

The Farm Economy and Outlook for Ag Lending



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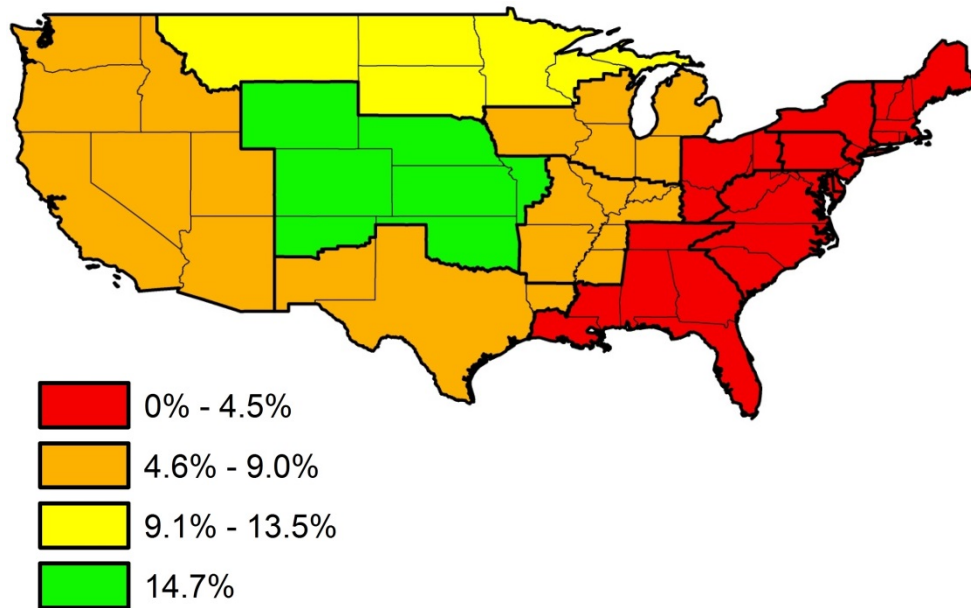
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Of the 12 Fed Districts, the 10th District is the most concentrated in agriculture by some measures.

Average Farm Income as a Share of Total Personal Income

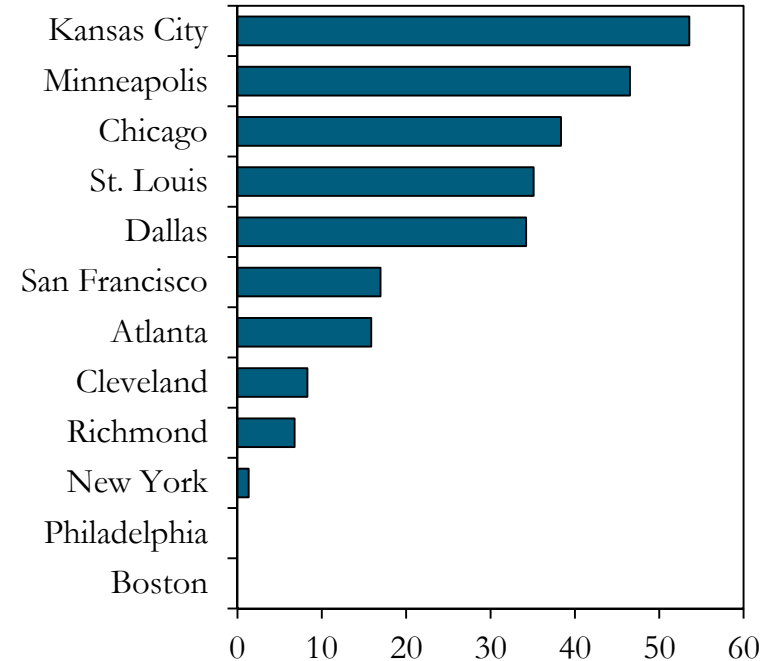
Average Across Counties by Fed District



Source: BEA.

