U.S. and World Economic Trends – Risks Facing U.S. Agriculture

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.
Risk #1
An elevated unemployment rate weighs on the recovery.

U.S. Unemployment Rate (U3)

Source: Bureau of Economic Analysis and Bureau of Labor Statistics
The economy is recovering from a very steep recession with gains expected in 2011.

Real GDP Growth

Annualized percent change from previous quarter

Blue Chip Forecast

Source: Bureau of Economic Analysis and Blue Chip Economic Indicators
Risk #2: The Best Cure for High Prices is High Prices and Speed of Information

Farmers Always Produce Themselves Out of Prosperity

• On January 2011: U.S. Acres Planted to Corn Up 4.3% NOW down 5.6%
• 2020: U.S. Corn Yields Up 17 Percent

How Quickly Could Farm Incomes Fall?

• 2013: Average Annual Corn Price is $4.10
• 2013: Net returns above variable costs for corn fall 40% below today’s levels.

Source: USDA
Risk #3: Have inflation risks changed?

Federal Reserve Balance Sheet: Assets

Billion Dollars

- Fed Agency Debt MBS Purchases
- Liquidity to Key Credit Markets
- Lending to Financial Institutions
- Long Term Treasury Purchases
- Traditional Security Holdings

Source: Federal Reserve Bank of Cleveland
Inflation is based on money and velocity.

**Quantity Theory of Money**

\[
\text{Price} = \frac{\text{Money} \times \text{Velocity}}{\text{Quantity}}
\]

**Definition of Inflation:**

Too much money \( M \uparrow \)

chasing \( V \uparrow \)

too few goods \( Q \downarrow \)
Consumers prices are rising, especially for food and energy.

Personal Consumption Expenditures Price Index

Percent change from previous year

Source: Bureau of Economic Analysis
Risk #4: Soaring Global Food and Energy Prices

World Food Prices and U.S. Gasoline Prices

Source: Food and Agricultural Organization of the United Nations and Energy Information Administration
Risk #5: Higher interest rates slow the Chinese economy.

China’s Inflation and Interest Rates

- Interest Rate on One Year Deposits (Left Scale)
- Consumer Price Inflation: 12-month (Right Scale)
Risk #6: Will the Eurozone sovereign debt problems impact U.S. agriculture?

Five-year Sovereign Credit Default Swap Spreads

Source: Bloomberg data starting 1/4/10 and ending 1/19/11. U.S. is priced to Euros.
Risk #7:
Agriculture Faces Huge Interest Rate Risk.

Capitalized Land Values = \frac{\text{Expected Incomes}}{\text{Expected Discount Rates}}

Farm Incomes Rise with Lower Interest Rates
Discount Rates Fall with Lower Interest Rates

What Happens to Farmland Values Under Higher Interest Rates?
Could farmland values experience a correction?

**Capitalized Revenues from Corn Production**

- **Capitalized Value at 7% capitalization rate and 200 bushel yield**
- **Estimated Eastern Nebraska Irrigated Cropland Value**

Dollars per bushel

Dollars per acre
Risk #8: How much debt do farmers really have?

Growth in Farm Real Estate and Non-Real Estate Debt (2009 to 2010)

Source: USDA, Agricultural Finance Databook, Federal Farm Credit Banks
Conclusions

- Rural America fared better during the recession and recovery.
- Crop incomes are booming and farmers are buying tractors, land, and more.
- Economic growth and inflations have risen recently.
- Despite a stronger recovery, headwinds remains.
- New opportunities are emerging with stronger demand.
- Agriculture continues to face volatile markets.

Low leverage ratios and strong working capital are the best way to manage through volatile times.
For More Information on Agricultural and Rural Economies

www.kansascityfed.org