

Land Value Considerations in Succession Planning

IN Ag Law Foundation Estate and Succession Planning for the Family Farm

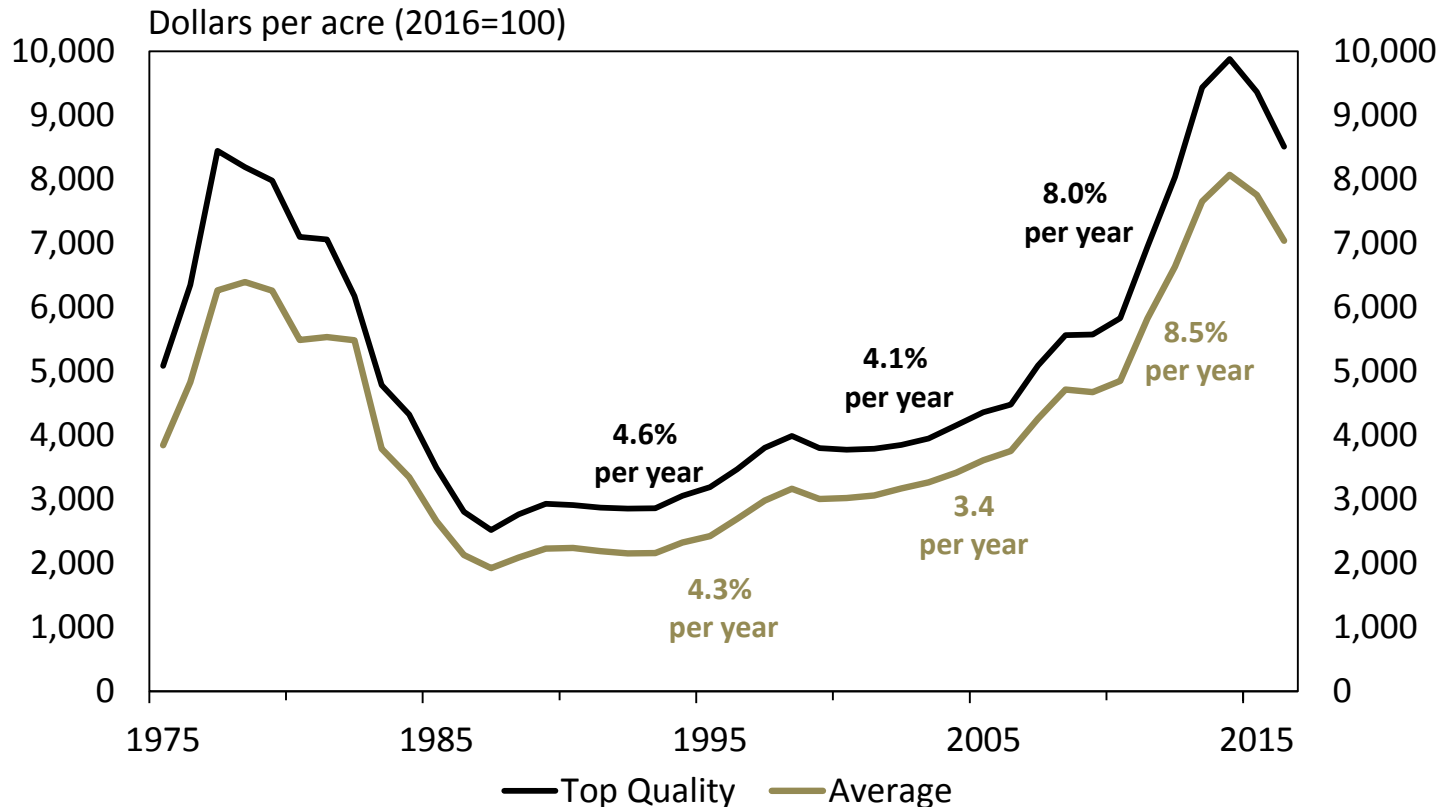
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Associate Dean College of Agriculture
www.extension.purdue.edu