Proportion of “Farm Dependent” Counties

Percent



Source: BEA, USDA, and staff calculations

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Pop Quiz

1. Weakness in the farm economy is:

- a) persisting
- b) intensifying
- c) gradual
- d) all of the above
- e) none of the above

2. Outside economic factors could best be described as:

- a) tailwinds
- b) headwinds
- c) irrelevant



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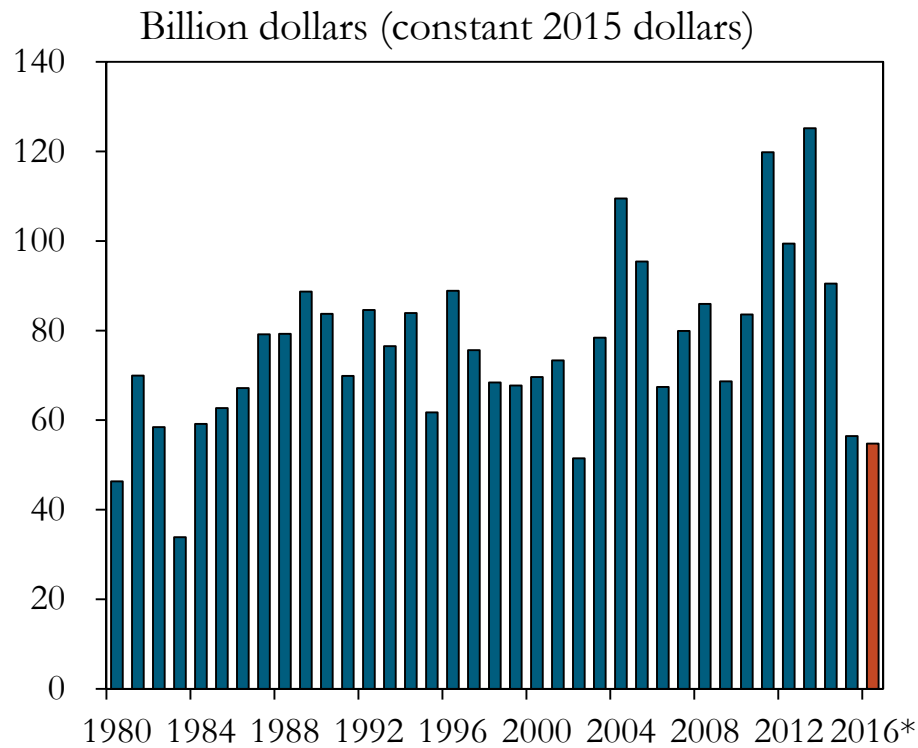
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Farm income has dropped sharply, and is expected to remain low.

