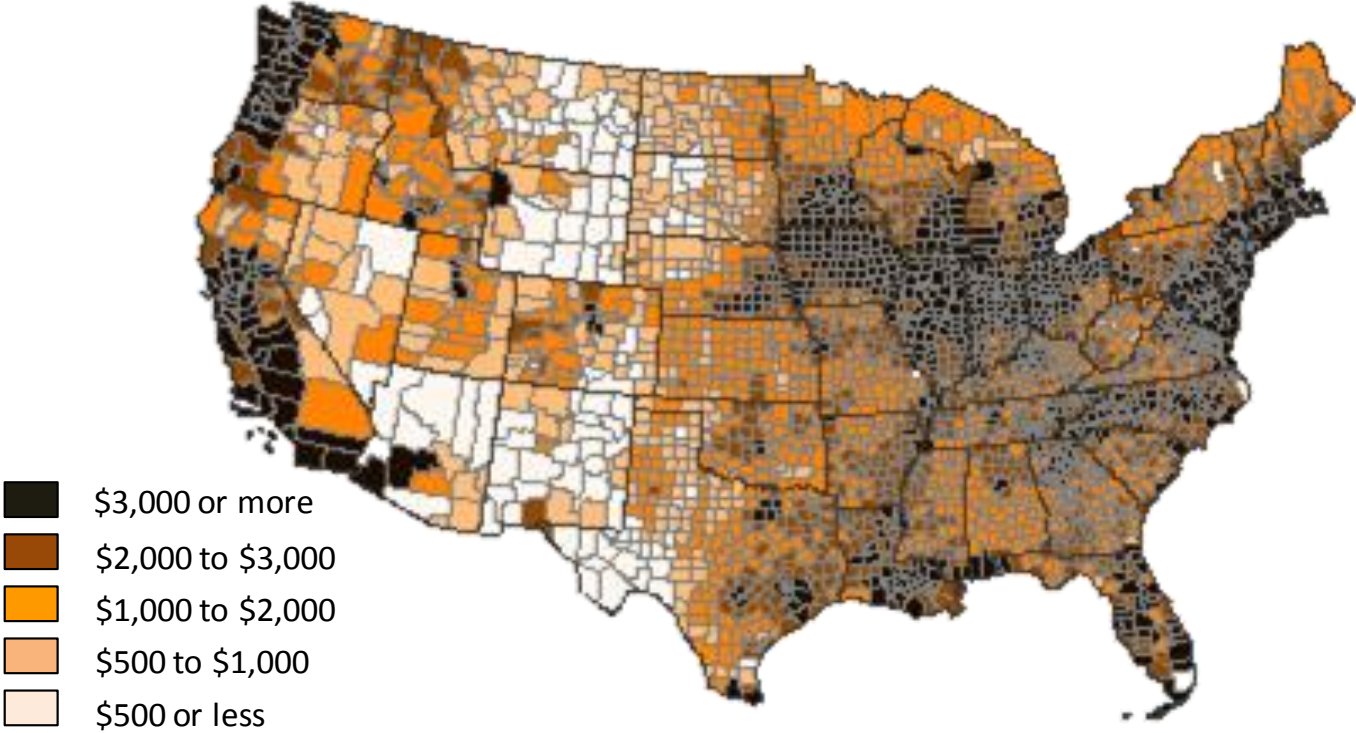


Source: USDA

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Farmland values surged in the 1970s.