July 2017

Farmland Values Surged in the Recent Boom

Real Indiana Farmland Values

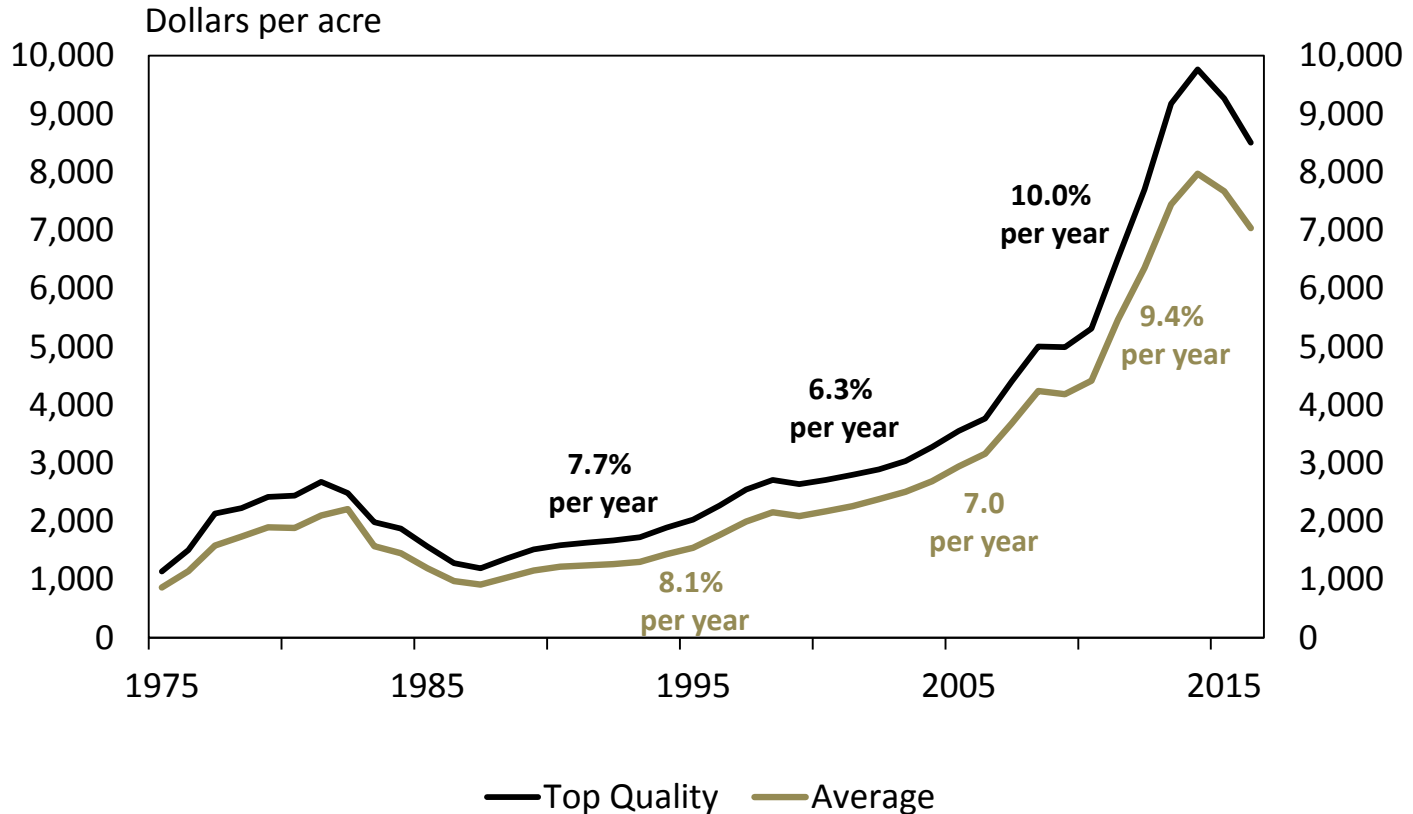


Source: Purdue University

Note: Farmland values adjust with CPI

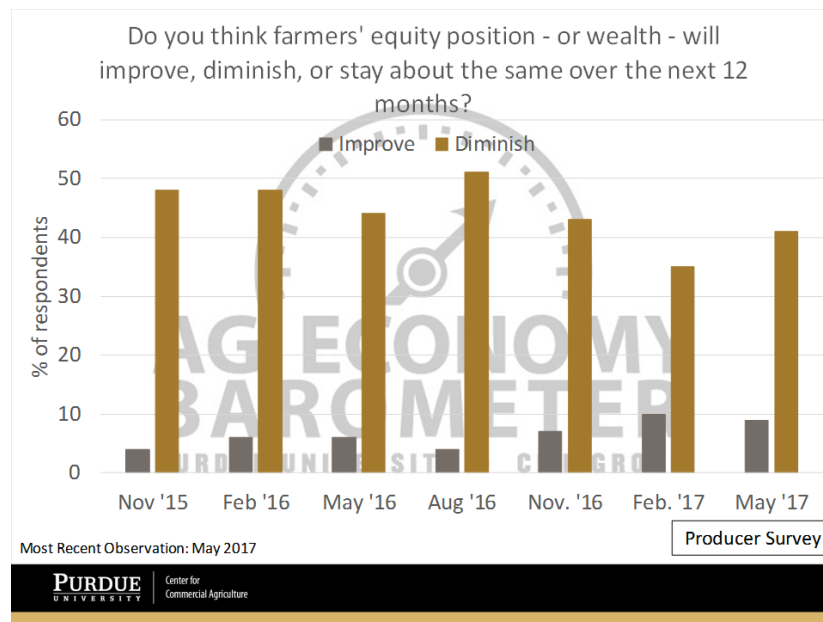
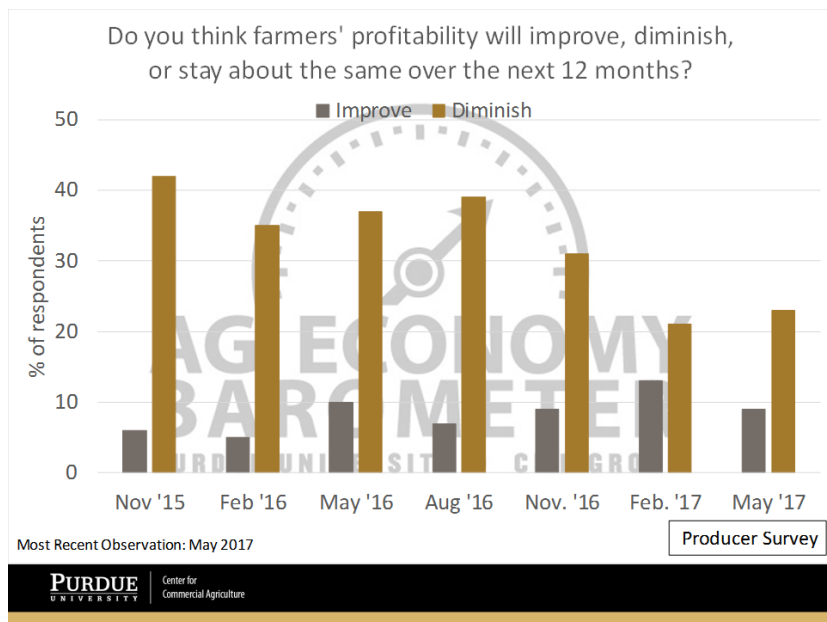
Nominal Gains are 2 to 3% Higher than Inflation-Adjusted (Real) Gains

Indiana Farmland Values



Source: Purdue University

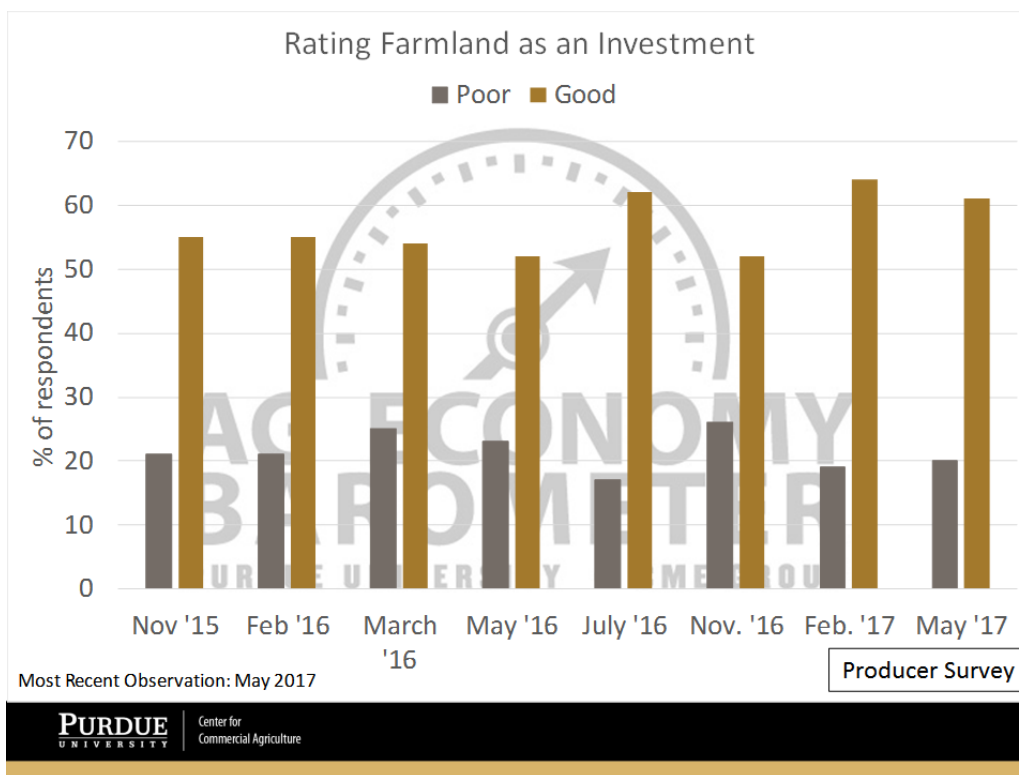
Producer Expectations on Farmland



More farmers expect profitability and wealth to diminish over the next 12 months ...

Source: Ag Economy Barometer, Purdue Center for Commercial Agriculture and CME,
<https://ag.purdue.edu/commercialag/ageconomybarometer/>

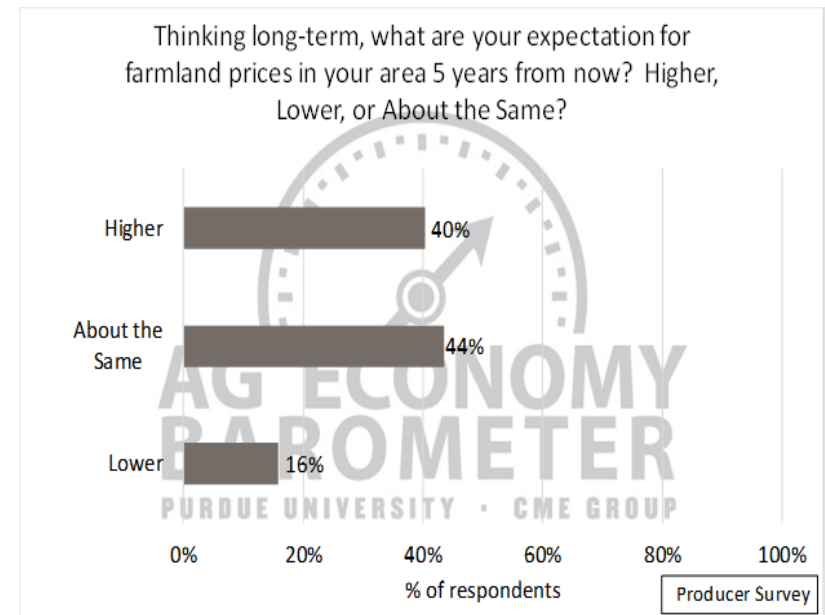
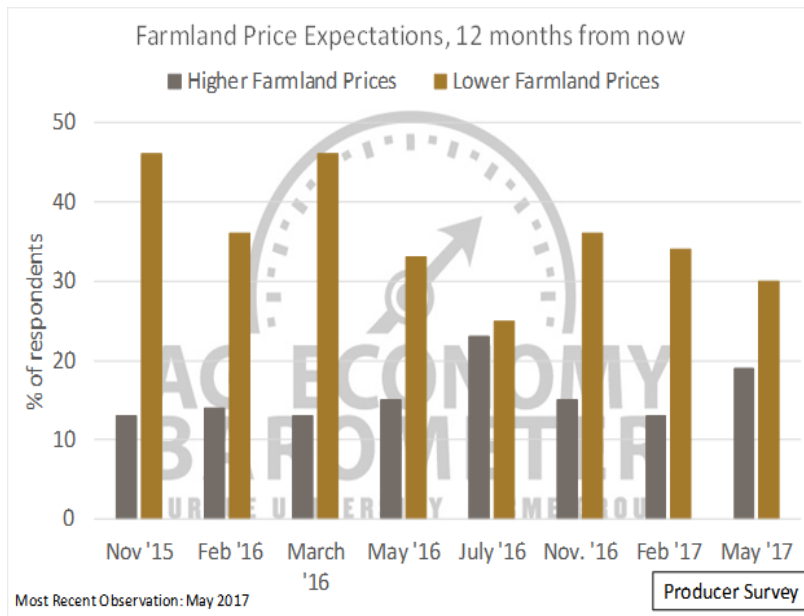
... it must be a great time to make a farmland investment.



