Quarterly Report on FCS Condition
September 12, 2019

Dennis A. Shields
Hal Johnson
Topics for Open Session

- Economic Conditions Affecting the Farm Credit System
  - Macroeconomic conditions
  - Farm income and government payments
  - Farm sector debt servicing and leverage

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

Dennis A. Shields
Chief Economist
Office of Regulatory Policy
Slower economic growth expected for key U.S. agricultural export markets

Real gross domestic product per capita

% change

World U.S. Canada Mexico Japan South Korea Europe China

Source: USDA/ERS using data and forecasts from Global Insight, International Monetary Fund, and Oxford Economics.
Economic concerns

- Trade war triggers recession
- Uncertainty reduces business investment
- Consumer spending and slowdown in industrial production
- Inverted yield curve
- Rising consumer, business, and government debt
- Relative interest rates and impact on value of U.S. dollar
China’s retaliatory tariffs reduce (and re-direct) U.S. agricultural exports

China now accounts for only 5% of U.S. ag. exports, down from 16% in 2017

Fiscal year U.S. agricultural export value ($bil.)

Source: USDA.
Market Facilitation Program payments represent sizable support for U.S. farm sector

Ratio of estimated 2019 MFP payments to total agricultural sales by county

Impact of 2019 MFP payments

<table>
<thead>
<tr>
<th></th>
<th>Ratio of payments to sales</th>
<th>Ratio of payment to net cash income</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. total</td>
<td>3.7%</td>
<td>16.5%</td>
</tr>
<tr>
<td>FCS district (geographic) footprint using county estimates</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AgriBank</td>
<td>5.4%</td>
<td>22.0%</td>
</tr>
<tr>
<td>Texas</td>
<td>4.4%</td>
<td>22.1%</td>
</tr>
<tr>
<td>AgFirst</td>
<td>2.5%</td>
<td>8.9%</td>
</tr>
<tr>
<td>CoBank</td>
<td>1.8%</td>
<td>9.9%</td>
</tr>
</tbody>
</table>

Source: FCA analysis of USDA payment rates, acreage, production; and county sales and income from 2017 Census of Agriculture.
Average crop margins are lifted by Market Facilitation Program payments

### Iowa soybeans

<table>
<thead>
<tr>
<th>Year</th>
<th>Margin</th>
<th>With MFP of $1.18 per bu.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018</td>
<td>1.75</td>
<td></td>
</tr>
<tr>
<td>2019F</td>
<td>0.29</td>
<td></td>
</tr>
</tbody>
</table>

### Iowa corn

<table>
<thead>
<tr>
<th>Year</th>
<th>Margin</th>
<th>With MFP of $0.35 per bu.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018</td>
<td>0.31</td>
<td></td>
</tr>
<tr>
<td>2019F</td>
<td>0.41</td>
<td></td>
</tr>
</tbody>
</table>

### Kansas wheat

<table>
<thead>
<tr>
<th>Year</th>
<th>Margin</th>
<th>With MFP of $0.99 per bu.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018</td>
<td>-1.40</td>
<td></td>
</tr>
<tr>
<td>2019F</td>
<td>-0.41</td>
<td></td>
</tr>
</tbody>
</table>

Source: FCA using data from USDA, Iowa State University, and Kansas State University data.

Note: Includes 2018 MFP per-bushel payments of $1.65 for soybeans, $0.01 for corn, and $0.14 for wheat. The 2019 rates are estimated by dividing average per-acre payment by average state yield.
Crop insurance indemnities flow into areas with poor planting weather

Corn and soybean indemnities as a share of total liability

Source: FCA analysis of USDA/RMA data.
Note: Total liability is amount equal to a complete crop loss (after deductible is incurred).
Crop prices are projected to remain weak

Source: Food & Agricultural Policy Research Institute baseline projections (assumes current policies), 8/28/19.
Livestock margins to remain near break-even

- Cow-calf producer margins to remain near break-even
- Hog producer returns to slide with uncertain prospects for exports to China
- Dairy margins to improve in late 2019, but pressure remains on high-cost producers
Expected farm income approaches “average” with help from Market Facilitation Program

U.S. net cash farm income

$ billion in 2019 dollars

Source: USDA/ERS, August 30, 2019; FCA analysis of USDA forecasts and subsequent revisions.
Caution ahead: U.S. farm sector debt-to-income remains historically high

Debt / net cash farm income

Without MFP payments, the debt-to-income ratio in 2019 would be 3.4.

