



Farmland Value Drivers and Risks

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Farm Foundation Forum

U.S. Farmland Values: Boom or Bust

Washington, D.C.

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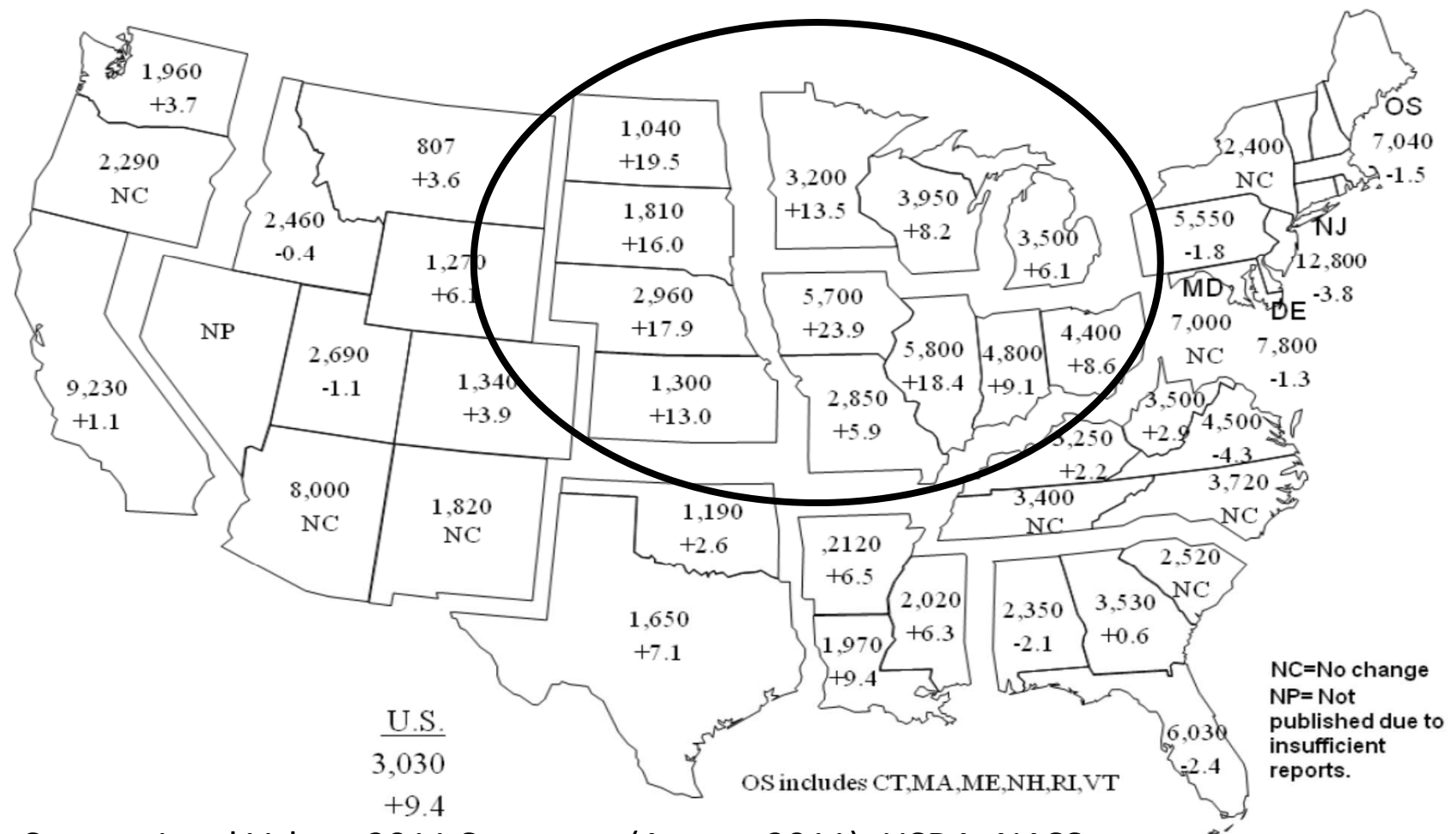
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Farmland Values Continue Their Rise