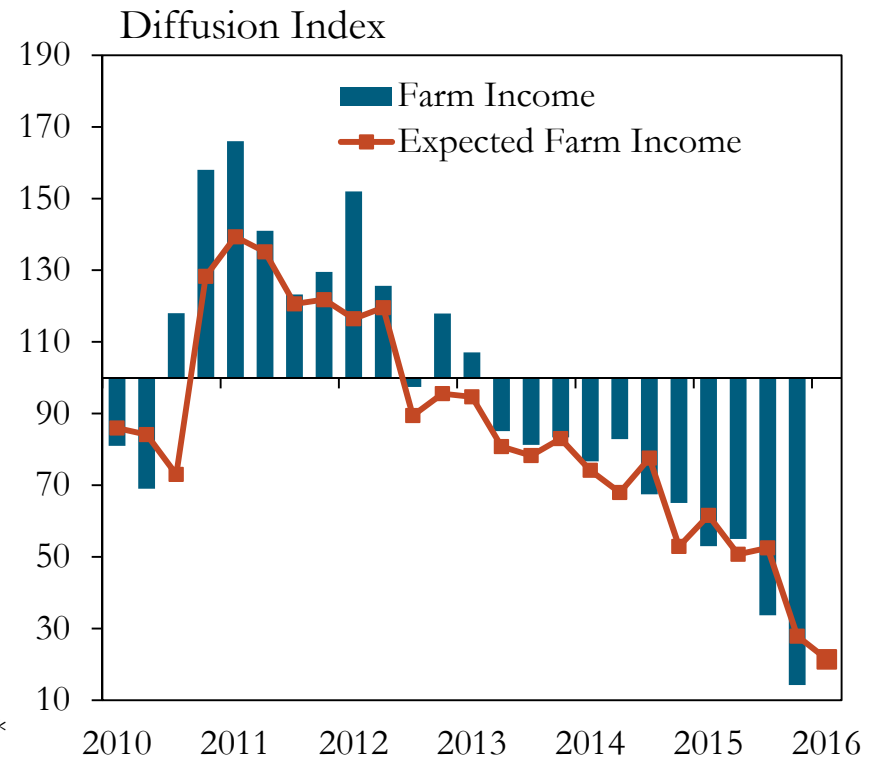
U.S. Real Net Farm Income



Sources: USDA and Federal Reserve Bank of Kansas City.

* Forecast for 2016.

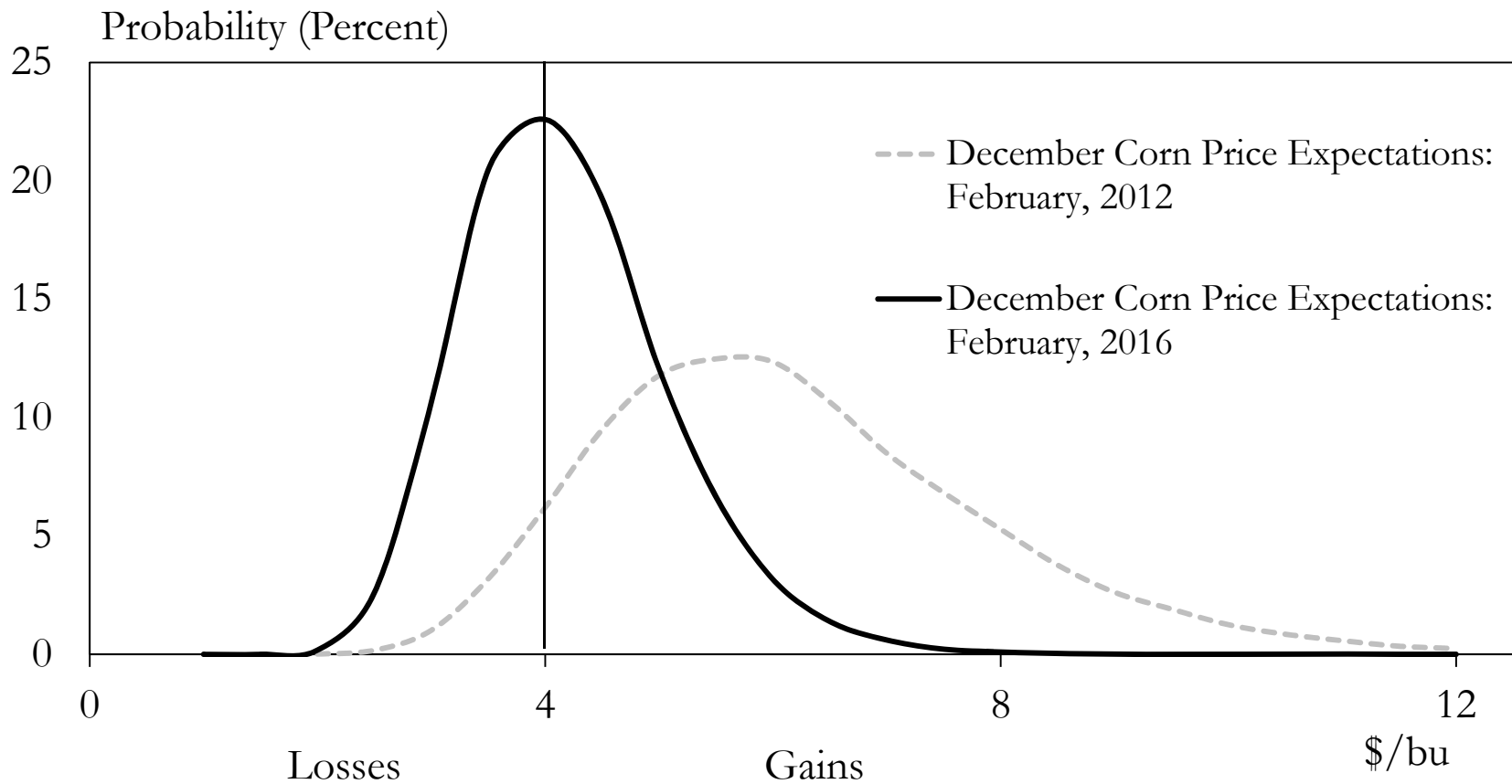
Tenth District Farm Income



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Expected crop prices have shifted dramatically in recent years.



