Farm Economy and Outlook for Ag Lending

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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.
Of the 12 Fed Districts, the 10th District is the most concentrated in agriculture by some measures.

Average Farm Income as a Share of Total Personal Income
Average Across Counties by Fed District

Source: BEA, USDA, and staff calculations

Proportion of “Farm Dependent” Counties

Source: BEA.
Farm income has dropped sharply, and is expected to remain low.

Sources: USDA and Federal Reserve Bank of Kansas City.

* Forecast for 2016.
Expected crop prices have shifted dramatically in recent years.

Source: Calculations based on data from barchart.com
Increased production has driven crop prices lower, but demand strength will be a key long-term driver.

**U.S. Ethanol Production and Ag Exports to China**

Index (2005 = 0)

- **Ethanol Production**
- **U.S. Ag Exports to China**

Sources: USDA, Energy Information Administration and Renewable Fuels Association
Recent developments in China have accentuated concerns surrounding future demand.
In general, U.S. exports have been weak, driven by further strengthening of the U.S. dollar.

*Nominal Trade-weighted broad index
Source: Federal Reserve Board and Haver Analytics
The stronger dollar reflects relatively weak global economic growth in 2014 and 2015.

Global Real GDP Growth

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* Forecast
Source: IMF January 2016 Update
The dollar has surged even more dramatically against key regions competing in global ag export markets.

**Currency Exchange Rates**

![Graph showing currency exchange rates from January 2010 to January 2016. The graph indicates a stronger dollar trend over time.]

*Nominal broad trade-weighted exchange value of the U.S. dollar
Sources: FRB, IMF and Haver Analytics.
The downturn in ag is intensifying.  
Implications for lending?
The drop in farm income has reduced cash flow, and increased short-term lending needs.

U.S. Farm Income and Operating Loans

Sources: Agricultural Finance Databook Table A.3 and USDA.
Credit conditions have gradually deteriorated.

Tenth District Credit Conditions
2015, Fourth Quarter

Source: Federal Reserve Bank of Kansas City, Survey of Ag Credit Conditions
Farmland values have also declined, but only at a modest pace.

Changes in High Quality Farmland Values

Source: Federal Reserve Banks of Kansas City and Chicago.
Despite only modest reductions in average farmland values, the variation has increased dramatically.

Value of Non-irrigated Cropland, Fourth Quarter 2015

Percent change from previous year

Distribution of Tenth District Irrigated Farmland Values

Probability (percent)

Mean: $1,200
Mean: $1,900
Mean: $5,000

Source: Federal Reserve Bank of Kansas City
Bankers have noted several key factors that have shaped the path of farmland values.

Factors Contributing to Farmland Values, 2015

Source: Federal Reserve Bank of Kansas City
How might a changing interest rate environment affect the ag economy?
The Fed raised the Fed Funds target rate by 25 bp in December.
Interest expenses, however, are small when compared to fluctuations in commodity prices.

U.S. Corn Producers: Interest Costs and Price Fluctuations

Sources: USDA, barchart.com and author's calculations.
Expectations of future interest rates and cash rents suggest farmland values could decline further.

10-Year Treasury Yields

Iowa Cropland Values

Sources: USDA, Haver Analytics, Blue Chip Economic Forecasts and author’s calculations
Concluding Points

• Farm income has continued to weaken with low commodity prices.
  • Supply-side headwinds: strong U.S. and global production.
  • Demand-side headwinds: ethanol, export markets, and China.

• Effects of the downturn in the farm economy:
  • Tightening credit conditions.
  • Pressure on cash rents and farmland values.
  • Consolidation (opportunities for some).
  • Accelerating decline where rural = ag.
Questions?

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