Source: USDA/ERS, August 30, 2019.

Note: Income before interest expense.
Debt-to-income ratio has deteriorated in the Midwest since 2012

Source: FCA analysis of data from 2012 and 2017 Census of Agriculture.
Note: Income before interest expense.
U.S. farm sector real estate leverage rises toward historical average

Source: USDA/ERS, August 30, 2019; FCA analysis of USDA forecasts and subsequent revisions.
Change in real estate leverage is a mixed bag across counties in the Midwest

Percentage-point change in debt-to-asset ratio from 2012 to 2017

- Improved by at least 5
- Improved by 2.5 to < 5
- Relatively flat
- Deteriorated by 2.5 < 5
- Deteriorated by at least 5

Source: FCA analysis of data from 2012 and 2017 Census of Agriculture.
Caution ahead: Iowa land values are elevated relative to the state’s net cash income

Source: FCA analysis of USDA/NASS land values and USDA/ERS net cash farm income by state.
Concluding comments

- Unprecedented weather in 2019 is colliding with agricultural trade policy
- Trade-related payments prop up farm income in the short run
- Farm sector debt-to-income is high, but leverage is near average with room to grow as long as land values hold

Risks ahead

- Any potential price reversal from smaller 2019 U.S. crops will be affected by current trade policy environment and competitor production
- A severe global recession would reduce demand for agricultural products
- A shift toward major government payments creates a major downside risk for farm borrowers and lenders when discretionary support is discontinued
Questions

THANK YOU
Farm Credit System Condition and Performance

as of
June 30, 2019

Hal Johnson
Sr. Financial Analyst
Office of Examination
Topics

- System growth
- Portfolio credit quality
- Earnings
- Capital
- FIRS
System reports little growth in the 1st half of 2019

<table>
<thead>
<tr>
<th>Total Assets 6/30/19</th>
<th>$352.5 billion</th>
<th>+1.1% Qtr</th>
<th>+1.0% YTD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross Loans 6/30/19</td>
<td>$276.2 billion</td>
<td>+0.8% Qtr</td>
<td>+1.0% YTD</td>
</tr>
</tbody>
</table>

**Loan Growth by Loan Type**
% change year-to-date through June

- **Total Loan Portfolio**: 0.7% in Jun-17, 0.8% in Jun-18, 1.0% in Jun-19
- **RE Mortgage (46%)**: 1.7% in Jun-17, 1.7% in Jun-18, 0.9% in Jun-19
- **Prod. & Intermediate (19%)**: -2.5% in Jun-17, -2.0% in Jun-18
- **Agribusiness (18%)**: 6.6% in Jun-17, 4.7% in Jun-18

Source: FCS Information Statements
Credit risk rises; producers challenged by low margins and market uncertainty

### Nonperforming Loans

- **$2.450 billion** YTD Chg. + $252M or 11.5%
- **$49 million** Yr. over Yr. + $49M or 2.0%

### Delinquencies

- **0.36%** YE '18 0.31%
- **0.28%** Q2 '18

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

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Source: FCS Information Statements
Despite some deterioration in portfolio quality, the level of credit risk is manageable.