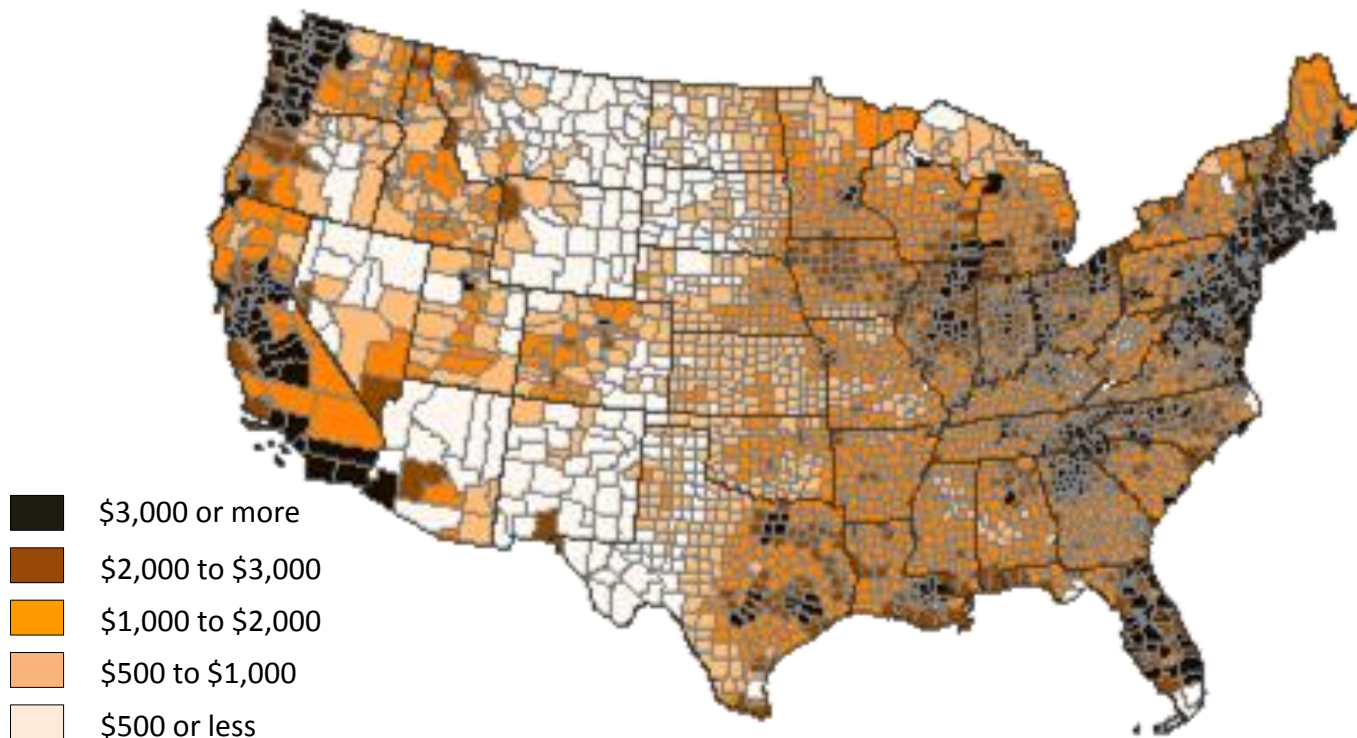
Real Farmland Values in 1982



Source: USDA

Within 5 years, farmland values dropped back to 1969 levels.

