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What is the “New Normal” for Rural America?



The views expressed are those of the author and do not necessarily reflect the opinions of the Federal Reserve Bank of Kansas City or the Federal Reserve System.

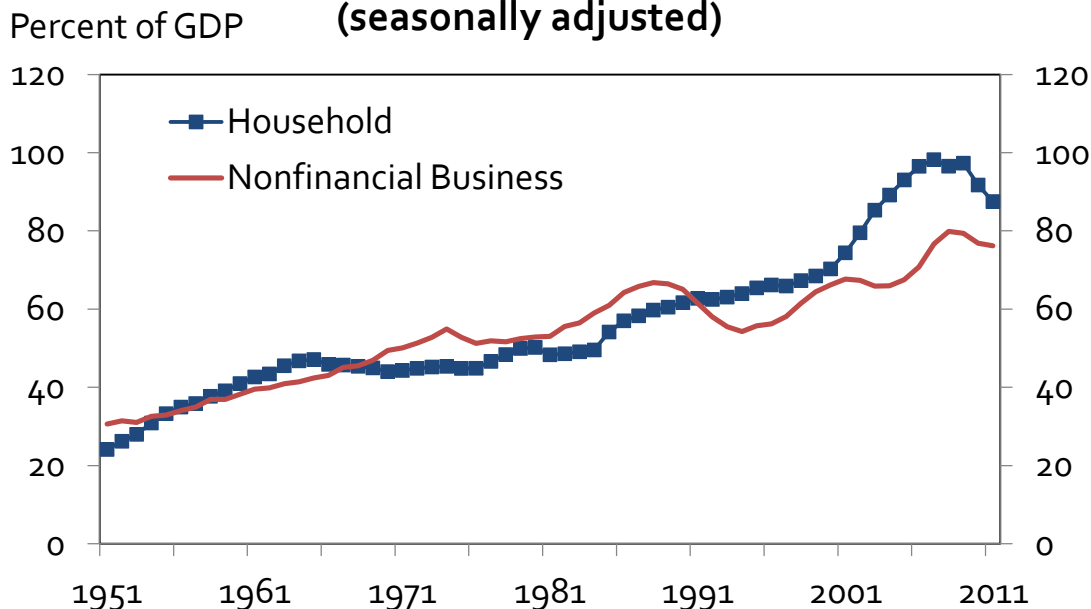
What is the New Normal?

DELEVERAGING



Spending Slows
Savings Increase
Deposits Rise
Lending Softens
Low inflation

U.S. Debt Outstanding
(seasonally adjusted)



Source: Federal Reserve Board of Governors
Note: 2011 data as of third quarter



The Goal: Foster Maximum Employment and Stable Prices

Economic Projections of Federal Open Market Committee Members, Central Tendency, January 2012

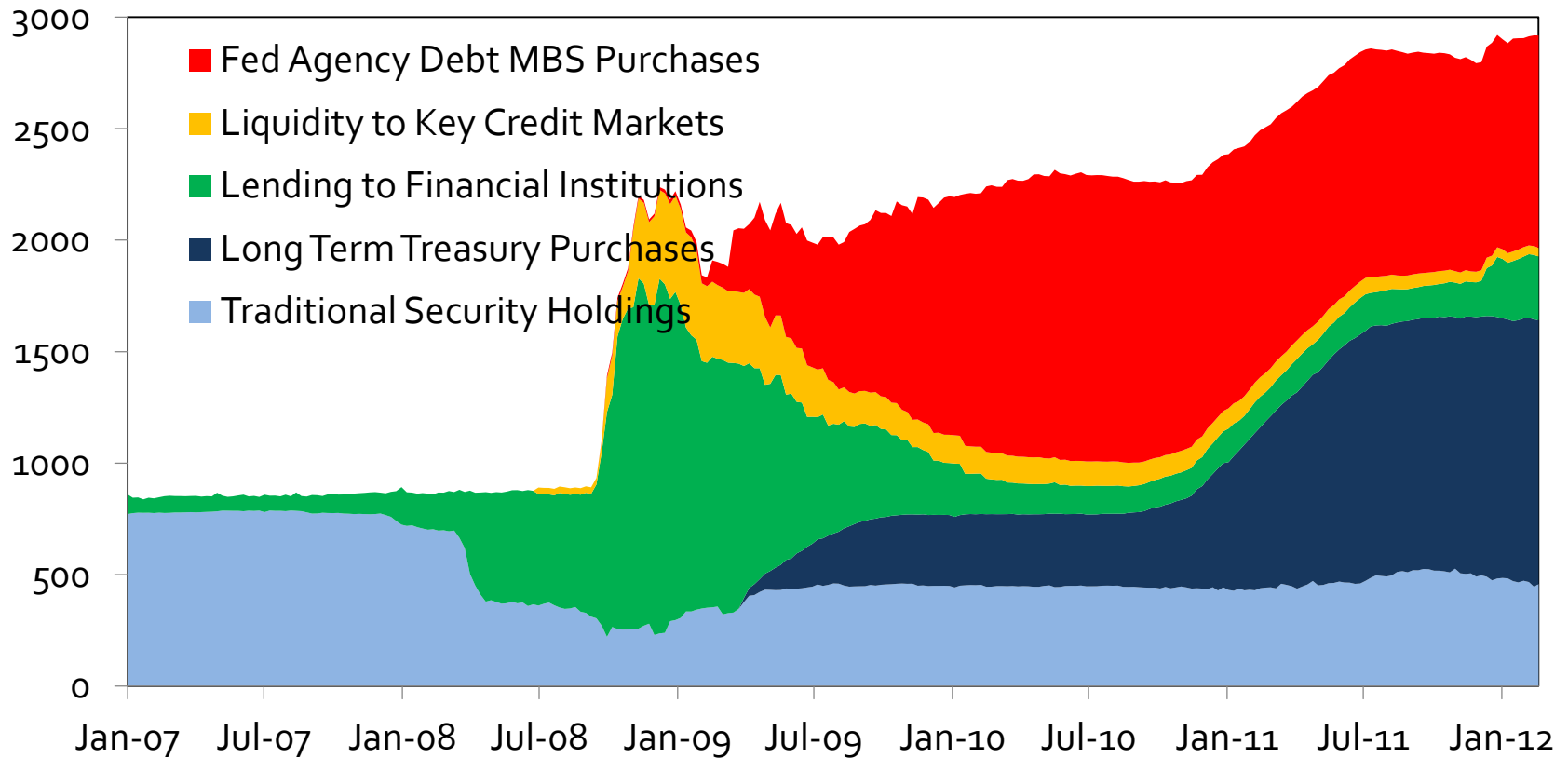
	Longer Run	2012	2013	2014
Real GDP Growth	2.3 to 2.6	2.2 to 2.7	2.8 to 3.2	3.3 to 4.0
Nov. 2011 proj.	2.4 to 2.7	2.5 to 2.9	3.0 to 3.5	3.0 to 3.9
Unemployment Rate	5.2 to 6.0	8.2 to 8.5	7.4 to 8.1	6.7 to 7.6
Nov. 2011 proj.	5.2 to 6.0	8.5 to 8.7	7.8 to 8.2	6.8 to 7.7
PCE Inflation	2.0	1.4 to 1.8	1.4 to 2.0	1.6 to 2.0
Nov. 2011 proj.	1.7 to 2.0	1.4 to 2.0	1.5 to 2.0	1.5 to 2.0

