Economic Crisis: Linkages to Agriculture and Farmland Values

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2009 Illinois Farm Economics Summit
The Profitability of Illinois Agriculture: Profitability at a Crossroads
Where do we start?
Economic Basics

GDP = C + I + G - (X - M)

US:
14,266 = 10,140 + 1,569 + 2,959 - 402
71% + 11% + 21% - 3%
Source: BEA 3rd Qtr 2009, estimate, current dollars

China
36% + 42% + 13% + 9%
Financial Health of the Consumer

- **Income Declines**
  - 15 million unemployed + 11.5 underemployed
  - Average work week 33.2 hours
  - Median unemployment 20.1 weeks (up 100% Nov 2008)

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

- 23% of home mortgages have negative equity

- 9.24% mortgages past due (up 44%)
U.S. Savings Rate

China: 30-40%
Commercial, Residential and Farm Real Estate Prices

Illinois Farmland
Residential Housing
Commercial Real Estate

Base = 2000
U.S. Debt Markets | How markets have changed since the start of the recession

Supported by Government

U.S. Treasuries: +40%
Municipal: +6%
Agency MBS??: +21%
Non-agency MBS: -29%
Prime jumbo: -24%
Subprime: -34%
Option ARM: -19%
Alt-A: -23%
Commercial: +33%
Auto loans: -12%
Credit cards: -43%
Commercial paper: 0%
Student loans: -35%
Commercial grade bonds: -7%
Institutional leveraged loans: +5%
Investment grade bonds: -12%
Bank loans and leases: -9%

Mortgage markets
Consumer loans
Corporate

Source: WSJ 12/8/2009
The Fed Has Expanded its Balance Sheet to Extend Credit to Banks

Billions of Dollars

Federal Reserve Balance Sheet

- Short-term Lending to Financial Firms
- Rescue Operations
- Operations Focused on Broader Credit Conditions
- Other Assets
- Treasury Portfolio

Source: Federal Reserve Board of Governors
U.S. Outlays & Receipts/GDP

Source: CBO
Sources of Tax Revenue

- Individual Income Taxes
- Corporate Income Taxes
- Excise Taxes
- Social Insurance and Retirement Receipts
- Other

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Under current law, the federal budget is on an unsustainable path—meaning that federal debt will continue to grow much faster than the economy over the long run. Source: Congressional Budget Office June ‘09
Delinquency Rates
Commercial Banks

- Agr Loans, 9.08
- Business Loans, 6.42
- Residential Mortgages, 3.24
- Credit Cards, 5.24
- Commercial Real Estate, 12.06
- Residential Mortgages, 9.81
- Commercial Real Estate, 8.74
- Credit Cards, 6.58
- Business Loans, 4.4
- Agr Loans, 2.57

Graph showing delinquency rates for various types of loans from 1987Q1 to 2009Q1.
Price of Legacy/Toxic Securities

- ABX-06-02-AAA
- ABX-06-02-BBB
What about Agriculture?
Vulnerabilities
Rural and Agricultural Financial Markets

- 148 Commercial bank failures since June 2008
- Regional exposure to Commercial Development and Real Estate Loans
- Pork and dairy markets
- Exposure to interest rate changes
- Additional deposit insurance fees for banks
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
Farmland Price Headlines

- "...quarterly decrease of 6% (...in 2009) ... the largest quarterly decline since 1985" (Chicago Fed AgLetter).

- "It's Confirmed: Farmland Prices are Correcting". Continuing with an attribution to USDA, "...both Bloomberg and the WSJ are reporting the first annual drop in U.S. farmland prices in 20 years of an average of -3.2%". (www.seekingalpha.com)

- Various sources have cited declines in Iowa farmland values from last year ranging from about 5% to nearly 7.6% (HPJ Land Journal, ISU Ag Decision Maker, others).

- In its mid-2009 survey, the Illinois Society of Professional Farm Managers and Rural Appraisers found high quality land to be down 2.38%, lower quality land off 5.6%, and were among the first to note evidence of expectations of declining cash rents.

- USDA sources show farmland values in Illinois down .4% from the same period in 2008, with steeper declines in IN and IA, though surveyed cash rents paid were still up into 2009 from a year earlier.
Is the sky falling?

<table>
<thead>
<tr>
<th></th>
<th>Dow Index</th>
<th>Case-Shiller House Price Index/year</th>
<th>Chicago House Price Index</th>
<th>Illinois 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 date</td>
<td>11.98%</td>
<td>0.41%</td>
<td>1.01%</td>
<td>-0.50%</td>
</tr>
</tbody>
</table>
## Estimated Returns to Land

<table>
<thead>
<tr>
<th>Region</th>
<th>Returns/Acre</th>
<th>Imputed Land Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northern Illinois</td>
<td>265</td>
<td>5,893</td>
</tr>
<tr>
<td>Central Illinois High Productivity</td>
<td>263</td>
<td>5,849</td>
</tr>
<tr>
<td>Central Illinois Low Productivity</td>
<td>226</td>
<td>5,018</td>
</tr>
<tr>
<td>Southern Illinois</td>
<td>154</td>
<td>3,427</td>
</tr>
</tbody>
</table>

**Assumptions:**
- Schnitkey budgets + $50 return to land
- $4.00 / bu. Corn : $10.00 / bu. Soybeans
- 4.5% Capitalization Rate
What have we learned from the Crisis?

- Consumer has felt some pain
- Real estate prices can fall.
- Low documentation loans often don’t work.
- Credit spreads can widen quickly.
- In crisis, diversification does not work well.
- Pain can be severe.
- Lack of regulatory “sympathy” to smaller institutions.
- Total agricultural debt low relative to others.