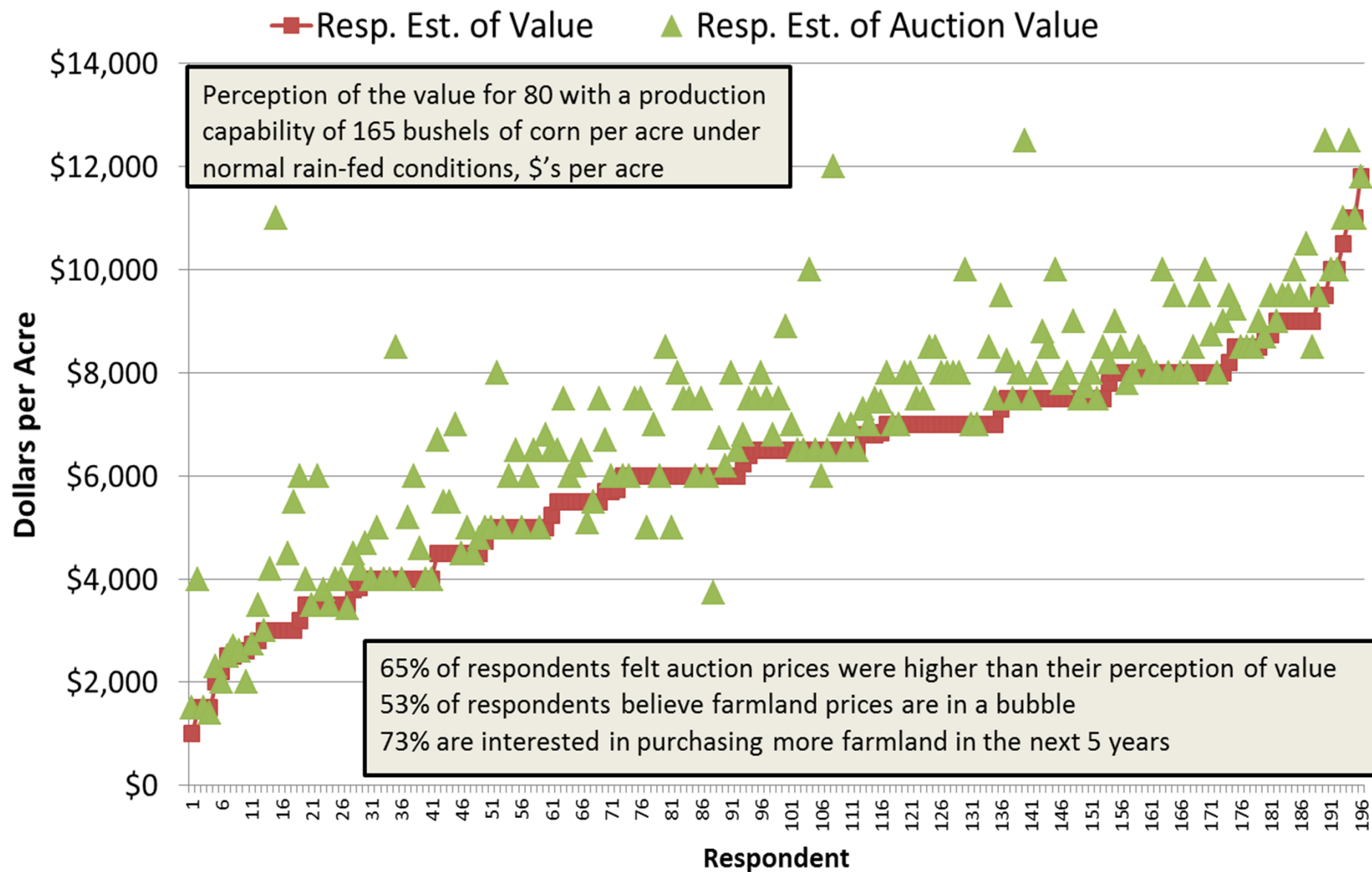
2011 Cropland Value by State

Dollars per Acre and Percent Change from 2010



Source: Land Values 2011 Summary (August 2011), USDA, NASS

Estimates of Farmland Value and Price at Auction, 196 Respondents, Spring 2012



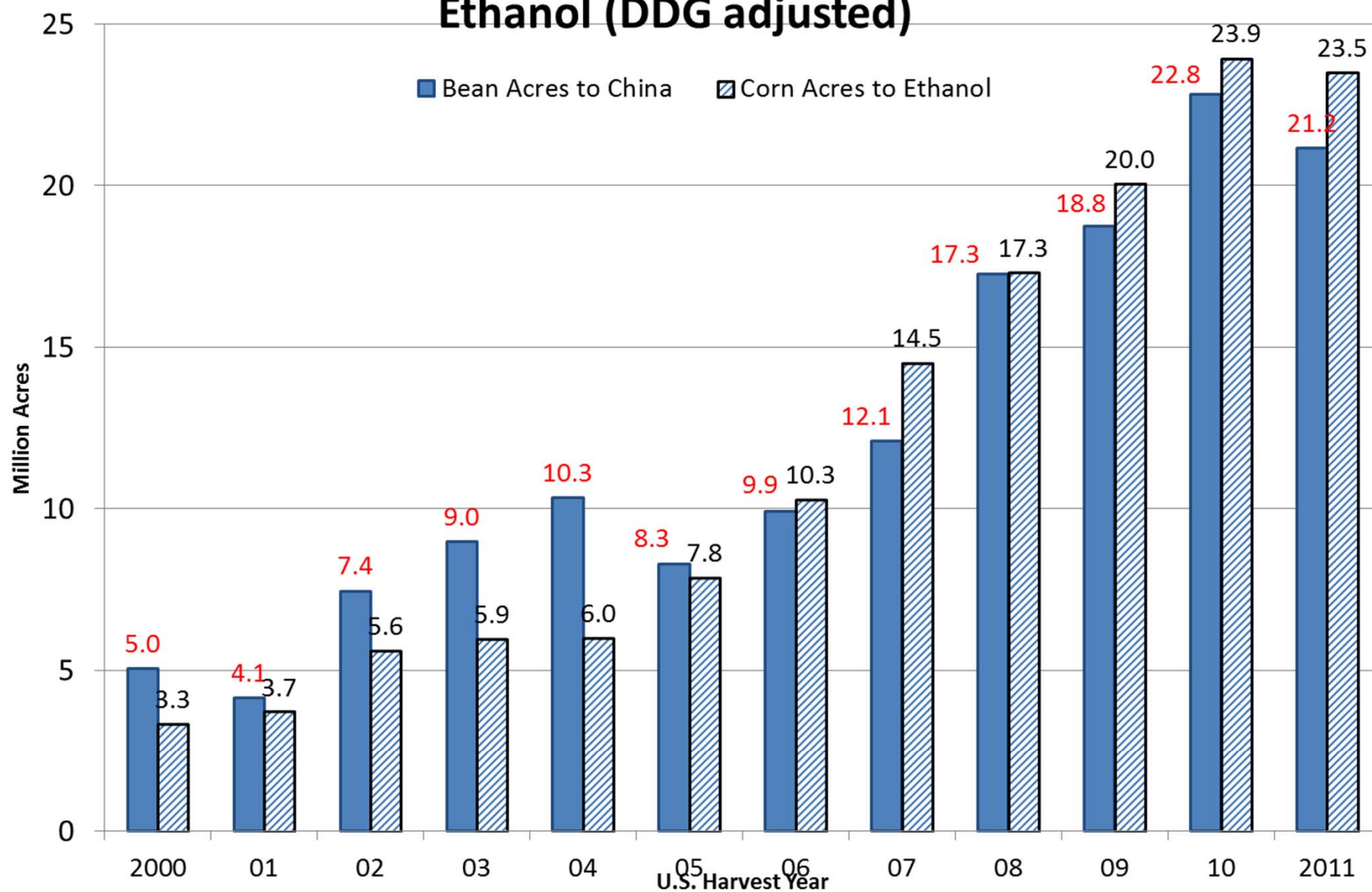
Fundamentals Make Prices Look Attractive

- Today's earnings and interest rates make prices look attractive
 - Today's fundamentals were not necessarily yesterday's
 - Tomorrow's fundamentals are not necessarily today's

Factors Driving Farmland Values

- Returns are high driven by
 - Biofuel demand
 - Strong demand from emerging markets
 - Weather shocks/poor yields
- Generally decreasing interest rate environment
 - Rates at 30 year lows