Real Farmland Values in 1987

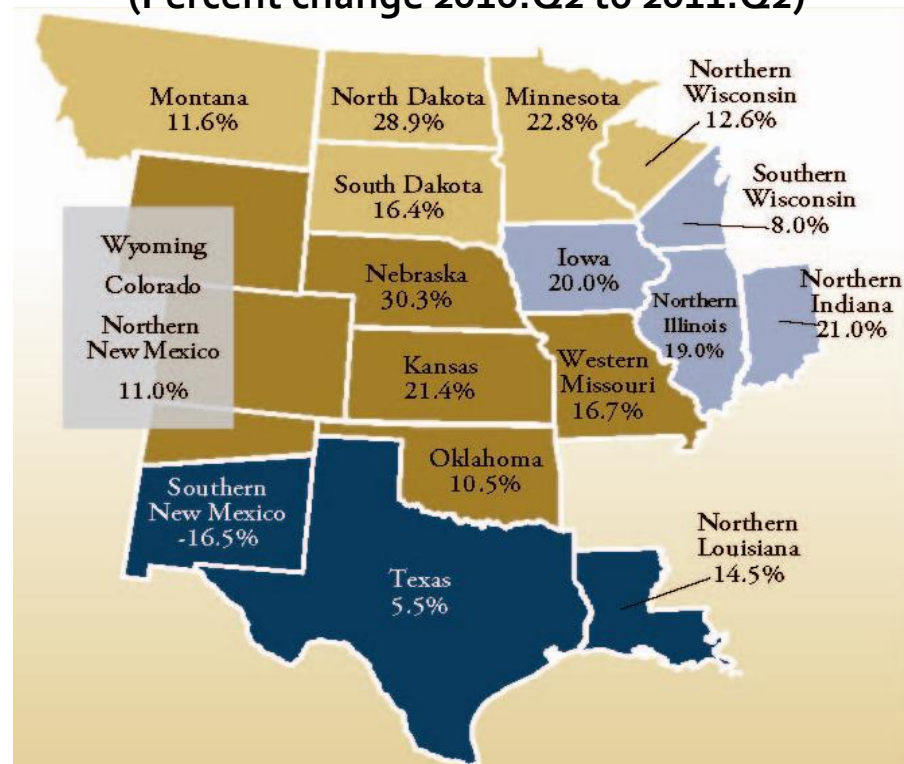


Source: USDA

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Today, robust energy and agricultural prices spur cropland value gains.

Non-irrigated Cropland Values (Percent change 2010:Q2 to 2011:Q2)



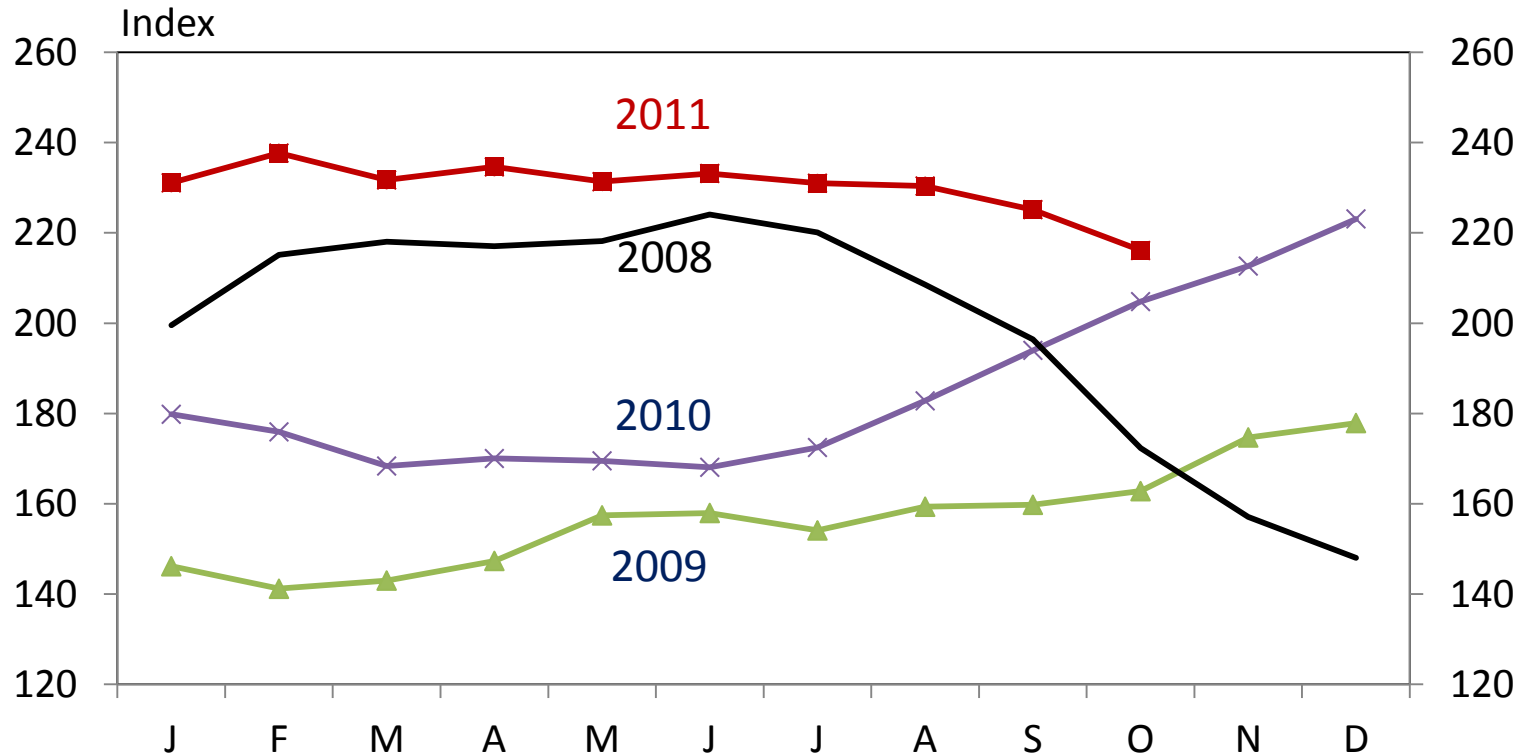
Source: Agricultural Finance Databook, Federal Reserve Bank of Kansas City

