Farm Credit Mid-America

- Part of the National Farm Credit System
- One of 84 associations across the nation
- Cover four-state territory (IN, OH, KY, TN)

**Financial strength:**
- More than $19 billion in assets
- More than $2.5 billion in capital
- More than 96,000 customer-members
- Governed by 18 member-elected Board
- Over 1,100 staff in 93 offices
Land Value Drivers

- Profitable cash grain production & strong demand for land
- Demand for farm commodities exports and ethanol production
- Grain ending stocks and global production
- Low interest rates
- Lack of alternative investments for both buyers and sellers
- Equipment investment and operating capacity
Factors Impacting Crop Returns
Farmer Debt Loads

Farm Debt Leveraging Has Not Followed Land Prices Higher

<table>
<thead>
<tr>
<th>Period</th>
<th>Assets Change</th>
<th>Debt Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>1970-1980</td>
<td>+259%</td>
<td>+235%</td>
</tr>
<tr>
<td>1980-1990</td>
<td>-16%</td>
<td>-19%</td>
</tr>
<tr>
<td>1990-2000</td>
<td>+43%</td>
<td>+25%</td>
</tr>
<tr>
<td>2000-2016</td>
<td>+74%</td>
<td>+43%</td>
</tr>
</tbody>
</table>

Billion dollars

Farm assets (left scale)

Farm debt (right scale)
Net Return Summary

Exhibit 57: US Corn, Soybean and Wheat Net Operating Revenue Comparison

* Net operating revenues = returns over variable costs. Revenue excludes government payments.

Sources: USDA, ERS (historical); Informa Economics (forecast, 2011-2015)
How are today’s interest rates impacting FARMERS?

- Cash Flow
- Purchasing Power
- What about Land Values?
Historical Interest Rates

10 Year Treasury Rate

Mar-03 to Mar-13
Historical Treasury Yield Curves
U.S. Treasury Rates

Long Term US Treasury Rate History

- 3-Year Treasury Constant Maturity Rate
- 5-Year Treasury Constant Maturity Rate
- 7-Year Treasury Constant Maturity Rate
- 10-Year Treasury Constant Maturity Rate
- 20-Year Treasury Constant Maturity Rate
- 30-Year Treasury Constant Maturity Rate
Midwest Real Estate Values

Year over year changes in farmland values in the Seventh Federal Reserve District

Percent

Farm Credit Benchmark Farms

• 40 Benchmark Farms
  – Indiana, Kentucky, Ohio, and Tennessee

• Values Updated Annually (June 30th)

• 17,567 sales analyzed over the past 5 years

• The average annual increase in farm land values was 10.65% for period ending June 30, 2012.
# Midwest Real Estate Values

## Percent Change

<table>
<thead>
<tr>
<th></th>
<th>IN</th>
<th>KY</th>
<th>OH</th>
<th>TN</th>
<th>Association</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jun-12</td>
<td>22.8%</td>
<td>5.7%</td>
<td>11.8%</td>
<td>2.3%</td>
<td>10.7%</td>
</tr>
<tr>
<td>Jun-11</td>
<td>27.3%</td>
<td>12.2%</td>
<td>14.3%</td>
<td>6.9%</td>
<td>15.6%</td>
</tr>
<tr>
<td>Jun-10</td>
<td>3.8%</td>
<td>-1.0%</td>
<td>3.7%</td>
<td>3.0%</td>
<td>2.5%</td>
</tr>
<tr>
<td>Jun-09</td>
<td>5.9%</td>
<td>-2.5%</td>
<td>5.3%</td>
<td>1.0%</td>
<td>2.7%</td>
</tr>
<tr>
<td>Jun-08</td>
<td>13.7%</td>
<td>8.9%</td>
<td>6.1%</td>
<td>6.6%</td>
<td>8.7%</td>
</tr>
</tbody>
</table>
Sustainable Value Philosophy

• **Purpose** – Manage risk for member and Association

• **Premise** – Recognize higher commodity production margins but limit over-reaction

• **Outcome** – Help prevent over-extending credit in a rapidly increasing market
Lending Model Assumptions

• Forward Looking Assumptions:
  – Historical yields by county
  – Corn market price (long term average)
  – Capitalization rate
  – Normalized input costs
## Sustainable Value Philosophy