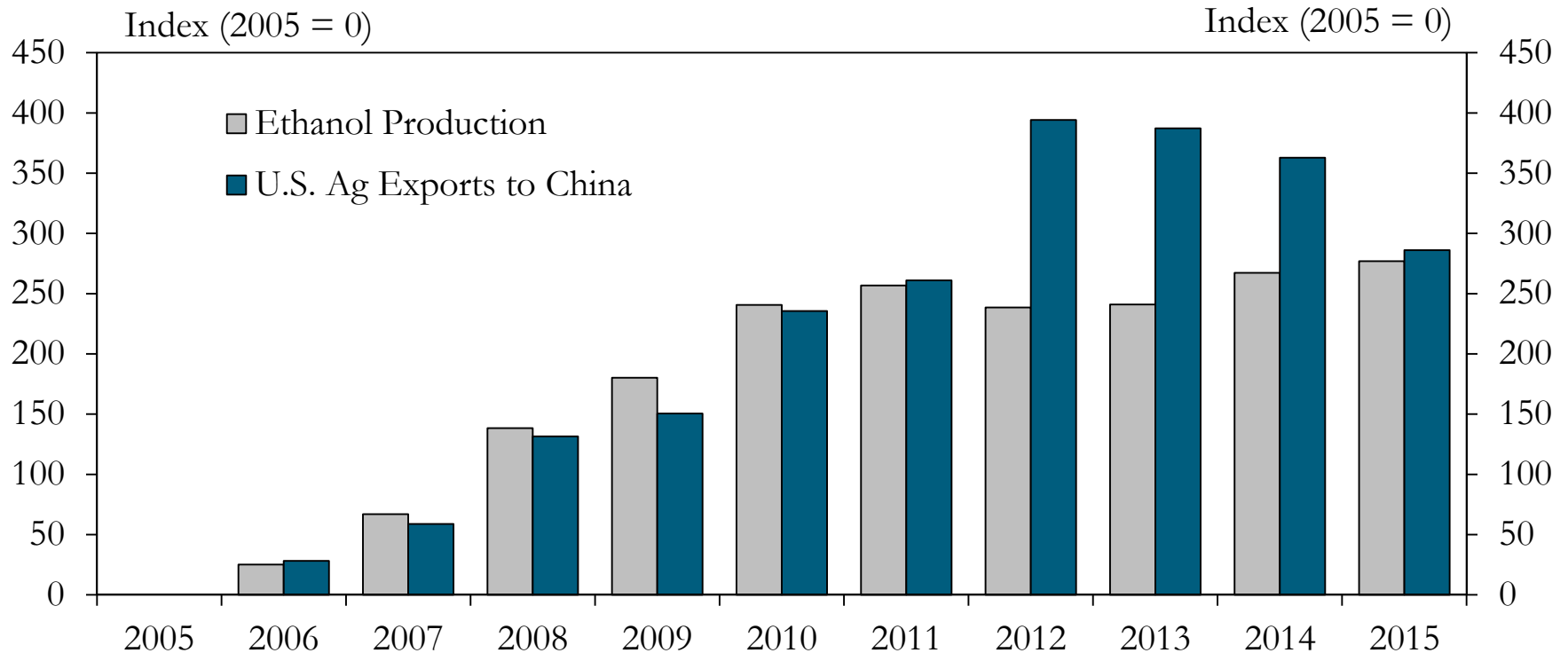
Source: Calculations based on data from barchart.com

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Increased production has driven crop prices lower, but demand strength will be a key long-term driver.

