PURDUE EXTENSION | LOCAL FACES COUNTLESS CONNECTIONS

U.S. Land Outlook

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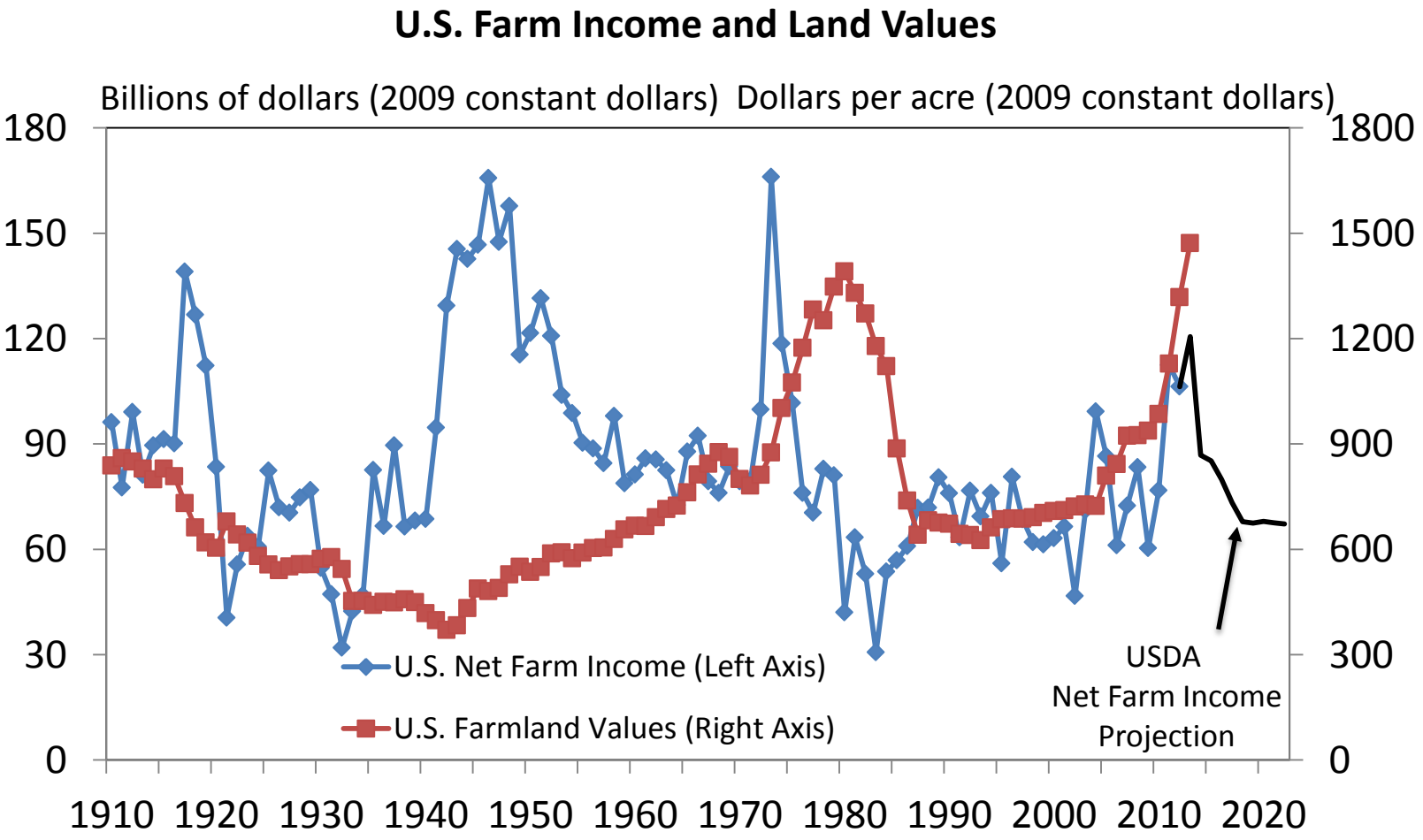
PURDUE UNIVERSITY

A Golden Era for Agriculture?



Calculations based on USDA data and CPI data from the Federal Reserve Bank of Minneapolis

Farmland Value Gains Slow

- Federal Reserve Banks
  - Kansas City District nonirrigated
    Dec. 2012: 24.9% year-over-year gain
    Dec. 2013: 9.2% year-over-year gain
  - Chicago District
    Dec. 2012: 16% year-over-year gain
    Dec. 2013: 5% year-over-year gain
  - Dallas District
    Dec. 2012: 10% year-over-year gain
    Dec. 2013: 5% year-over-year gain

Land values are based on expectations.

