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

- Grocery Stores
- Food Service and Drinking Places

Source: Census Bureau
Challenge

An elevated unemployment rate weighs on consumer demand.
## Opportunities and Challenges for Agriculture

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Labor markets are improving, but it is slow.

Source: Bureau of Labor Statistics
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.
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

Billion dollars (constant 2010 dollars)

Source: USDA
Challenge

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

Source: International Monetary Fund
Challenge

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

Five-year Sovereign Credit Default Swap Spreads

Source: Bloomberg data starting 1/4/10 and ending 11/30/10. U.S. is priced to Euros.
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A growing world population boosts international food demand, but what will they eat?

Households Owning a Refrigerator

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Households Owning a Microwave Oven

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Source: USDA, Euromonitor
Will consumer-oriented products continue to lead agricultural exports?

Value of U.S. Agricultural Exports

Indexed (1990 = 100)

- Bulk Products
- Intermediate Products
- Consumer-Oriented Products

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.
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

2006  2007  2008  2009  2010*

-30.0  -20.0  -10.0  0.0  30.0

Real Net Farm Income

4-Wheel Drive Tractor Sales

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

Debt Repayment Capacity Utilization (DRCU) Ratio Categories

- Farms with Sales Greater than $1 Million
- Farms with Sales Less than $1 Million
- Crop Farmers
- Livestock Producers
- Operator Less than 35 Years-old

- DRCU 0 to 0.5 (Lowest Stress)
- DRCU 0.5 to 1 (Low Stress)
- DRCU 1 to 2 (High Stress)
- DRCU Greater than 2 (Highest Stress)

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.
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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
Challenge

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

U.S. Debt as a Percent of GDP

Source: Congressional Budget Office

- **CBO Extended Baseline Scenario (August 2010)**
- **CBO Extended Baseline Scenario (Nov. 2009)**
- **CBO Alternative Fiscal Scenario (Nov. 2009)**
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.

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

Note:
- Nebraska irrigated corn yield 198 bushels per acre (2009 average)
- U.S. average annual price $5.20 per bushel (2010 average)
Challenge

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.

Eastern Nebraska Irrigated Cropland Value = $5,000
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
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