Quarterly Report on FCS Condition
December 9, 2021

Dennis A. Shields
Hal Johnson
Topics for Open Session

- Economic Conditions Affecting the Farm Credit System
  - Macro, inputs, and supply chain
  - Commodity margins
  - Farm sector income and real estate values

- Farm Credit System Condition and Performance
  - System growth and loan portfolio
  - Earnings and capital
  - Financial Institution Rating System (FIRS)
Economic Conditions Affecting the Farm Credit System

Dennis A. Shields
Chief Economist
Office of Data Analytics and Economics
U.S. economy powers forward, but inflation could alter trajectory

- U.S. GDP growth slowed in the third quarter, constrained by supply chain issues and labor shortages.
- Employment numbers remain below pre-pandemic levels on falling workforce participation.
- CPI inflation hits a 30-year high, and consumer sentiment falls to 10-year low.
- Fed policy holds rates steady despite growing concerns that inflation is not “transitory.”
- Relatively strong economic growth is expected for major importers of U.S. agricultural products.
More costly inputs and supply chain woes challenge producers and marketers

- Ag producers face major cost increases for energy, transportation, and labor.
- Chemical inputs have soared:
  - Fertilizer prices are up sharply on rising natural gas and transportation costs, plus strong global demand.
  - Generic glyphosate prices have doubled.
- Global farm equipment industry continues to struggle with product and parts delivery.
- Supply chains may not fully recover until 2023.

Source: New York Mercantile Exchange as reported by Trading Economics.
Note: Btu = British thermal unit.
Shipping costs show signs of easing

- Transportation bottlenecks have kept U.S. ports logjammed with ships from Asia.
- Backhaul opportunities to Asia evaporated.
- Shipping rates set records, but have recently declined as shipping demand eases seasonally.
- Situation is expected to improve over winter.

Sources: Bloomberg for container rates and Trading Economics for London-based Baltic Exchange Dry Index.
Notes: Container rate for Shanghai-to-Los Angeles trade route; FEU = 40-foot equivalent unit.
U.S. ag exports to remain strong in 2022

- Value of U.S. agricultural exports projected at record.
- Trade supported by global economic recovery.
- Relatively strong demand for a range of ag commodities.
- China to remain largest market, driven by import needs and policy.

Source: *Outlook for U.S. Agricultural Trade*, USDA.
Notes: October-September fiscal years; F = forecast as of 11/23/21.
Grain farm income to fall in 2022 with higher input costs

- Net income in 2022 for Illinois grain farms are projected lower, approaching 2013-2019 average.
- Higher fertilizer costs are major driver.
- Sharply lower crop prices would trigger negative net incomes and major cost adjustments for these farms.

### Net income for an Illinois grain farm

<table>
<thead>
<tr>
<th>2022 projection scenario:</th>
<th>Average farm net income</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corn price = $5 / bu.</td>
<td>$146,160 per farm</td>
</tr>
<tr>
<td>Corn price = $4 / bu.</td>
<td>-$53,200 per farm</td>
</tr>
</tbody>
</table>

**2021 projection**

- $300,000+ per farm (record)

**2013-2019 avg.**

- $85,000 per farm

Source: [farmdocdaily](https://www.farmdocdaily.com), Univ. of Illinois, 11/16/21.

Notes: Example serves as proxy for Midwest grain farms. Projections for a corn/soybean farm in central IL with 1,400 acres. For 2022, assumes higher fertilizer costs than in 2021 and per-bushel soybean prices of $12 and $10.
Livestock producer margins in 2021 have been favorable, except for dairy

- Cow-calf margins are positive outside of drought areas.
  - Poor pastures and expensive hay stress some producers.
  - Cyclical downturn in cattle inventory means higher calf prices next year.

- Hog margins have been robust despite high feed costs.
  - Reduced slaughter and strong exports supported hog prices in 2021.
  - Record high retail prices will slow purchases in 2022.

- Broiler margins find rare air, remain high through most of 2021.
  - Industry cautiously expanded production in 2021.
  - Chicken wings compete with burgers and pizza – a major structural shift in demand.

- Dairy margins remain well below 5-year average.
  - Milk prices increased only 1% compared with double-digit gains for cattle, hogs, and broilers.
  - Poor margins have not been offset by ad hoc payments and federal purchases (as in 2020).

