

Brian C. Briggeman

Economist

Federal Reserve Bank of Kansas City – Omaha Branch

www.kansascityfed.org/omaha

January 26, 2011

Opportunities and Challenges Facing Agriculture in 2011 and Beyond



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

Opportunities and Challenges for Agriculture

Opportunities

- 1) Food demand has rebounded

Challenges

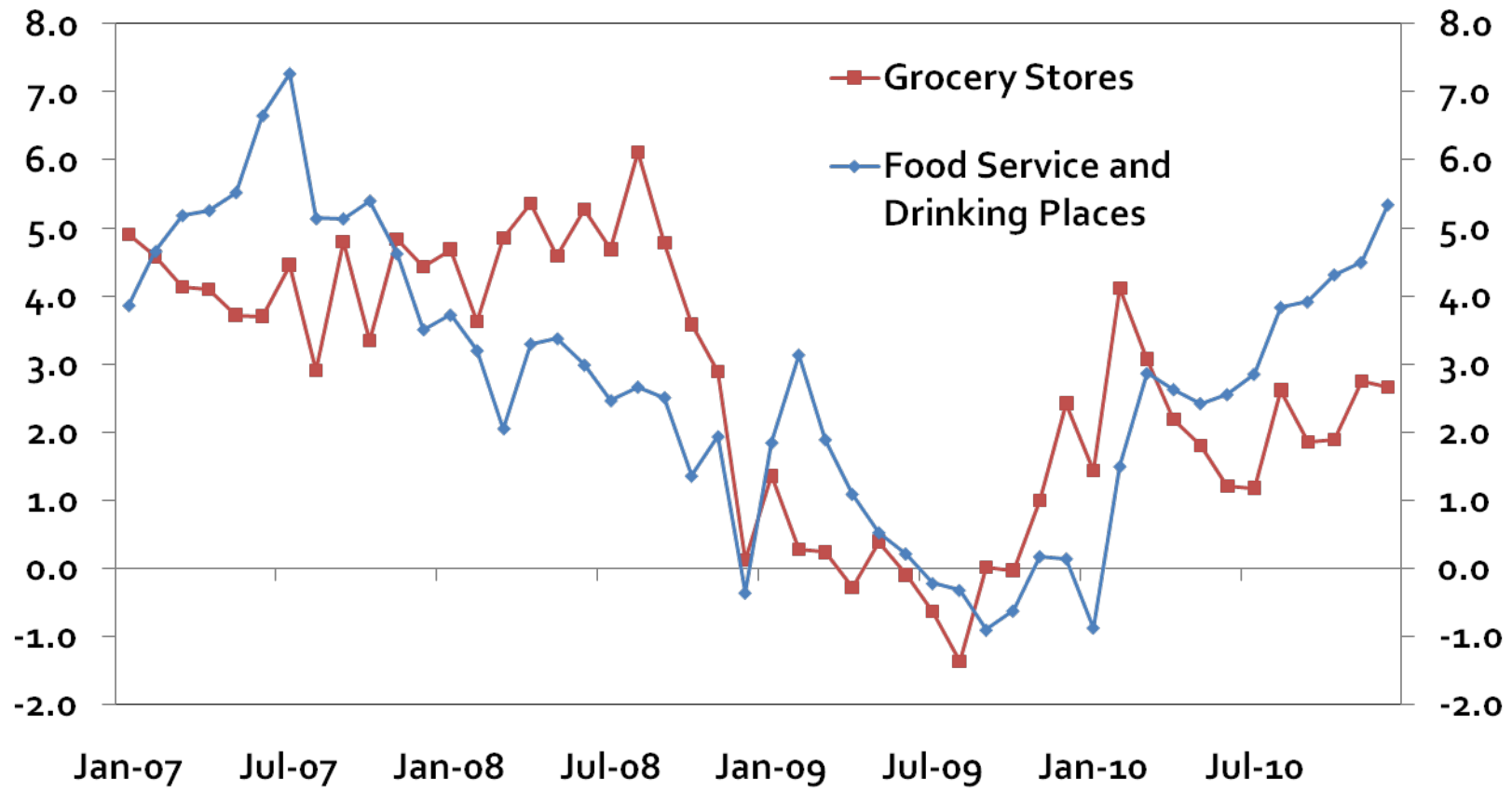
- 1) Elevated unemployment rate



U.S. food expenditures have rebounded.

U.S. Retail Sales at Grocery Stores and Restaurants

Percent change from year ago

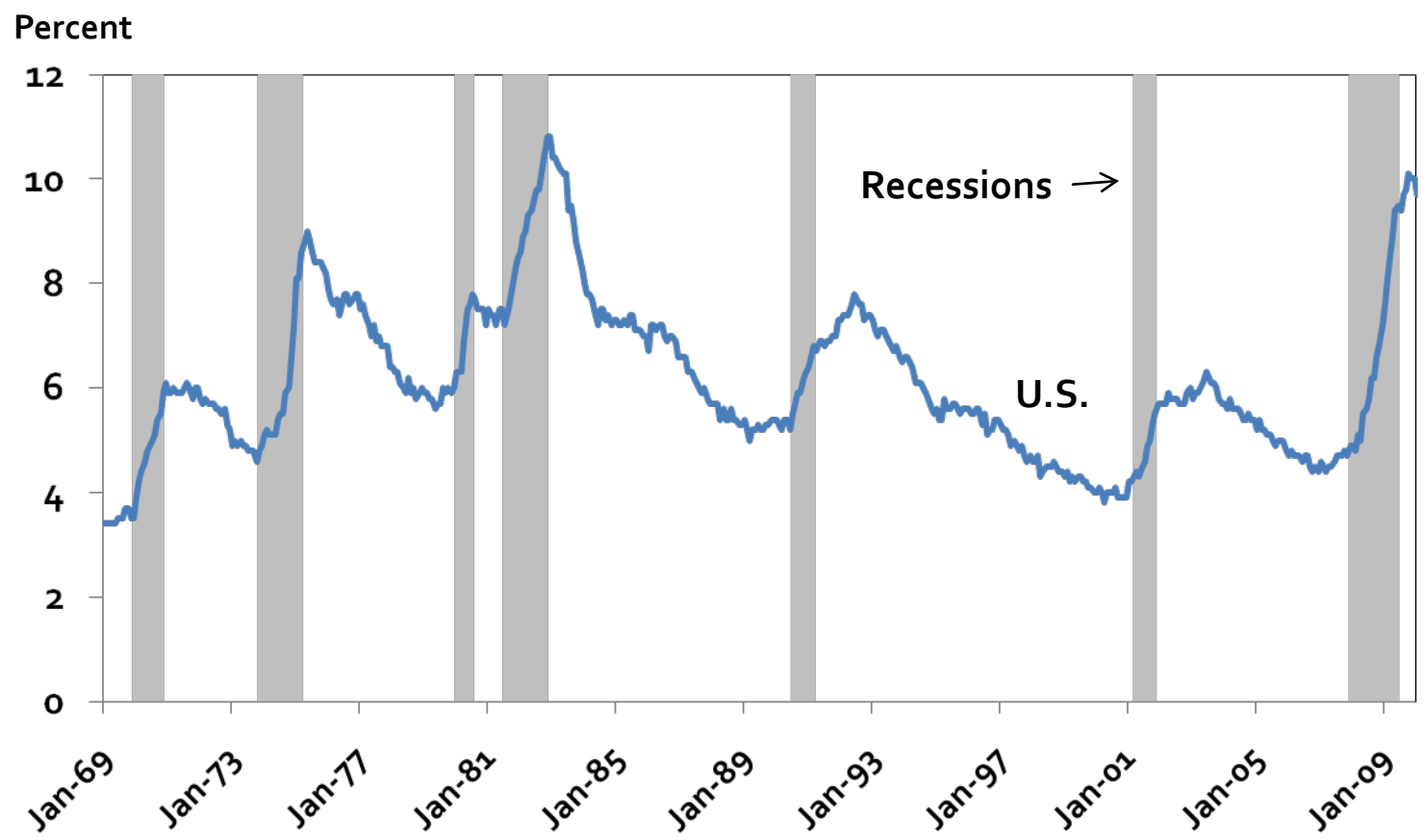


Source: Census Bureau



An elevated unemployment rate weighs on consumer demand.

U.S. Unemployment Rate (U3)



Source: Bureau of Economic Analysis and Bureau of Labor Statistics



Opportunities and Challenges for Agriculture

Opportunities

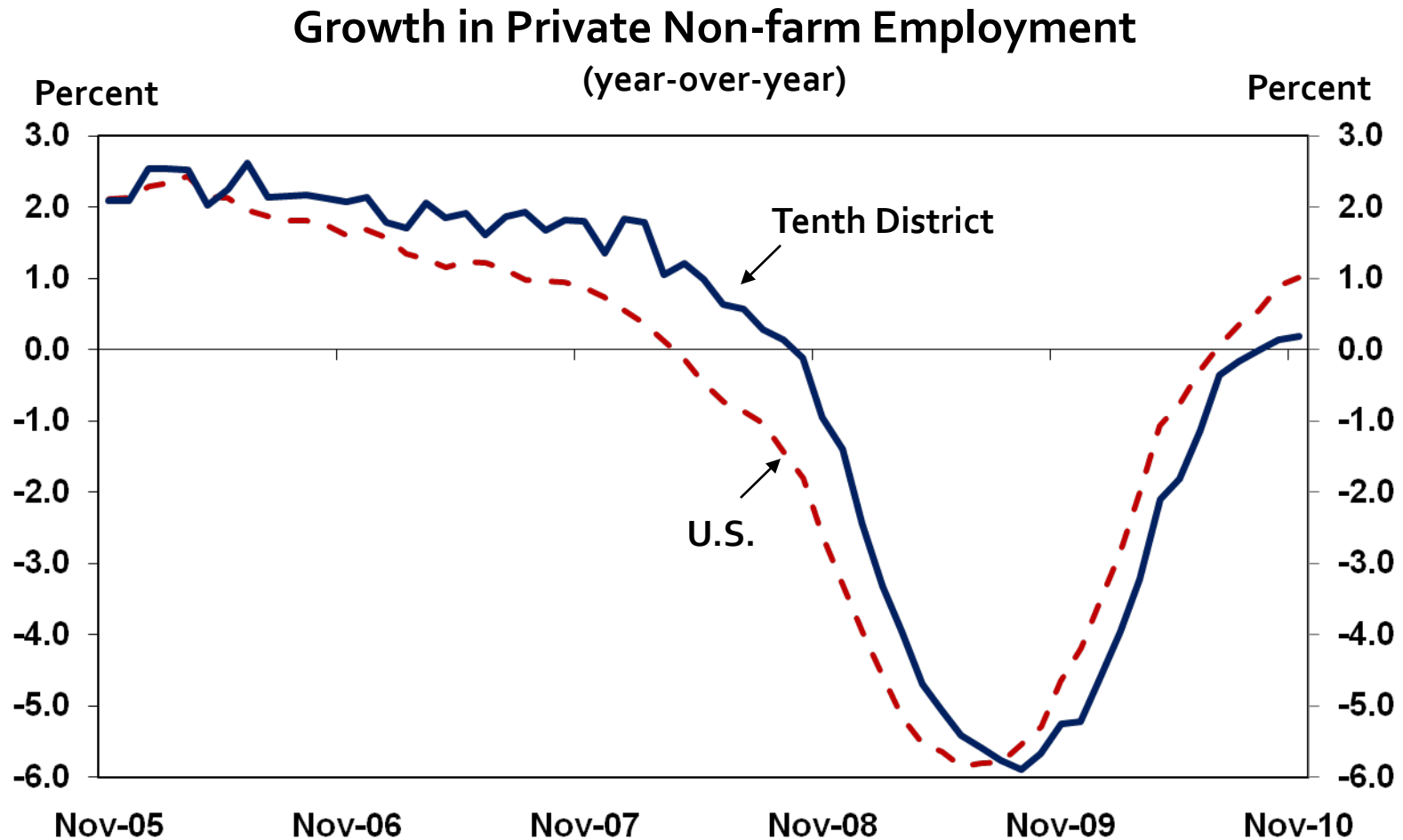
- 1) Food demand has rebounded
- 2) Businesses are hiring