Source: Federal Reserve Board of Governors



Federal Reserve Balance Sheet: Assets

Billion Dollars

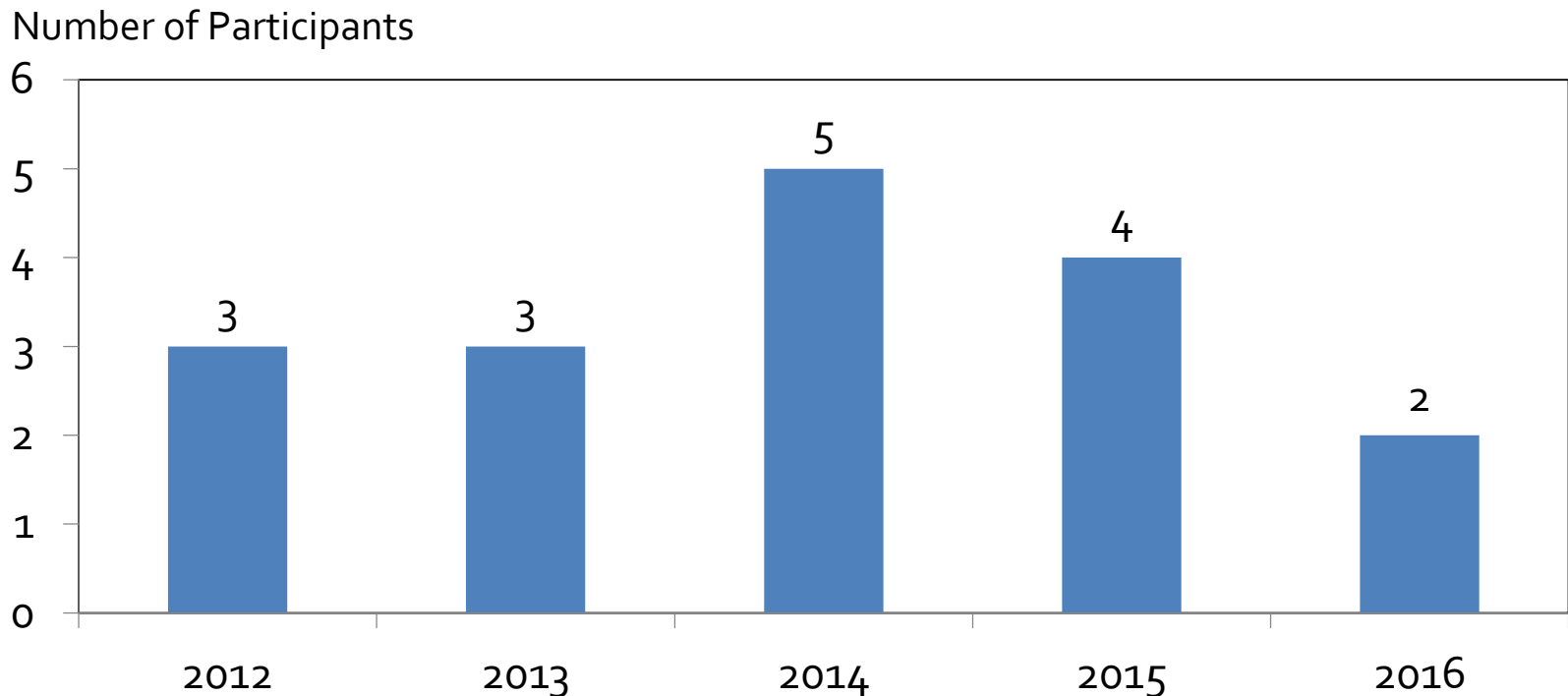


Source: Federal Reserve Bank of Cleveland



When will interest rates turn higher?

Overview of Federal Open Market Committee (FOMC) Participants Assessments of Appropriate Monetary Policy (Appropriate Timing of Policy Firming)



Source: Federal Reserve Board of Governors



What are the Implications for Rural America?



Who Benefits from Low Interest Rates?

Debtors or Savers?

Asset-owners
(via a low cap rate)

What are Farmers?

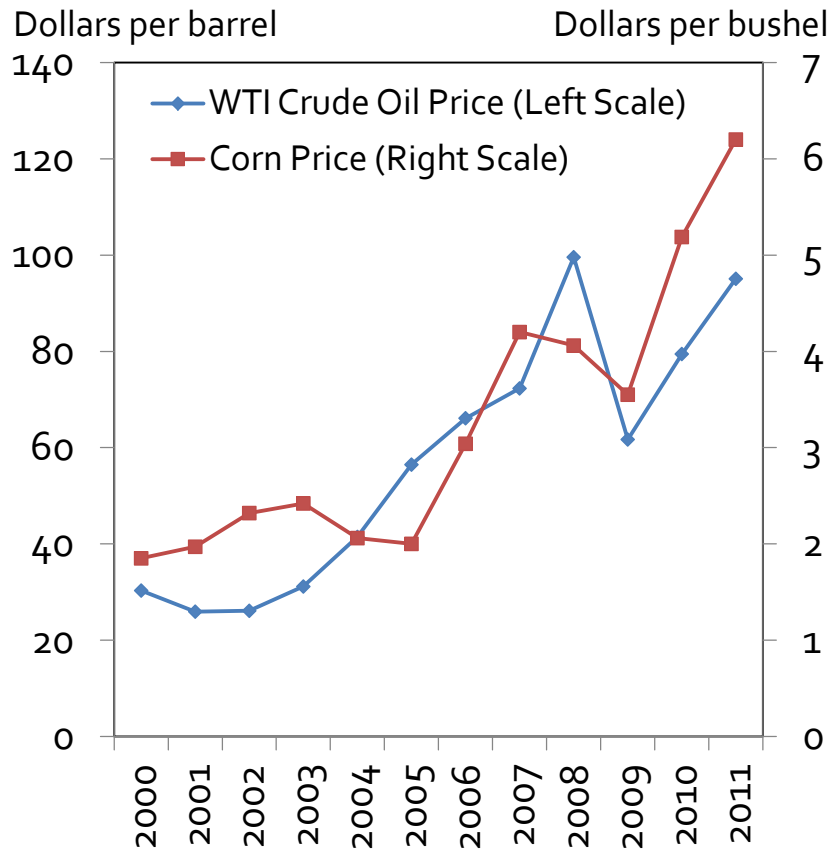


“Land Rich, Cash Poor”



Commodity markets are shaping rural economic gains.

U.S. Crude Oil and Corn Prices



Commodity-Dependent Economies Boom

Rural America is not Immune to Broader Economic Swings

Source: Commodity Research Bureau



Rural housing activity is weak.

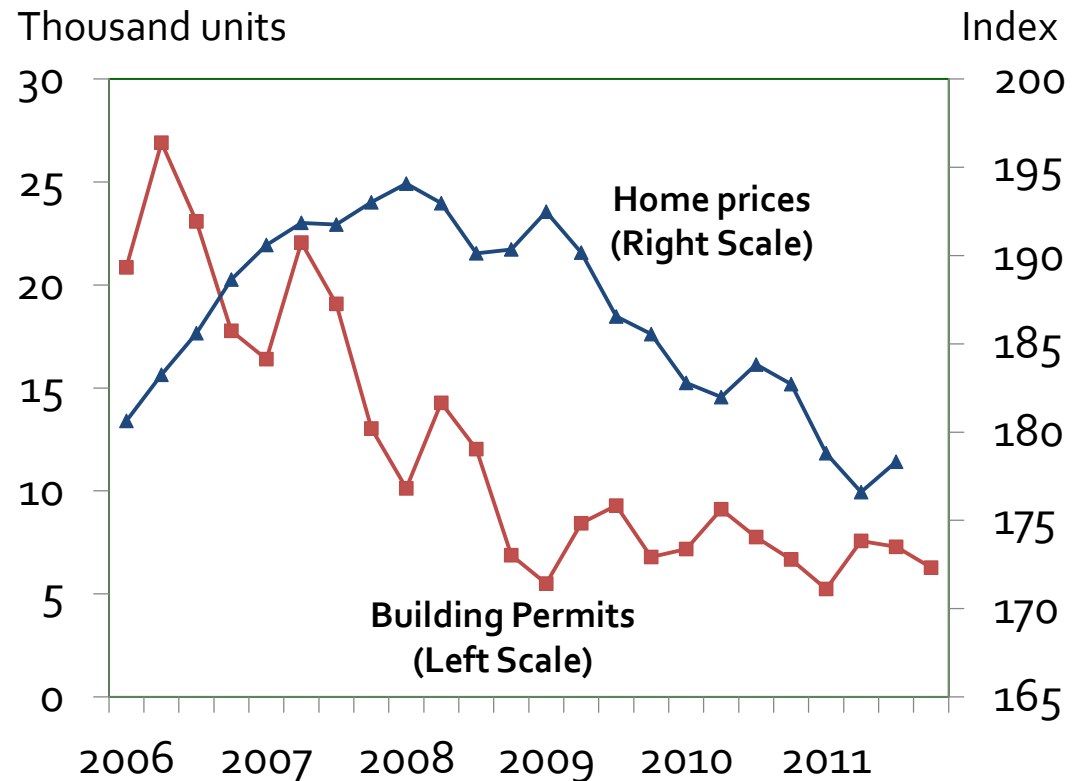


Rural Construction Employment

Flat in 2011

Down 24% since 2007

Rural Single-Family Building Permits and Home Prices



Calculations based on Census Bureau and FHFA data



Fiscal challenges at the federal, state, and local level strain rural employment.



