Farm Income and Finance Outlook

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.
Today’s Roadmap

- Farm Income – A look at demand
- Financial health of agricultural lenders and producers
- Importance of Main Street activity
  - Specifically, off-farm income
- Macroeconomic factors and farmland values
Four consecutive quarters of growth signals a recovery, but it is expected to be slow.

**Real GDP Growth**

Annualized percent change from previous quarter

Source: Bureau of Economic Analysis and Blue Chip Economic Indicators
An elevated unemployment rate contributes to the expected slow recovery.

Source: Bureau of Economic Analysis and Bureau of Labor Statistics
U.S. consumers are spending money.

U.S. Monthly Retail and Food Sales

Billion dollars

Source: U.S. Census Bureau
Corporate profits and business investment are beginning to rebound.

Corporate Profits and Nonresidential Fixed Investment

Percent change from year ago

Source: Bureau of Economic Analysis
After dramatic improvements since 2007, U.S. net exports have stabilized.

U.S. Real Net Exports of Goods and Services and Value of the Dollar

Source: Bureau of Economic Analysis and Federal Reserve Board of Governors
Protein exports are rising.

U.S. Protein Exports (Beef, Dairy, Pork, and Poultry)
3-month moving average

Source: USDA
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Recently, financial stress has moved closer to its long-run average.
Returns at agricultural lenders remain strong.

Average Return on Assets

Source: Board of Governors of the Federal Reserve and FDIC
Agricultural banks are banks with agricultural loans accounting for 14% or more of their loan portfolio.
Funds are available for farm loans, but farm loan demand is muted.

Source: Federal Reserve Board of Governors and Federal Reserve Bank of Kansas City

Tenth District Farm Loan Demand and Funds Availability

Federal Reserve Bank of Kansas City – Omaha Branch
Regional, Public and Community Affairs Division
Delinquency rates are rising for ag loans.

Delinquency and Charge-off Rates on Ag Loans
All Commercial Banks

Percent of ag loans


Source: Federal Reserve Board of Governors
In 2008, livestock and young farmers exhibited the most farm financial stress.

Debt Repayment Capacity Utilization (DRCU) Ratio Categories

<table>
<thead>
<tr>
<th>Category</th>
<th>Percent of Farms with Debt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Farms with Sales Greater than $1 Million</td>
<td></td>
</tr>
<tr>
<td>Crop Farmers</td>
<td></td>
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<tr>
<td>Livestock Producers</td>
<td></td>
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<tr>
<td>Operator Less than 35 Years-old</td>
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</tbody>
</table>

- 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.
Livestock and young farmers’ financial stress is most affected by falling farm incomes.

Debt Repayment Capacity Utilization (DRCU)

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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Off-farm income makes up a significant proportion of total farm household income.

Share of Farm and Off-farm Income for All Farm Households

Source: Census of Agriculture

Note: Farm household is defined as having more than $1,000 of farm sales.
Off-farm income significantly lowers financial stress for livestock and young farmers.

Debt Repayment Capacity Utilization (DRCU) Ratio Categories

Source: 2008 Agricultural Resource Management Survey
Note: Farm DRCU only considers farm income to repay farm debt. Household DRCU considers all farm household income to repay all farm household debt.
Part-time farmers’ debt repayment ability relies heavily on off-farm income.

Debt Repayment Capacity Utilization (DRCU) Ratio

Source: Agricultural Resource Management Survey
Note: Farm DRCU only considers farm income to repay farm debt. Household DRCU considers all farm household income to repay all farm household debt.
Off-farm income helps full-time farmers repay debt when farm income drops.

Debt Repayment Capacity Utilization (DRCU) Ratio

Source: Agricultural Resource Management Survey
Note: Farm DRCU only considers farm income to repay farm debt. Household DRCU considers all farm household income to repay all farm household debt.
Farming is not the only foundation for rural economies.

Rural Earnings from Farming, Manufacturing, and Service Sectors

Percent of total earnings in nonmetropolitan counties

Source: USDA
Farm households have benefited from the service sector.

Debt Repayment Capacity Utilization (DRCU) Ratio

Source: Agricultural Resource Management Survey
Note: Household DRCU considers all farm household income to repay all farm household debt.
Can Broadband connections help the rural service sector flourish?

Broadband connections could enhance telemedicine in rural areas. Whitacre, et al. (2007) estimates that telemedicine can add as much as $145,000 per year to a rural economy.

Source: FCC
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Do negative real interest rates have an affect on farmland values?

Real U.S. Farmland Values

Source: USDA and Board of Governors
Is a farmland bubble brewing? Are values too high or rents too low?

**Farmland Values to Rent Ratio**

- **Iowa Farmland Value to Rent**
- **East NE Irrigated Cropland Value to Rent**
- **S&P PE Ratio (Average since 1945)**

Calculations based on Iowa State University and University of Nebraska data

Federal Reserve Bank of Kansas City – Omaha Branch
Regional, Public and Community Affairs Division
Conclusion

- U.S. and international demand have a significant affect on farm incomes
- Credit is available for creditworthy producers, but do these producers need/want it?
- Off-farm income plays a significant role in farm household financial stress
- Macroeconomic events flow through to agricultural markets
For More Information

Federal Reserve Bank of Kansas City – Omaha Branch

www.kansascityfed.org/omaha
Excess reserves held at the Fed have surged.

Excess Reserves of Depository Institutions

Billion dollars

Jan-08 Jul-08 Jan-09 Jul-09 Jan-10 Jul-10

≈ 2 Billion Dollars

Source: Federal Reserve Board of Governors
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 \(M\)↑ chasing too few goods \(Q\)↓
Velocity has fallen.
Inflation expectations remain subdued.

U.S. Inflation Expectations

Source: Survey of Professional Forecasters