U.S. Ethanol Production and Ag Exports to China



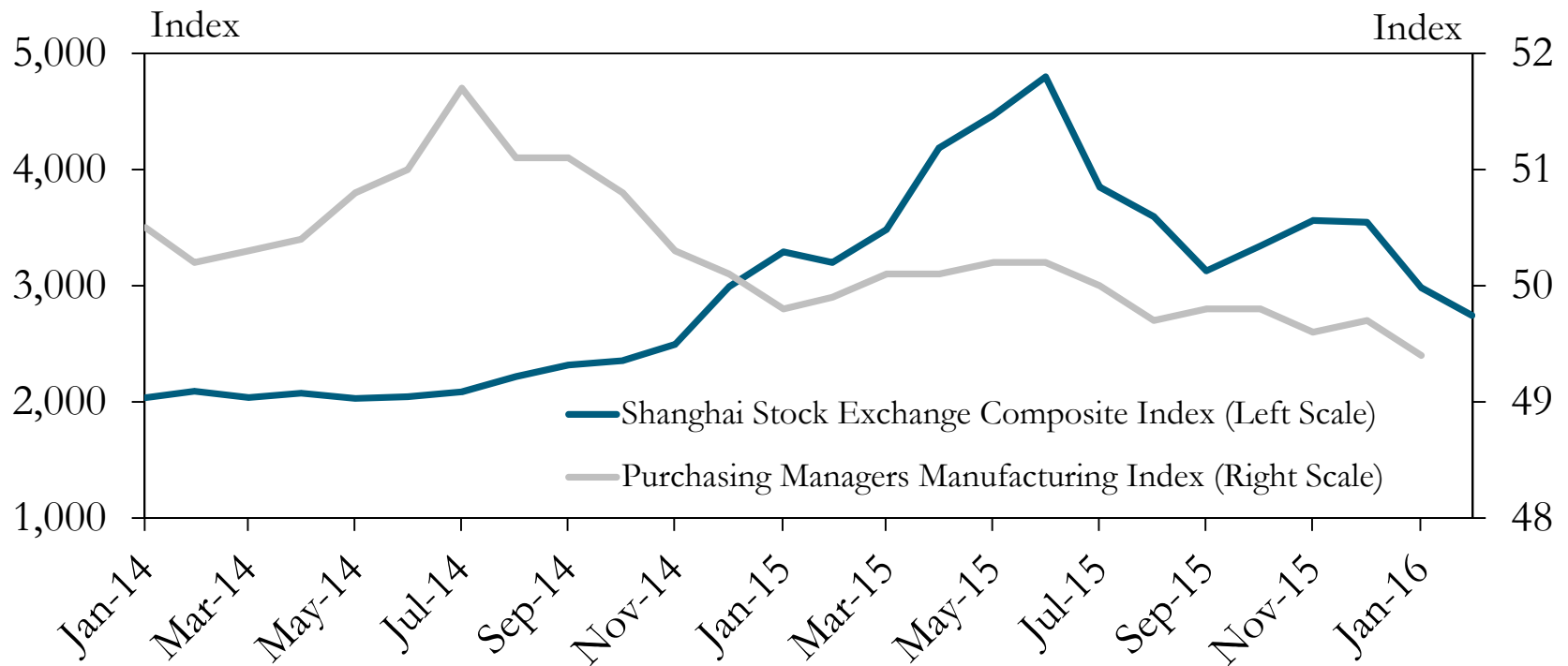
Sources: USDA, Energy Information Administration and Renewable Fuels Association

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Recent developments in China have accentuated concerns surrounding future demand.