Challenges

- 1) Elevated unemployment rate
- 2) Hiring is slow

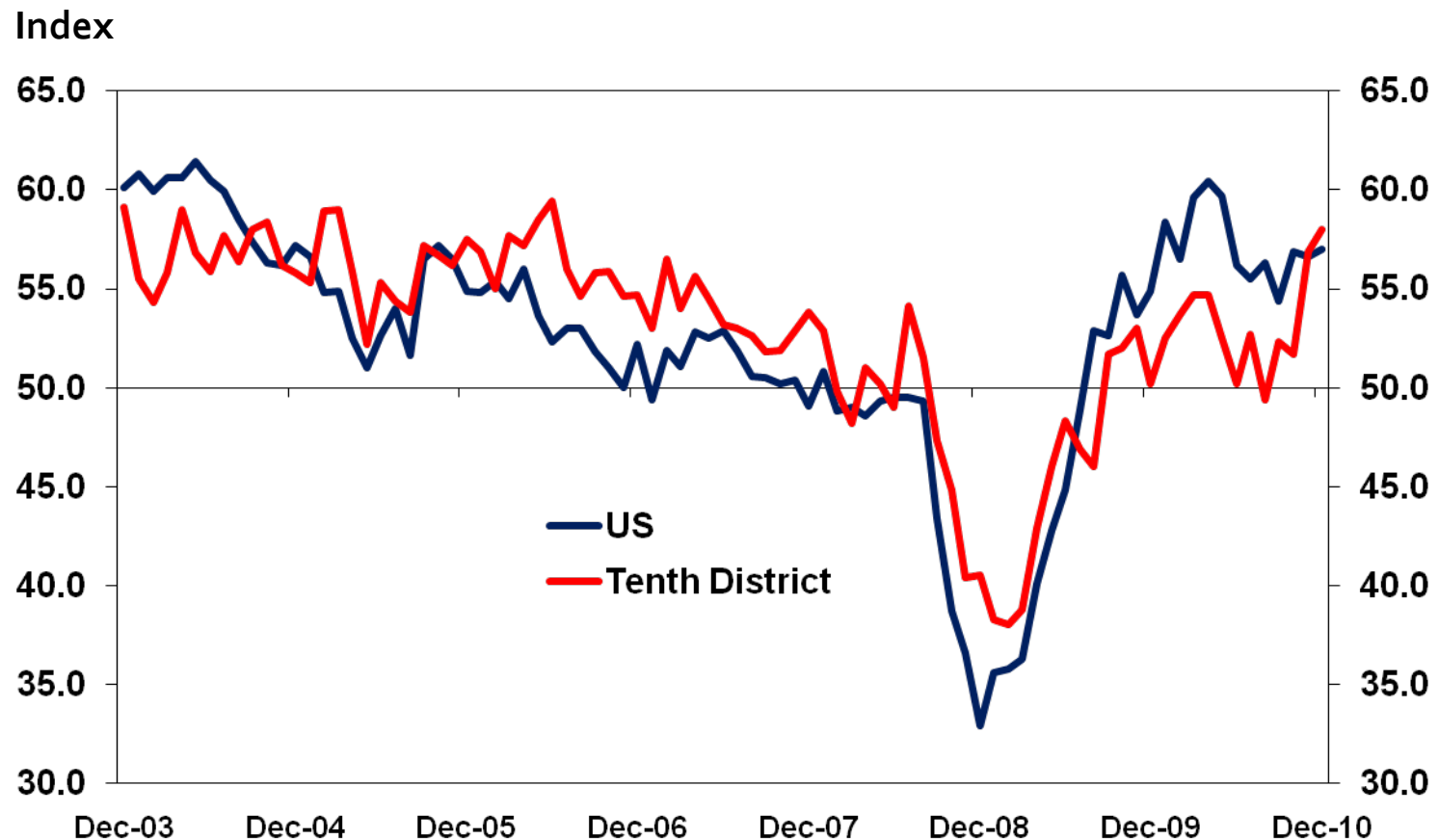


Labor markets are improving, but it is slow.



Manufacturing activity has strengthened.

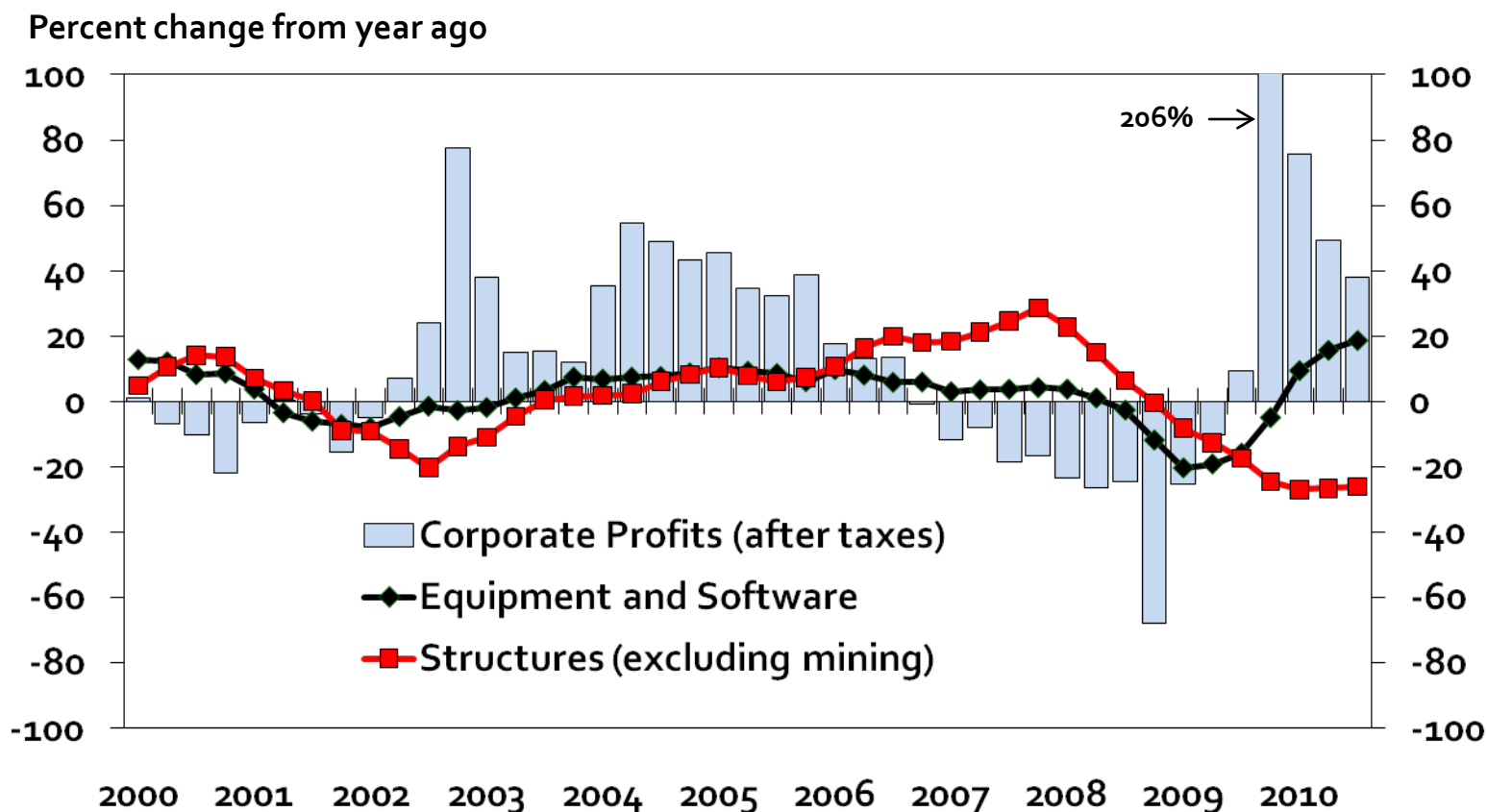
U.S. and Tenth District Manufacturing Production Indices



Source: Institute of Supply Management and Federal Reserve Bank of Kansas City

Corporate profits and equipment and software investment have rebounded.