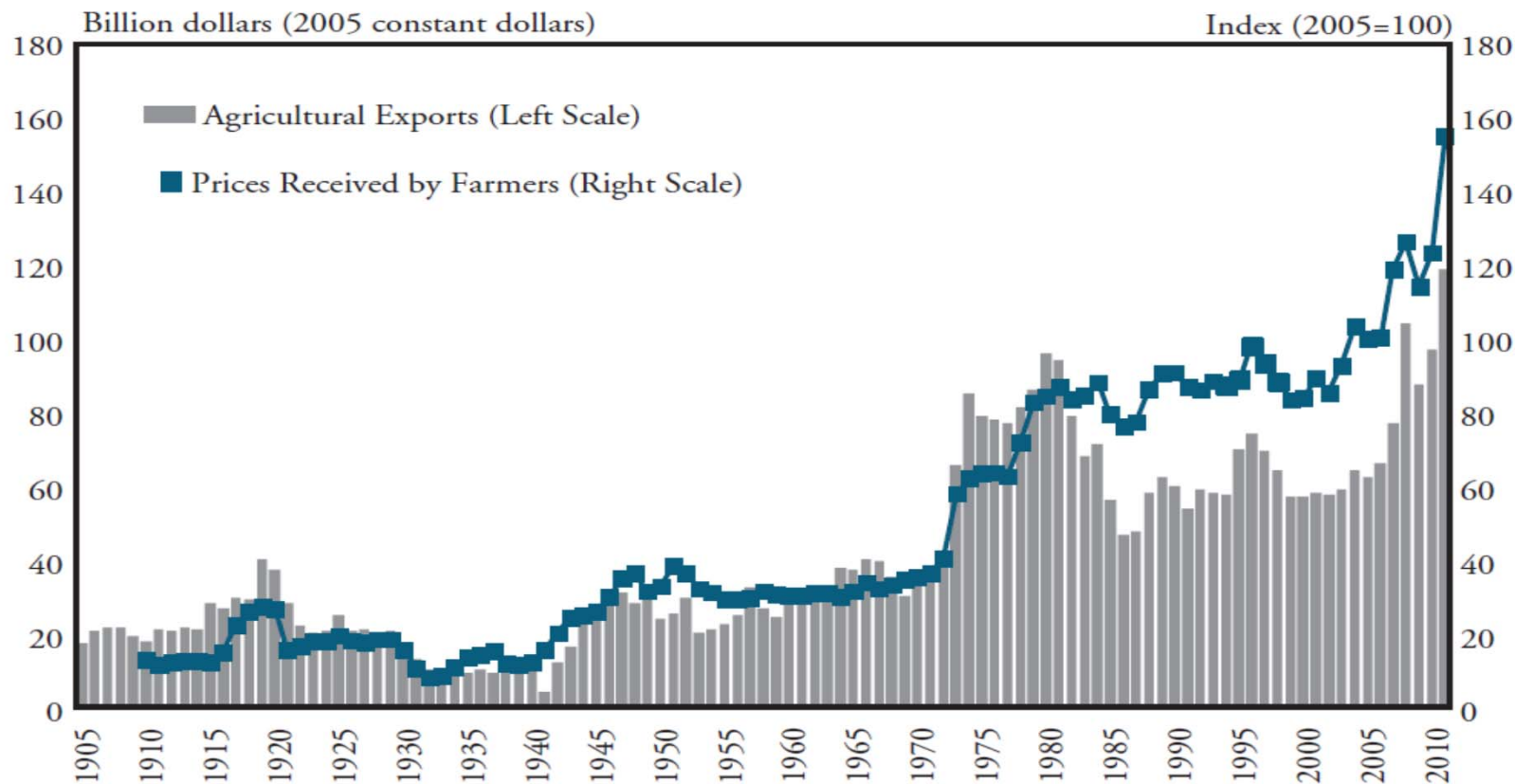
Acres of U.S. Soybeans Destined for China & Acres to Ethanol (DDG adjusted)



