Finance and Credit Issues for Agriculture and the Food System: Update 2010

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Summary: Key Changes
November 2008 - Today

- Short-term liquidity
- Financial market volatility
- Unemployment
- Deleveraging
- Public debt: level, duration, yield curve
- Federal and state budgets
- Corporate and farm profitability
- Securitization markets
- Bank failures & stress on FDIC
- Agricultural financial stress: dairy, protein and ethanol markets
Financial Health of the Consumer

- **Income declines**
  - 15 million unemployed + 11.5 underemployed
  - Average work week 33.3 hours
  - Median unemployment 19.9 weeks (up 100% Nov 2008)

- **Wealth declines**
  - $3.6 trillion off home price peak
  - $8.3 trillion off financial asset peak values

- 23% home mortgages with negative equity

- 9.24% mortgages past due (up 44%)
Unemployment Rates by County
February 2007
4.6%

Source: BLS and Latoya Egwuekwe
Unemployment Rates by County
March 2007
4.6%

Source: BLS and Latoya Egwuekwe
Unemployment Rates by County
June 2007
4.5%

Source: BLS and Latoya Egwuekwe
Unemployment Rates by County
July 2007
4.5%

Source: BLS and Latoya Egwuekwe
Unemployment Rates by County
August 2007
4.5%

Source: BLS and Latoya Egwuekwe
Unemployment Rates by County
September 2007
4.5%

Source: BLS and Latoya Egwuekwe
Unemployment Rates by County
October 2007
4.6%

Source: BLS and Latoya Egwuekwe
Unemployment Rates by County
November 2007
4.6%

Source: BLS and Latoya Egwuekwe
Unemployment Rates by County
December 2007
4.6%

Source: BLS and Latoya Egwuekwe
Unemployment Rates by County
January 2008
4.7%

Source: BLS and Latoya Egwuekwe
Unemployment Rates by County
March 2008
4.7%

Source: BLS and Latoya Egwuekwe
Unemployment Rates by County
April 2008
4.8%

Source: BLS and Latoya Egwuekwe
Unemployment Rates by County
May 2008
4.9%

Source: BLS and Latoya Egwuekwe
Unemployment Rates by County
July 2008
5.0%

Source: BLS and Latoya Egwuekwe
Unemployment Rates by County
August 2008
5.2%

Source: BLS and Latoya Egwuekwe
Unemployment Rates by County
September 2008
5.3%

Source: BLS and Latoya Egwuekwe
Unemployment Rates by County
October 2008
5.4%

Source: BLS and Latoya Egwuekwe
Unemployment Rates by County
January 2009
6.0%

Source: BLS and Latoya Egwuekwe
Unemployment Rates by County
February 2009
6.3%

Source: BLS and Latoya Egwuekwe
Unemployment Rates by County
April 2009
7.0%

Source: BLS and Latoya Egwuekwe
Unemployment Rates by County
May 2009
7.3%

Source: BLS and Latoya Egwuekwe
Unemployment Rates by County
June 2009
7.6%

Source: BLS and Latoya Egwuekwe
Unemployment Rates by County
July 2009
7.9%

Source: BLS and Latoya Egwuekwe
Unemployment Rates by County
August 2009
8.2%

Source: BLS and Latoya Egwuekwe
Unemployment Rates by County
September 2009
8.5%

Source: BLS and Latoya Egwuekwe
Unemployment Rates by County
October 2009
8.8%

Source: BLS and Latoya Egwuekwe
Unemployment Rates by County
November 2009
9.0%

Source: BLS and Latoya Egwuekwe
Average farm operator household income, by source, compared with U.S. household income, 1988-2009F

Sources of off-farm income for farm operator households, 2008

- Wages and salaries, operators: 37%
- Wages and salaries, spouses: 22%
- Nonfarm business income, operator: 8%
- Nonfarm business income, spouses: 2%
- Interest income: 3%
- Dividend income: 2%
- Transfer income, public sources: 11%
- Transfer income, private sources: 6%
- Other: 9%