Rural Government Employment

Down 7.2% in 2011

The public sector accounts for almost 1 out of every 5 rural jobs.

Most government employment is at the local level, whose budgets hinge on Inter-government transfers and property taxes.

Inter-government transfers account for 45% of the local government revenues in rural counties.



Fiscal challenges also strain hospitals and education.



Rural Hospital Employment

Down 9.4% in 2011

Down 8.8% since 2009

Health Care Services Employment

Up 0.8% in 2011

Down 2.6% since 2009



Rural Educational Services Employment

Down 2.3% in 2011

Down 8.0% since 2009



Rural mining economies are booming



Rural mining employment

Up 8.4% in 2011

Up 20% since 2009

Top 10 State in Personal Income Growth

State	Personal Income Growth 2010:YTD to 2011:YTD
(1) North Dakota	10.5
(2) Texas	6.8
(3) Oklahoma	6.5
(4) South Dakota	6.4
(5) Minnesota	6.1
(5) Nebraska	6.1
(7) Iowa	5.8
(7) California	5.8
(9) Colorado	5.7
(9) Idaho	5.7
U.S. Average	5.0

Source: Bureau of Economic Analysis

Note: Year -to-Date information through third quarter



Rising farm incomes boost rural spending and *manufacturing*.



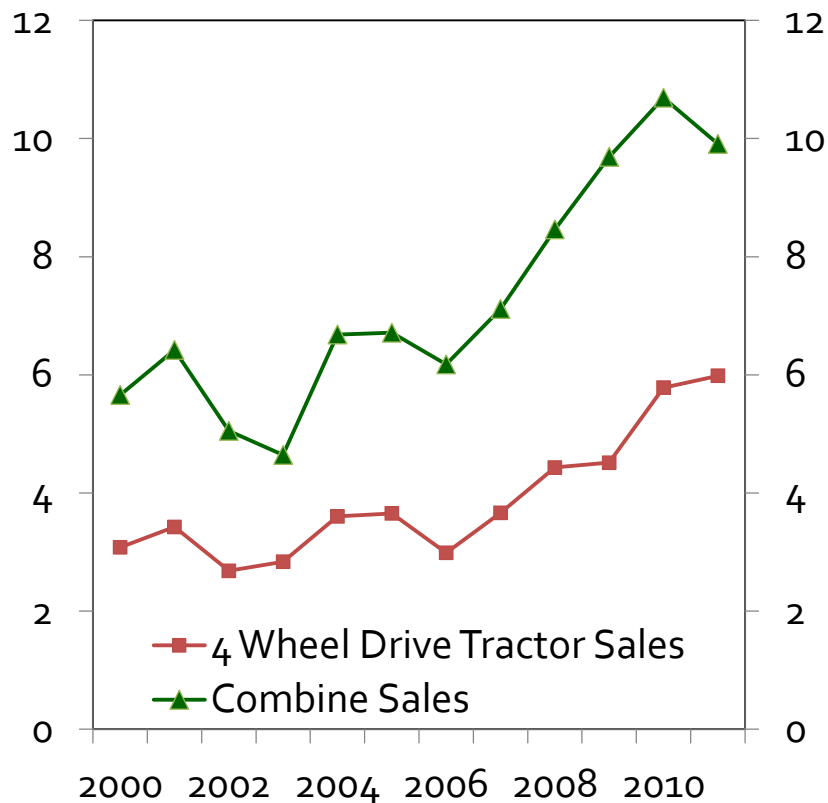
Rural manufacturing employment

Up 3.8% in 2011

Up 14% since 2009

U.S. Tractor and Combine Sales

Thousand units per month



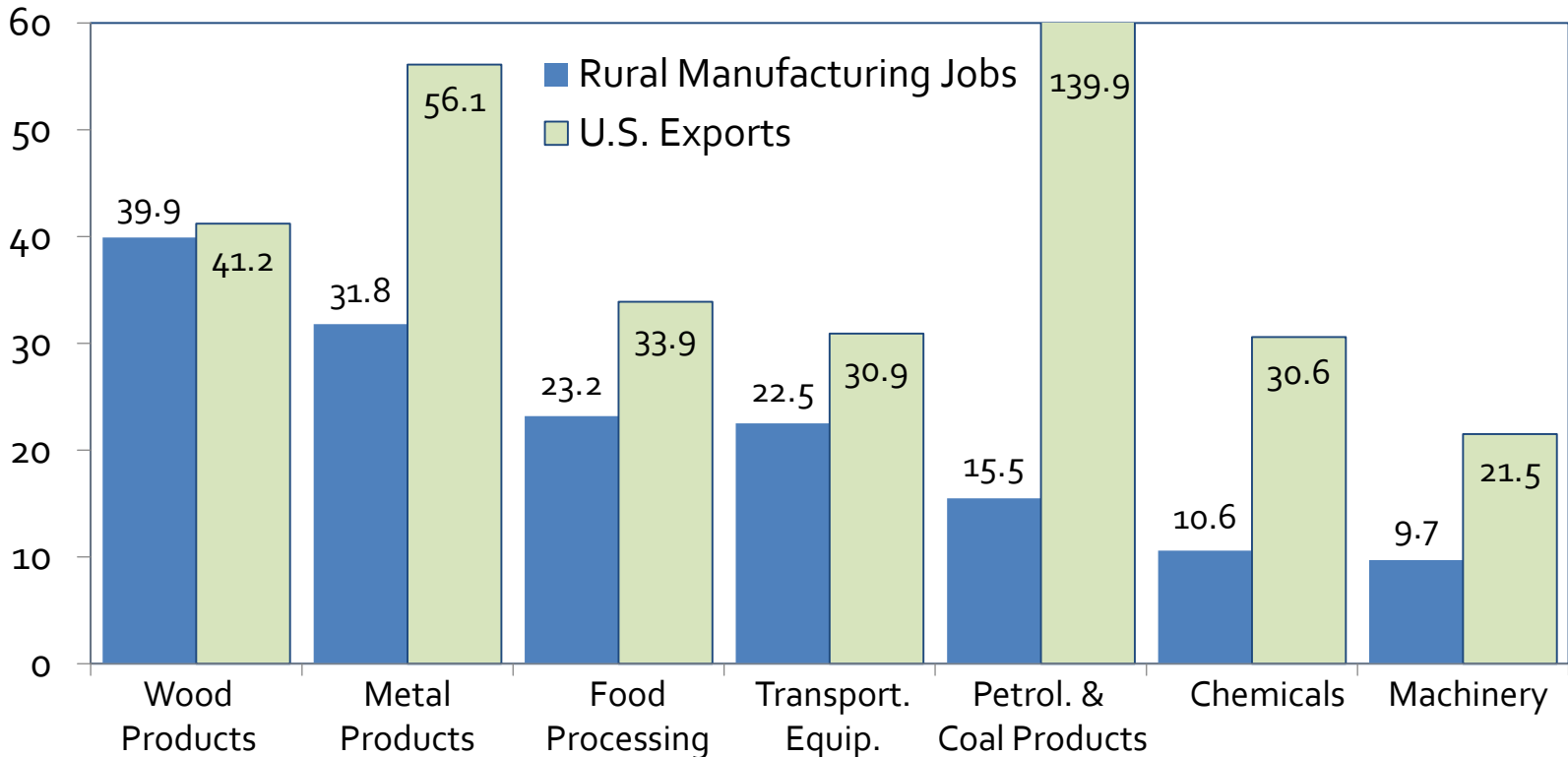
Source: Association of Equipment Manufacturers



Rural manufacturing was spurred by stronger exports.