Corporate Profits and Nonresidential Fixed Investment



Source: Bureau of Economic Analysis

Opportunities and Challenges for Agriculture

Opportunities

- 1) Food demand has rebounded
- 2) Businesses are hiring
- 3) U.S. agricultural exports are rising

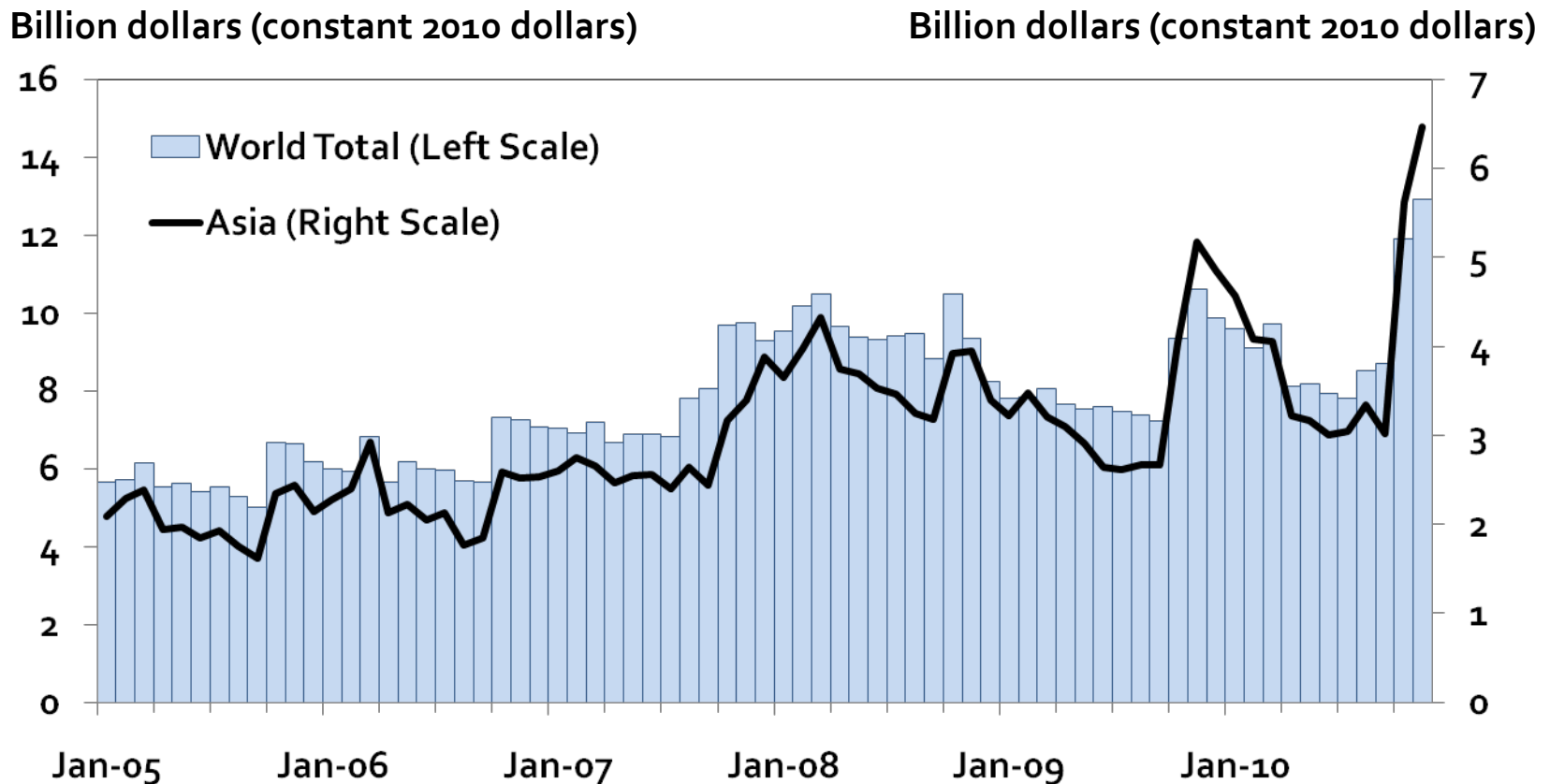
Challenges

- 1) Elevated unemployment rate
- 2) Hiring is slow
- 3) Risks to the global recovery



Agricultural exports have surged led by exports to Asia.

Real U.S. Agricultural Exports

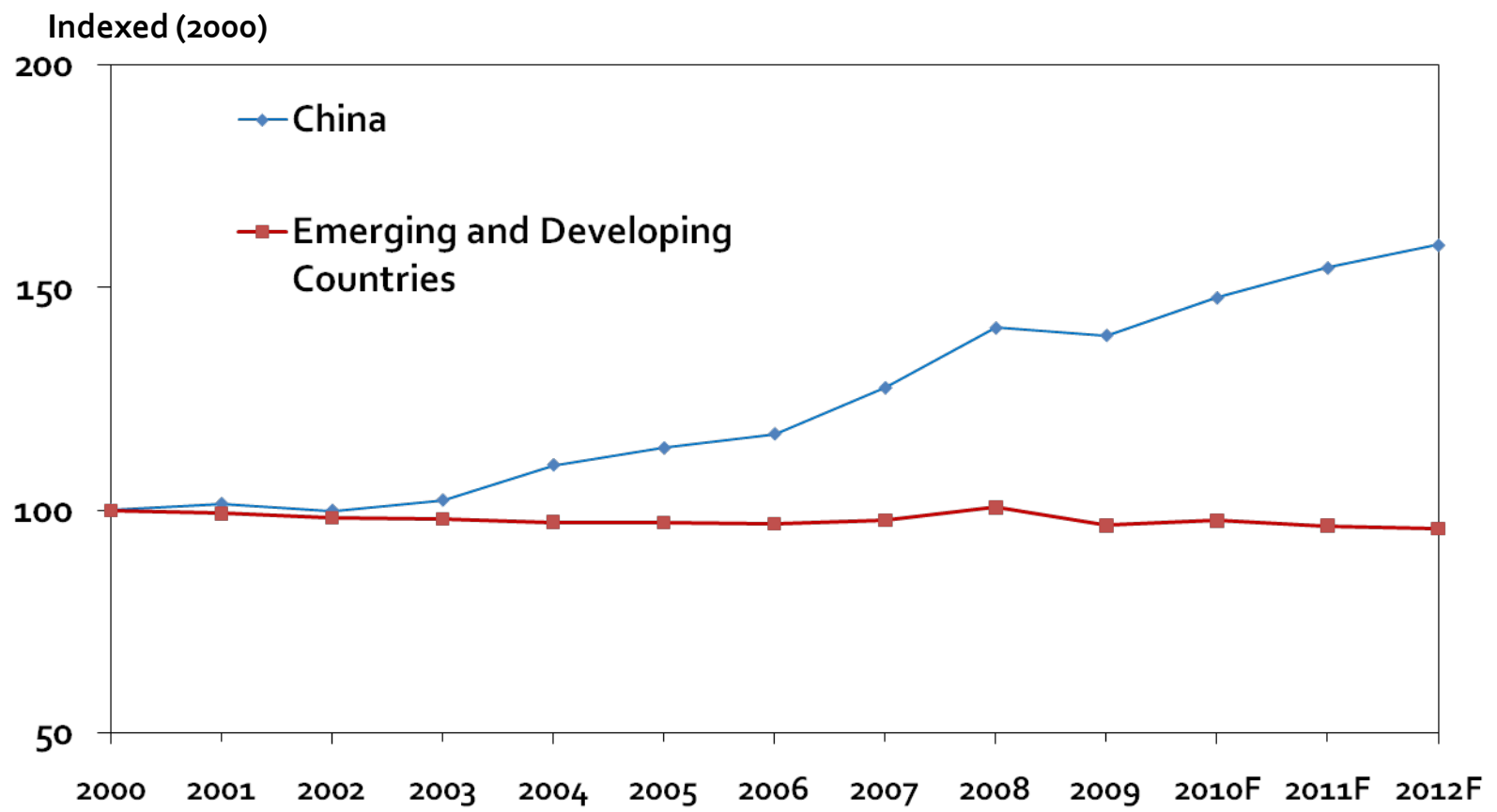


Source: USDA



Inflation is expected to be flat in most emerging and developing countries. One notable exception is China.

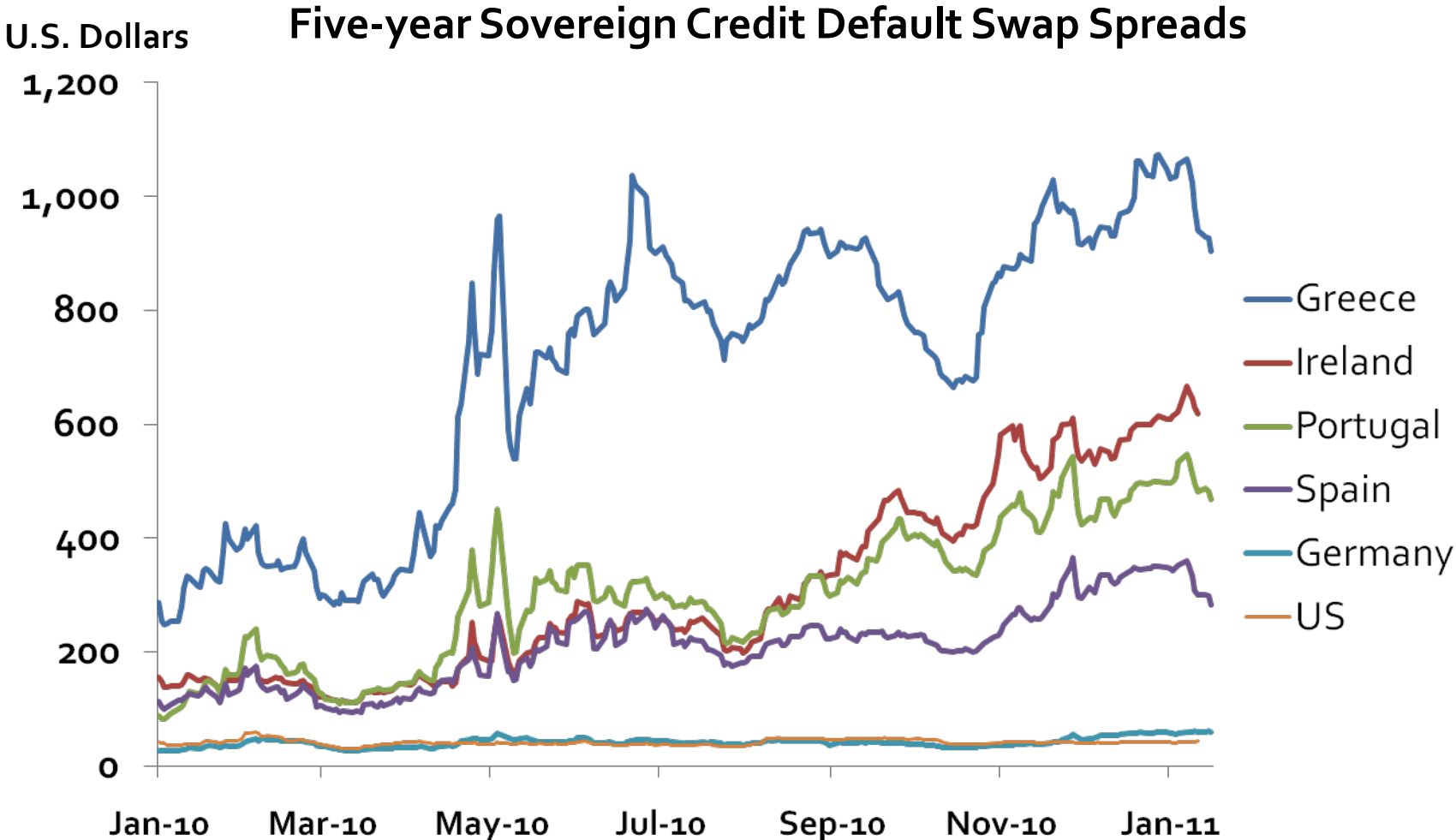
Inflation Rates



Source: International Monetary Fund



What does the Eurozone Sovereign Debt Crisis mean for the U.S. economy and agriculture?