Source: Agricultural Resource Management Survey, ERS and NASS, USDA.
Inflation-adjusted U.S. home prices, Population, Building costs, and Bond yields (1890–2005)

Source: *Irrational Exuberance*, 2nd ed. (Fig. 2.1)
Commercial, Residential and Farm Real Estate Prices

Base = 2000

Farm Foundation Forum
### Farmland prices

<table>
<thead>
<tr>
<th>Period</th>
<th>Dow Index</th>
<th>Case Shiller House Price Index/Year</th>
<th>Chicago House Price Index</th>
<th>Midwest Farmland Total Return</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999-2008</td>
<td>1.10%</td>
<td>5.89%</td>
<td>3.00%</td>
<td>12.70%</td>
</tr>
<tr>
<td>2007</td>
<td>6.20%</td>
<td>-10.30%</td>
<td>-4.70%</td>
<td>16.20%</td>
</tr>
<tr>
<td>2008</td>
<td>-45.50%</td>
<td>-21.40%</td>
<td>-15.40%</td>
<td>18.90%</td>
</tr>
<tr>
<td>2009 to Dec</td>
<td>11.98%</td>
<td>0.41%</td>
<td>1.01%</td>
<td>-0.50%</td>
</tr>
</tbody>
</table>
Price of Legacy/Toxic Securities

ABX-06-02-BBB

ABX-06-02-AAA

Farm Foundation Forum
Total Assets Used in Farming: United States

$1.943 Trillion
2009p

- Real estate, 84%
- Machinery & equipment, 6%
- Crops stored, 2%
- Purchased inputs, 0%
- Financial assets, 4%
- Livestock & poultry, 4%

Source: Economic Research Service
Current Economic Drivers

Farmland Prices

- Net returns to land
  - Level
  - Volatility
- Energy prices
- Interest / inflation rates
- Housing crisis
- Scope & economic situation of buyers
- Demand for recreational land
- Capital gains tax rates
Total Farm Debt

Farm Credit System 37%
Commercial banks 46%
Life insurance companies 10%
Individuals and others 2%
Farm Service Agency 2%

$239 Billion 2008
$249 Billion 2009p
$233 Billion 2010f

Does not include other sectors of the supply chain
Perspective of $250 Billion

Does not include
Asset bank commercial paper MM Mutual Fund facility
Temporary guarantee for MM funds

Source: WSJ
Individual Lenders in Production Agriculture
How Many Banks Does It Take?
% of Commercial Bank Loans to Agriculture

15 Banks
821 Banks
332 Banks

474 Banks
5,000+ Banks

0% 20% 40% 50% 100%
<table>
<thead>
<tr>
<th>Bank Name</th>
<th>Loans Secured by RE</th>
<th>Production Loans</th>
<th>Total Ag Loans</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wells Fargo Bank, NA</td>
<td>$2,597,000</td>
<td>$5,972,000</td>
<td>$8,569,000</td>
</tr>
<tr>
<td>Bank of America, NA</td>
<td>1,815,530</td>
<td>1,511,970</td>
<td>3,327,500</td>
</tr>
<tr>
<td>Bank of the West</td>
<td>987,753</td>
<td>1,978,060</td>
<td>2,965,813</td>
</tr>
<tr>
<td>Rabobank, NA</td>
<td>1,527,271</td>
<td>562,229</td>
<td>2,089,500</td>
</tr>
<tr>
<td>U.S. Bank NA</td>
<td>744,309</td>
<td>1,042,911</td>
<td>1,787,220</td>
</tr>
<tr>
<td>M&amp;I Marshall and Ilsley Bank</td>
<td>761,496</td>
<td>450,166</td>
<td>1,211,662</td>
</tr>
<tr>
<td>Regions Bank</td>
<td>733,065</td>
<td>303,174</td>
<td>1,036,239</td>
</tr>
<tr>
<td>Wachovia Bank, NA</td>
<td>378,000</td>
<td>448,000</td>
<td>826,000</td>
</tr>
<tr>
<td>Citibank, NA</td>
<td>16,000</td>
<td>799,000</td>
<td>815,000</td>
</tr>
<tr>
<td>KeyBank NA</td>
<td>214,206</td>
<td>529,294</td>
<td>743,500</td>
</tr>
<tr>
<td>Great Western Bank</td>
<td>285,153</td>
<td>442,300</td>
<td>727,453</td>
</tr>
<tr>
<td>First National Bank of Omaha</td>
<td>69,907</td>
<td>649,497</td>
<td>719,404</td>
</tr>
<tr>
<td>Citizens Business Bank</td>
<td>204,298</td>
<td>424,653</td>
<td>628,951</td>
</tr>
<tr>
<td>Pinnacle Bank</td>
<td>213,531</td>
<td>322,075</td>
<td>535,606</td>
</tr>
<tr>
<td>Fulton Bank, NA</td>
<td>399,579</td>
<td>135,466</td>
<td>535,045</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>$10,947,098</td>
<td>$15,570,795</td>
<td>$26,517,893</td>
</tr>
</tbody>
</table>