Rural Manufacturing Jobs and U.S. Exports by Industry

Percent change from 2009 to 2011

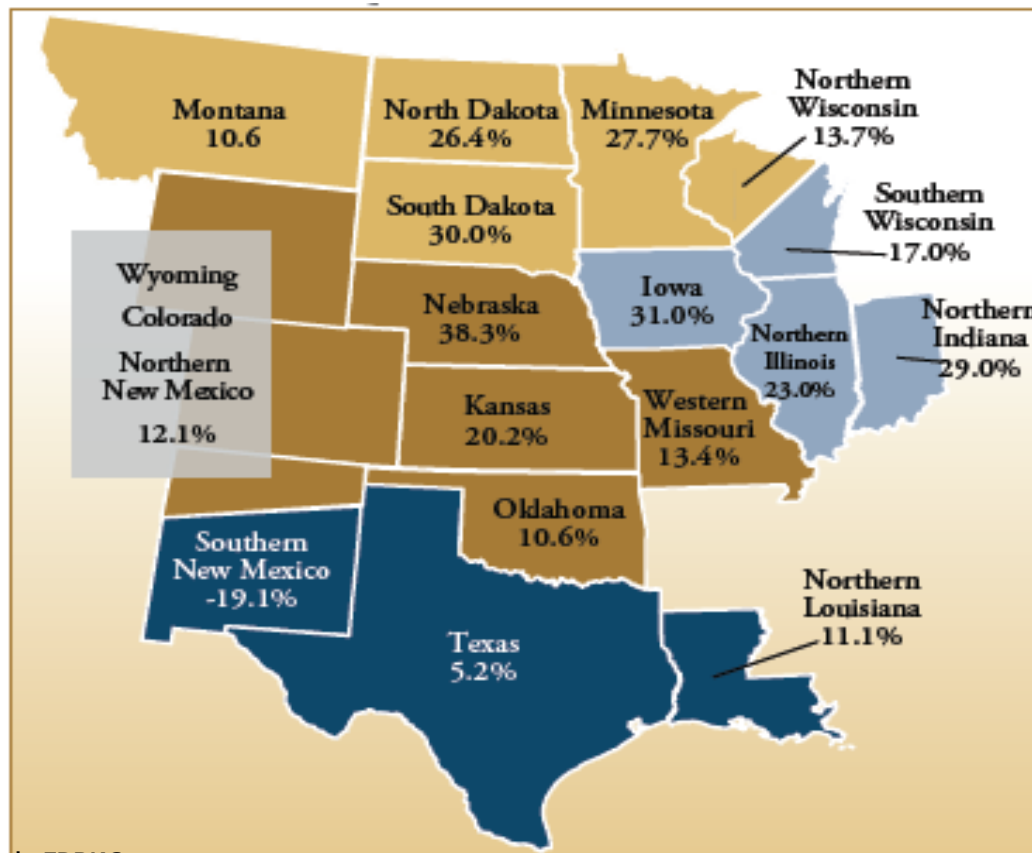


Calculations based on Census Bureau data and WiserTrade data



Farmland values have surged in the Midwest.

Non-irrigated Cropland Values (Percent change 2010:Q3 to 2011:Q3)

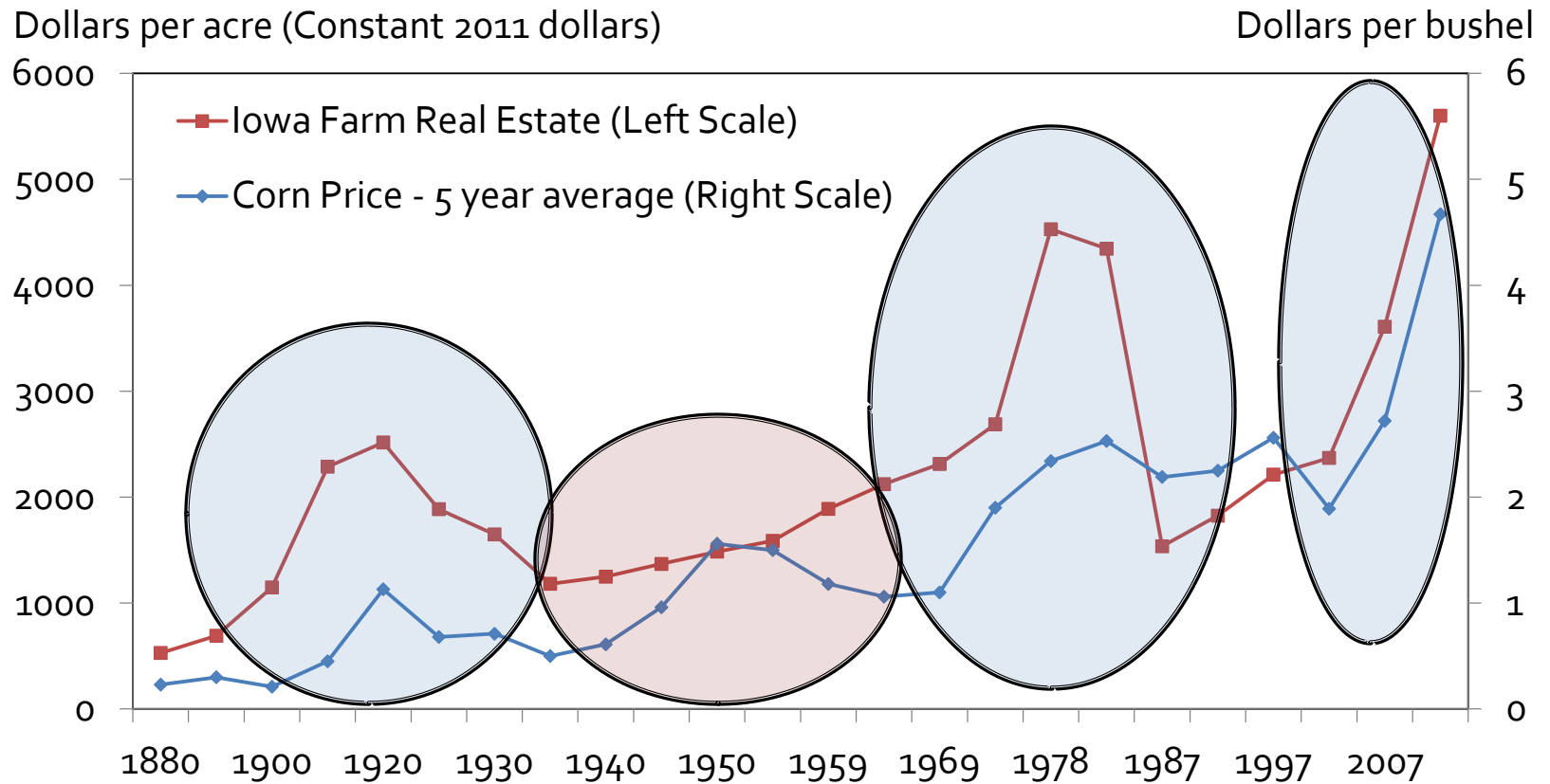


Source: Agricultural Finance Databook, FRBKC



Is agriculture set up for another correction?