Exports Play a Key Role In Price Increases

Chart 1

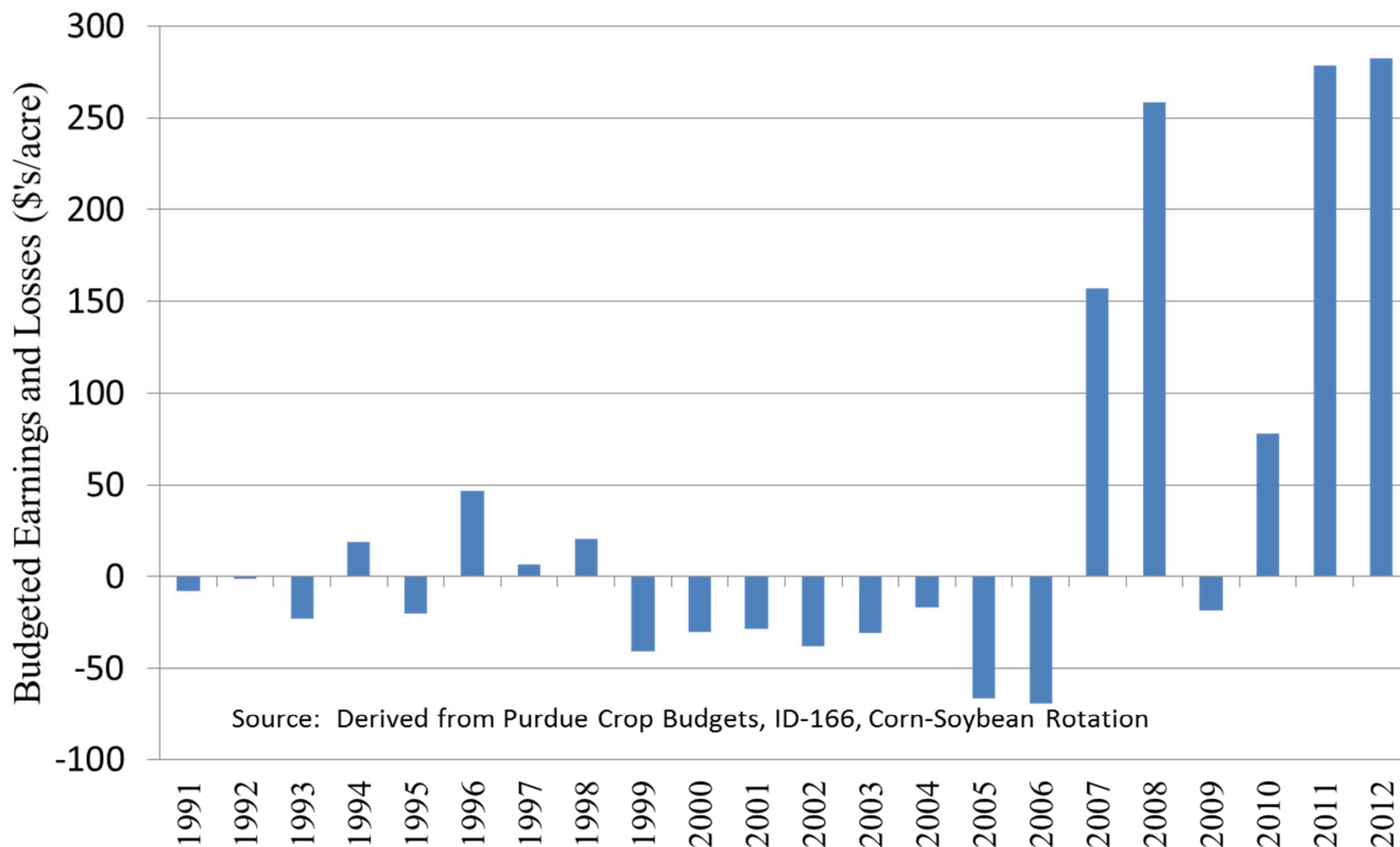
U.S. AGRICULTURAL EXPORTS AND INDEX OF PRICES RECEIVED BY U.S. FARMERS



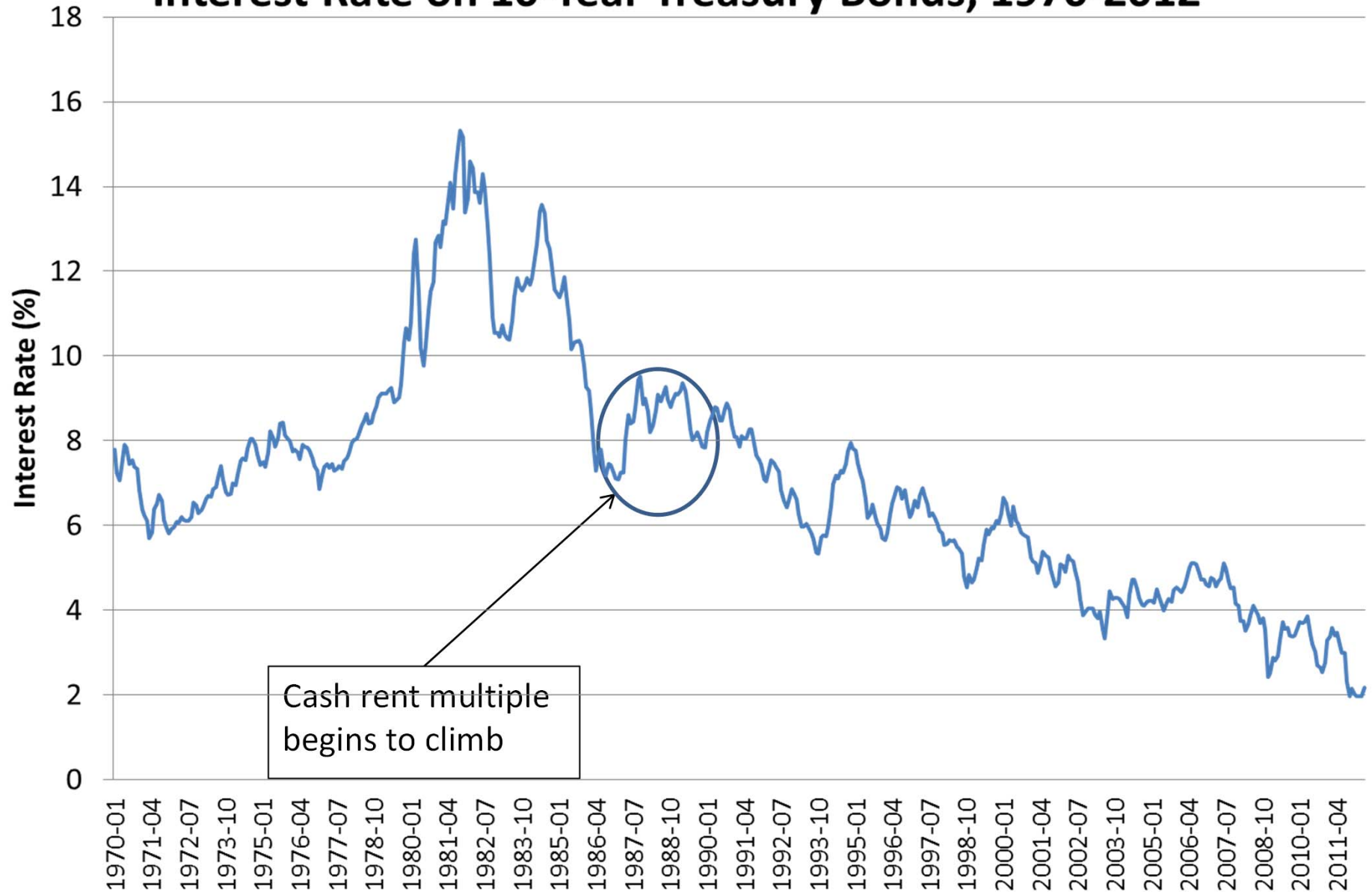
Note: Calculations based on U.S. Census Bureau and USDA data deflated with CPI from the Federal Reserve Bank of Minneapolis.

SOURCE: Henderson, J., B.A. Gloy, and M.D. Boehlje. "Agriculture's Boom-Bust Cycles: Is This Time Different." *The Economic Review*, Kansas City Federal Reserve Bank, 96:4(2011): 83-101.

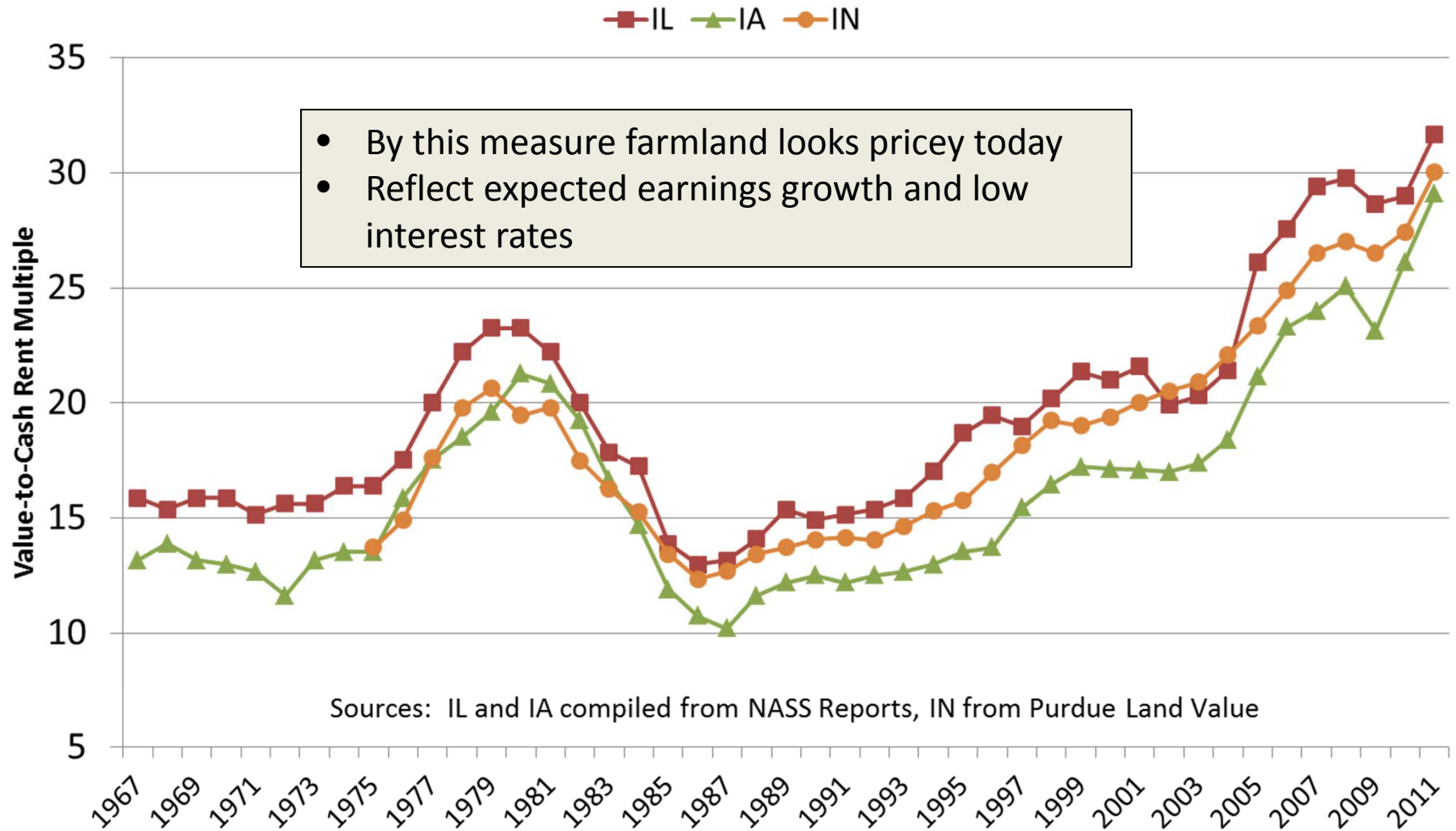
Budgeted Profit and Loss for High Quality Indiana Farmland, 1991-2012