Proportion of all banks: 16% | 26% | 21%
Delinquency Rates
Commercial Banks

Source: Federal Reserve
Banks Initially Participating in TARP

- 400 Firms (530 Banks)
- 6% of banks lending to Agriculture
- 24% of Agricultural Volume
- 0.09% ROA TARP Banks
- 0.42% ROA Non-TARP Banks
185 Bank Failures
Since 1/2008

Source: WSJ
<table>
<thead>
<tr>
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<th>Secured by Farm Real Estate</th>
<th>Ag Production</th>
<th>Total Ag Loans</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ag Loan Volume ($ billion)</td>
<td>$1.30</td>
<td>$0.89</td>
<td>$2.19</td>
</tr>
<tr>
<td>Number of banks with volume</td>
<td>103</td>
<td>60</td>
<td>106</td>
</tr>
<tr>
<td>Percent of total bank volume</td>
<td>1.06%</td>
<td>1.51%</td>
<td>1.20%</td>
</tr>
</tbody>
</table>
## Agricultural Banks

<table>
<thead>
<tr>
<th></th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Return on assets</td>
<td>1.20%</td>
<td>1.00%</td>
<td>0.83%</td>
</tr>
<tr>
<td>Core Capital/Total Assets</td>
<td>10.31%</td>
<td>9.99%</td>
<td>9.96%</td>
</tr>
<tr>
<td>Percent all loans noncurrent</td>
<td>1.05%</td>
<td>1.43%</td>
<td>1.83%</td>
</tr>
</tbody>
</table>
Summary: Commercial Banks Lending to Agr.

- 702 on FDIC problem list
- Availability of credit
- Unemployment impacts
- Construction and Development Loans
- Community Banks
  - Less benefit from maturity spreads
  - Interest rate risk exposure
  - FDIC premium costs
  - Additional provisions
Bond markets have stabilized

$2.850 Billion Income 2009

Capital / Assets grew to 13.9%

Nonaccrual loans increase $1.087 billion
2.14% from 1.50%

Exposure to dairy, protein and ethanol
- Repay 2008 emergency capital infusion
- Capital surplus $126 million Q3 - 2009 
  Up $100 million
- Currently has largest capital surplus in history
- Ethanol losses and exposure
- Benefits from expanded authorities of rural utilities
Captive Finance
Securitization rebound

Source: Bloomberg and Morgan Stanley
Summary

- In general, health lenders to agriculture remains adequate

- Nonagricultural income and unemployment large issue

- Profit margins narrowing and risks increasing
  More winners – more losers
Challenges: Producer Risk Pipeline

- Commodity price risks
- Input price risks
- Cash rent
- Interest rate risks
- Counterparty risks