What are the Implications for Agriculture?

- The Benefits
 - Farm incomes are high
 - Farmland values boom
- The Costs
 - Food prices escalate, especially for the poor.
 - Depending on your perspective, food vs. fuel.

Soaring global food prices start to ease

World Food Prices

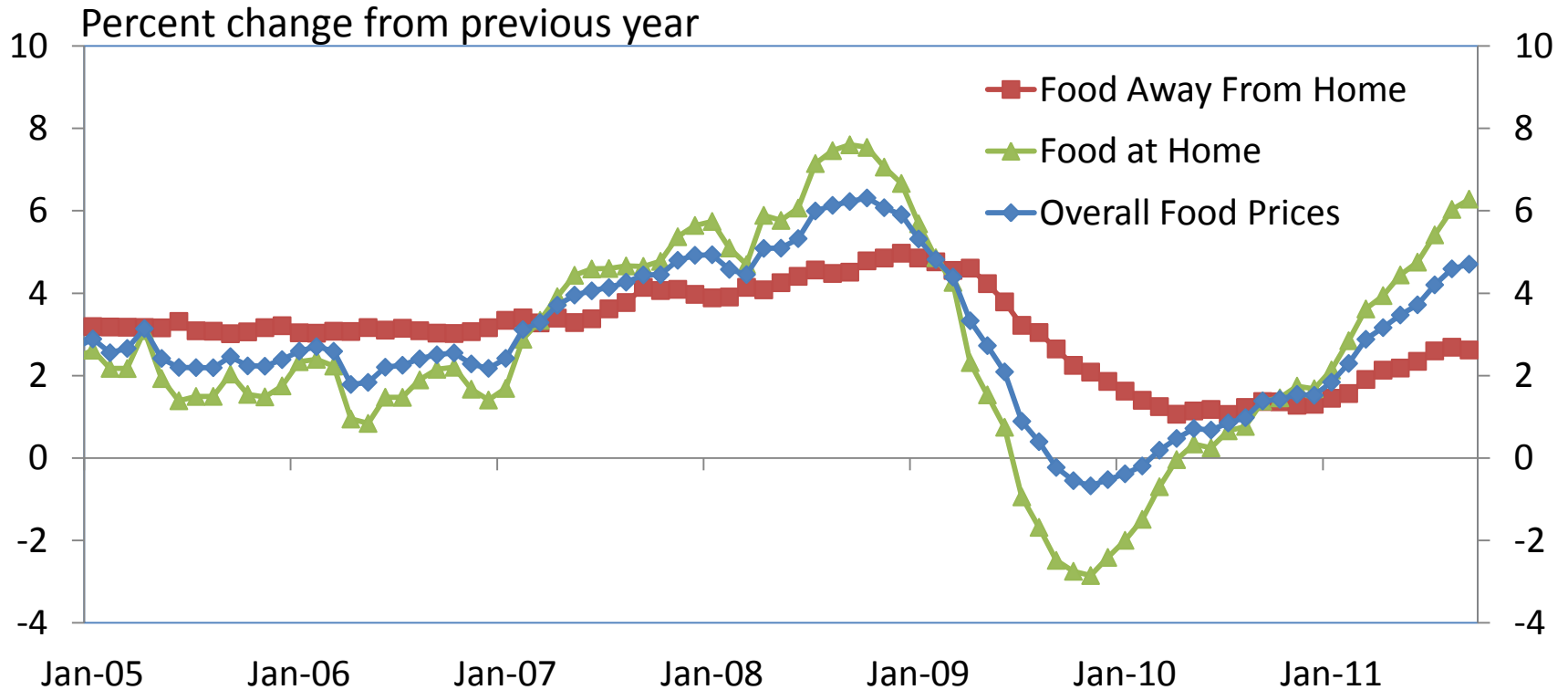


Source: FAO of the United Nations

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Yet, U.S. food prices continue to rise, especially for food consumed at home.