Source: Margins and Markets, 11/22/21, Livestock Marketing Information Center.
Farm income to remain above average in 2021

U.S. net cash farm income (adjusted for inflation)

Source: USDA/ERS.
Note: Forecast for 2021 as of December 1.
Midwest farmland markets soar

- Banker surveys report double-digit gains for cropland prices.
- Farm auctions trigger strong farmer and investor interest.
- Sales volume is up across much of Corn Belt this fall.
- Pasture/ranchland prices are also up sharply outside of drought areas.
- Drivers: high profits for crops, low borrowing rates, negative returns on alternative investments, inflation concerns, and demand for rural land.

### Cropland values, % change

<table>
<thead>
<tr>
<th></th>
<th>Q3 2020 to Q3 2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chicago Federal Reserve District</td>
<td>18%</td>
</tr>
<tr>
<td>Illinois</td>
<td>13%</td>
</tr>
<tr>
<td>Indiana</td>
<td>15%</td>
</tr>
<tr>
<td>Iowa</td>
<td>28%</td>
</tr>
<tr>
<td>Kansas City Fed. Reserve District</td>
<td>14%</td>
</tr>
<tr>
<td>Kansas</td>
<td>10%</td>
</tr>
<tr>
<td>Nebraska</td>
<td>16%</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>9%</td>
</tr>
<tr>
<td>Minneapolis Fed. Reserve District</td>
<td>22%</td>
</tr>
<tr>
<td>North Dakota</td>
<td>4%</td>
</tr>
<tr>
<td>Minnesota</td>
<td>26%</td>
</tr>
<tr>
<td>South Dakota</td>
<td>23%</td>
</tr>
</tbody>
</table>

Source: District Federal Reserve Bank [surveys](#).

Note: Non-irrigated cropland.
Farmland markets are stable-to-higher in Pacific Northwest and California

- In the Pacific Northwest, most areas report strong demand for good quality ag land, rural residential properties, and ranches.
- Prices have risen for California farmland with good water rights.
- With water availability a major determinate of land usage, valuations can be half when water rights are less secure.

### Cropland value, % change

<table>
<thead>
<tr>
<th>State</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Washington</td>
<td>-1%</td>
<td>0%</td>
<td>-1%</td>
<td>3%</td>
</tr>
<tr>
<td>Oregon</td>
<td>3%</td>
<td>3%</td>
<td>1%</td>
<td>6%</td>
</tr>
<tr>
<td>Idaho</td>
<td>5%</td>
<td>5%</td>
<td>4%</td>
<td>9%</td>
</tr>
<tr>
<td>California</td>
<td>5%</td>
<td>5%</td>
<td>1%</td>
<td>7%</td>
</tr>
</tbody>
</table>

Source: Calculated from Land Values, 2021 Summary; USDA. Note: Based on data collected from producers during first half of June.
Patterns in movements of farmland value can have implications for collateral risk

- State farmland values follow a distinct pattern in:
  - OH, IN, IL, IA, NE, MN
  - MO, KS, OK

- A different pattern emerges in:
  - RI, DE, MD, VA
  - FL, GA, NV

- Real estate values might have similar patterns in unexpected places.

Source: FCA’s Office of Data Analytics and Economics.
Notes: States are arithmetically grouped by similarity of changes in state average farm real estate values (USDA/NASS, 1996-2021). Charts show pattern of change, not specific values.
Concluding comments

- Expanding economic activity in the U.S. and abroad supports demand for U.S. farm goods.
- Inflation and input costs continue to affect producer returns and consumer demand.
- Pandemic-related challenges present risks while driving change in operations for businesses and customers.
- Drought and water concerns stress some regions and producers.
- Stable-to-strong land market strengthens farm balance sheets.
- Farm income to hit multi-year high in 2021, but shrinking government payments make future profits uncertain.
Farm Credit System
Condition and Performance

as of
September 30, 2021

Hal Johnson
Sr. Financial Analyst
Office of Examination
Topics

- System growth
- Portfolio credit quality
- Earnings
- Capital | Liquidity
- FIRS
Soaring cropland markets drive strong demand for real estate mortgage loans

Source: FCS Information Statements

<table>
<thead>
<tr>
<th>Total Assets</th>
<th>Gross Loans</th>
</tr>
</thead>
<tbody>
<tr>
<td>9/30/21</td>
<td>9/30/21</td>
</tr>
<tr>
<td>$410.6 billion</td>
<td>$325.8 billion</td>
</tr>
</tbody>
</table>

+0.7% Qtr  \(+2.5\%\) YTD  \(+6.7\%\) 12M

+0.8% Qtr  \(+3.3\%\) YTD  \(+8.0\%\) 12M

Quarterly Loan Growth

Loan Growth by Loan Type

% change year-to-date through September

Total Loan Portfolio
- Total Loan Portfolio
- RE Mortgage
- Prod. & Intermediate
- Agribusiness

