Topics for Open Session

- Economic Conditions Affecting the Farm Credit System
  - Commodity price outlook
  - Farm programs and other government assistance
  - Weather, trade, and other risks ahead

- 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
Weather moved the markets in May

Corn futures

Soybean futures

Soybean stocks-to-use ratio to remain high

U.S. soybean price and stocks-to-use ratio

Ending stocks-to-use ratio in percent

$/bu.

0 5 10 15 20 25


May 2019 forecast

Source: FCA using USDA data (May).
Soybean margins to turn negative without Market Facilitation Program payments

Iowa soybean margins

<table>
<thead>
<tr>
<th>Year</th>
<th>Margin ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>0.06</td>
</tr>
<tr>
<td>2010</td>
<td>2.85</td>
</tr>
<tr>
<td>2011</td>
<td>3.55</td>
</tr>
<tr>
<td>2012</td>
<td>2.47</td>
</tr>
<tr>
<td>2013</td>
<td>1.20</td>
</tr>
<tr>
<td>2014</td>
<td>-0.90</td>
</tr>
<tr>
<td>2015</td>
<td>-0.60</td>
</tr>
<tr>
<td>2016</td>
<td>0.45</td>
</tr>
<tr>
<td>2017</td>
<td>0.77</td>
</tr>
<tr>
<td>2018</td>
<td>1.80</td>
</tr>
<tr>
<td>2019F</td>
<td>-0.84</td>
</tr>
</tbody>
</table>

Includes $1.65 2018 Market Facilitation Program payment
Excludes pending 2019 MFP payment

Source: FCA using USDA (May) and Iowa State University data.
Corn stocks-to-use ratio could decline sharply from initial forecast

U.S. corn price and stocks-to-use ratio

$/bu.

5 10 15 20

Ending stocks-to-use ratio in percent

Source: FCA using USDA data. Note: 2019 production scenario A = 0.9 mil. bu. and B = -1.4 bil. bu. from May forecast.
Corn margins to remain near break-even levels

Iowa corn margins

$/bu.

-0.10 0.14
1.64 0.21
2.23 0.05
1.45

2009 10 11 12 13 14 15 16 17 18 2019F

Includes $0.01 2018 Market Facilitation Program payment
Excludes pending 2019 MFP payment

Source: FCA using USDA (May) and Iowa State University data.
Wheat stocks are also large relative to use

Source: FCA using USDA data (May).
Wheat margin loss continues to narrow

Kansas wheat margins

Source: FCA using USDA (May) and Kansas State University data.
Weather drives crop insurance and planting decisions

Projected crop insurance price ($/bu.)

Expected net returns in 2019 ($/acre)

**Scenario: Low corn yield and prices below projected levels**

<table>
<thead>
<tr>
<th></th>
<th>Corn</th>
<th>Soybeans</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prevent plant indemnity (after weed control) OR</td>
<td>$331</td>
<td>$252</td>
</tr>
<tr>
<td>Crop revenue</td>
<td>$581</td>
<td>$475</td>
</tr>
<tr>
<td>+ crop insurance indemnity</td>
<td>+ $41</td>
<td>+ 0</td>
</tr>
<tr>
<td>- non-land costs</td>
<td>- $469</td>
<td>- $256</td>
</tr>
<tr>
<td>= expected return before land cost</td>
<td>= $153</td>
<td>= $219</td>
</tr>
</tbody>
</table>

Source: USDA/RMA.

Farm programs provide some downside price protection in 2019

Part of the gap between the Farm Bill reference price and the season-average farm price is paid under Price Loss Coverage.

Source: FCA using USDA prices (May) and statutory reference prices.
Cow-calf margins to remain slightly positive

- High hay costs limit cow-calf margins; May 1 hay stocks down nearly one-third from 2014-18 average
- Recent export demand strength expected to continue in 2019
- Domestic beef demand remains healthy

Average cow-calf returns

Source: Informa Economics.
Hog producers return to profitability

- African Swine Fever is sharply reducing China’s hog inventory
- Pork exporting opportunities lead to market volatility and hedging opportunities
- U.S. guards against adverse impacts of a potential outbreak

Hog producer margins

Source: Informa Economics.
Dairy margins improve after running in the red in 2018

- Slowdown in production growth has lifted prices
- Margins are running slightly above breakeven
- High-cost producers remain under pressure

Dairy producer margins

$/cwt.