U.S. Food Price Inflation



Source: Bureau of Labor Statistics

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Why is there a difference between world and U.S. food price inflation?

Commodities account for a smaller share of processed foods.

Farm share of U.S. food dollar

Beef products	45 cents
Milk products	30 cents
Fruits and vegetables	25 to 28 cents
Bread	4 cents
Corn flakes	4 cents
Corn syrup	3 cents

Source: USDA

The U.S. Food Marketing Bill



Farm value Marketing bill
What a dollar spent on food paid for in 2006

1960s to 1970s

- 1) Farm value 33%
- 2) Labor 29.5%

2008

- 1) Labor 40%
- 2) Farm value 16%

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Why is there a difference between world and U.S. food price inflation?

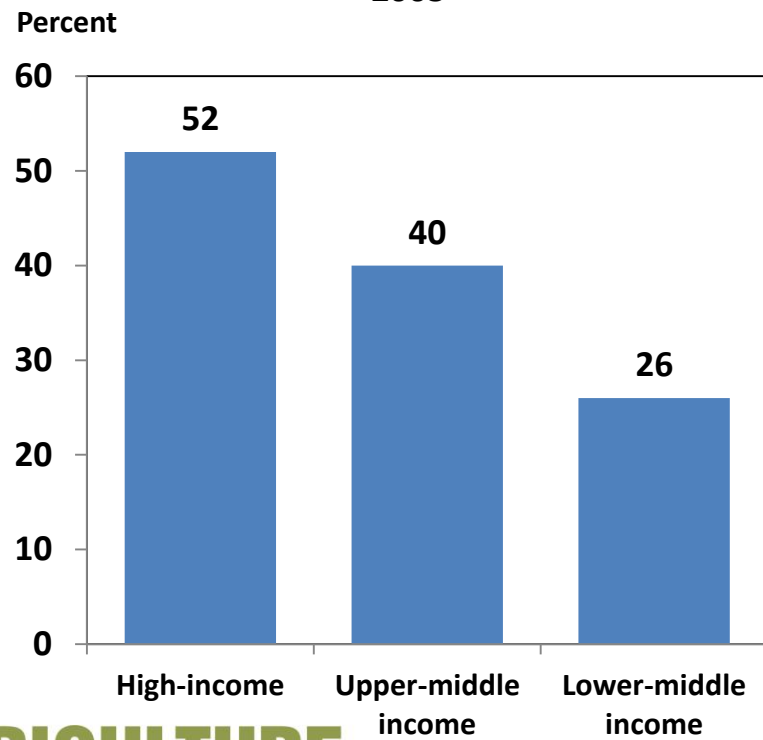
Wealthy nations eat more processed foods.

Per capita fast-food expenditures
(2005)

U.S.	\$492
Canada	\$387
United Kingdom	\$199
Japan	\$108
Brazil	\$ 26.3
China	\$ 7.4
India	\$4.3