2019
- Total Loan Portfolio
- RE Mortgage
- Prod. & Intermediate
- Agribusiness

2020
- Total Loan Portfolio
- RE Mortgage
- Prod. & Intermediate
- Agribusiness

2021
- Total Loan Portfolio
- RE Mortgage
- Prod. & Intermediate
- Agribusiness

Source: FCS Information Statements
Portfolio loan quality is very good; challenges persist for certain sectors and regions

<table>
<thead>
<tr>
<th>Nonperforming Assets (9/30/21)</th>
<th>$1.784 billion</th>
<th>Qtr chg.</th>
<th>-$77M or -4.1%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delinquencies (1) (9/30/21)</td>
<td>0.22%</td>
<td>Q2 '21</td>
<td>0.24%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Q3 '20</td>
<td>0.28%</td>
</tr>
</tbody>
</table>

(1) accruing loans 30 days or more past due as a % of accruing loans

<table>
<thead>
<tr>
<th>% of Nonperforming Assets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nonperforming Assets ($M)</td>
</tr>
<tr>
<td>Nonperforming Assets as a % of Gross Loans + OPO</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>% of Loans Classified less than Acceptable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sep-21</td>
</tr>
<tr>
<td>Total Portfolio</td>
</tr>
<tr>
<td>Real Estate Mortgage</td>
</tr>
<tr>
<td>Production &amp; Intermediate</td>
</tr>
<tr>
<td>Agribusiness</td>
</tr>
<tr>
<td>Rural Infrastructure</td>
</tr>
</tbody>
</table>

Source: FCS Information Statements
The System reported strong 3rd quarter results

System Earnings ($M)

<table>
<thead>
<tr>
<th>Year-to-date System Net Income</th>
<th>Year-to-date Provisions for Loan Losses</th>
</tr>
</thead>
<tbody>
<tr>
<td>3Q-14 3Q-15 3Q-16 3Q-17 3Q-18 3Q-19 3Q-20 3Q-21</td>
<td></td>
</tr>
<tr>
<td>3,569 3,481 3,589 3,716 4,012 4,055 4,446 5,201</td>
<td></td>
</tr>
<tr>
<td>7 87 218 188 146 95 165 (142)</td>
<td></td>
</tr>
</tbody>
</table>

Source: FCS Information Statements

Net Interest Spread | Net Interest Margin

<table>
<thead>
<tr>
<th>Rate: Earning Assets</th>
<th>% Net Interest Margin</th>
<th>Rate: Interest-Bearing Liab.</th>
<th>% Net Interest Spread</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.55 2.49 2.48 2.46 2.42 2.46 2.46 2.46</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.41 3.48 3.75 4.21 4.40 3.56 3.17 3.17</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.01 1.17 1.50 2.09 2.36 1.30 0.84 0.84</td>
<td></td>
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( **) year-to-date annualized

% Change in Average Earning Assets
(compared to the same period a year ago)

| 3Q-14 3Q-15 3Q-16 3Q-17 3Q-18 3Q-19 3Q-20 3Q-21 |
| 7.0% 6.4% 9.8% 4.1% 4.2% 5.2% 7.2% 8.0% |

19
Strong earnings support continued capital growth

**Capital and Liquidity**  
(as of September 30, 2021)

- Total Regulatory Capital:
  - Banks | 15.4% to 18.9%
  - Associations | 12.0% to 34.7%

- Days of liquidity for the four funding banks ranged from 150 to 227 days

- Capital and the allowance for loan losses as a % of loans outstanding ranged from 17.8% to 23.0% at a combined district level

Source: FCS Information Statements

Note: Restricted capital represents capital associated with the Insurance Fund.
**System FIRS ratings**

**FIRS Ratings**
(based on 9/30/21 financial reporting)

- Composite FIRS ratings were largely unchanged from the 2nd quarter
- Over 95% of System banks and associations have a Composite FIRS rating of 1 or 2
- Institutions rated 3 or lower hold less than 1.0% of System assets

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![Composite FIRS Ratings](chart.png)

**Composite FIRS Ratings**
Farm Credit System Banks and Associations

Source: FCA’s FIRS ratings database
Summary and final points

- Supply chain issues, labor constraints, and inflationary pressures are affecting agricultural producers.
- Strong crop sector returns help drive farmland values higher, particularly in the Midwest.
- System portfolio quality is very good, but challenges persist for certain sectors and geographic regions.
- The Farm Credit System remains safe and financially sound.
- System institutions are well-positioned to meet the credit needs of agricultural producers and rural America.
Questions

THANK YOU