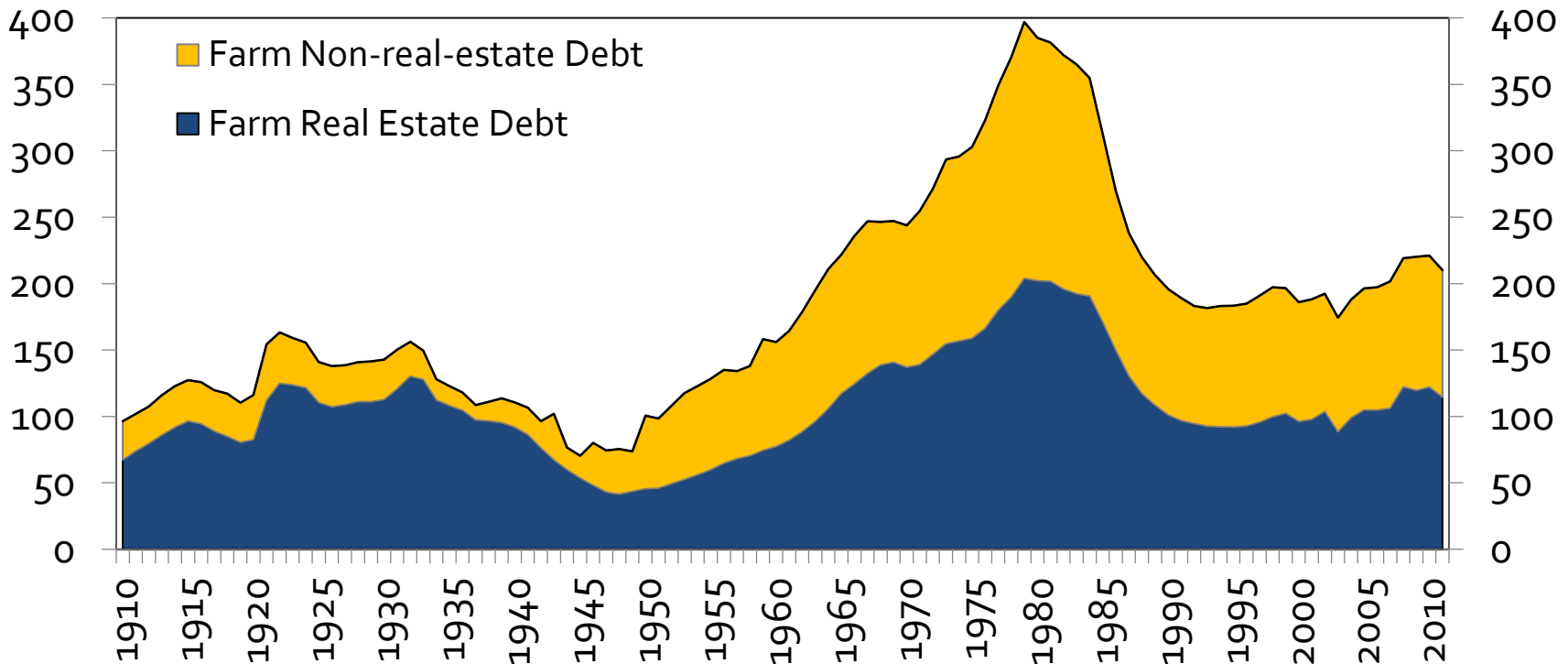
Iowa Corn Prices and Farm Real Estate Values



What made the 1940s different? Deleveraging

U.S. Farm Debt

Billion dollars (2005 constant dollars)



Calculations based on U.S. Census Bureau and U.S. Department of Agriculture data deflated with consumer price index from the Federal Reserve Bank of Minneapolis.

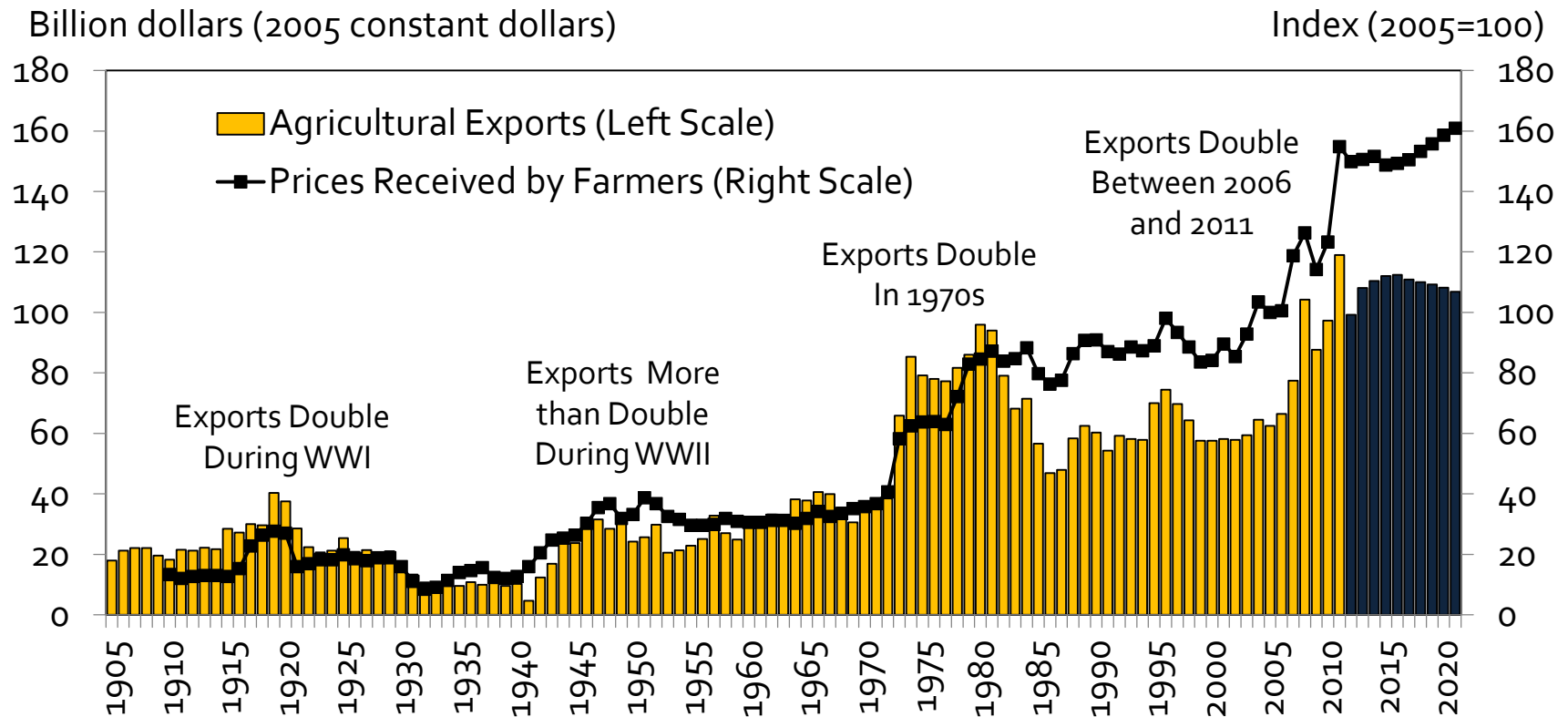


What is the Outlook?



Elevated export trends similar to the 1950s could keep farm prices high.

U.S. Agricultural Exports and Farm Prices



Calculations based on U.S. Census Bureau and U.S. Department of Agriculture data deflated with consumer price index from the Federal Reserve Bank of Minneapolis and USDA inflation expectations.



Ethanol hits the "Blend Wall"



U.S. Motor Gasoline Use

Fell 2.6% in 2011
2015 forecast down 5%

U.S. Ethanol Standard is a 10% blend.