Source: Informa Economics.
Kansas farm management data indicate contrasting returns by income group

<table>
<thead>
<tr>
<th></th>
<th>All farms</th>
<th>Low income group (25%)</th>
<th>High income group (25%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2014</strong></td>
<td>15</td>
<td>16</td>
<td>18</td>
</tr>
<tr>
<td><strong>2015</strong></td>
<td>15</td>
<td>16</td>
<td>17</td>
</tr>
<tr>
<td><strong>2016</strong></td>
<td>17</td>
<td></td>
<td>18</td>
</tr>
<tr>
<td><strong>2017</strong></td>
<td>18</td>
<td></td>
<td>15</td>
</tr>
<tr>
<td><strong>2018</strong></td>
<td>20</td>
<td></td>
<td>14</td>
</tr>
</tbody>
</table>

Source: Kansas Farm Management Association, May 2019.
U.S. export intensity is relatively high for key agricultural commodities

### U.S. exports as a share of production in 2018

<table>
<thead>
<tr>
<th>Commodity</th>
<th>Share of Production</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corn</td>
<td>16%</td>
</tr>
<tr>
<td>Sorghum</td>
<td>23%</td>
</tr>
<tr>
<td>Soybeans</td>
<td>39%</td>
</tr>
<tr>
<td>Wheat</td>
<td>49%</td>
</tr>
<tr>
<td>Cotton</td>
<td>80%</td>
</tr>
<tr>
<td>Beef</td>
<td>12%</td>
</tr>
<tr>
<td>Broiler meat</td>
<td>17%</td>
</tr>
<tr>
<td>Pork</td>
<td>22%</td>
</tr>
<tr>
<td>Oranges</td>
<td>10%</td>
</tr>
<tr>
<td>Apples</td>
<td>17%</td>
</tr>
<tr>
<td>Grapes</td>
<td>33%</td>
</tr>
<tr>
<td>Almonds</td>
<td>55%</td>
</tr>
<tr>
<td>Pistachios</td>
<td>55%</td>
</tr>
</tbody>
</table>

### Top 3 markets

- **Corn**: Mexico, Japan, S. Korea
- **Sorghum**: China, Japan, Spain
- **Soybeans**: China, Mexico, Netherlands
- **Wheat**: Japan, Mexico, Philippines
- **Cotton**: Vietnam, China, Turkey
- **Beef**: Japan, S. Korea, Mexico
- **Broiler meat**: Mexico, Hong Kong, Canada
- **Pork**: Japan, Mexico, Canada
- **Oranges**: S. Korea, Canada, Japan
- **Apples**: Mexico, Canada, India
- **Grapes**: Canada, Mexico, S. Korea
- **Almonds**: India, Spain, Hong Kong
- **Pistachios**: Hong Kong, Germany, Belgium

Source: USDA/FAS Production, Supply and Distribution; and Global Agricultural Trade System.
Waning competitiveness: U.S. share of global exports declined in 2018

U.S. share of global exports by crop year

Source: USDA/FAS Global Agricultural Trade System.
Concluding comments

- Weather in 2019 creates production risk and pricing opportunities
- Additional trade-related payments and disaster assistance form a bridge to next year’s loan renewal season
- Low-cost operations survive and thrive in a low price environment
- Marginal producers may not survive, even with support

Risks ahead
- U.S. animal disease outbreak and market volatility
- Resilience of U.S. and global economic growth amid trade issues
Questions

THANK YOU
Farm Credit System
Condition and Performance

as of
March 31, 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 quarter, seasonal factors drive financing needs

**Total Assets 3/31/19**
$348.7 billion
-0.1% Qtr
+4.7% YOY

**Gross Loans 3/31/19**
$274.2 billion
+0.3% Qtr
+4.4% YOY

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**Loan Growth by Loan Type**
(% change quarter-over-quarter)