Source: Ag Economy Barometer, Purdue Center for Commercial Agriculture and CME,
<https://ag.purdue.edu/commercialag/ageconomybarometer/>

Because land values are going higher.

- Over the next year, more farmers expect lower farmland prices.
- In 5 years, more farmers expect higher farmland values



Source: Ag Economy Barometer, Purdue Center for Commercial Agriculture and CME, <https://ag.purdue.edu/commercialag/ageconomybarometer/>

What Will Drive Farmland Values?

Farm
Profitability



Interest
Rates

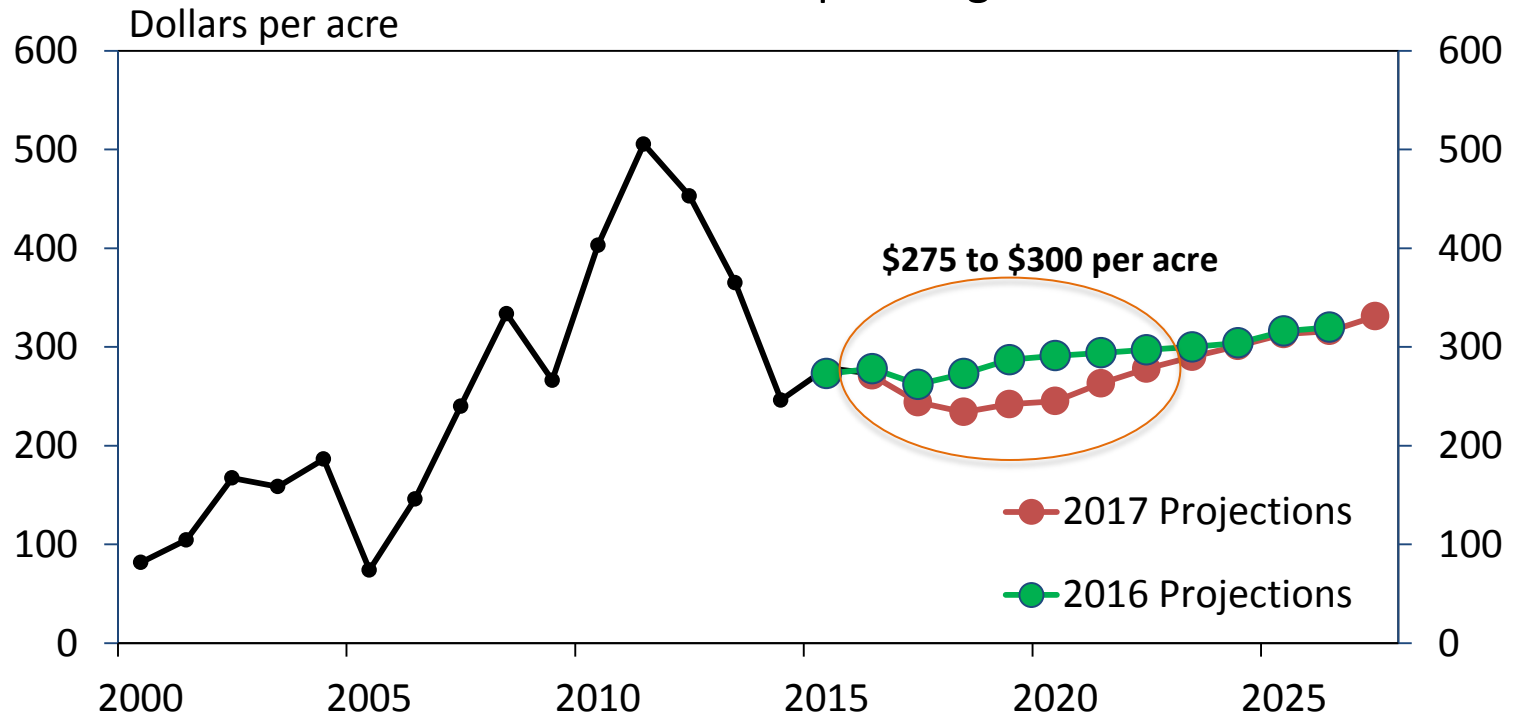


Non-farm
Influences



Farm Profits are Expected to Stabilize

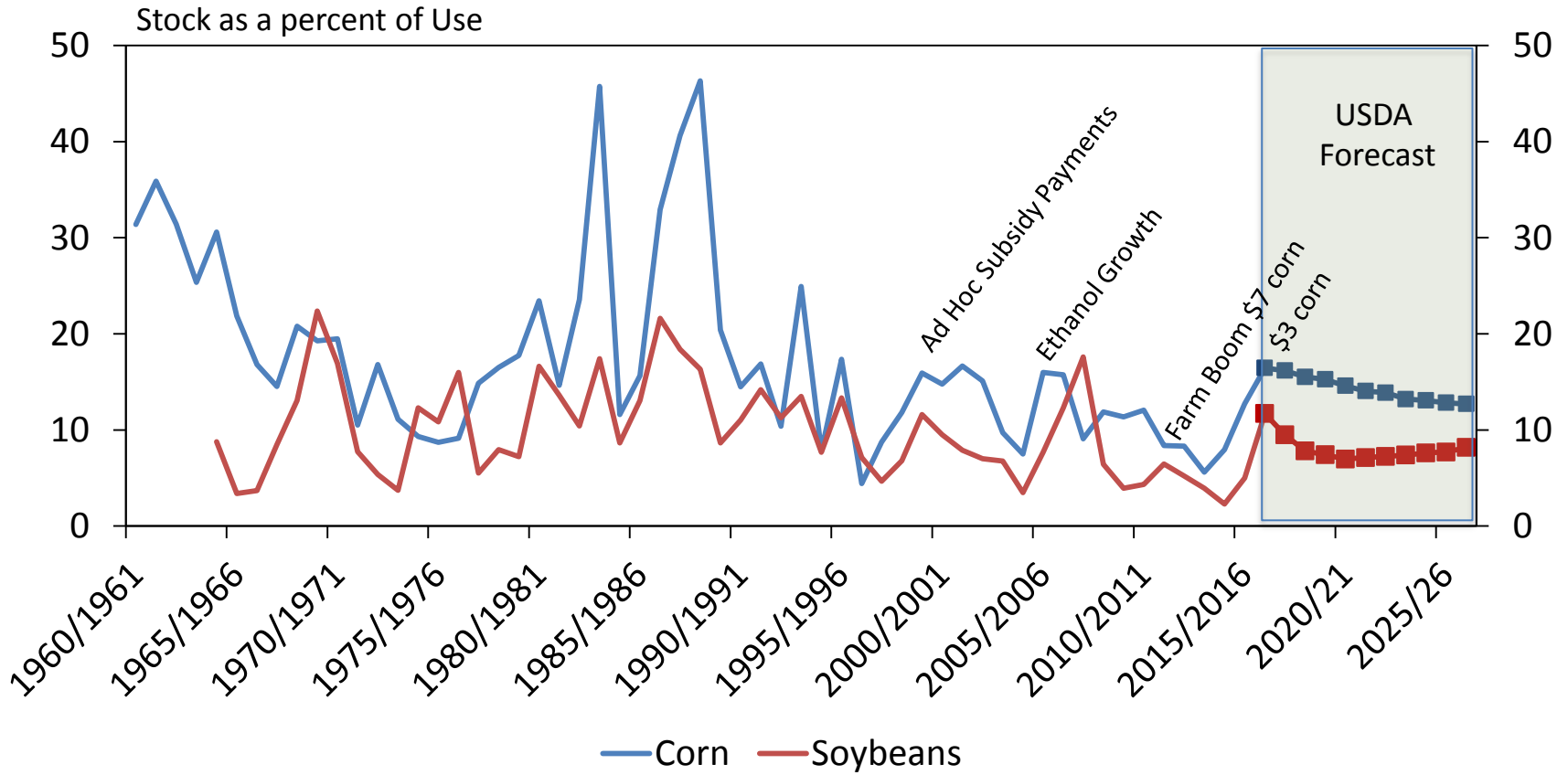
U.S. Returns to Corn Production
Above Variable or Operating Costs