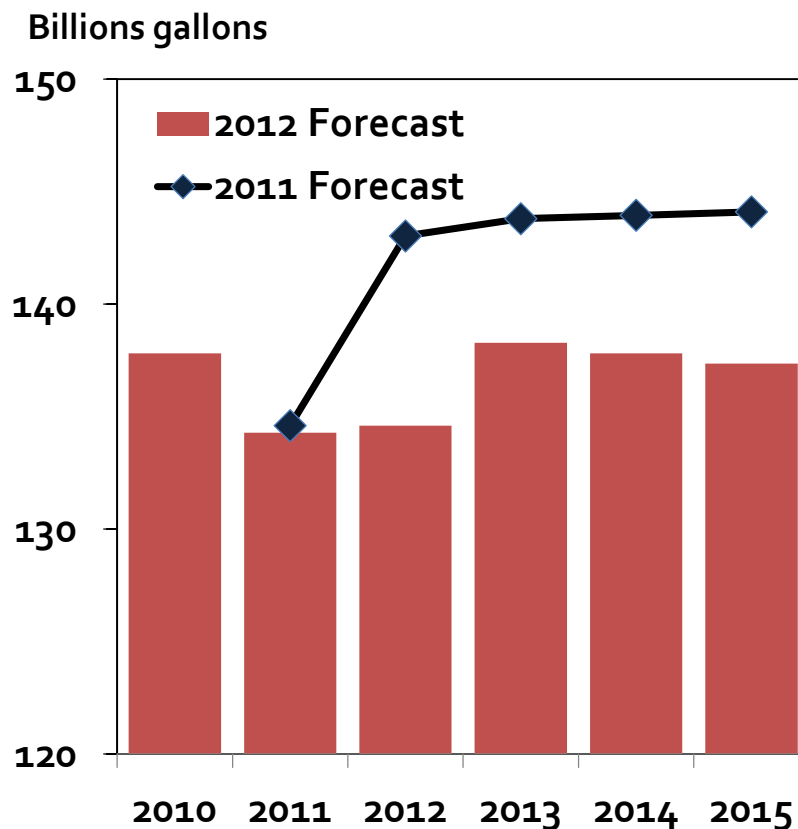
Projections of 2015 Ethanol Consumption

In 2007, 15 billion gallons
Today, 13.7 billion gallons

Current Ethanol Production Capacity

13.5 billion gallons with
522 million gallons under construction

U.S. Motor Gasoline Consumption

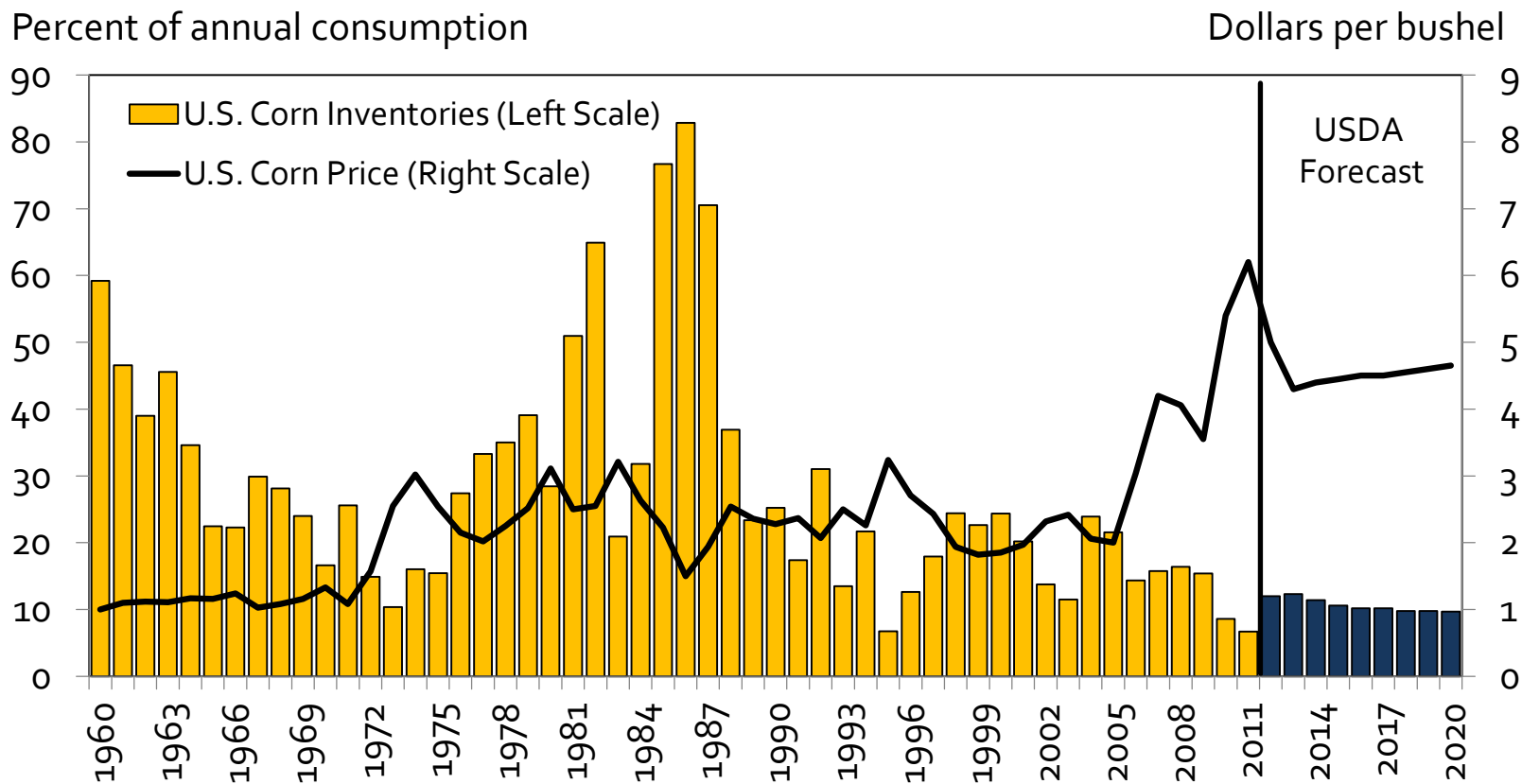


Source: EIA



What is the supply response of farmers from higher prices?

U.S. Corn Inventories and Prices

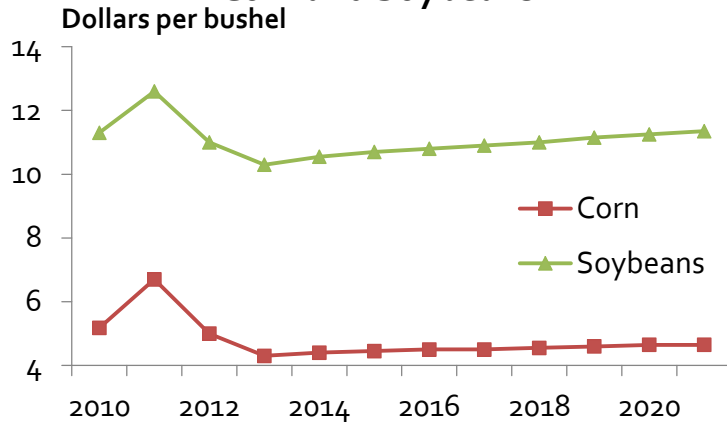


Source: USDA

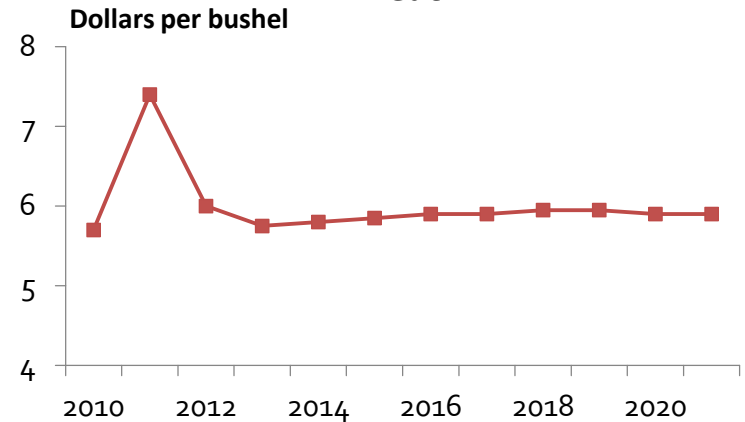


U.S. Crop Price Projections

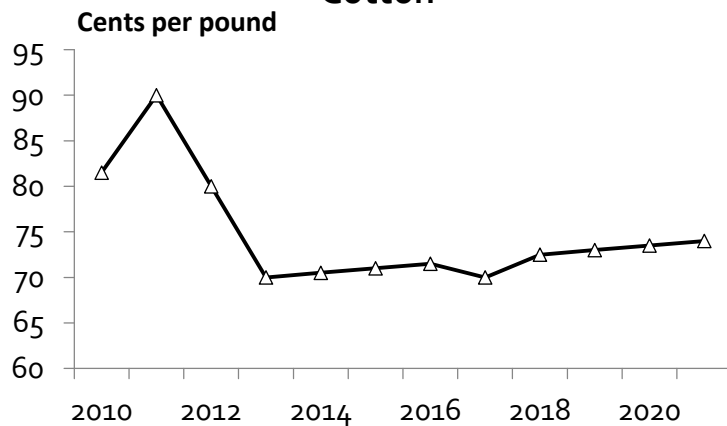
Corn and Soybeans



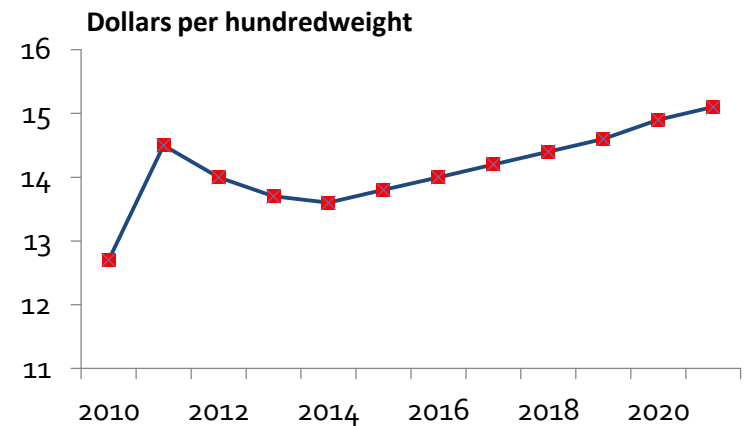
Wheat



Cotton



Rice



Source: USDA



Farm incomes are projected to retreat to historical norms.