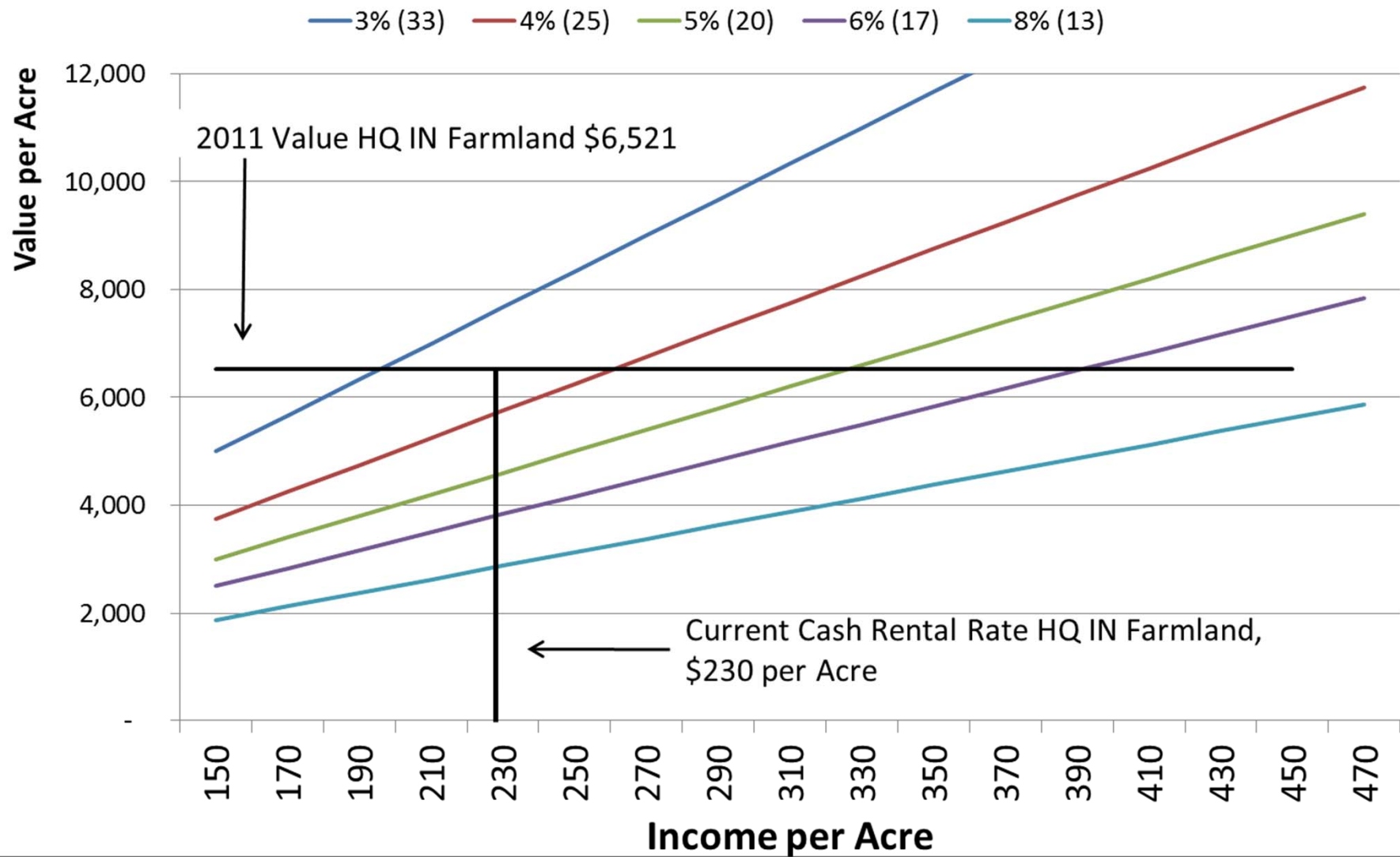
Interest Rate on 10-Year Treasury Bonds, 1970-2012