Source: Economic Research Service, USDA

Global Inventories are Rebalancing

U.S. Stocks to Use Ratios



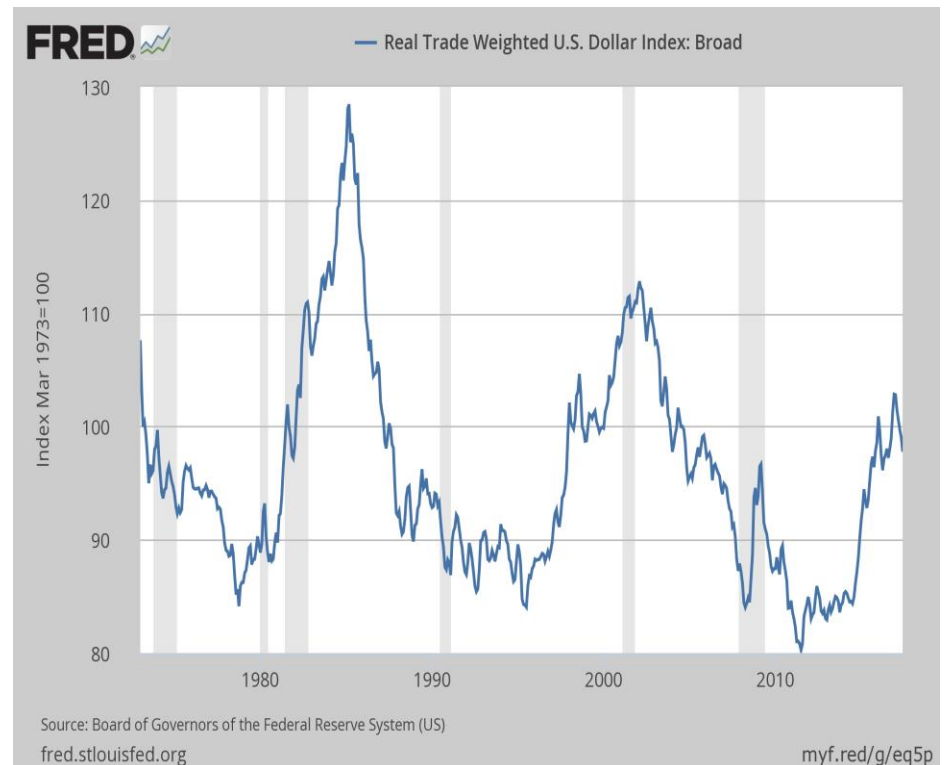
Source: USDA

The Value of the Dollar will Shape Agricultural Profits

A Strong Dollar ...

- Depresses commodity prices
- Limits exports

The Dollar is Driven by Financial Flows ...
Monetary Policy



What Will Drive Farmland Values?

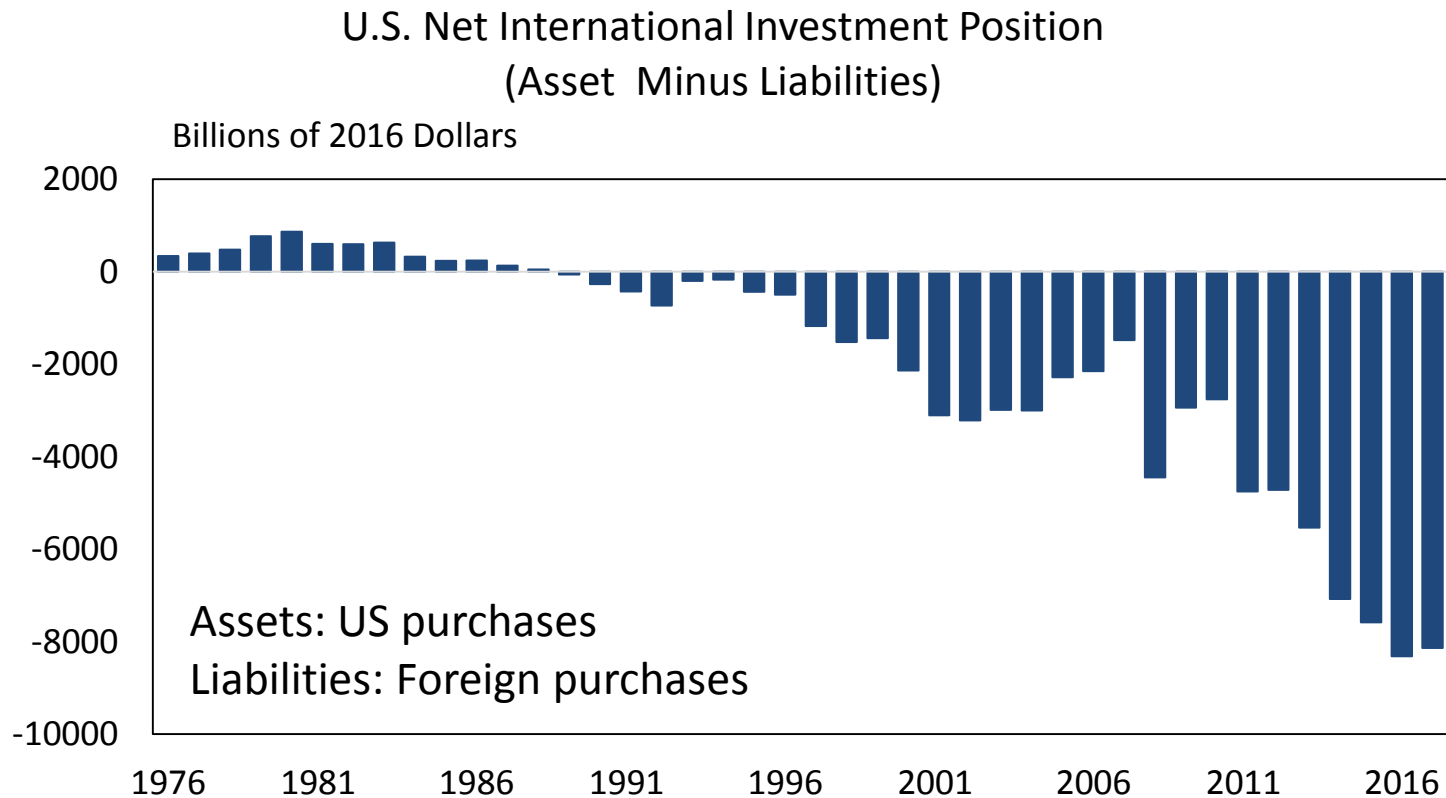
Farm
Profitability



Interest
Rates



Financial Flows are More Dominant than Ever



Source: U.S. Bureau of Economic Analysis

Financial Flows are More Dominant than Ever

Net Exports of Goods and Services
(Billions of dollars)

	1976-1980	1990-1994	2012-2016
Exports	315.3	730.8	2,072.4
Imports	(367.2)	(797.6)	(2,548.2)
Net Exports	(51.9)	(66.8)	(476.1)

Source: U.S. Bureau of Economic Analysis

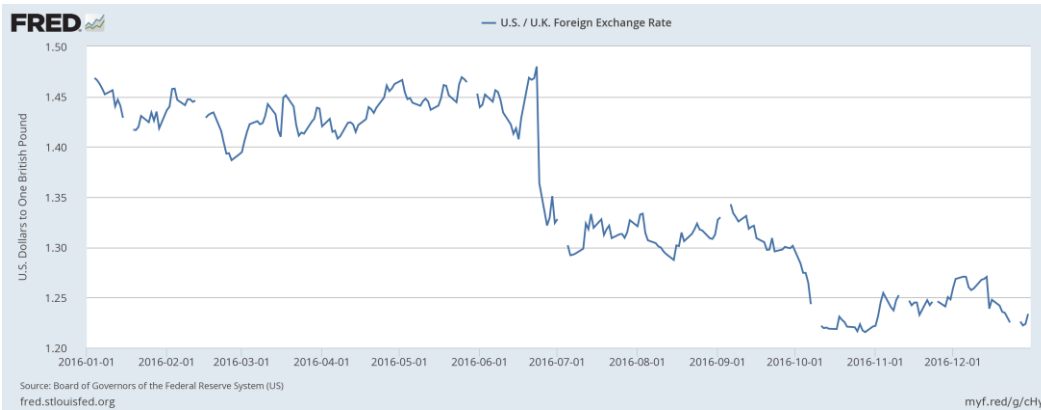
Net International Investment Position
(Billions of dollars)

	1976 - 1980	1990-1994	2012-2016
Assets	1,567	4,886	24,228
Liabilities	(1,227)	(5,250)	30,877
Net Position	340	(275)	(6,649)