Source: Bloomberg data starting 1/4/10 and ending 11/30/10. U.S. is priced to Euros.



Opportunities and Challenges for Agriculture

Opportunities

- 1) Food demand has rebounded
- 2) Businesses are hiring
- 3) U.S. agricultural exports are rising
- 4) Global food demand is changing

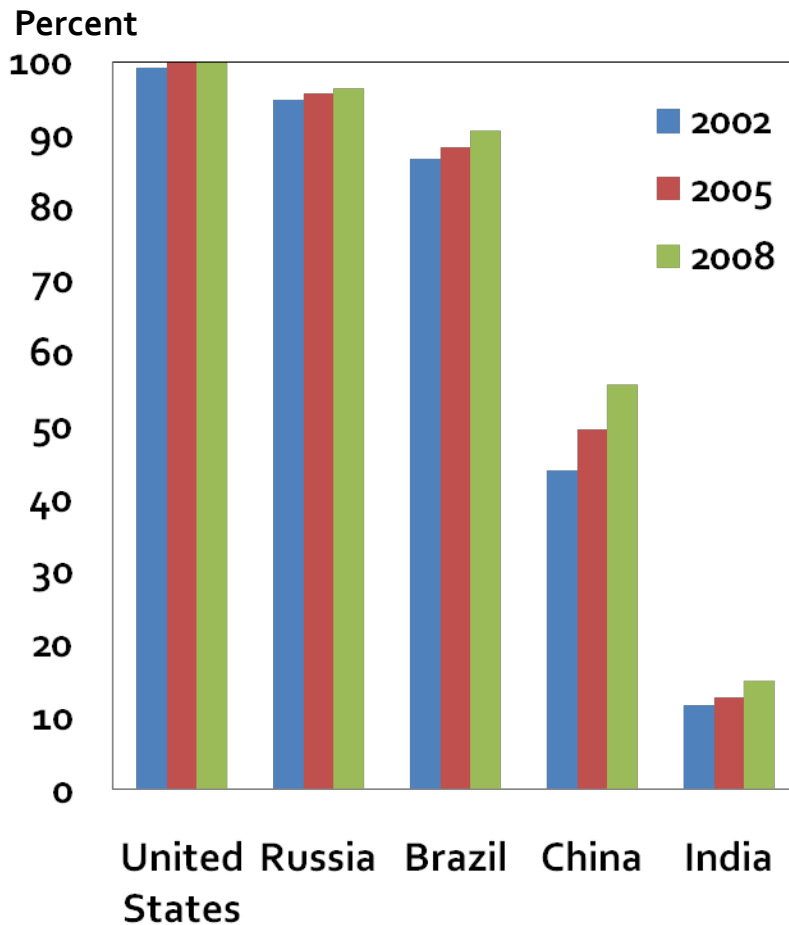
Challenges

- 1) Elevated unemployment rate
- 2) Hiring is slow
- 3) Risks to the global recovery
- 4) Who will meet this changing food demand?

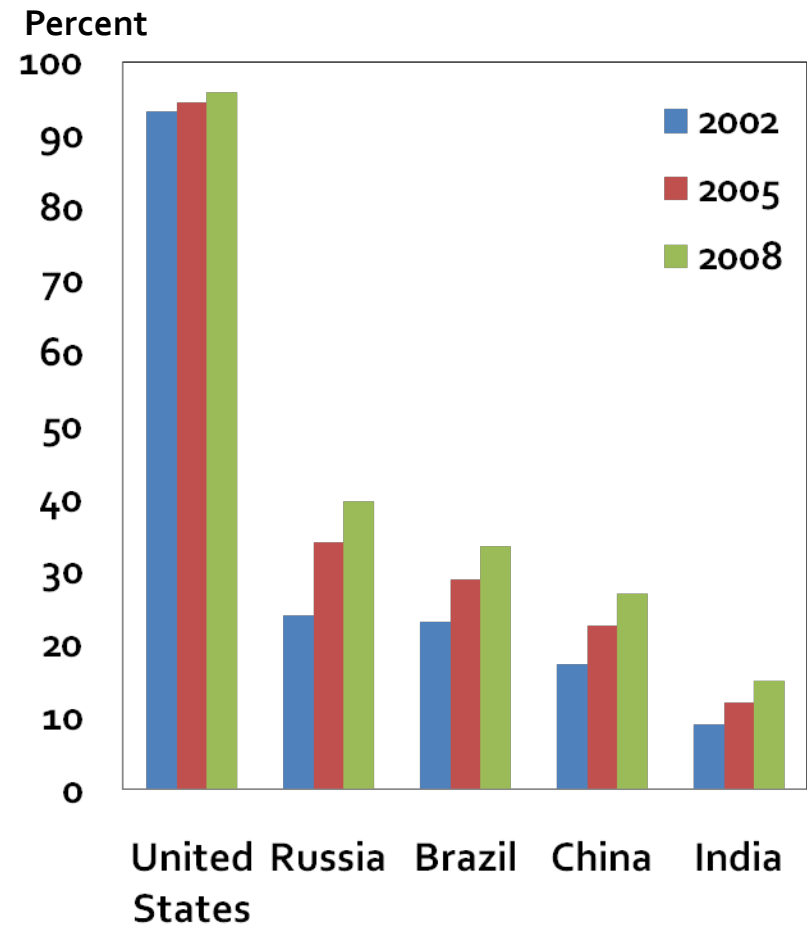


A growing world population boosts international food demand, but what will they eat?

Households Owning a Refrigerator



Households Owning a Microwave Oven

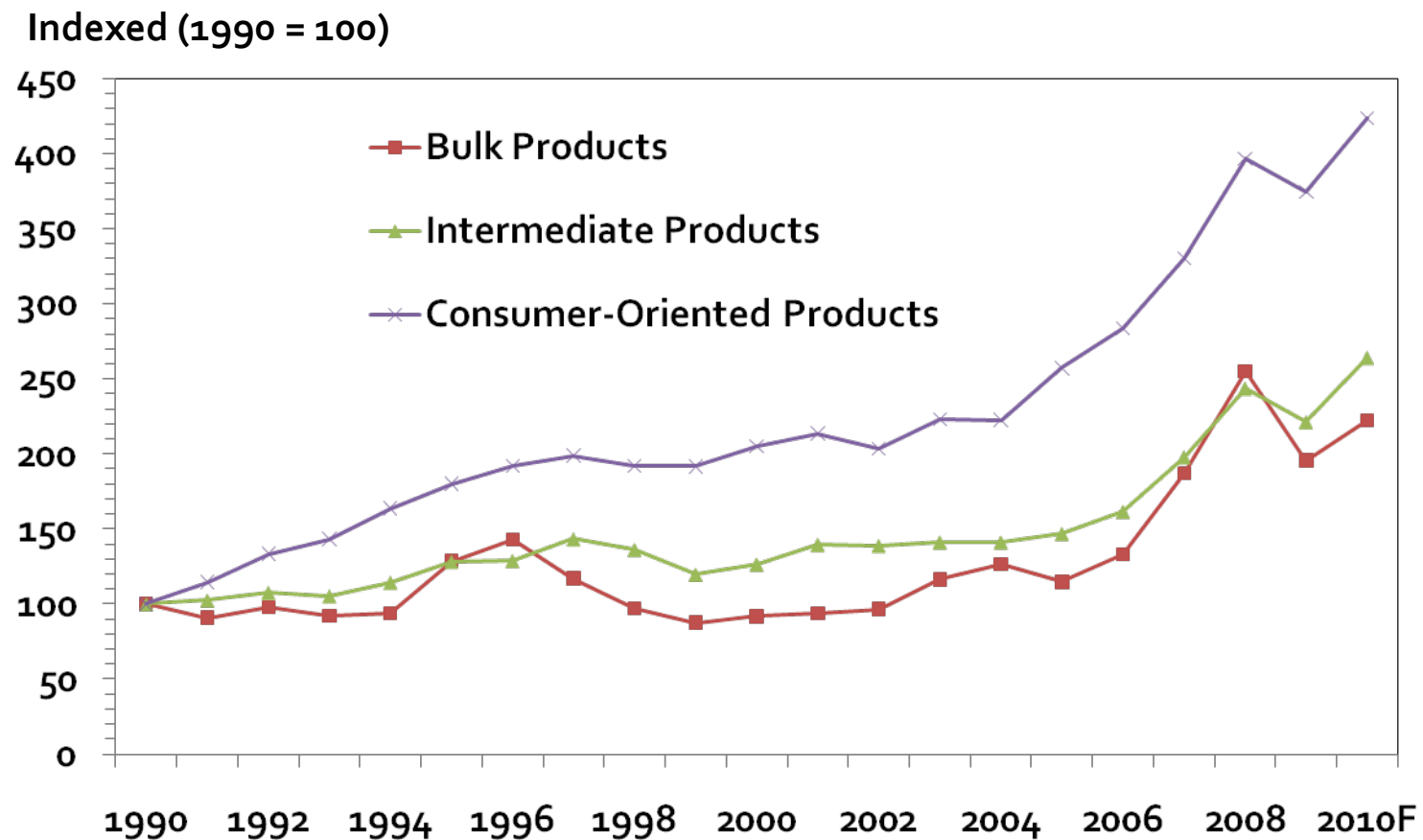


Source: USDA, Euromonitor



Will consumer-oriented products continue to lead agricultural exports?

