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

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**

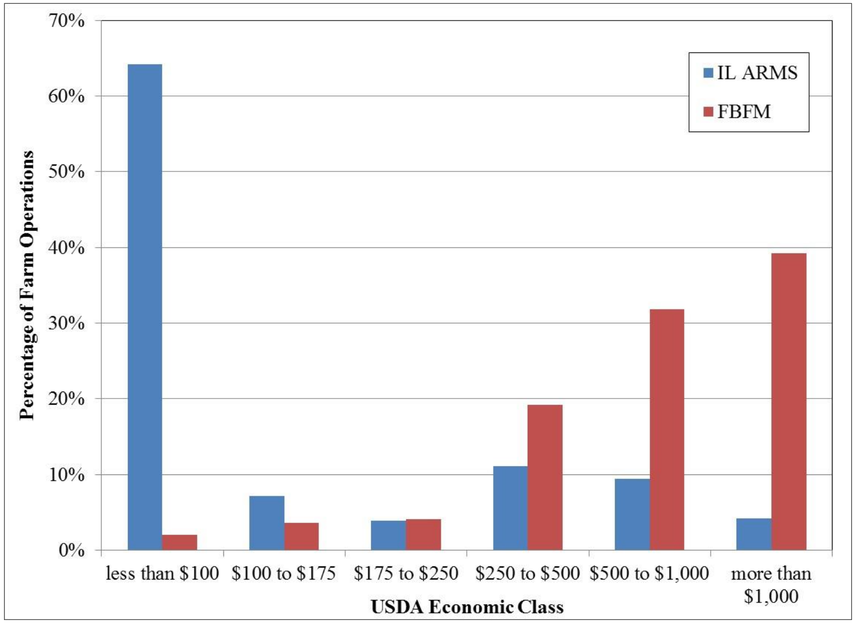
MAKING COMPARISONS

Making Comparisons

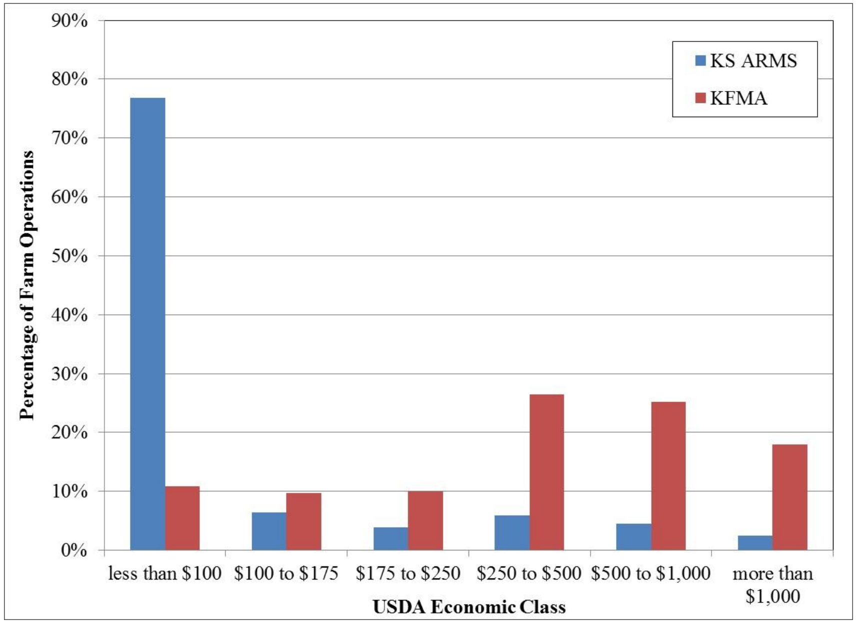
- A number of state extension economists release estimates and forecasts based on farm management association data
- Farm management associates track farms through multiple years and for all operators
- Farm management associations may have some selection bias

Making Comparisons

Illinois (FBFM)



Kansas (KFMA)



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

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?