<table>
<thead>
<tr>
<th>Category</th>
<th>Jun-19</th>
<th>Jun-18</th>
<th>Jun-17</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Portfolio</td>
<td>7.2</td>
<td>6.5</td>
<td>6.2</td>
</tr>
<tr>
<td>Real Estate Mortgage</td>
<td>7.5</td>
<td>7.0</td>
<td>6.2</td>
</tr>
<tr>
<td>Production &amp; Intermediate</td>
<td>12.0</td>
<td>10.6</td>
<td>10.6</td>
</tr>
<tr>
<td>Agribusiness</td>
<td>5.0</td>
<td>4.5</td>
<td>4.6</td>
</tr>
<tr>
<td>Rural Infrastructure</td>
<td>2.9</td>
<td>2.4</td>
<td>2.3</td>
</tr>
</tbody>
</table>

% of Loans Classified less than Acceptable

Source: FCS Information Statements
System’s financial condition is sound

System Earnings
year-to-date through June

<table>
<thead>
<tr>
<th>Year</th>
<th>System Net Income</th>
<th>Provision for Loan Losses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jun-11</td>
<td>1,986</td>
<td></td>
</tr>
<tr>
<td>Jun-12</td>
<td>2,119</td>
<td></td>
</tr>
<tr>
<td>Jun-13</td>
<td>2,246</td>
<td></td>
</tr>
<tr>
<td>Jun-14</td>
<td>2,341</td>
<td></td>
</tr>
<tr>
<td>Jun-15</td>
<td>2,273</td>
<td></td>
</tr>
<tr>
<td>Jun-16</td>
<td>2,337</td>
<td></td>
</tr>
<tr>
<td>Jun-17</td>
<td>2,466</td>
<td></td>
</tr>
<tr>
<td>Jun-18</td>
<td>2,649</td>
<td></td>
</tr>
<tr>
<td>Jun-19</td>
<td>2,668</td>
<td></td>
</tr>
</tbody>
</table>

Source: FCS Information Statements

Net Interest Spread (YTD annualized)
- Q2 ’19: 2.00%
- Q2 ’18: 2.13%

Net Interest Margin (YTD annualized)
- Q2 ’19: 2.40%
- Q2 ’18: 2.44%

Rate: Earning Assets
- 2011: 4.06
- 2012: 3.79
- 2013: 3.59
- 2014: 3.46
- 2015: 3.41
- 2016: 3.48
- 2017: 3.75
- 2018: 4.21
- YTD ’19: 4.64

Rate: Interest-Bearing Liabilities
- 2011: 1.38
- 2012: 1.08
- 2013: 0.95
- 2014: 0.96
- 2015: 1.01
- 2016: 1.17
- 2017: 1.50
- 2018: 2.09
- YTD ’19: 2.46

% Net Interest Spread
- 2011: 2.86
- 2012: 2.87
- 2013: 2.78
- 2014: 2.64
- 2015: 2.55
- 2016: 2.49
- 2017: 2.48
- 2018: 2.46
- YTD ’19: 2.40

% Net Interest Margin
- 2011: 2.68
- 2012: 2.71
- 2013: 2.64
- 2014: 2.50
- 2015: 2.40
- 2016: 2.31
- 2017: 2.25
- 2018: 2.12
- YTD ’19: 2.00
The System continues to maintain its strong capital position

Capital and Liquidity
- as of June 30, 2019 -

- Retained earnings as a percentage of total capital equaled 79.1% of total capital
- The System’s liquidity position equaled 178 days of coverage
- Days of available liquidity for the 4 funding banks ranged from 147 to 235 days

Source: FCS Information Statements

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

FIRS Ratings

- Composite FIRS ratings reflect the System’s solid financial performance and acceptable portfolio credit quality.
- Over 91% of System Banks and Associations have a Composite FIRS rating of 1 or 2.
- Institutions rated 3 or lower account for less than 2.5% of System assets.

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

- Challenges for the farm economy
  - Trade policy uncertainties, slowing global economic growth, low margins, production concerns, existing stocks
- Rising credit risk underscores the significant operating difficulties facing System borrowers
- System institutions are financially sound, strongly capitalized and well-positioned to support agricultural producers
Questions

THANK YOU