Source: U.S. Bureau of Economic Analysis

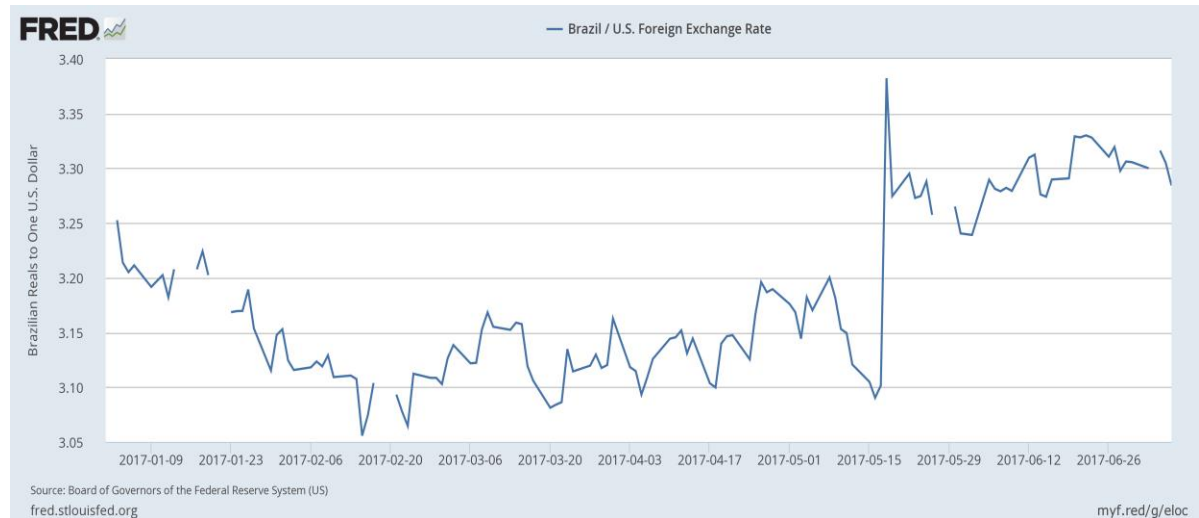
Financial Flows are 10 Fold Export Activity

Exchange Rates Move with Fear



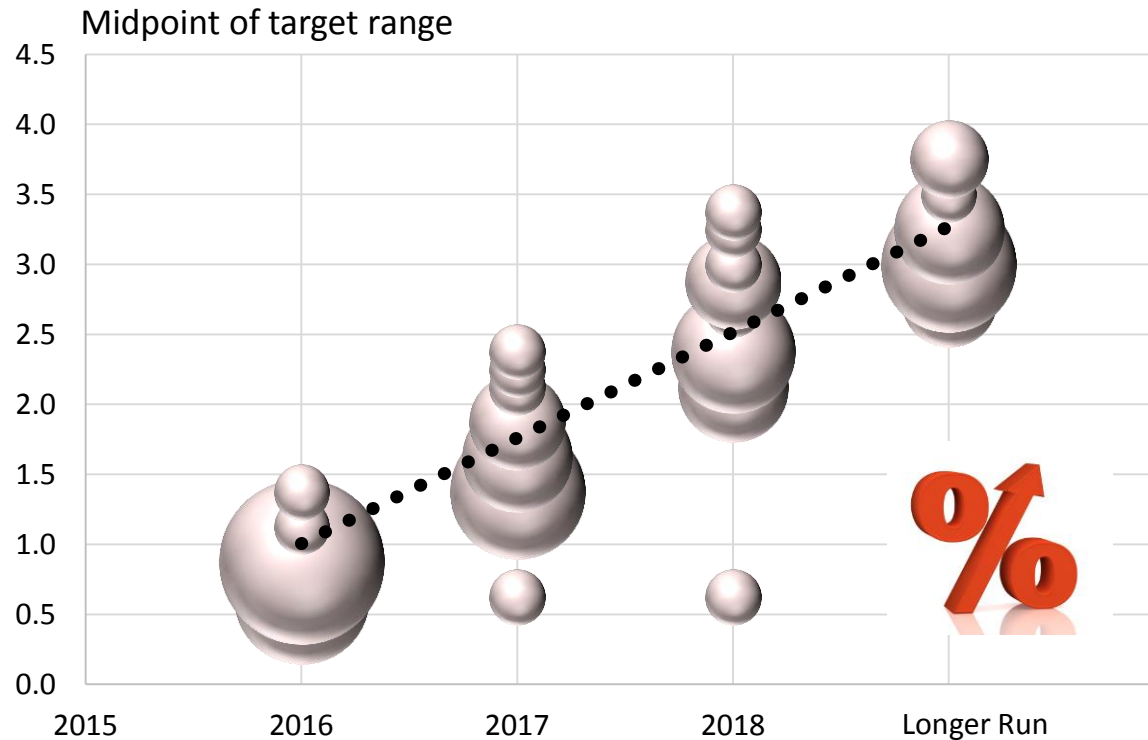
Brexit: 2017

Brazil: 2017



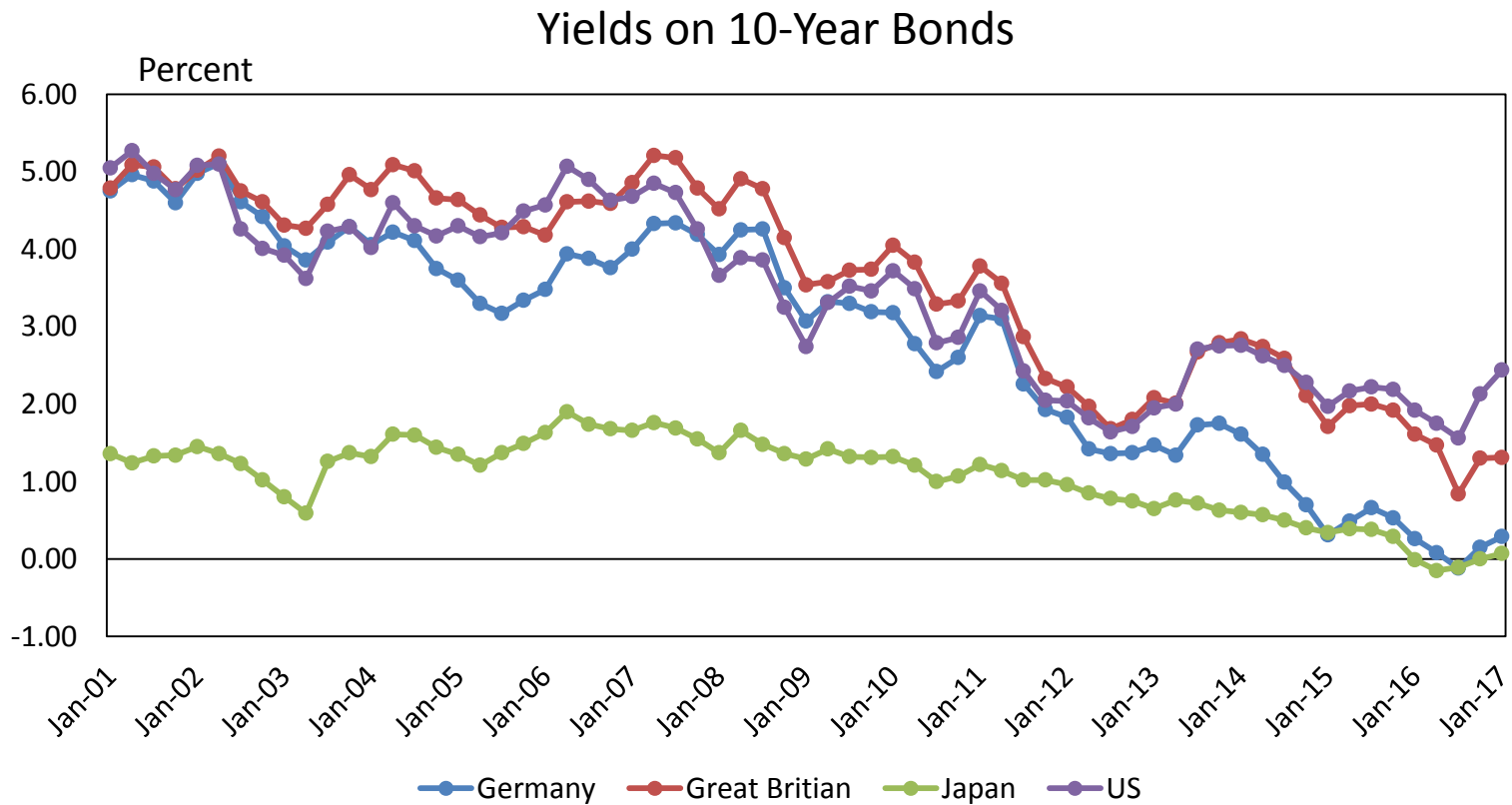
How will the Fed Normalize Rates?