Value of U.S. Agricultural Exports



Source: USDA Foreign Agricultural Service



Opportunities and Challenges for Agriculture

Opportunities

- 1) Food demand has rebounded
- 2) Businesses are hiring
- 3) U.S. agricultural exports are rising
- 4) Global food demand is changing
- 5) Commodity prices are rising

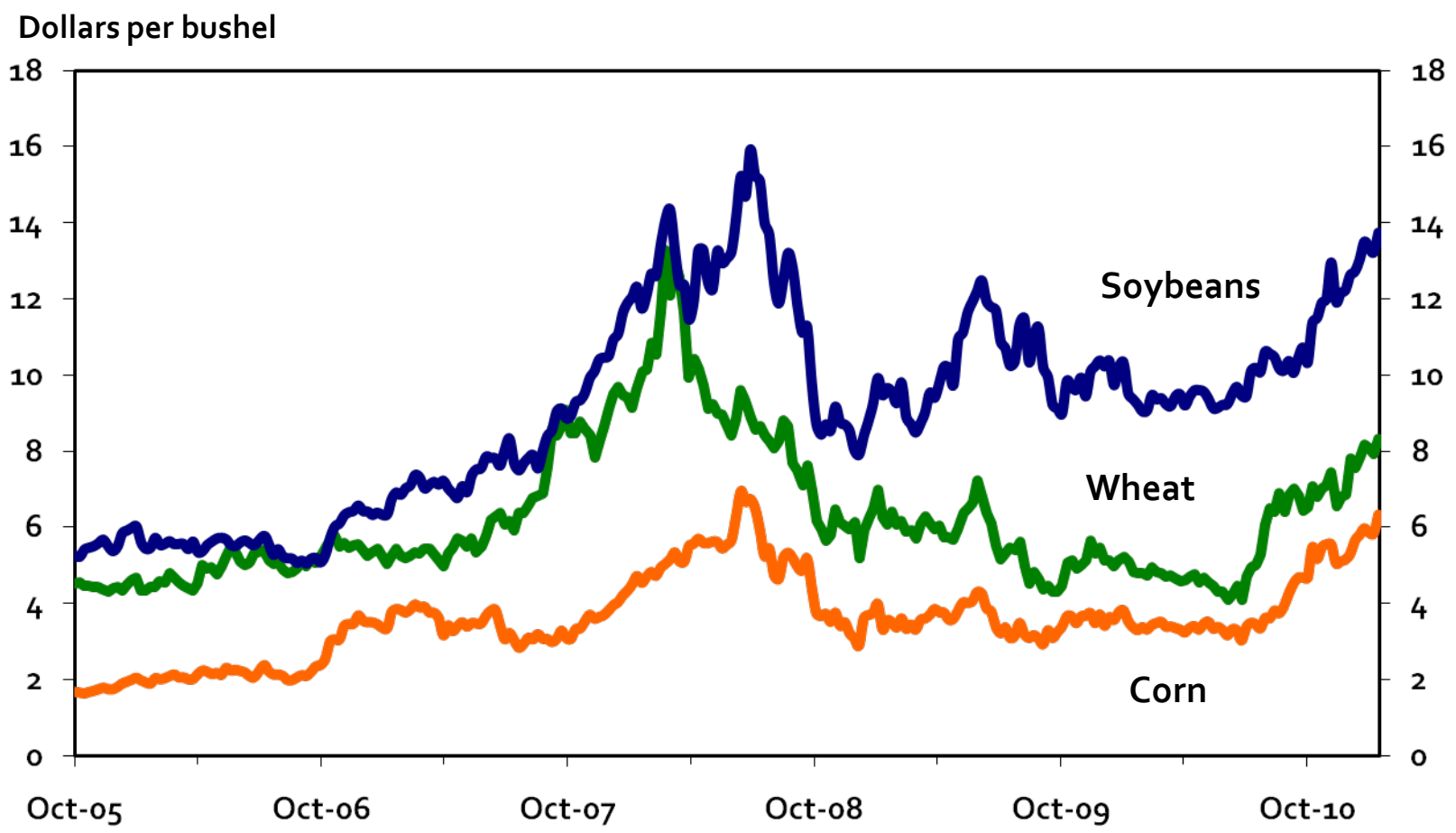
Challenges

- 1) Elevated unemployment rate
- 2) Hiring is slow
- 3) Risks to the global recovery
- 4) Who will meet this changing food demand?
- 5) Volatility has risen in commodity markets



Crop prices have risen significantly, but so has volatility.

U.S. Crop Prices



Source: Commodity Research Bureau



Opportunities and Challenges for Agriculture

Opportunities

- 6) U.S. producers are enjoying banner profits

Challenges

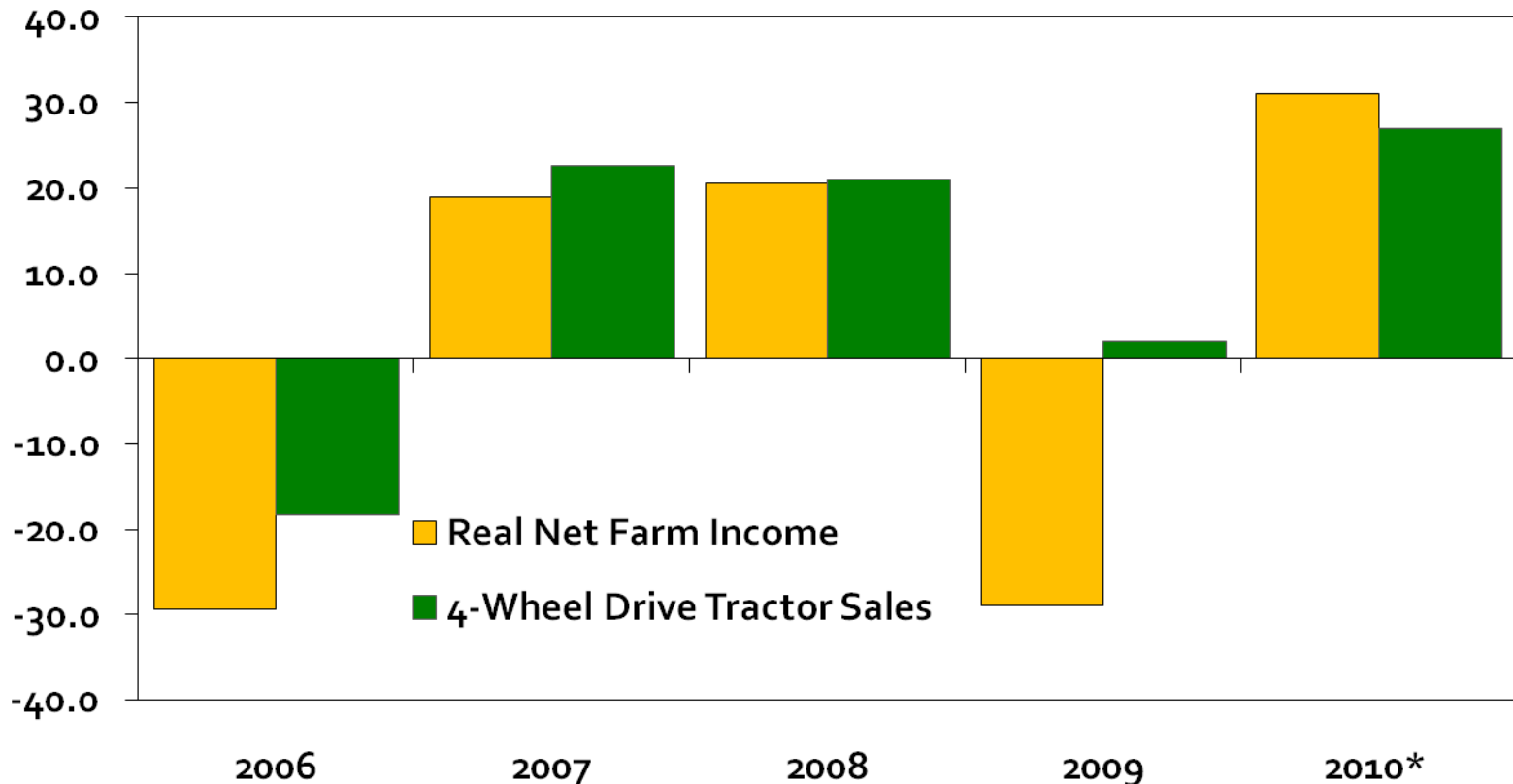
- 6) However, will these profits last?



Stronger farm incomes boost agricultural equipment sales.

U.S. Real Net Farm Income and Agricultural Equipment Sales

Percent change from previous year



Source: Association of Equipment Manufacturers and USDA

* Tractor Sales data are year-to-date through October and Net Farm Income forecast for 2010 dated November 30, 2010.



Opportunities and Challenges for Agriculture

Opportunities

- 6) U.S. producers are enjoying banner profits
- 7) Farmers have ample repayment capacity

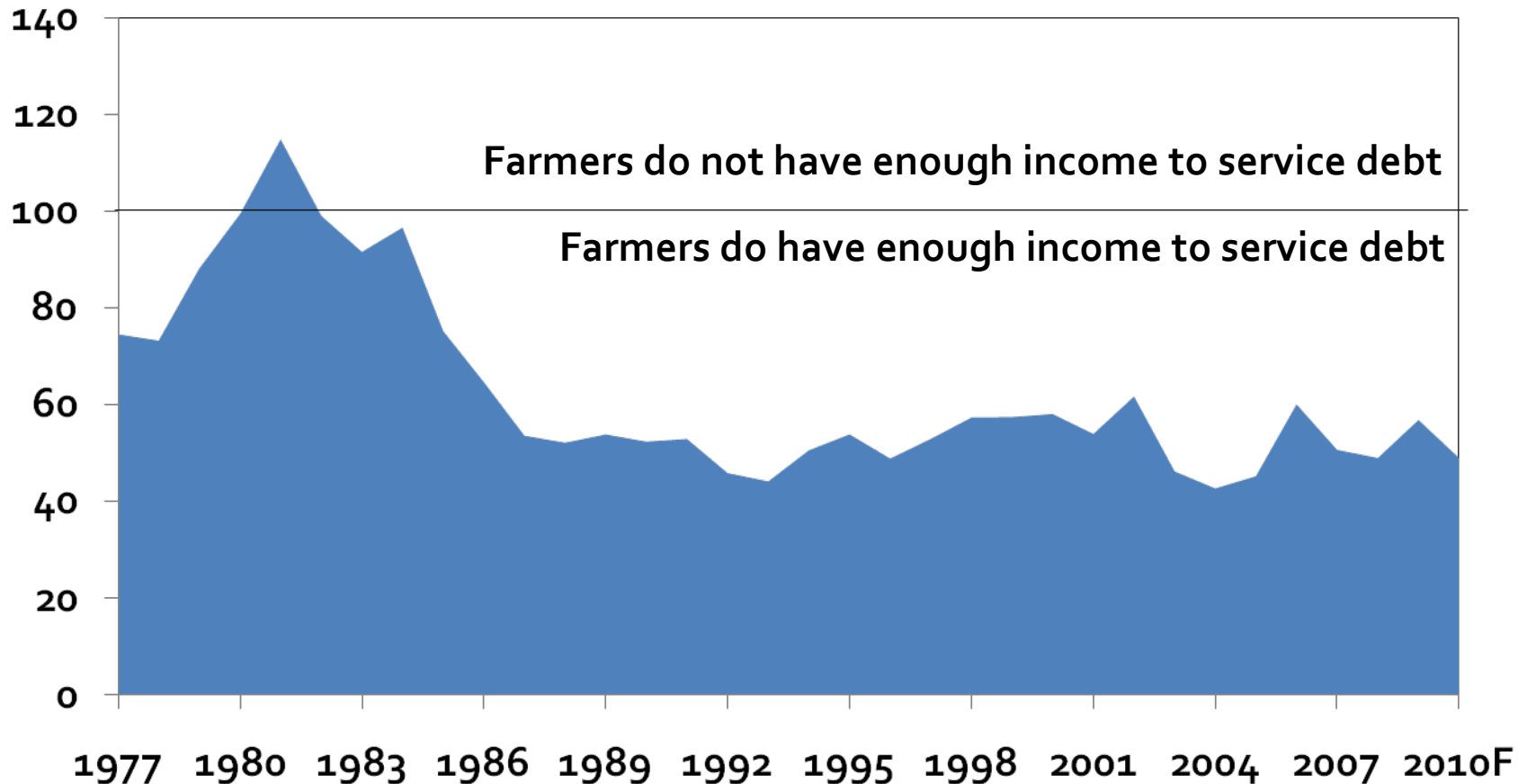
Challenges

- 6) However, will these profits last?
- 7) Some producers hold too much debt



Farm income has been enough to service farm debt, and financial stress has been low.