Capitalized Value Formula

$$\frac{\textit{Cash rent or Net returns to land}}{\textit{Expected Capitalization Rate}}$$

According to USDA, land costs are projected to account for a quarter of total corn production costs and a third of soybean production costs in 2012 and 2013

Cash rent or net return to land (dollars per acre)

Capitalization Rate (percent)	$200	$300	$400	$500	$600	$700
3%	6,667	10,000	13,333	16,667	20,000	23,333
4%	5,000	7,500	10,000	12,500	15,000	17,500
5%	4,000	6,000	8,000	10,000	12,000	14,000
6%	3,333	5,000	6,667	8,333	10,000	11,667
7%	2,857	4,286	5,714	7,143	8,571	10,000
8%	2,500	3,750	5,000	6,250	7,500	8,750

What are your expectations for profits and interest rates?

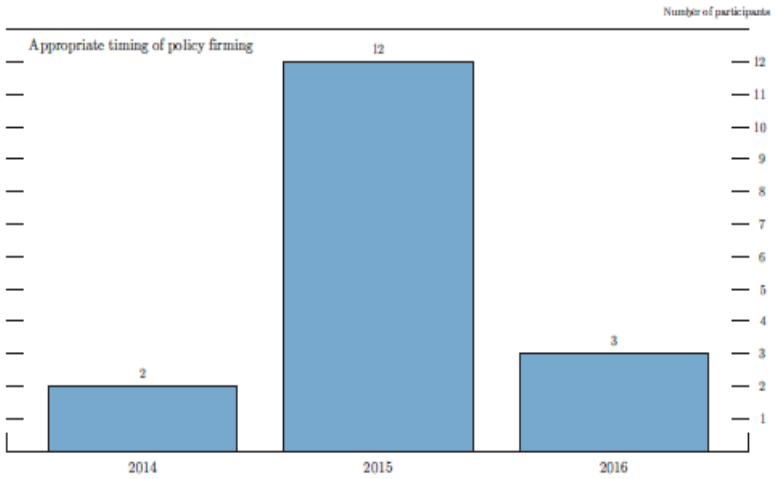
Land values are based on expectations.

Example 1	
(A) Corn Price	$6.00
(B) Yield	200
(C) Gross Revenue (A x B)	$1200
(D) Land's share of total cost	25%
(E) Net revenue for land (C x D)	$300
(F) Cap Rate	4%
(G) NPV for land (E x F)	$7,500

Example 2	
(A) Corn Price	$4.00
(B) Yield	200
(C) Gross Revenue (A x B)	800
(D) Land's share of total cost	25%
(E) Net revenue for land (C x D)	200
(F) Cap Rate	4%
(G) NPV for land (E x F)	$5,000

Example 3	
(A) Corn Price	$4.00
(B) Yield	200
(C) Gross Revenue (A x B)	800
(D) Land's share of total cost	25%
(E) Net revenue for land (C x D)	200
(F) Cap Rate	6%
(G) NPV for land (E x F)	$3,333

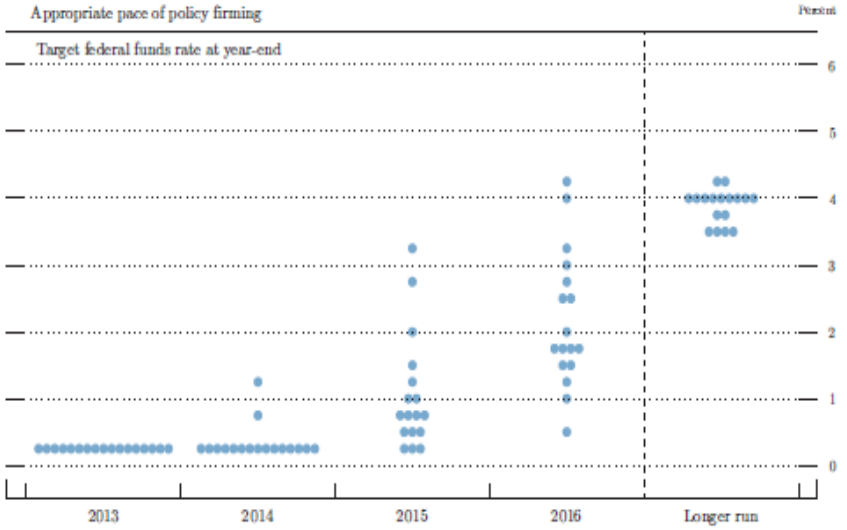
Federal Reserve Monetary Policy Projections