- **Mar-17**
  - Total Loan Portfolio: 0.6%
  - RE Mortgage (46%): 0.2%
  - Prod. & Intermediate (19%): 0.3%

- **Mar-18**
  - Total Loan Portfolio: 0.3%
  - RE Mortgage (46%): 1.0%
  - Prod. & Intermediate (19%): -0.2%

- **Mar-19**
  - Total Loan Portfolio: 16.8%
  - RE Mortgage (46%): 16.8%
  - Prod. & Intermediate (19%): 8.0%
  - Agribusiness (18%): -9.2%

Source: FCS Information Statements
Credit risk rises as agricultural producers face continued low prices and market uncertainty

Nonperforming Loans as a % of Gross Loans

<table>
<thead>
<tr>
<th></th>
<th>Mar-19</th>
<th>Dec-18</th>
<th>Mar-18</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Portfolio</td>
<td>6.8</td>
<td>6.6</td>
<td>6.3</td>
</tr>
<tr>
<td>Real Estate Mortgage</td>
<td>11.4</td>
<td>10.6</td>
<td>10.4</td>
</tr>
<tr>
<td>Production &amp; Intermediate</td>
<td>10.4</td>
<td>10.4</td>
<td>10.4</td>
</tr>
<tr>
<td>Agribusiness</td>
<td>4.3</td>
<td>4.3</td>
<td>4.4</td>
</tr>
<tr>
<td>Rural Infrastructure</td>
<td>2.9</td>
<td>2.2</td>
<td>2.6</td>
</tr>
</tbody>
</table>

Source: FCS Information Statements

(1) accruing loans 30 days or more past due
System earning remained strong in the 1st quarter; interest spreads continued to compress

Quarterly System Earnings ($M)

- System Net Income
- Provisions for Loan Losses

Includes $104M net deferred tax adjust.

<table>
<thead>
<tr>
<th>Quarter</th>
<th>System Net Income</th>
<th>Provisions for Loan Losses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mar-16</td>
<td>1,157</td>
<td>69</td>
</tr>
<tr>
<td>Sep-16</td>
<td>1,252</td>
<td>58</td>
</tr>
<tr>
<td>Mar-17</td>
<td>1,244</td>
<td>37</td>
</tr>
<tr>
<td>Sep-17</td>
<td>1,473</td>
<td>9</td>
</tr>
<tr>
<td>Mar-18</td>
<td>1,266</td>
<td>69</td>
</tr>
<tr>
<td>Sep-19</td>
<td>1,363</td>
<td>59</td>
</tr>
<tr>
<td>Mar-19</td>
<td>1,288</td>
<td>65</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Net Interest Spread (YTD annualized)</th>
<th>Q1’19</th>
<th>Q1 ’18</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2.00%</td>
<td>2.15%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Net Interest Margin (YTD annualized)</th>
<th>Q1’19</th>
<th>Q1 ’18</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2.40%</td>
<td>2.44%</td>
</tr>
</tbody>
</table>

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

- Mar-11: 9.0%
- Mar-12: 7.7%
- Mar-13: 6.4%
- Mar-14: 6.5%
- Mar-15: 8.6%
- Mar-16: 6.3%
- Mar-17: 3.6%
- Mar-18: 5.2%
- Mar-19: 5.2%

Source: FCS Information Statements
Strong earnings support continued capital growth

Capital and Liquidity
- as of March 31, 2019 -

▶ Retained earnings as a percentage of total capital equaled 79.4% of total capital.

▶ The System’s liquidity position equaled 177 days of coverage.

▶ Days of available liquidity for the 4 funding banks ranged from 149 to 227 days.

Source: FCS Information Statements

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

- Composite FIRS ratings reflect the System’s solid financial performance and acceptable portfolio credit quality
- Over 90% 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

Composite FIRS Ratings
Farm Credit System Banks and Associations

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

- Challenges for the farm economy:
  - Volatile markets, trade issues, weather, low margins, production levels and existing supplies

- Declining credit quality underscores the significant operating challenges facing System borrowers in many ag sectors

- The System remains financially sound and strongly capitalized

- System institutions have the risk-bearing capacity to support agricultural producers
Questions

THANK YOU