Fed Funds Rates



Source: Federal Reserve Board of Governors

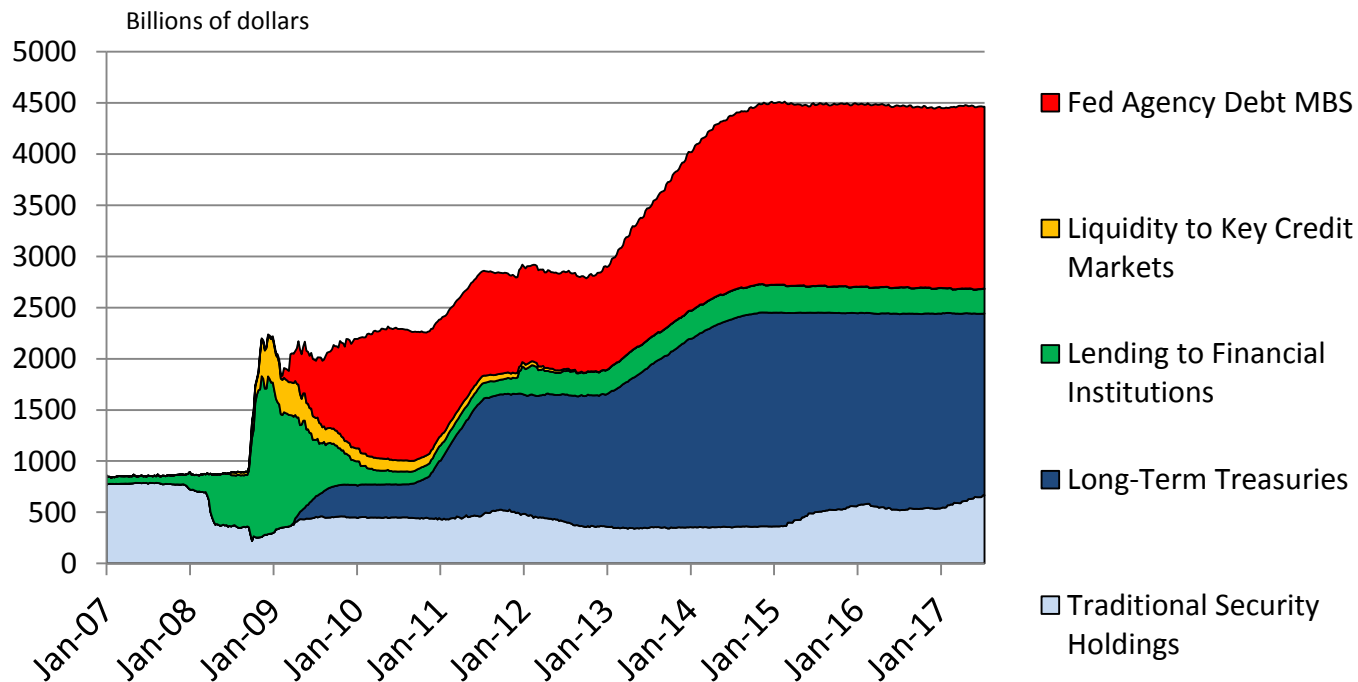
Interest Rate Movements Drive Financial Flows



Source: Board of Governors Federal Reserve System

The Next Step in Normalization: Shrinking the Balance Sheet

Federal Reserve Balance Sheet: Assets

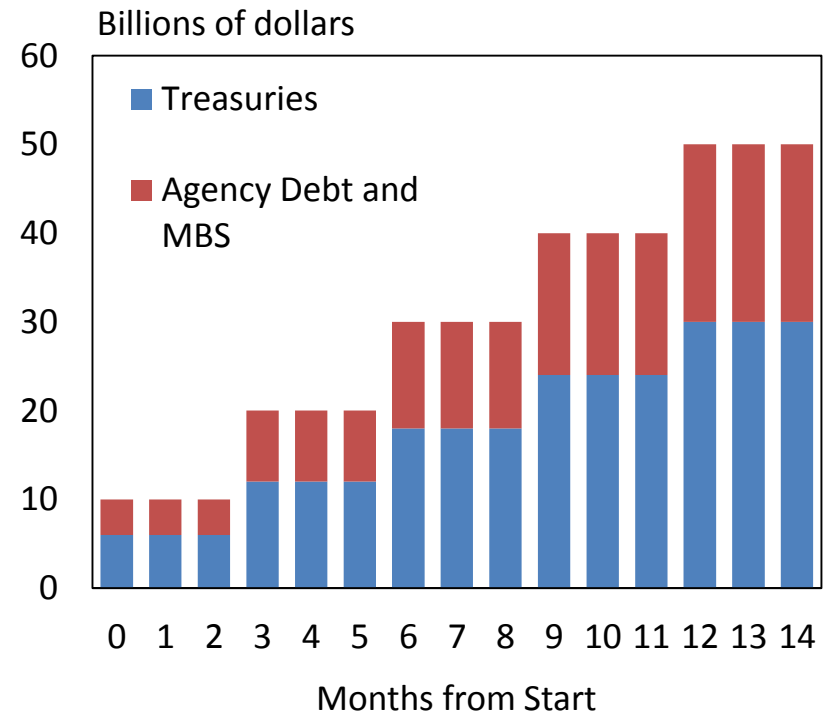


Source: Federal Reserve Bank of Cleveland

Shrinking Treasury Holdings and Mortgage-backed Securities

- For payments of principal that the Federal Reserve receives from *maturing Treasury securities*, the Committee anticipates that the cap will be **\$6 billion per month** initially and will increase in steps of \$6 billion at three-month intervals over 12 months until it reaches **\$30 billion per month**.
- For payments of principal that the Federal Reserve receives from its **holdings of agency debt and mortgage-backed securities**, the Committee anticipates that the cap will be **\$4 billion per month** initially and will increase in steps of \$4 billion at three-month intervals over 12 months until it reaches **\$20 billion per month**.

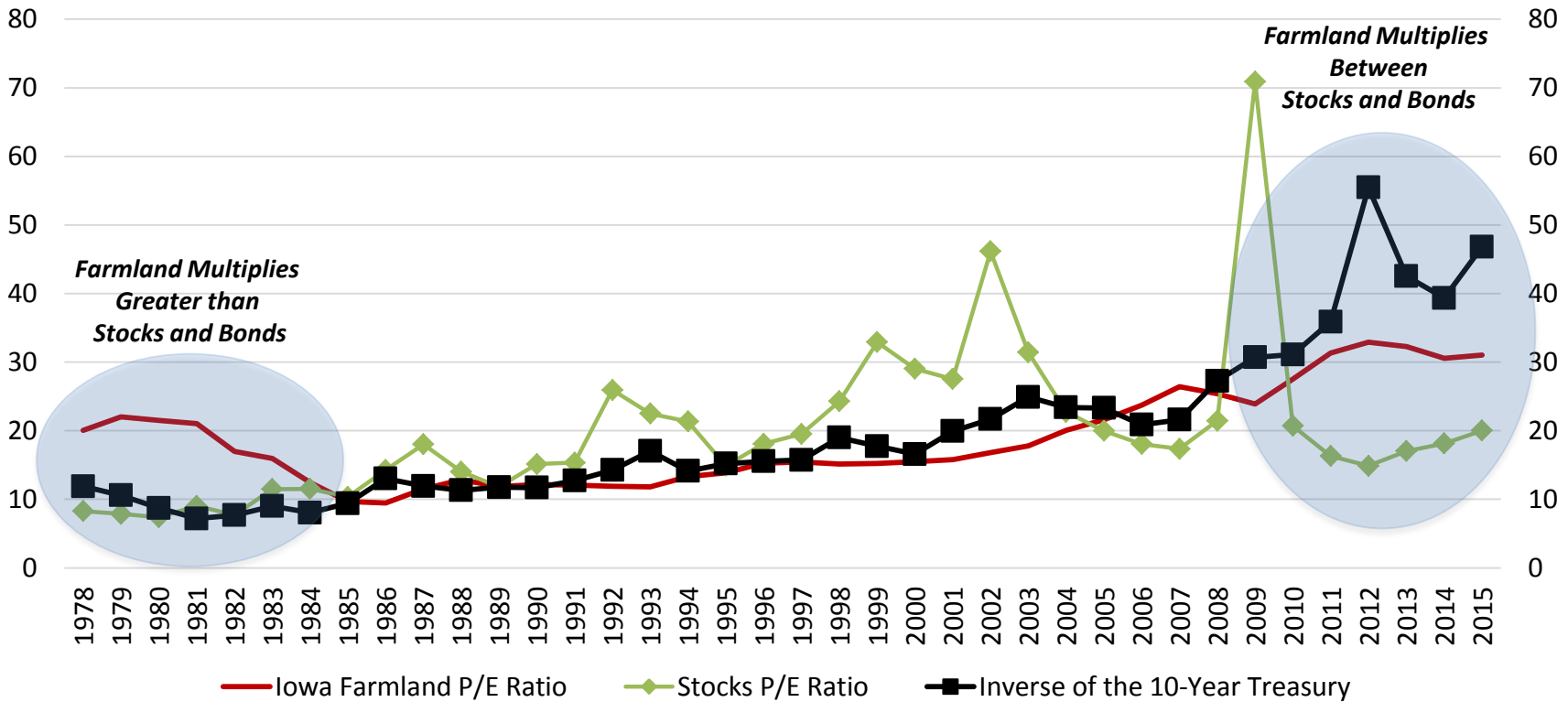
Cap on Principal Payments



Source: Federal Reserve Board of Governors

Is Farmland a Stock or a Bond?