Source: USDA and Euromonitor

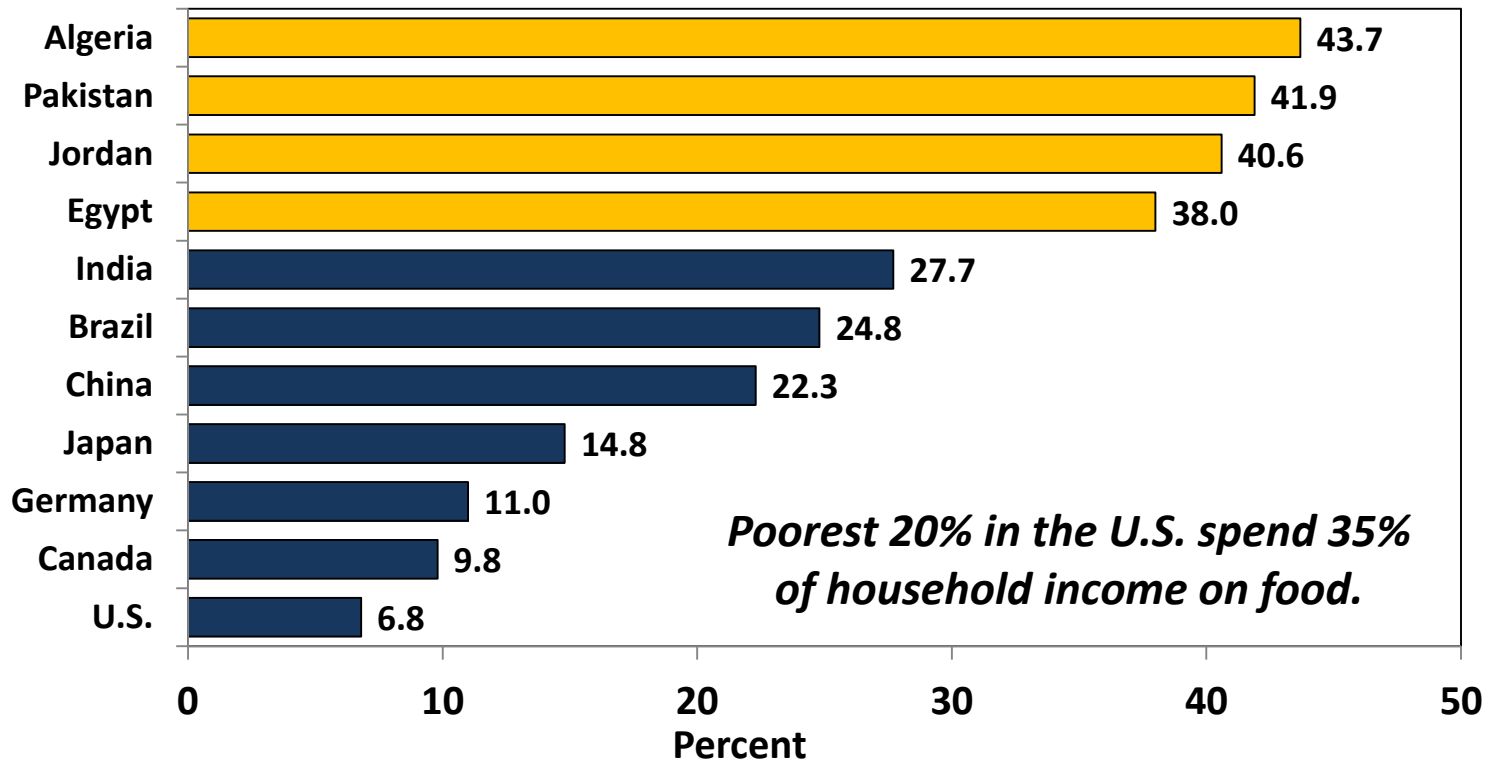
Packaged Foods Share of Food Expenditures
2005



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Rising food prices stress household budgets, especially the poor.

Food Share of Household Expenditure by Country, 2010



Source: USDA

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Food price inflation is projected to slow.

Commodity	2011	2012
Overall Food	3.5 to 4.5	2.5 to 3.5
Food away from home	3.0 to 4.0	2.0 to 3.0
Food at home	4.0 to 5.0	3.0 to 4.0
Meats	6.5 to 7.5	3.5 to 4.5
Dairy products	5.0 to 6.0	3.5 to 4.5
Fruits and vegetables	3.5 to 4.5	3.0 to 4.0
Sugars	2.5 to 3.5	2.0 to 3.0
Cereals	4.0 to 5.0	4.5 to 5.5

Source: USDA

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Food vs. Fuel

What we know: Ethanol is based on mandates, tariffs, and subsidies.

**Ethanol policy is being scrutinized again.
Will the answers be different?**

- What are the public benefits?
- Does it reduce our dependence on foreign oil?
- Is ethanol environmentally sustainable?
- Can we afford it?
- How long before advanced ethanol is viable?
- What is the impact on global food prices?

What are the Risks for Agriculture?