### Example Only

<table>
<thead>
<tr>
<th>Capitalization Rate</th>
<th>2.0%</th>
<th>2.5%</th>
<th>3.0%</th>
<th>3.5%</th>
<th>4.0%</th>
<th>4.5%</th>
<th>5.0%</th>
<th>5.5%</th>
<th>6.0%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sustainable Land Value</td>
<td>$15,931</td>
<td>$12,745</td>
<td>$10,621</td>
<td>$9,103</td>
<td>$7,965</td>
<td>$7,080</td>
<td>$6,372</td>
<td>$5,793</td>
<td>$5,310</td>
</tr>
<tr>
<td>65% Level</td>
<td>$10,355</td>
<td>$8,284</td>
<td>$6,903</td>
<td>$5,917</td>
<td>$5,177</td>
<td>$4,602</td>
<td>$4,142</td>
<td>$3,765</td>
<td>$3,452</td>
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</tbody>
</table>
### Ag Mortgage Portfolio L/AV

**New Loans**

<table>
<thead>
<tr>
<th>Date</th>
<th>&lt;=65%</th>
<th>66% to 75%</th>
<th>76% to 84%</th>
<th>&gt;= 85%</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/31/09</td>
<td>60.9%</td>
<td>32.0%</td>
<td>6.8%</td>
<td>0.3%</td>
</tr>
<tr>
<td>9/30/09</td>
<td>67.2%</td>
<td>27.3%</td>
<td>5.1%</td>
<td>0.3%</td>
</tr>
<tr>
<td>3/31/10</td>
<td>66.5%</td>
<td>27.5%</td>
<td>5.9%</td>
<td>0.1%</td>
</tr>
<tr>
<td>9/30/10</td>
<td>67.8%</td>
<td>29.2%</td>
<td>2.9%</td>
<td>0.2%</td>
</tr>
<tr>
<td>3/31/11</td>
<td>68.7%</td>
<td>27.9%</td>
<td>3.1%</td>
<td>0.3%</td>
</tr>
<tr>
<td>9/30/11</td>
<td>73.0%</td>
<td>23.0%</td>
<td>3.0%</td>
<td>0.0%</td>
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<tr>
<td>3/31/12</td>
<td>75.4%</td>
<td>21.5%</td>
<td>2.6%</td>
<td>0.5%</td>
</tr>
<tr>
<td>9/30/12</td>
<td>77.1%</td>
<td>19.9%</td>
<td>1.8%</td>
<td>1.1%</td>
</tr>
</tbody>
</table>
Sustainable Value Philosophy

• A difficult valuation scenario:
  Long term asset (land) being greatly influenced by short term economic factors

• The Great Lesson:
  – Rising asset values do not repay loans!
Could a Downturn Occur?

• Demand Destruction
  • Livestock
  • Ethanol

• Drought in 2013?
  • Could we push prices even higher?
  • Is there practical top to prices?

• Large Crop in 2013
  • Subsequent back to back strong (trend-line) yields

• Increase in Interest Rates

• Other Factors
  • Global economies
  • Value of the dollar
What Happens in a Downturn?

- Emotions kick in
- Buyers get cautious
  - Lower prices and profits
  - Uncertainty
  - Conserving cash/working capital
- Lower bids get rejected
  - Seller’s refuse to accept lower prices initially
- Buyers wait on the sidelines thinking prices will go even lower
- Fewer sales to discover true price
  - Auctions accentuate the upside and downside
  - More sales are private treaty (negotiated)
Food for Thought

• The increase in farm real estate values is different than the housing & the 80’s
• Purchased from position of financial strength
• Significant equity (both cash and collateral) going into the purchases
• Is an income producing asset
• Supply is constant
Risk Management Tools

• Maintain strong working capital

• Fix long term interest rates

• Resist aggressively prepaying fixed rate loans

• Crop insurance coverage – revenue protection

• Crop insurance – trend adjusted yield
Management Considerations

• Current environment is not a time for higher risk or higher leverage

• Leverage has two equal and real outcomes
  – maximizes opportunity for profit AND maximizes opportunity for loss

• Historically, it has been better to leverage into business cycle “low points” than to leverage into business cycle “high points”
Management Considerations

• **Production Agriculture Margins**
  – Likely scenario:
    • Higher margins are not permanent
    • Higher margins last for short time periods
    • Margins tend to normalize over time

• All parties involved in production agriculture will want a piece of the pie
  – “The function of a competitive market is to drive the economic return to the average producer to breakeven...”
  Danny Klinefelter Texas A&M
Farm Credit’s Mission:

To be a dependable source of constructive credit and high quality services at the best possible value for farmers and rural residents.