Earnings Multiples on 10-Year Treasury, Iowa Farmland, and U.S. Stocks



Calculations based on data from CARD, Iowa State University and FRED, Federal Reserve Bank of St. Louis.

What Will Drive Farmland Values?

Farm
Profitability



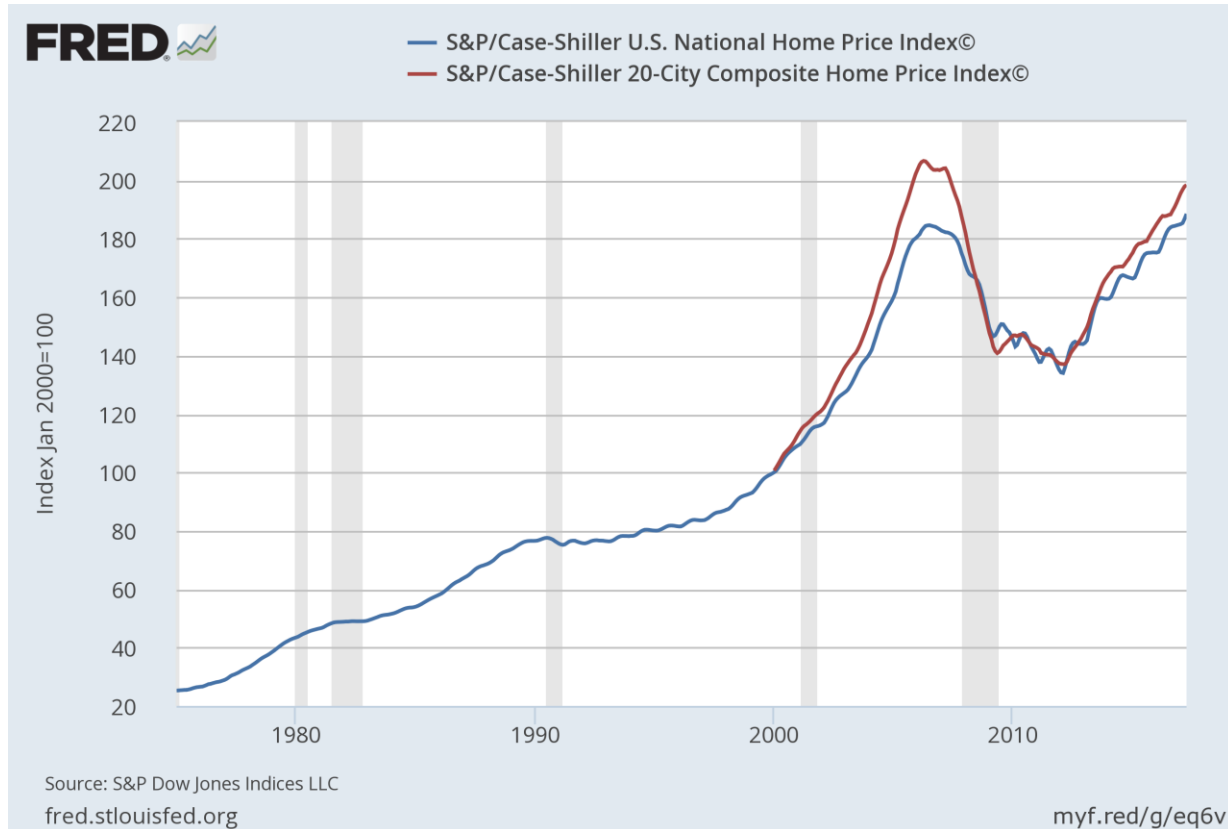
Interest
Rates



Non-farm
Influences



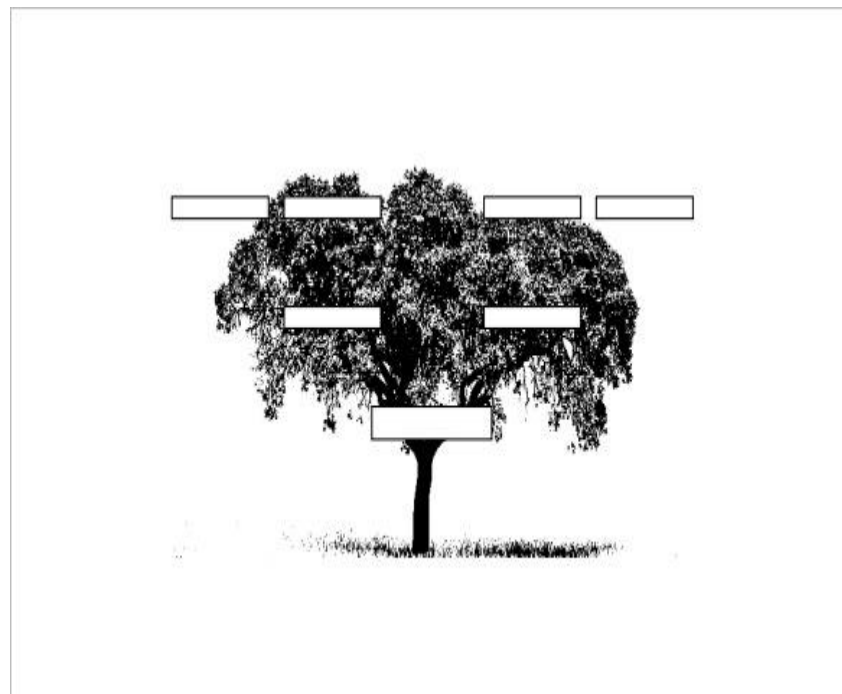
Home Prices have Reached 2005 Peaks



One source of regional variation in land values.

Market Dynamics

- Who is going to buy?
 - Farmers
 - Investors
 - Others?
- Who is going to sell?
 - Farmers
 - Heirs
 - Investors



Who is at Risk – Small Farms?

Smaller farming operations have more challenges with

- positive cash flow
- working capital and
- debt coverage.

Farms with 50% Land Owned and 25% Debt-to-Asset Ratio

	Size of Farm (Acres)		
	550	1200	2500
Percent with Positive Cash Position	24.3%	83.8%	98.4%
Working Capital to Value of Farm Production (% > 35%)	43.1%	96.1%	99.9%
Term Debt Coverage Ratio (% > 1.1)	23.2%	76.1%	97.9%

Source: Boehlje and Langemeier, "Financial Vulnerability in the Current Downturn: Stress Test of Midwestern Corn-Soybean Farms, Purdue Agricultural Economics Report, June 2017, Table 1
<https://ag.purdue.edu/agecon/Pages/Purdue-Agricultural-Economics-Report.aspx>

Who is at Risk – Rented Farms?

Farming operations with more rented land have more challenges with

- positive cash flow
- working capital and
- debt coverage.

Farms with 550 Acres and 25% Debt-to-Asset Ratio

	% of Land Owned		
	15%	50%	85%
Percent with Positive Cash Position	0.3%	24.3%	74.8%
Working Capital to Value of Farm Production (% > 35%)	0.5%	57.9%	90.8%
Term Debt Coverage Ratio (% > 1.1)	0.5%	23.2%	83.8%

Source: Boehlje and Langemeier, "Financial Vulnerability in the Current Downturn: Stress Test of Midwestern Corn-Soybean Farms, Purdue Agricultural Economics Report, June 2017, Table 1
<https://ag.purdue.edu/agecon/Pages/Purdue-Agricultural-Economics-Report.aspx>

Who is at Risk – Indebted Farms?

Farming operations with more debt have more challenges with

- positive cash flow
- working capital and
- debt coverage.

