Components of Farm Income

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Disclaimers

- The views expressed are completely my own and should not be attributed to my employer or former employers.
- My views are subject to change.
- My wife gave birth to our son on November 10, 2014, so I’m still very sleepy. If I start to nod off... wake me!
Farm Income for Crop Producers

- USDA Farm Income Estimation Process
  - Who
  - What
  - When
  - How
- Comparing ERS with other estimates
- How long do bad times last?
- Key insights for 2015 and longer term

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HOW DOES THE USDA ESTIMATE FARM INCOME?
Who

• ERS is a Principal Statistical Agency
  – Credibility and independence
• A team of about a dozen ERS economists
• Counsel from economists and statisticians at NASS and other agencies
What

- NASS Reports
  - Annual production estimates
  - Monthly marketing reports
- FSA Commodity Credit Corporation Loan Data
- ERS Balance Sheet Estimates
- Agricultural Resource Management Survey (ARMS)
  - Household consumption
  - Expenses
  - Details not observable in market data
- Census of Agriculture
When

- February
  - Current year: first forecast
  - Previous year: updated forecast
- August
  - Current year: update forecast (based on early production expectations)
  - Previous year: become “estimates,” add state-level
- November
  - Current year: updated forecast (based on early harvest reports)
How

• The information we have today is from the August forecast
• ERS releases next forecast on November 25
MAKING COMPARISONS
Making Comparisons

- A number of state extension economists release estimates and forecasts based on farm management association data
- Farm management associates track farms through multiple years and for all operators
- Farm management associations may have some selection bias
Making Comparisons

Illinois (FBFM)  Kansas (KFMA)

Source: Kuethe, et al. (2014) *Agricultural Finance Review*

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Making Comparisons

- My opinion: USDA gets better as you go larger, Farm Management Associations get better as you go smaller
HOW LONG DO THE BAD TIMES LAST?
Solvency Classification

- **Favorable**: Net farm income $> 0$, debt-to-asset ratio $\leq 40\%$
- **Marginal Income**: Net farm income $< 0$, debt-to-asset ratio $\leq 40\%$
- **Marginal Solvency**: Net farm income $> 0$, debt-to-asset ratio $> 40\%$
- **Vulnerable**: Net farm income $< 0$, debt-to-asset ratio $> 40\%$
FBFM Farms

- 884 Farms observed annually between 2003 – 2013
- In 2013, 2.4% of farms were classified as “vulnerable”
- 9.5% of farms were classified as “marginal income”
- 82.5% “favorable”
Vulnerability

- Number of farms that experienced vulnerable episode: 93 (1.5% of farms)
- Number of observed vulnerable episodes: 149
- Average length of vulnerable episode: 1.6 years
### Transition Probabilities (One Year)

<table>
<thead>
<tr>
<th></th>
<th>Favorable</th>
<th>Marginal Income</th>
<th>Marginal Solvency</th>
<th>Vulnerable</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Favorable</strong></td>
<td>93.7</td>
<td>3.8</td>
<td>2.1</td>
<td>0.3</td>
</tr>
<tr>
<td><strong>Marginal Income</strong></td>
<td>81.9</td>
<td>13.3</td>
<td>4.0</td>
<td>0.8</td>
</tr>
<tr>
<td><strong>Marginal Solvency</strong></td>
<td>22.3</td>
<td>1.2</td>
<td>70.7</td>
<td>5.9</td>
</tr>
<tr>
<td><strong>Vulnerable</strong></td>
<td>16.4</td>
<td>1.6</td>
<td>67.2</td>
<td>14.8</td>
</tr>
</tbody>
</table>
Total Length of Stay

- Forecasted total length of time spent in each state throughout the length of a 30 year loan
- “Average” farm expected to experience marginal income for 1.2 years and marginal solvency for 2.4 years
Key Insights for 2015

- Farm income for crop producers expected to be down in 2014 and 2015... perhaps beyond
- Need to conserve cash flow
- Crop insurance guarantees are down
- Current prices favor soybeans
- Questions surround cash rent
Key Insights for Longer Term

- Demand
- Supply
- Dollar
- Interest Rate
Thank You

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