U.S. Debt Repayment Capacity Utilization

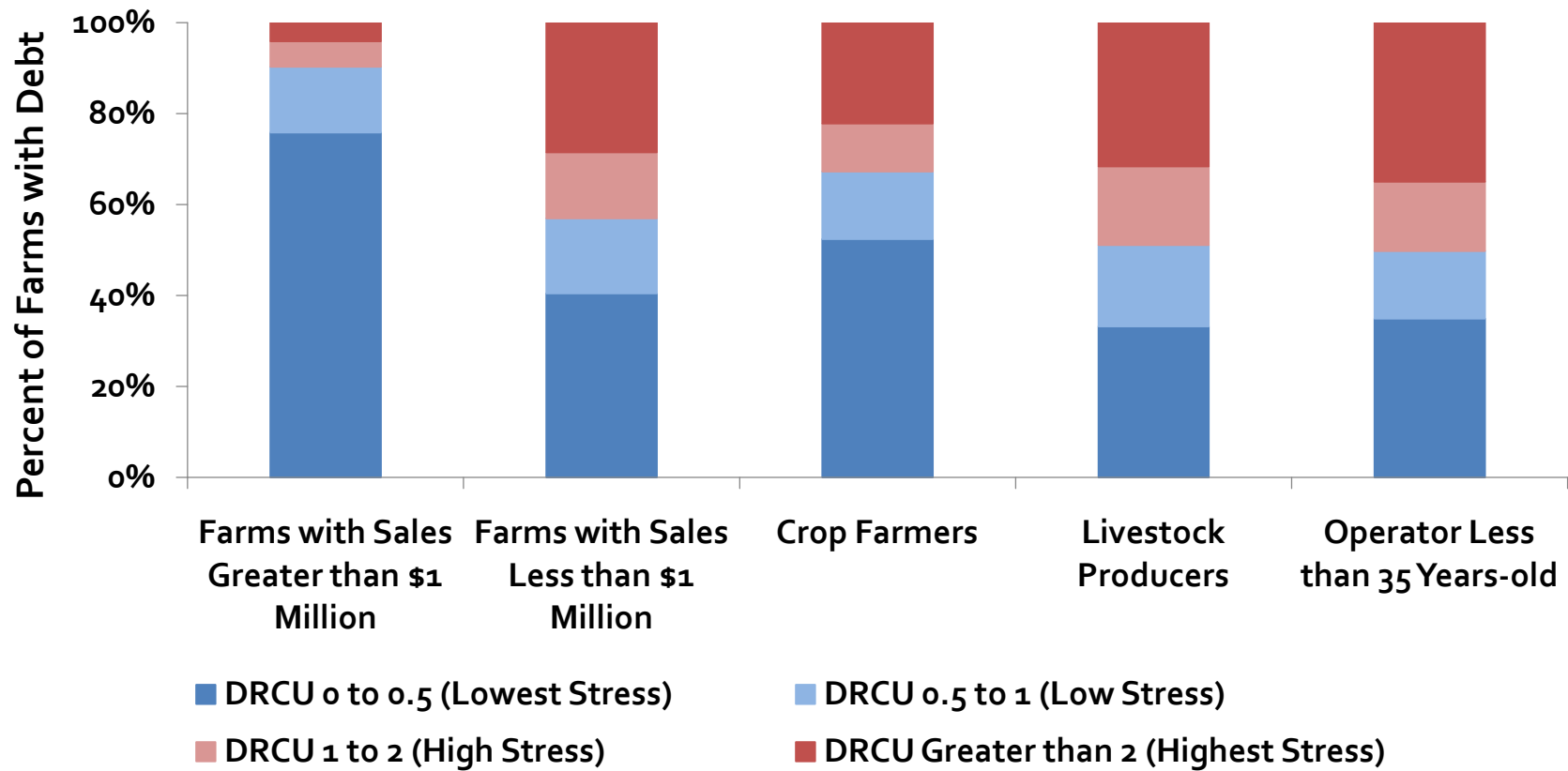


Source: USDA



In 2008, small, livestock, and young farmers exhibited the most farm financial stress.

Debt Repayment Capacity Utilization (DRCU) Ratio Categories



Source: 2008 Agricultural Resource Management Survey

Note: DRCU is actual farm debt divided by maximum feasible amount of farm debt that can be serviced from current farm income.

Opportunities and Challenges for Agriculture

Opportunities

- 6) U.S. producers are enjoying banner profits
- 7) Farmers have ample repayment capacity
- 8) Fiscal stimulus may spur job growth

Challenges

- 6) However, will these profits last?
- 7) Some producers hold too much debt
- 8) National deficit and debt are rising



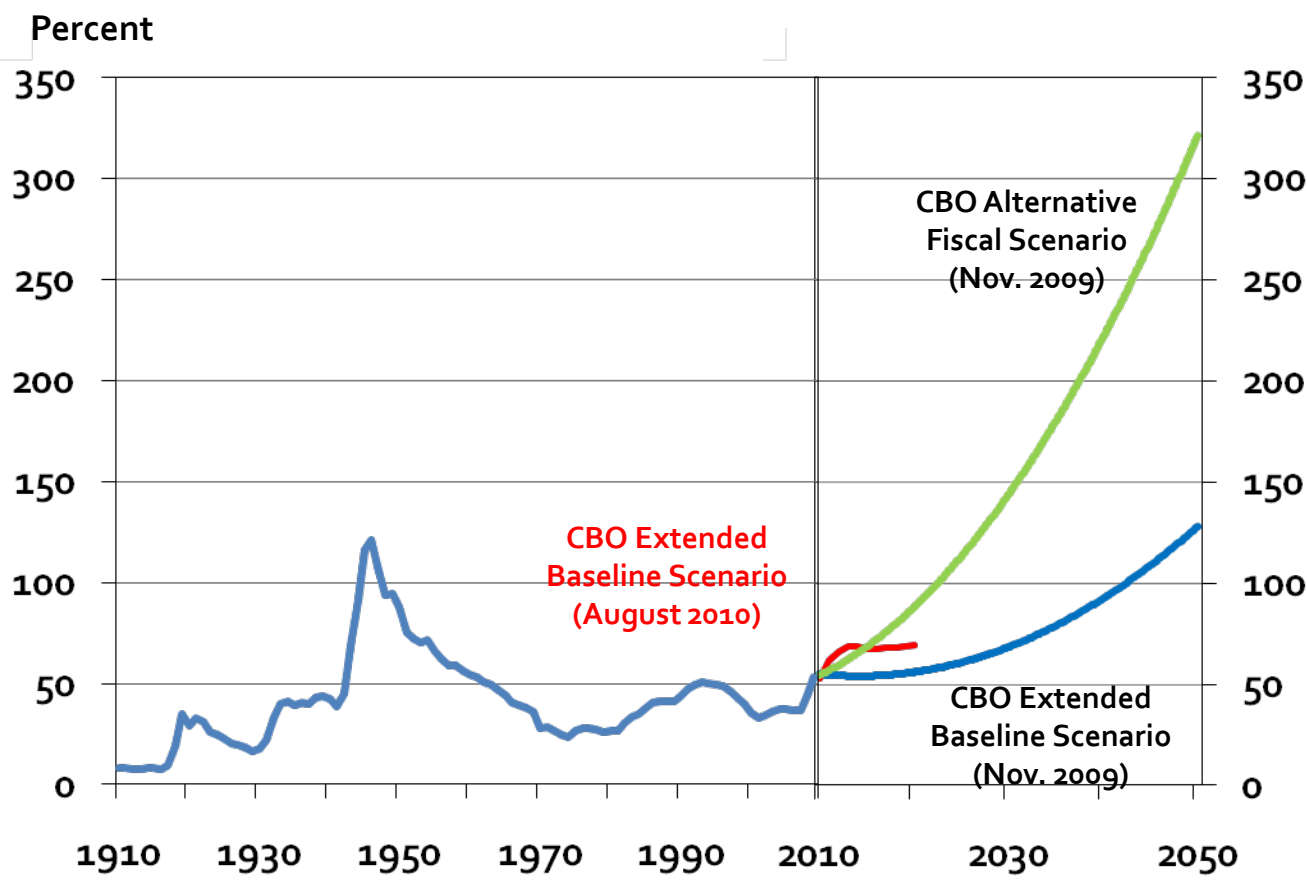
Will the most recent round of fiscal stimulus spur job growth?

- **Tax Hike Prevention Act of 2010**
 - Extends the 2001 and 2003 tax relief provisions
 - Reduces social security tax rate to 4.2%
 - Unemployment insurance
 - Estate and gift tax provisions
 - Business incentives such as bonus depreciation
 - Among other provisions



How will rising federal debt levels affect long-term economic conditions?