Value-to-Cash Rent Multiple for IA, IL, IN Cropland, 1967-2011



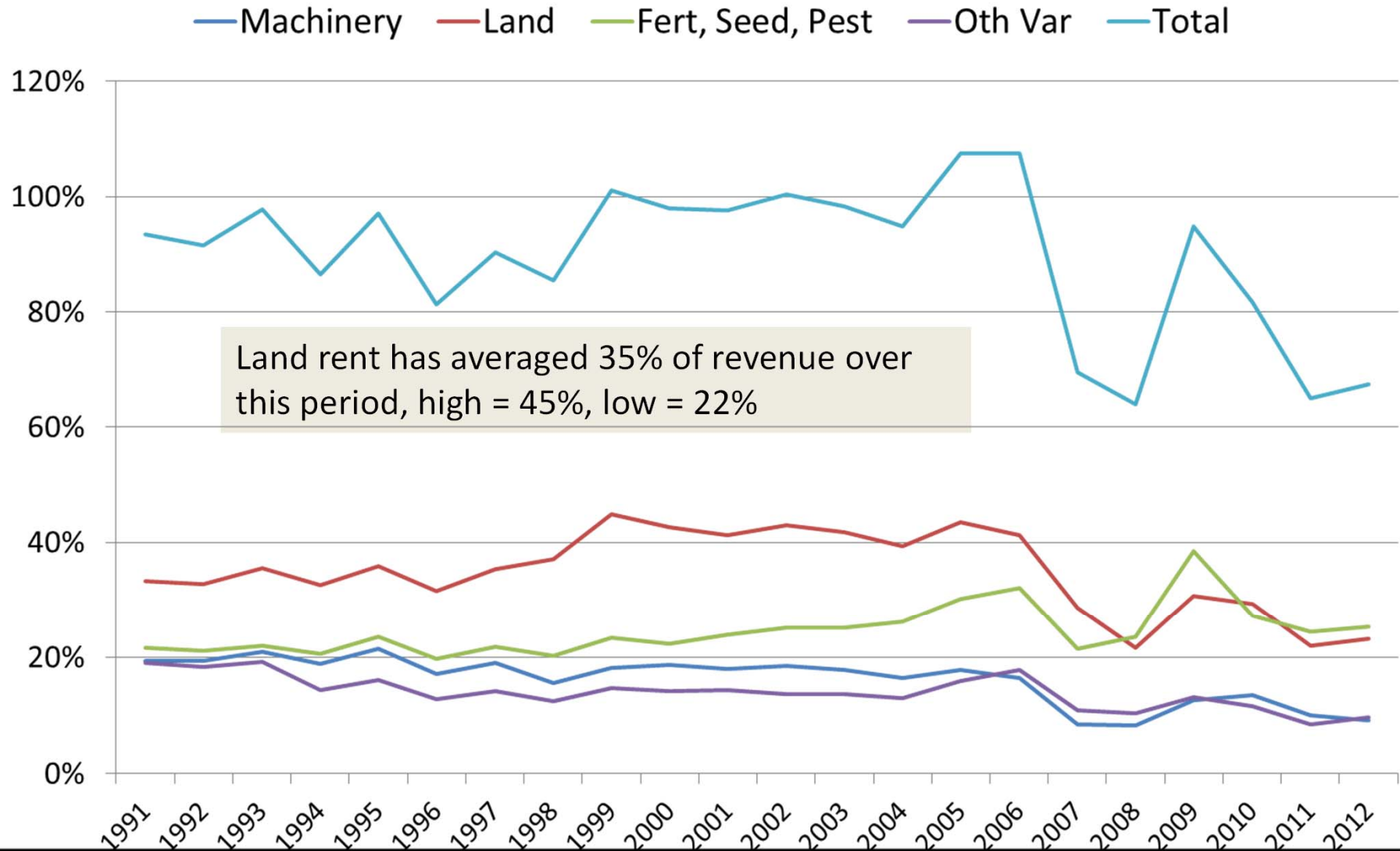
Land Values Under Alternative Capitalization Rates (Multiples) and Income Levels



Cap Rate Risk

- Monetary policy change = cap rate ↑
- Economic recovery = cap rate ↑
- Inflation = cap rate ↑
- Increased volatility/risk = cap rate ↑
- Slowing income growth in ag = cap rate ↑

Percent of Revenue to Various Inputs, HQ IN Farmland, 1991-2011



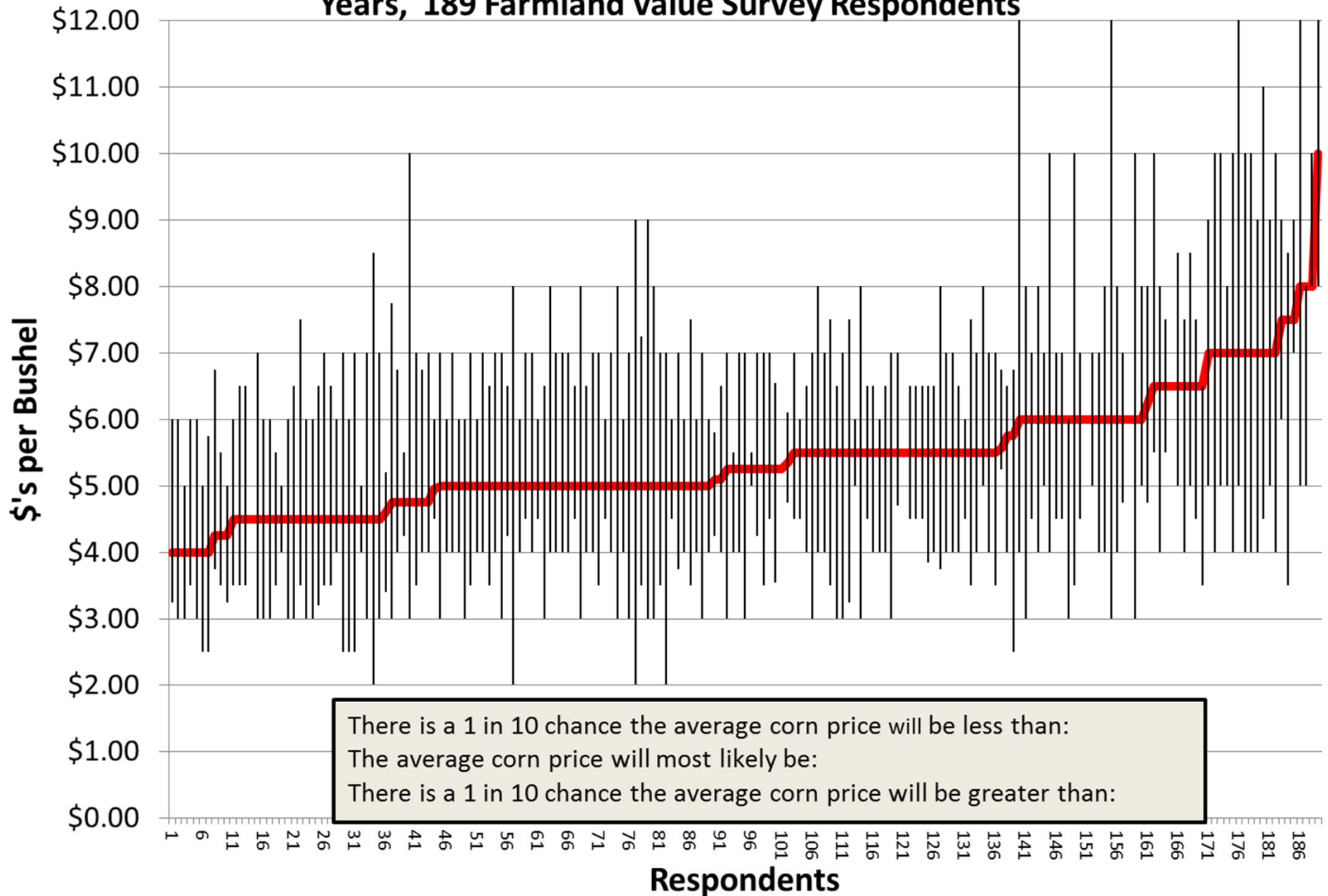
So What About Corn Prices?