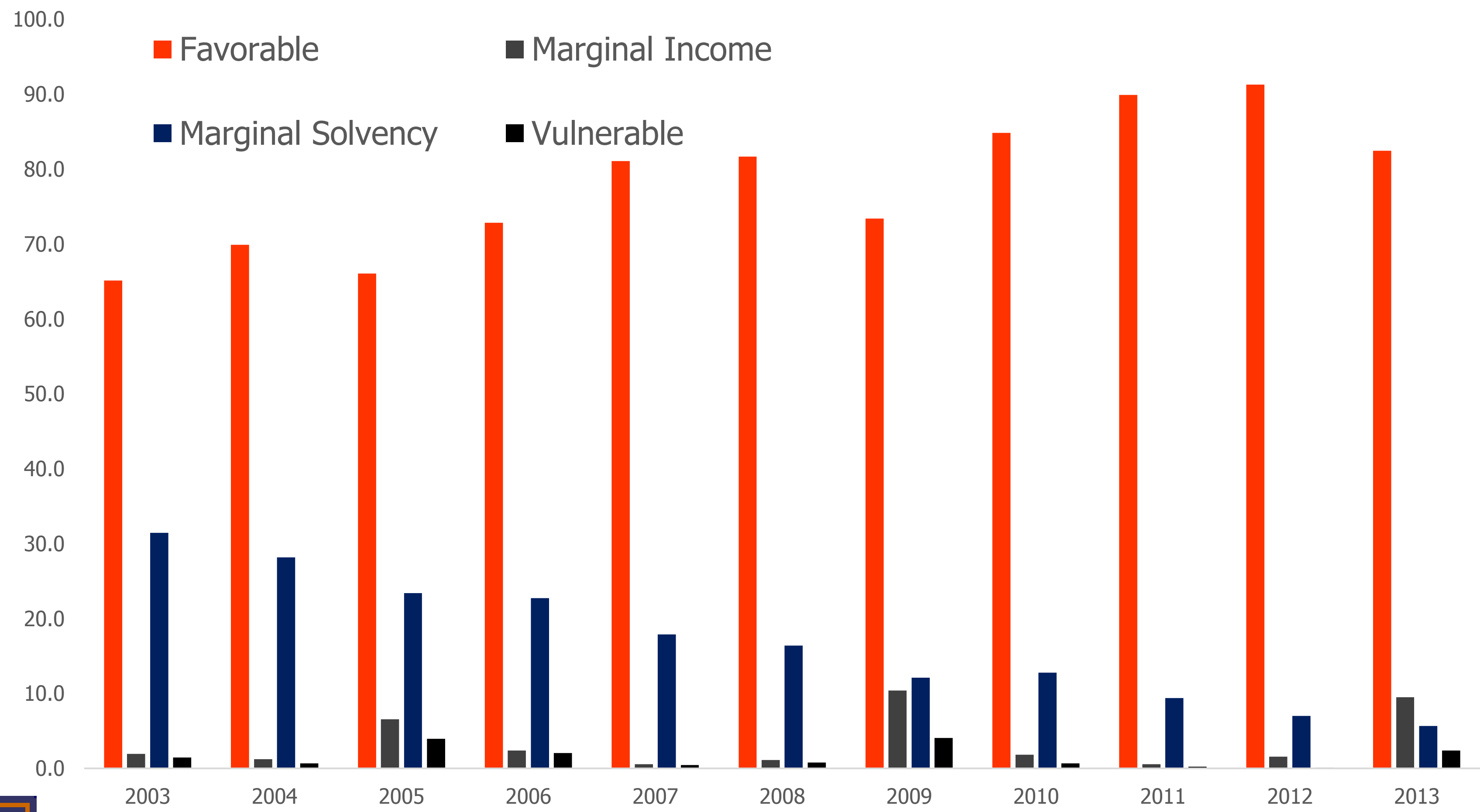
Solvency Classification

- 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 $> 40\%$

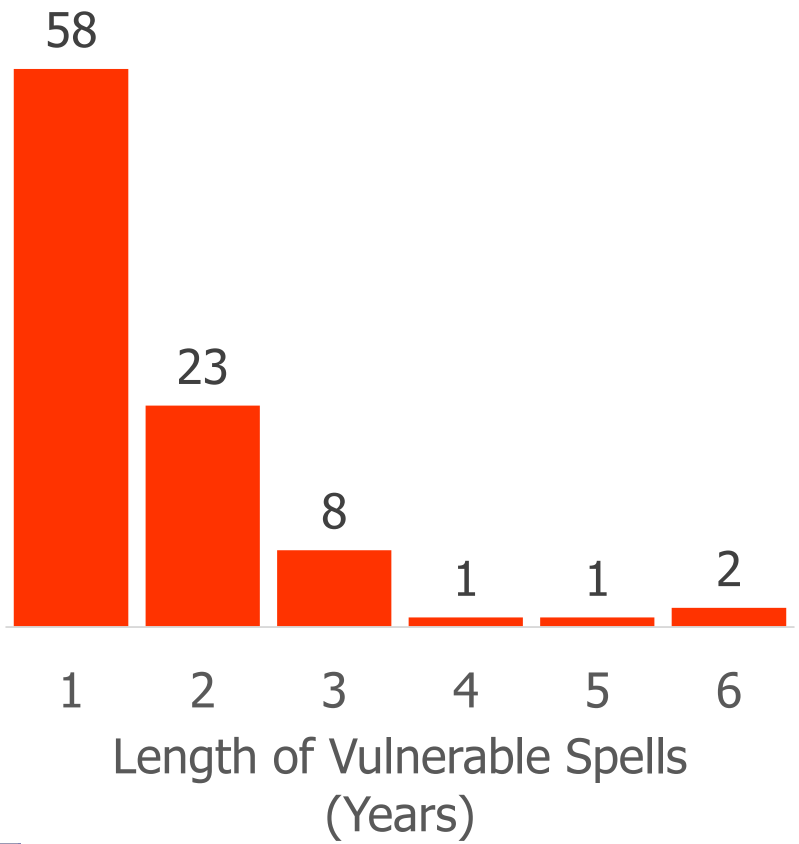
FBFM Farms

- 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"

FBFM Farms


Favorable
Marginal Income
Marginal Solvency
Vulnerable
100.0
90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0.0
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013

Vulnerability

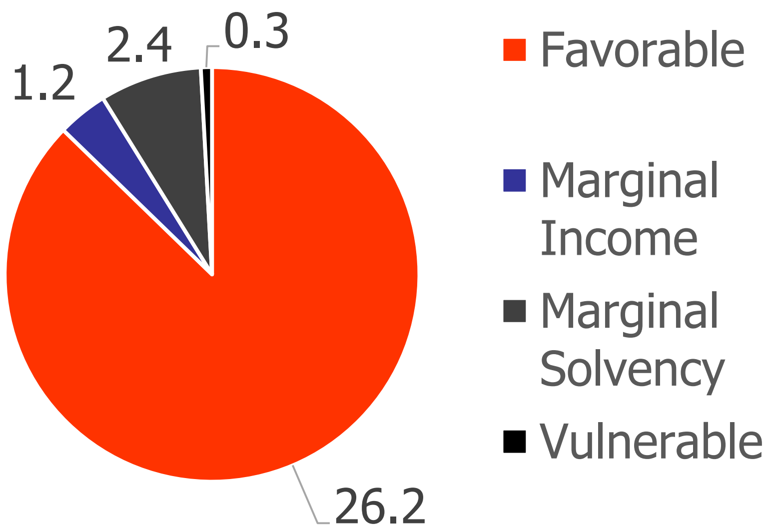


- **Number of farms that experienced vulnerable episode: 93 (1.5% of farms)**
- **Number of observed vulnerable episodes: 149**
- **Average length of vulnerable episode: 1.6 years**

Transition Probabilities (One Year)

	Favorable	Marginal Income	Marginal Solvency	Vulnerable
Favorable	93.7	3.8	2.1	0.3
Marginal Income	81.9	13.3	4.0	0.8
Marginal Solvency	22.3	1.2	70.7	5.9
Vulnerable	16.4	1.6	67.2	14.8

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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