- Future inflation
 - Inflation rose in 2011
 - Headline CPI inflation: 3.9% over the past year.
 - Core CPI inflation: 2.0% over the past year.
- Yet, forecasts suggest slower inflation in 2012.
- Inflation expectations remain stable.

Ultimately, velocity is the key to inflation.

Inflation is based on money and velocity.

Quantity Theory of Money

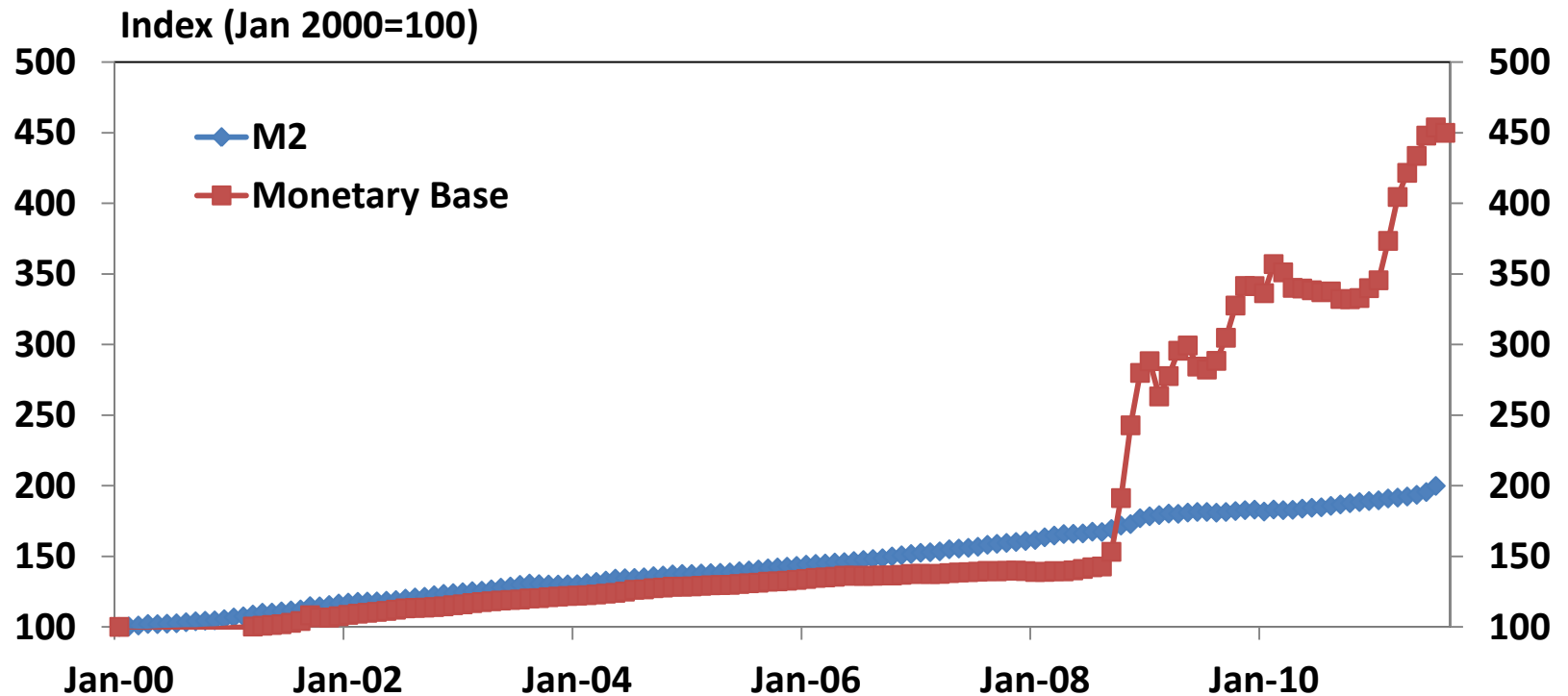
$$\text{Price} = \frac{\text{Money} * \text{Velocity}}{\text{Quantity}}$$

Definition of Inflation:

Too much money $M \uparrow$
chasing $V \uparrow$
too few goods $Q \downarrow$

The monetary base is not money supply.