U.S. Debt as a Percent of GDP



Source: Congressional Budget Office

Opportunities and Challenges for Agriculture

Opportunities

- 6) U.S. producers are enjoying banner profits
- 7) Farmers have ample repayment capacity
- 8) Fiscal stimulus may spur job growth
- 9) Financing costs are very low

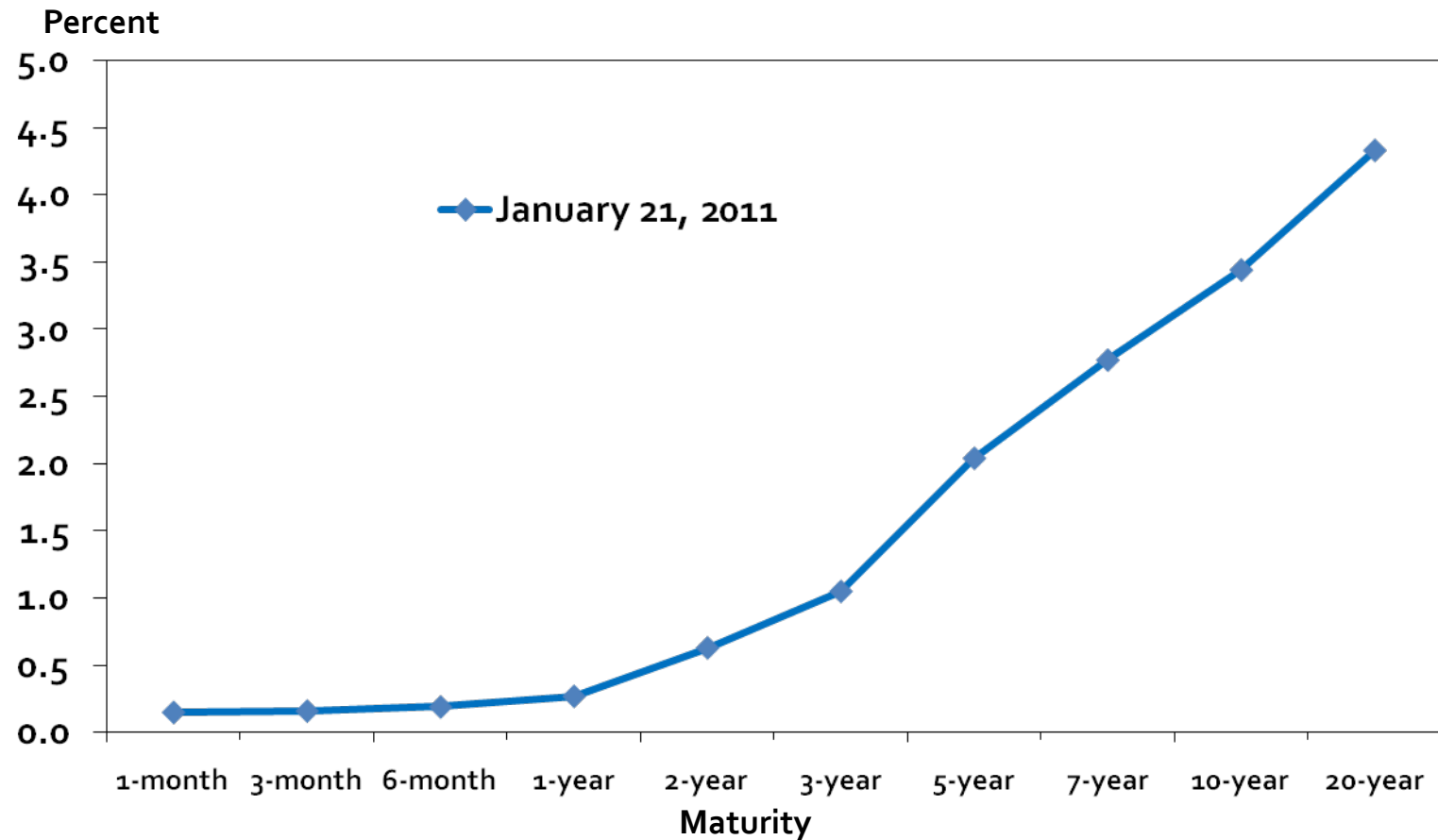
Challenges

- 6) However, will these profits last?
- 7) Some producers hold too much debt
- 8) National deficit and debt are rising
- 9) Removing monetary stimulus



Interest rates are at or near historical lows.

U.S. Treasury Yield Curve Rates

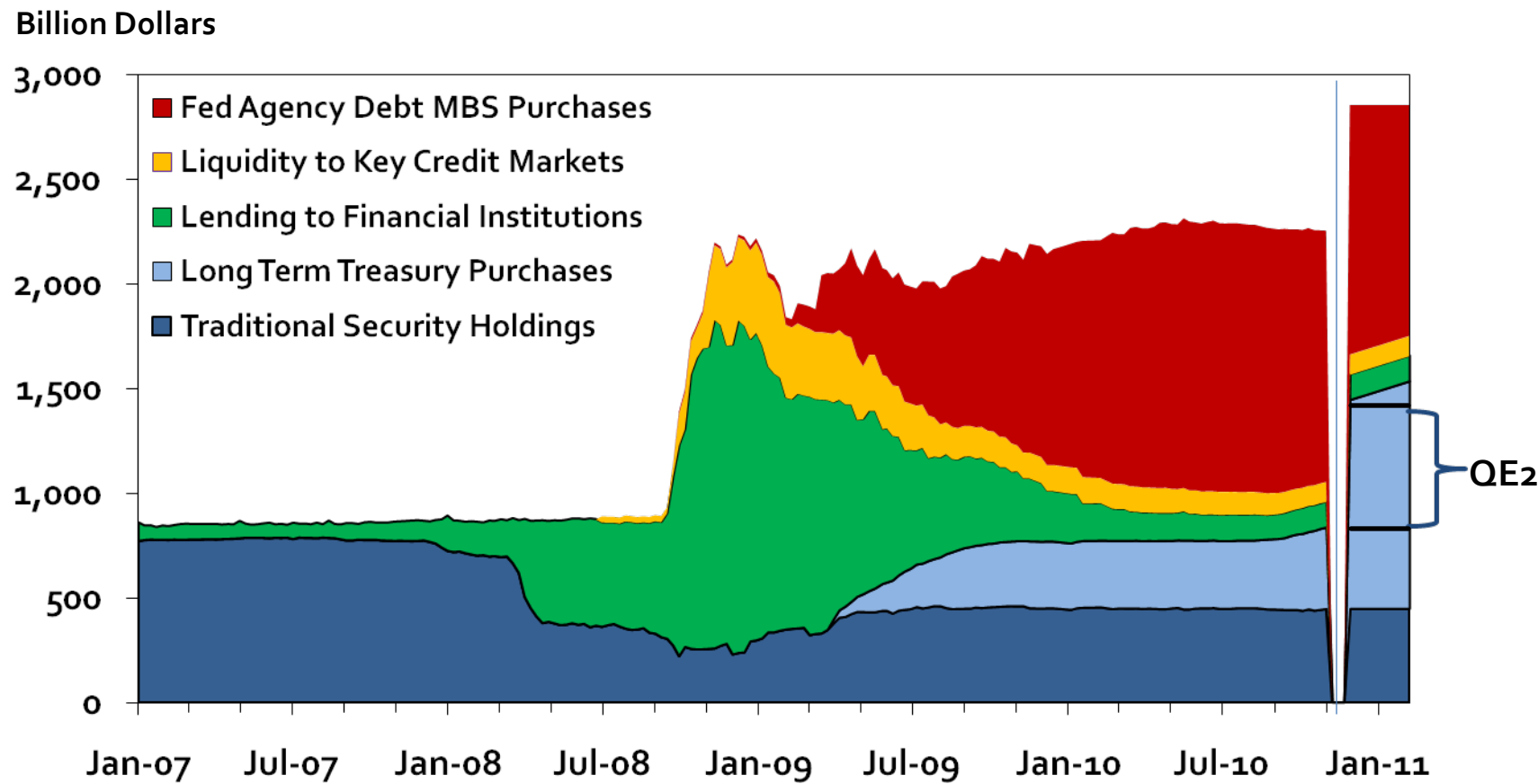


Source: Federal Reserve Board of Governors



When the Federal Reserve decides to exit from quantitative easing (QE) policy, what challenges might agriculture face?

Federal Reserve Balance Sheet: Assets



Source: Federal Reserve Bank of Cleveland



Opportunities and Challenges for Agriculture

Opportunities

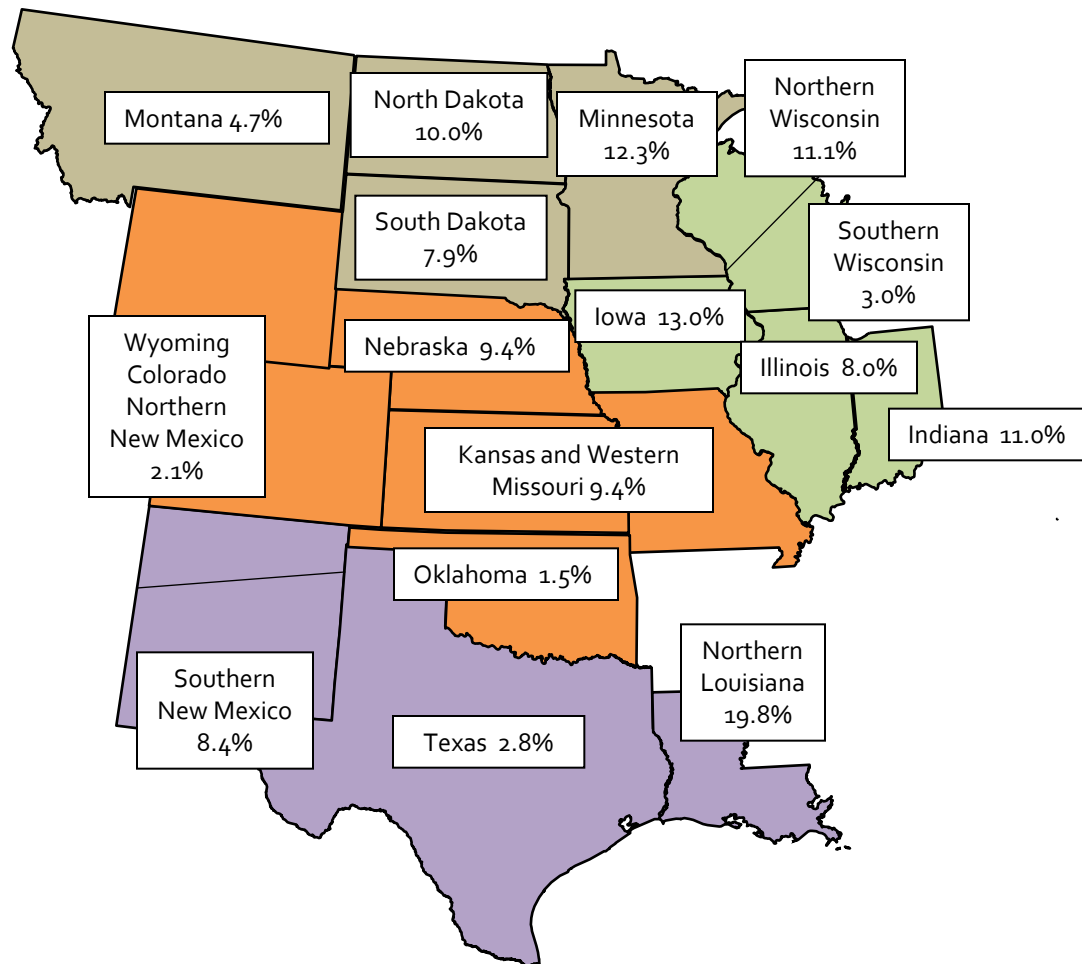
- 6) U.S. producers are enjoying banner profits
- 7) Farmers have ample repayment capacity
- 8) Fiscal stimulus may spur job growth
- 9) Financing costs are very low
- 10) Farmland values have surged

Challenges

- 6) However, will these profits last?
- 7) Some producers hold too much debt
- 8) National deficit and debt are rising
- 9) Removing monetary stimulus
- 10) Are farmland values sustainable?