- Darrel Good and Scott Irwin forecast the new plateau prices as follows:

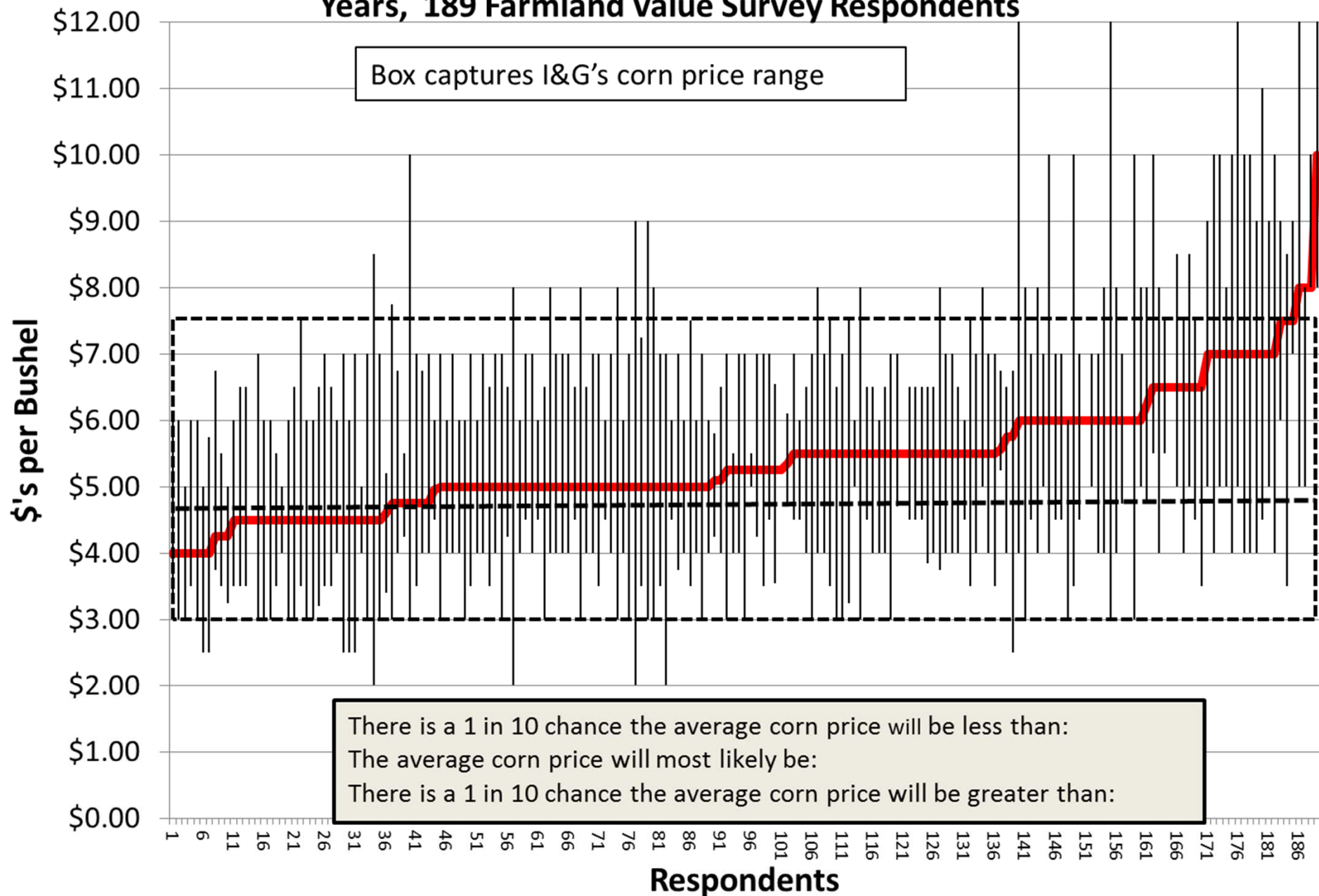
	Corn	Soybeans	Wheat
Post Dec 2006 Monthly Price	-----\$'s per Bushel-----		
Average	4.60	11.50	5.80
High	6.70	19.10	10.15
Low	3.00	8.20	3.30

SOURCE: Good, D. and S. Irwin. "The New Era of Corn, Soybean, and Wheat Prices." Marketing and Outlook Briefs, MOBR 08-04, September 2, 2008 Dept. of Agr. Cons. Econ, University of Illinois.

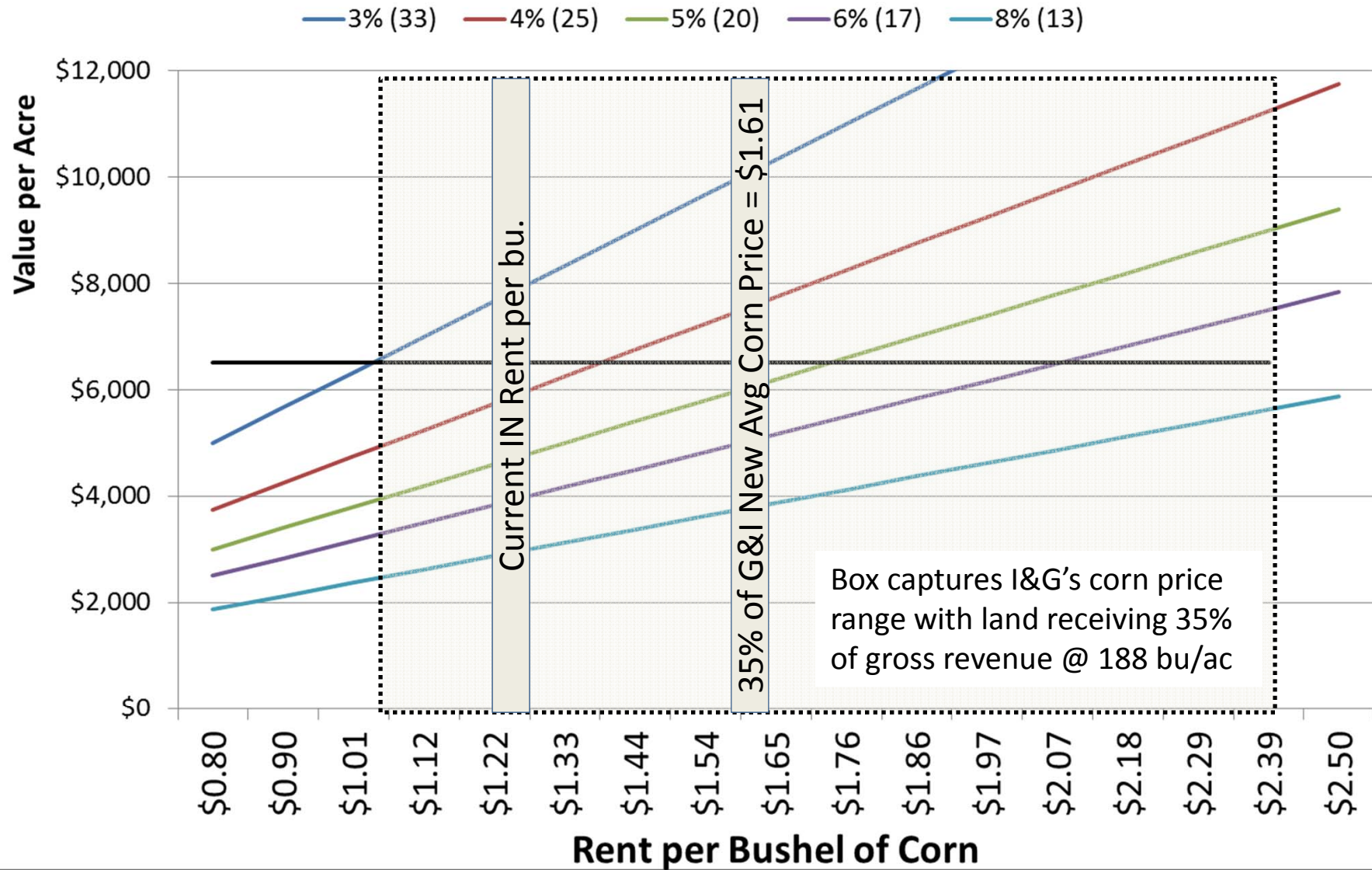
Distribution of Expected Average Cash Corn Prices Over the Next 5 Years, 189 Farmland Value Survey Respondents