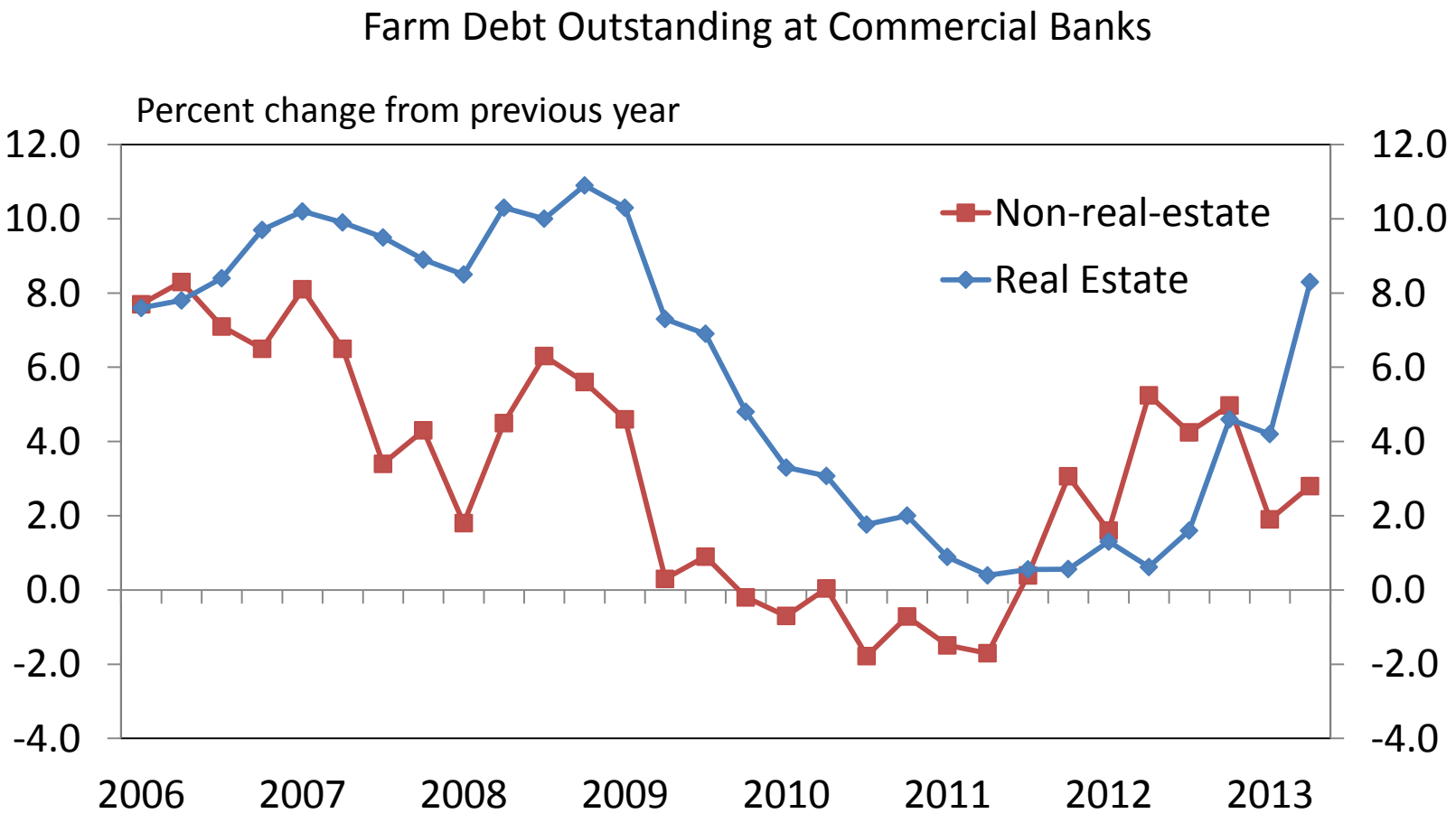
The Federal Open Market Committee suggests that the appropriate timing of policy firming is 2015

The Federal Open Market Committee suggests that interest rates will rise above 1 percent by the end of 2016, but the range is wide.

How soon will they get to the longer run of 4%?



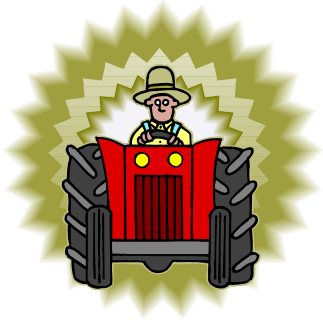
Farm debt is rising again.



Source: FDIC, Call Report data

In conclusion …

- Today, agriculture is well positioned.
  - ~~High~~ farm income expectations
  - Low Leverage



- How will agriculture respond to the following environment?
  - Margins narrow.
  - Expectations regarding the challenge of feeding the world persist.
  - Real interest rates are negative.

Will farmers leverage long-term assets to build working capital?