U.S. Real Net Farm Income (Annual Average)

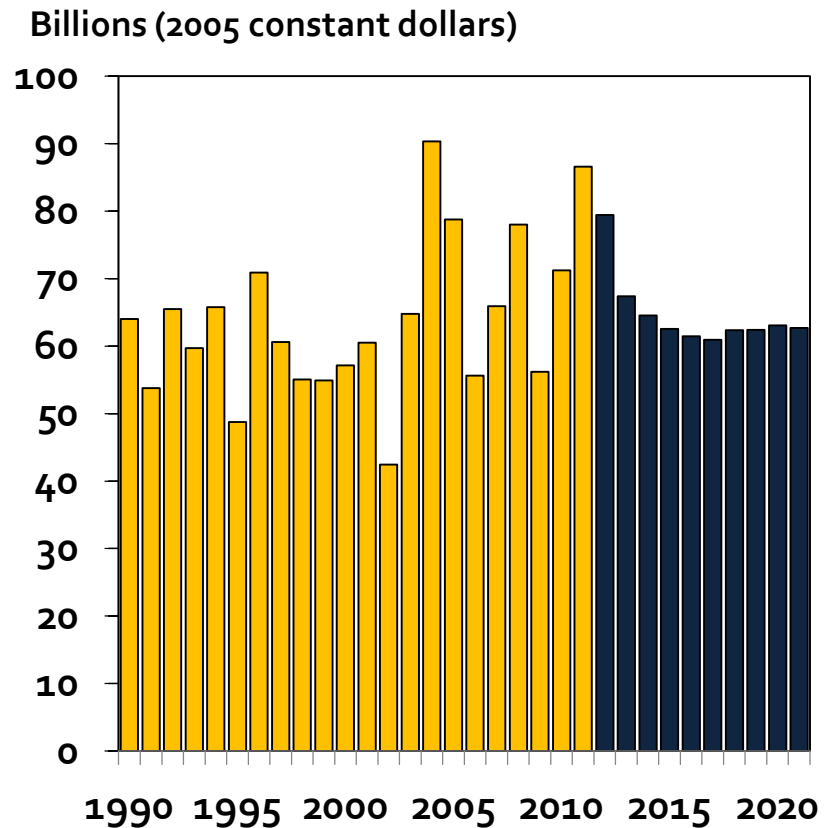
1990 to 2003: \$59 billion

2004 to 2011: \$73 billion

2012 to 2020: \$64.7 billion

- Through 2014
 - Crop cash receipts fall
 - Livestock cash receipts hold steady
 - High cash expenses stabilize
- After 2015
 - Crop and livestock receipts rise
 - Cash expenses rise

U.S. Real Net Farm Income



Source: USDA



What happens to farmland values if prices decline?

$$\text{Net Present Value} = \frac{30\% \text{ of Expected Gross Revenue}}{\text{Expected Capitalization Rate}}$$

Corn Price (dollars per bushel)

	\$3.00	\$4.00	\$5.00	\$6.00	\$7.00	\$8.00
3%	6,000	8,000	10,000	12,000	14,000	16,000
4%	4,500	6,000	7,500	9,000	10,500	12,000
5%	3,600	4,800	6,000	7,200	8,400	9,600
6%	3,000	4,000	5,000	6,000	7,000	8,000
7%	2,571	3,429	4,286	5,143	6,000	6,857
8%	2,250	3,000	3,750	4,500	5,250	6,000

Assumption corn yields 200 bushels per acre



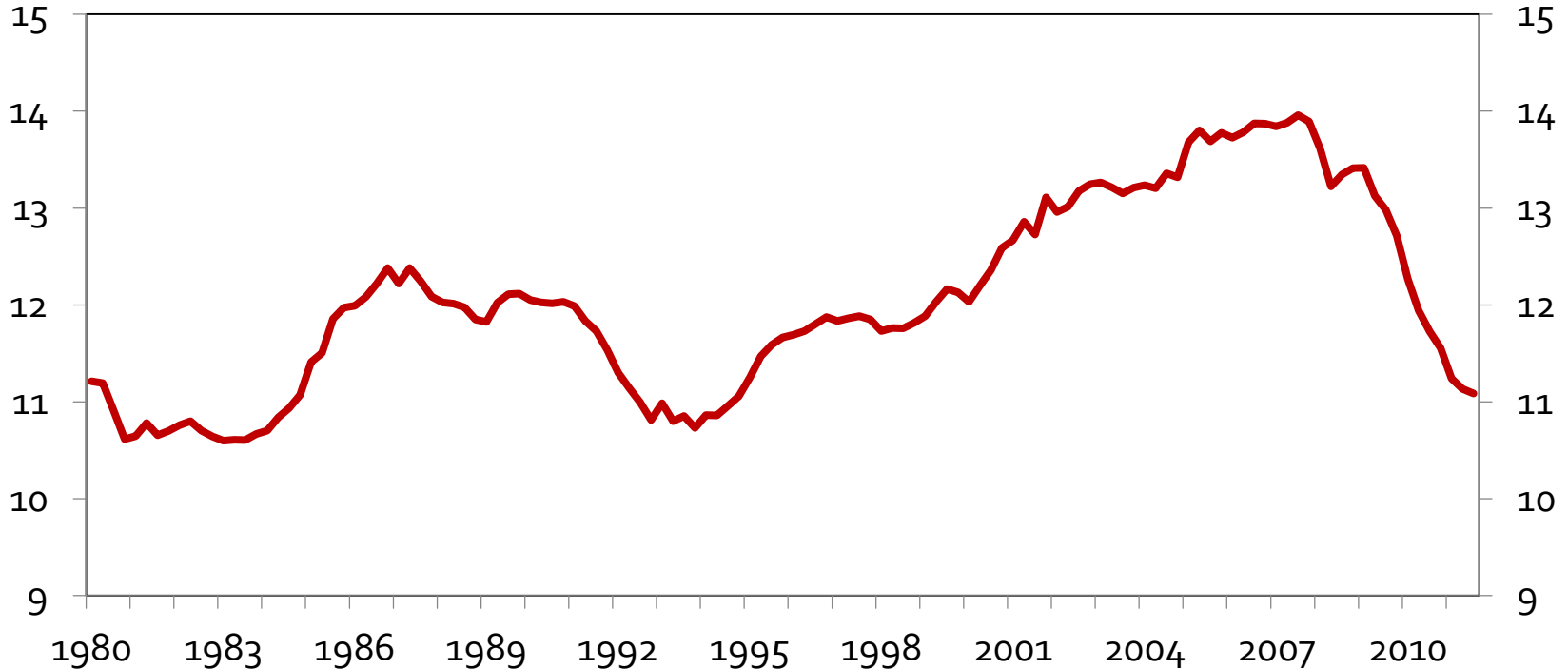
What Triggers the End of the “New Normal”?



The End of Deleveraging?