Distribution of Expected Average Cash Corn Prices Over the Next 5 Years, 189 Farmland Value Survey Respondents



Land Values Under Alternative Capitalization Rates (Multiples) and Rent per Bushel of Corn, HQ IN Farmland



Two Key Takeaways

- Policy plays a key role in current demand situation
 - Biofuels
 - Crop insurance
 - Environmental policy
- Macro-economics plays a key role in the situation
 - Interest rates
 - Exchange rates
 - Demand (income growth)

Price Risk is Substantial

Weekly Nearby Corn Futures Contract Prices, 2007-2012

ZC - Corn - Weekly Nearest OHLC Chart

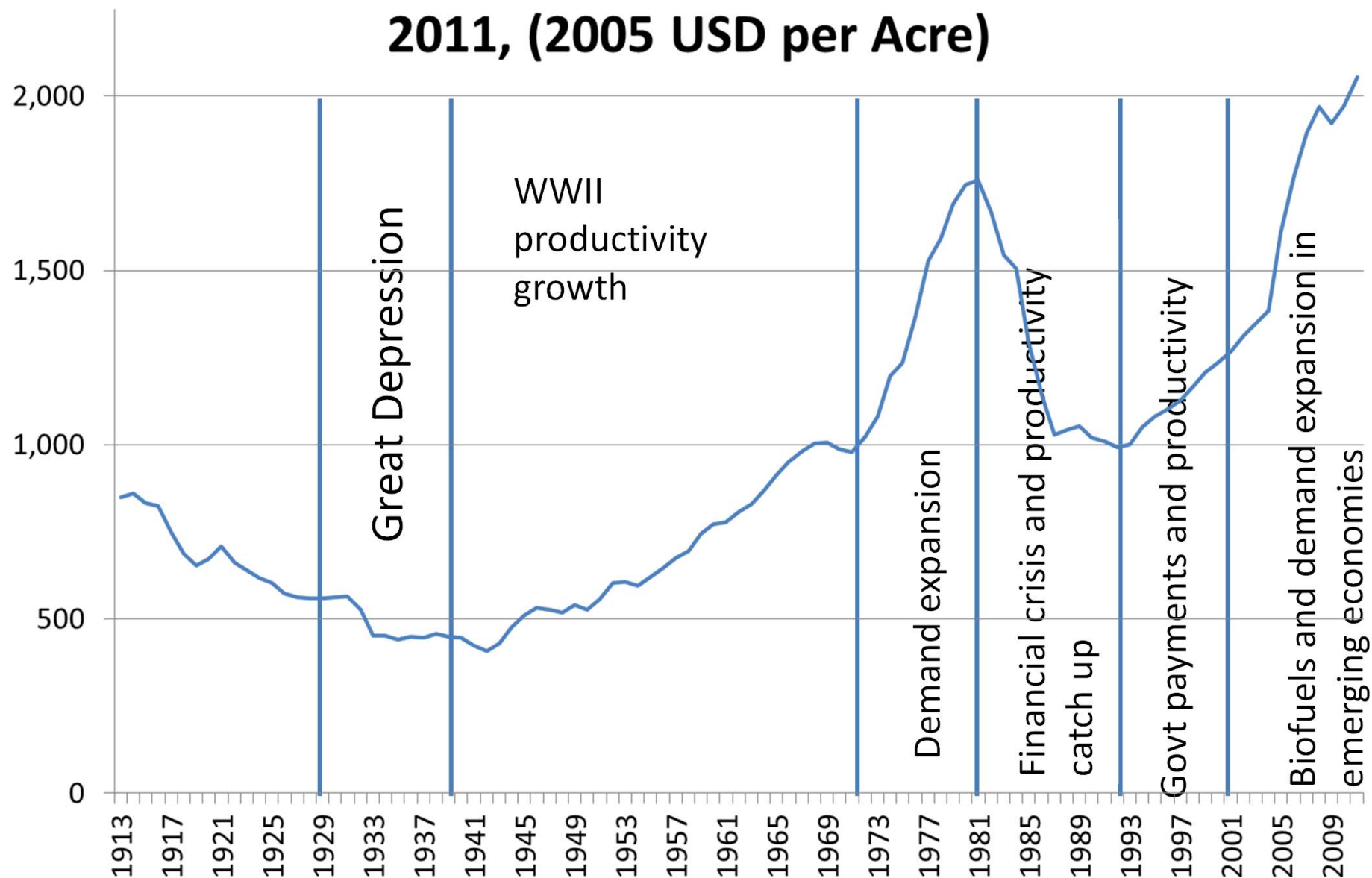


Which Conditions Describe Farmland Markets? **

Factor	Conditions	
Economy	Vibrant	Sluggish
Outlook	Positive	Negative
Lenders	Eager	Reticent
Capital markets	Loose	Tight
Capital	Plentiful	Scarce
Terms	Easy	Restrictive
Interest rates	Low	High
Spreads	Narrow	Wide
Investors	Optimistic	Pessimistic
	Sanguine	Distressed
	Eager to buy	Uninterested in buying
Asset owners	Happy to hold	Rushing for the exits
Sellers	Few	Many
Markets	Crowded	Starved for attention
Recent performance	Strong	Weak

**The Poor Man's Guide to Market Assessment – Adapted from The Most Important Thing: Uncommon Sense for Thoughtful Investors, by Howard Marks

All U.S. Agricultural Real Estate Values, 1913-2011, (2005 USD per Acre)



Final Thoughts

- There is room for land prices to go higher
- There are substantial risks associated with higher moves
 - Interest rates (cap rates)
 - These prices and rates will encourage use of leverage
 - Demand growth will face challenges
 - Export strength
 - Supply response is coming
 - Will we really end up at \$4.60+ on corn?

Questions

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