Growth in Monetary Aggregates

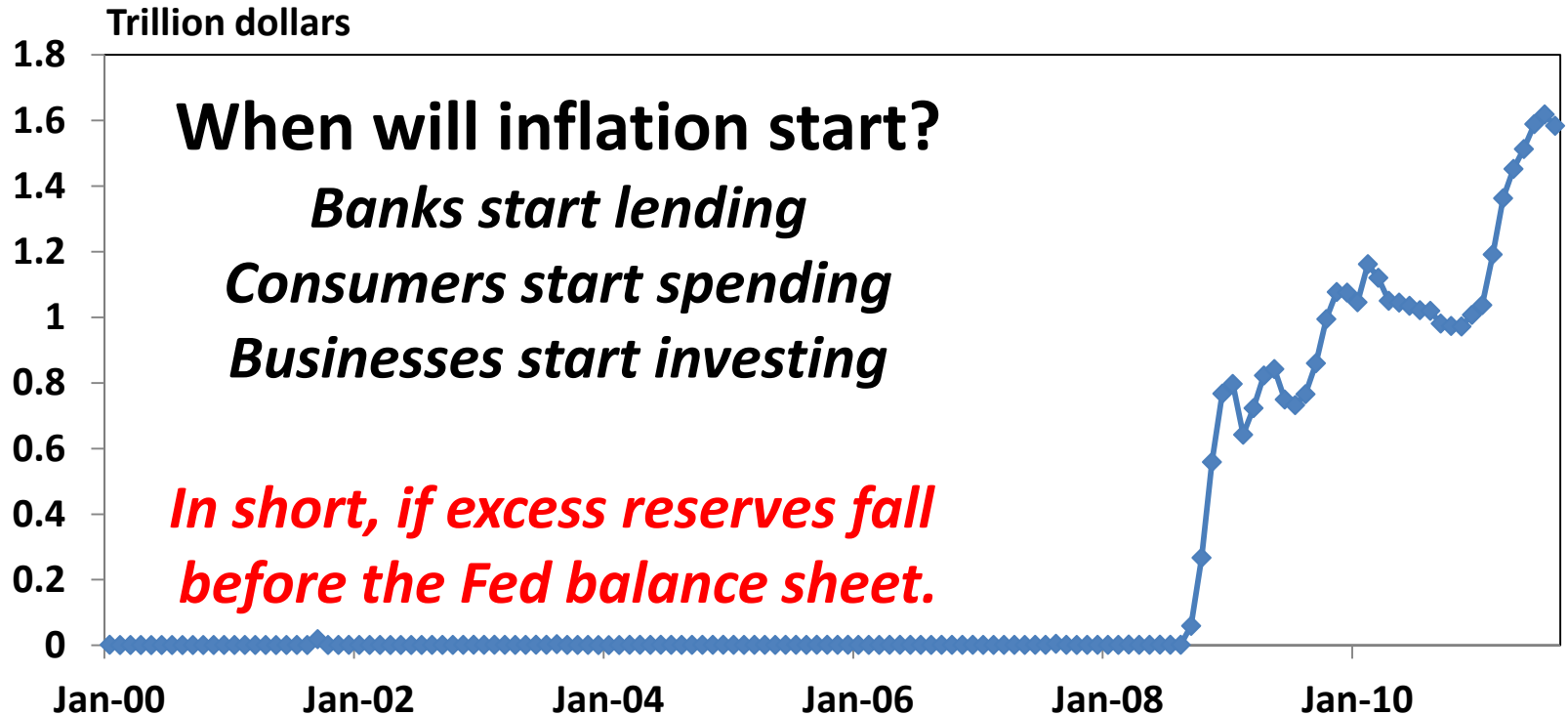


Source: Federal Reserve Board of Governors

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Banks are holding monetary base in excess reserves.

Excess Reserves in Depository Institutions



Source: Federal Reserve Board of Governors

Conclusions

- Market fundamentals drive market prices, monetary policy is an amplifier.
- Agriculture's "Golden Eras" emerged in low interest rate environments.
- Agriculture enjoys booming farm incomes and land values, but ...
- Urban consumers bear the burden of higher food prices.
- Velocity will shape inflation in the future.

***The key is bank lending, consumer spending,
and business investment.***

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