U.S. Household Debt Service Ratio (seasonally adjusted)

Percent of Disposable Personal Income



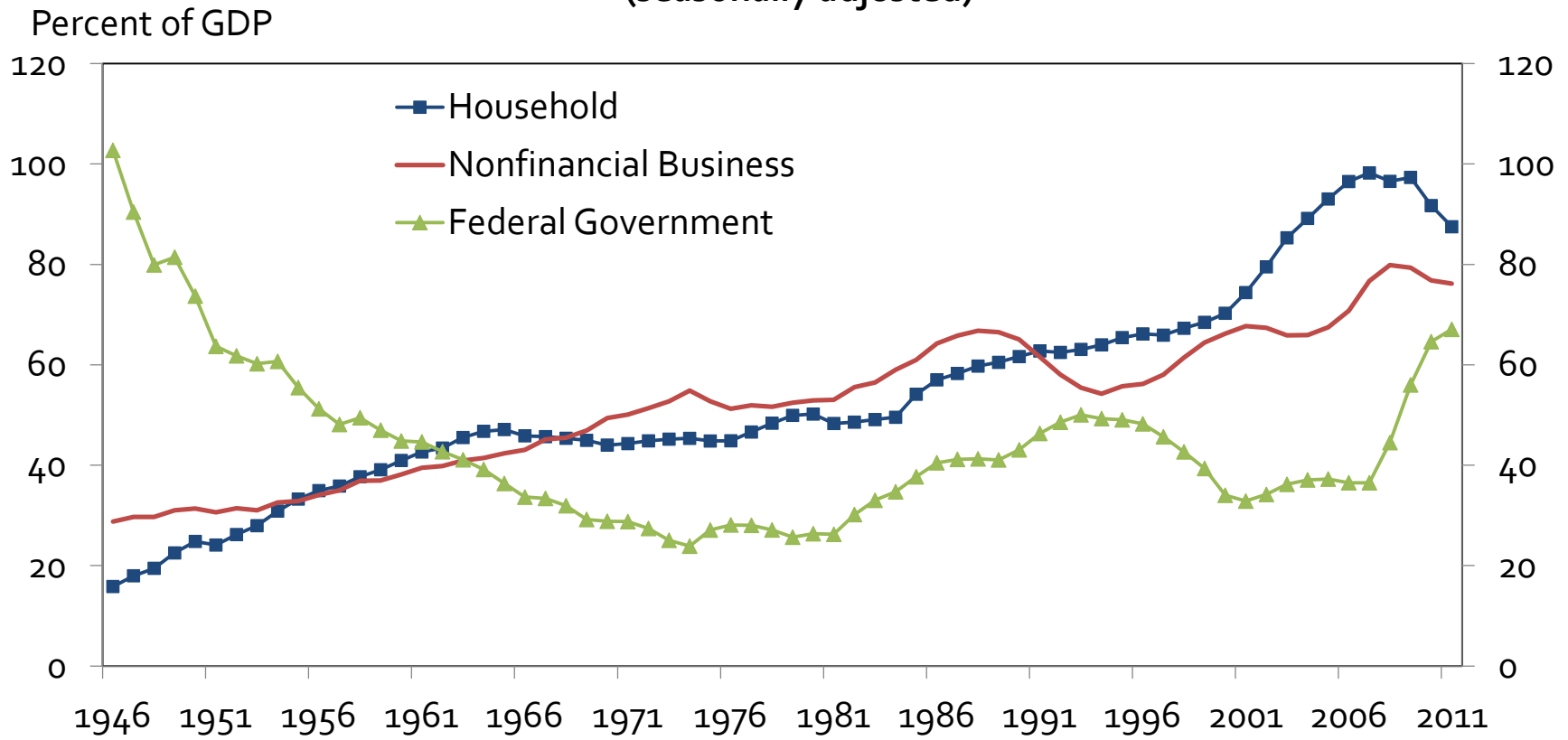
Source: Federal Reserve Board of Governors

Note: includes outstanding mortgage and consumer debt



Or, is deleveraging needed?

U.S. Debt Outstanding (seasonally adjusted)



Source: Federal Reserve Board of Governors

Note: 2011 data as of third quarter



How does deleveraging shape inflation?

Quantity Theory of Money

$$\text{Price} = \frac{\text{Money} * \text{Velocity}}{\text{Quantity}}$$

Definition of Inflation:

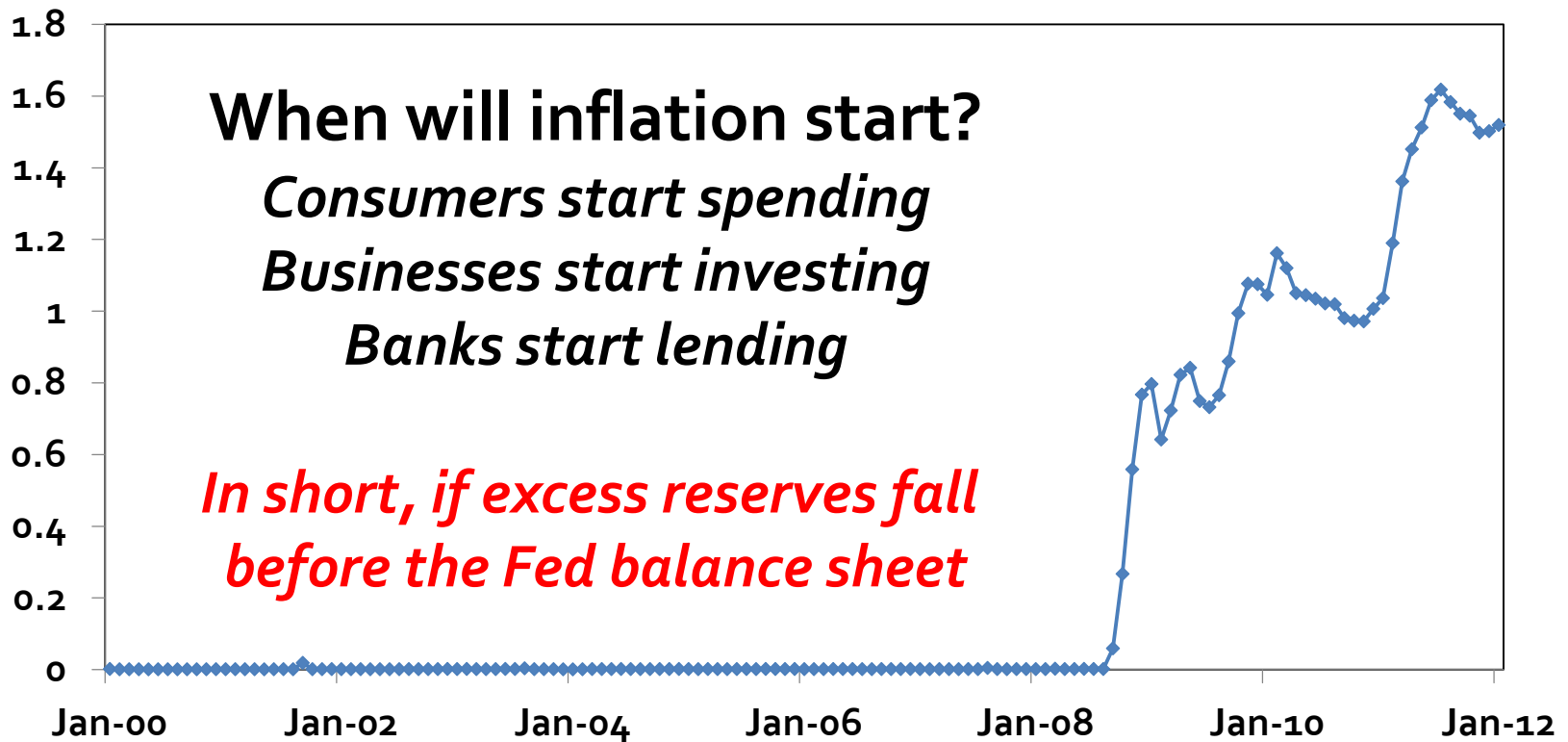
Too much money $M \uparrow$
chasing $V \uparrow$
too few goods $Q \downarrow$



Banks are holding monetary base in excess reserves

Excess Reserves in Depository Institutions

Trillion dollars



Source: Federal Reserve Board of Governors



Conclusions

- The outlook suggests a moderate pace to economic growth in the U.S. and globally.
- One defining characteristics of a “new normal” is deleveraging, which slows spending, investment, and loan demand growth.
- Commodity markets will remain strong and support rural economies.
- When will deleveraging end?

The end of deleveraging will bring about another “new normal”





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