Good Quality Farmland (Non-irrigated Cropland) Values (Percent change Third Quarter 2009 to Third Quarter 2010)



Source: Federal Reserve District Surveys (Chicago, Minneapolis, Kansas City, Dallas)



Capitalized Revenues from Corn Production

Land values should equal capitalized revenues

$$\text{Land Values} = \frac{\text{Expected Revenues}}{\text{Capitalization Rate}}$$

Assumptions:

Corn Price: \$5.00 per bushel

25% of gross revenues go to land

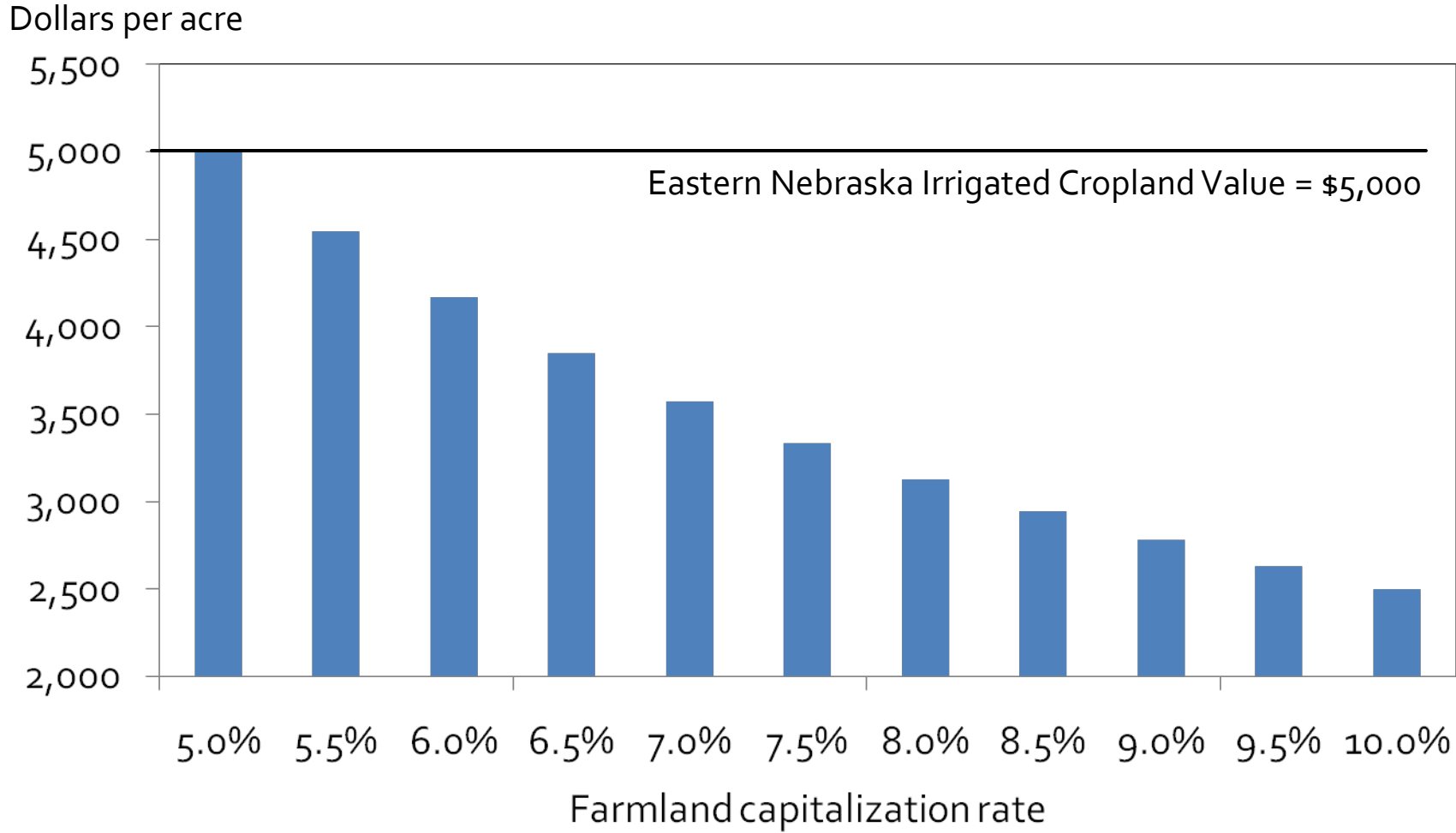
	Yield (bushel per acre)	
	150 bushels	200 bushels
Capitalization rate		
5%	3750	5000

Note: Nebraska irrigated corn yield 198 bushels per acre (2009 average)

U.S. average annual price \$5.20 per bushel (2010 average)



At \$5 per bushel corn, rising cap rates could slash cropland values.

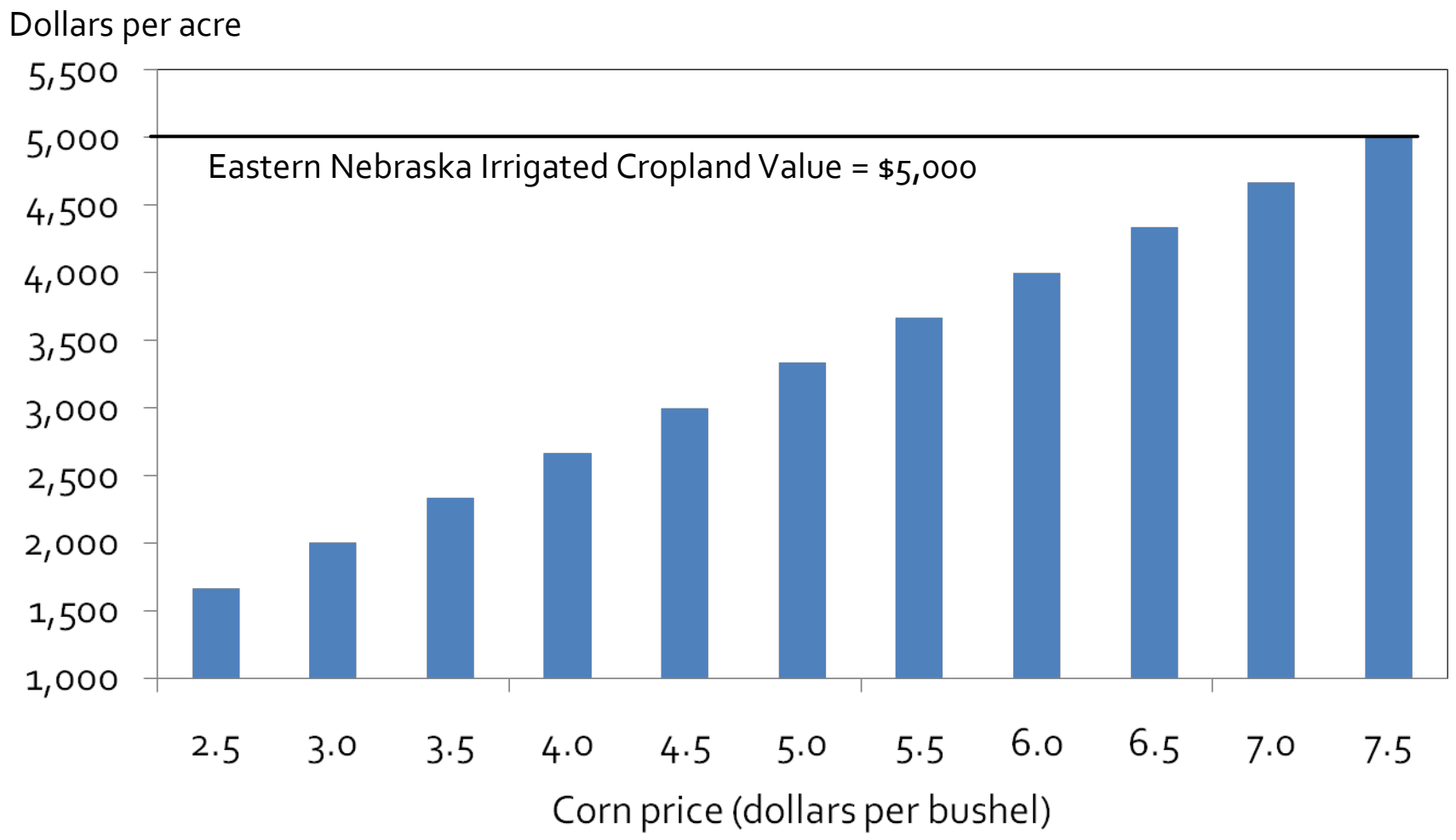


Authors' calculations assuming 200 bushels per acre and 25% of gross revenues capitalized into land.



Challenge

At a historical cap rate of 7.5 percent, record high corn prices are needed to justify current cropland values.



Authors' calculations assuming 200 bushels per acre and 25% of gross revenues capitalized into land.



Thank you

**Federal Reserve Bank of Kansas City – Omaha
Branch**

www.kansascityfed.org/omaha



Opportunities and Challenges for Agriculture

Opportunities

- 1) Food demand has rebounded
- 2) Businesses are hiring
- 3) U.S. agricultural exports are rising
- 4) Global food demand is changing
- 5) Commodity prices are rising

Challenges

- 1) Elevated unemployment rate
- 2) Hiring is slow
- 3) Risks to the global recovery
- 4) Who meets this changing food demand?
- 5) Volatility has risen in commodity markets



Opportunities and Challenges for Agriculture (continued)

Opportunities

- 6) U.S. producers are enjoying banner profits
- 7) Farmers have ample repayment capacity
- 8) Fiscal stimulus may spur job growth
- 9) Financing costs are very low
- 10) Farmland values have surged

Challenges

- 6) However, will these profits last?
- 7) Some producers hold too much debt
- 8) National deficit and debt are rising
- 9) Removing monetary stimulus
- 10) Are farmland values sustainable?