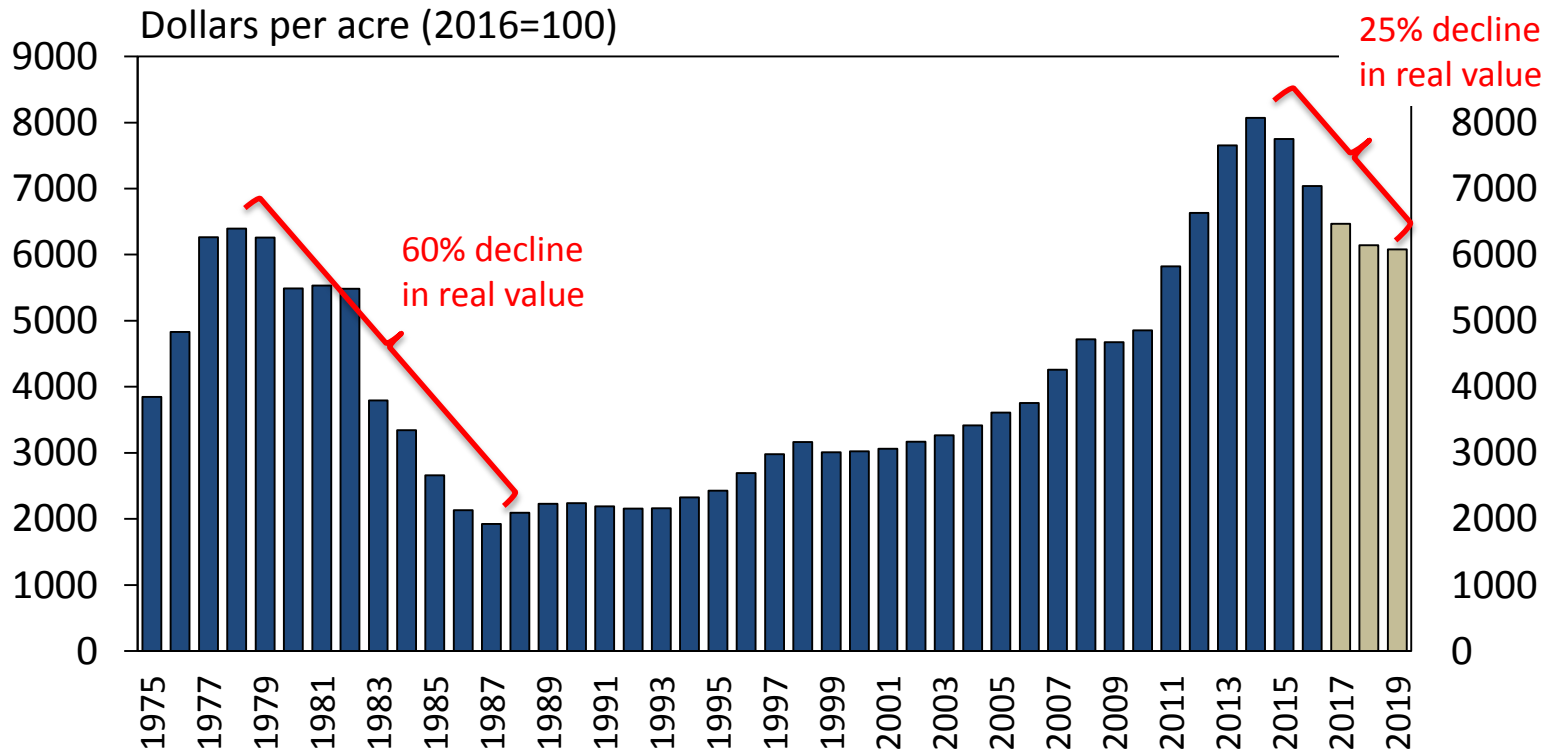
Farms with 2500 Acres and 50% of Land Owned

	Debt-to-Asset Ratio	
	25%	50%
Percent with Positive Cash Position	98.4%	53.7%
Working Capital to Value of Farm Production (% > 35%)	99.9%	54.4%
Term Debt Coverage Ratio (% > 1.1)	97.9%	61.8%

Source: Boehlje and Langemeier, “Financial Vulnerability in the Current Downturn: Stress Test of Midwestern Corn-Soybean Farms, Purdue Agricultural Economics Report, June 2017, Table 1
<https://ag.purdue.edu/agecon/Pages/Purdue-Agricultural-Economics-Report.aspx>

How Far Will Land Values Fall?

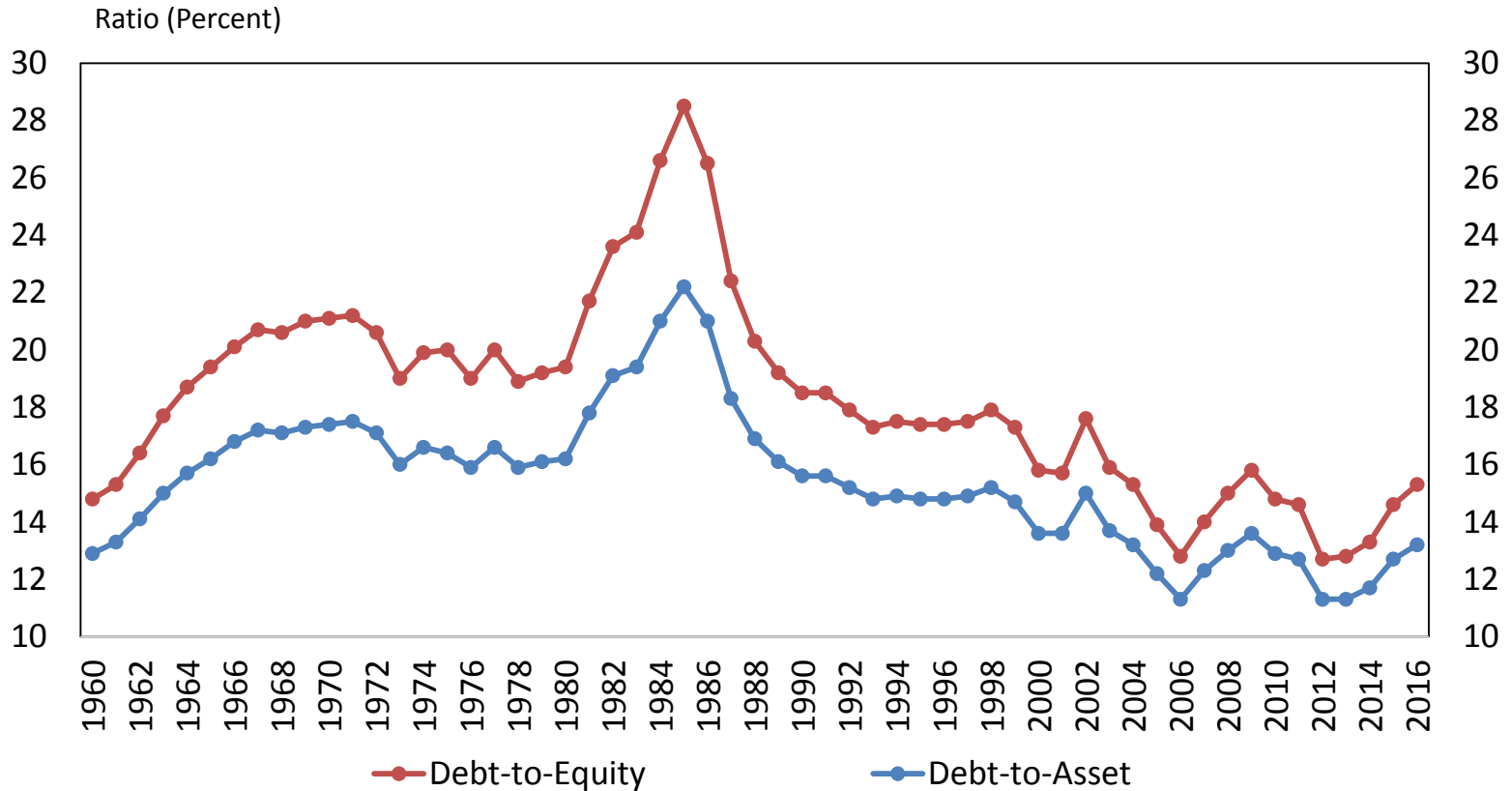
Indiana Farmland Values for Average Quality Land



Source: Hurt, Chris, Department of Agricultural Economics, Purdue University.

What Does it Take to Trigger a 1980s Scenario?

U.S. Farm Debt Ratios



Source: USDA

Rising Debt Levels and Steep Land Value Declines

U.S. Farm Debt to Asset Ratios Under Alternative Scenarios

Change in Farm Real Estate Assets

Change in Farm Debt

	+10%	+15%	+20%	+25%	+30%
-10%	15.8	16.5	17.3	18.0	18.7
-20%	17.4	18.2	19.0	19.8	20.6
-30%	19.4	20.2	21.1	22.0	22.9
-40%	21.8	22.8	23.8	24.8	25.7
-50%	24.9	26.1	27.2	28.3	29.5

Note Calculations based on USDA data from 2016

Conclusions

- Today: A Cash Crunch in U.S. Agriculture
- Tomorrow: Will Bankruptcies Emerge?
- Land values are expected to soften through 2019
- Slow and Steady Wins the Race.
- The Watch List: Interest Rates and Exchange Rates