China Stock and Manufacturing Indexes



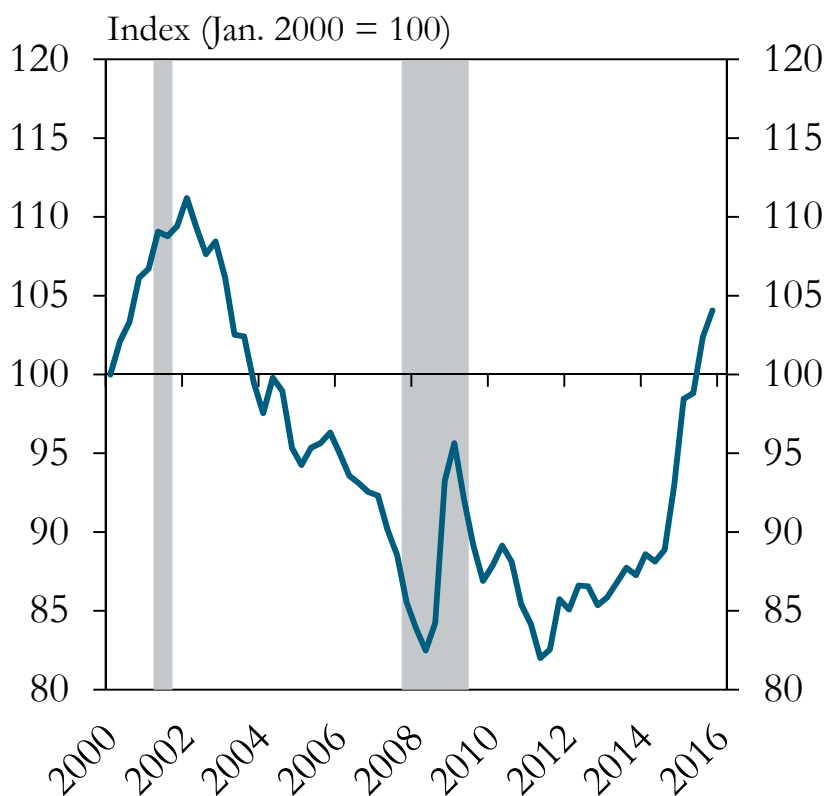
Source: Yahoo! Finance

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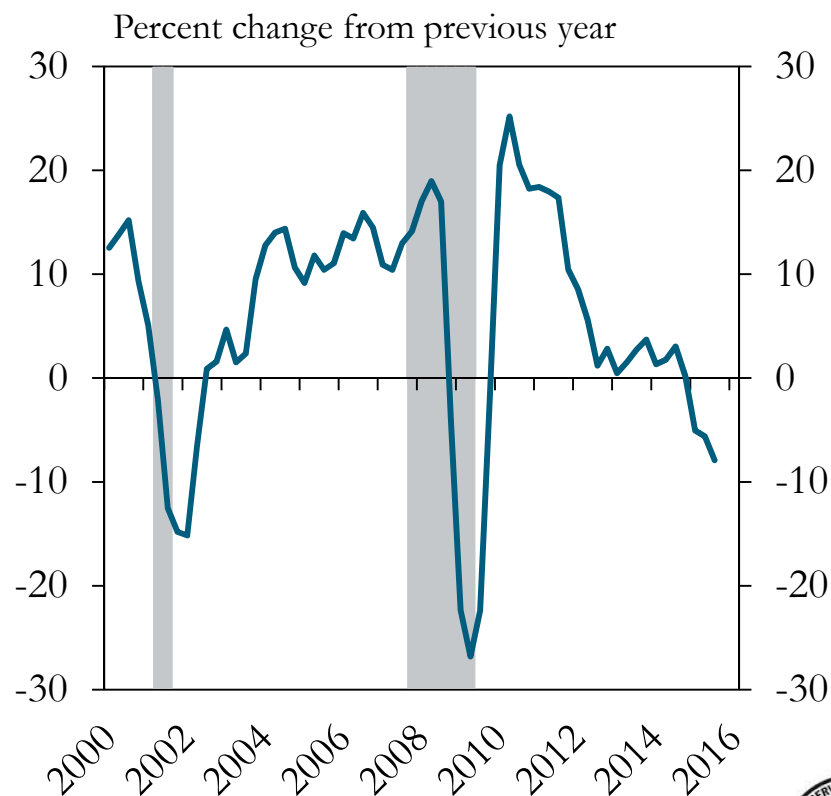


In general, U.S. exports have been weak, driven by further strengthening of the U.S. dollar.

Value of U.S. Dollar*



Value of U.S. Exports

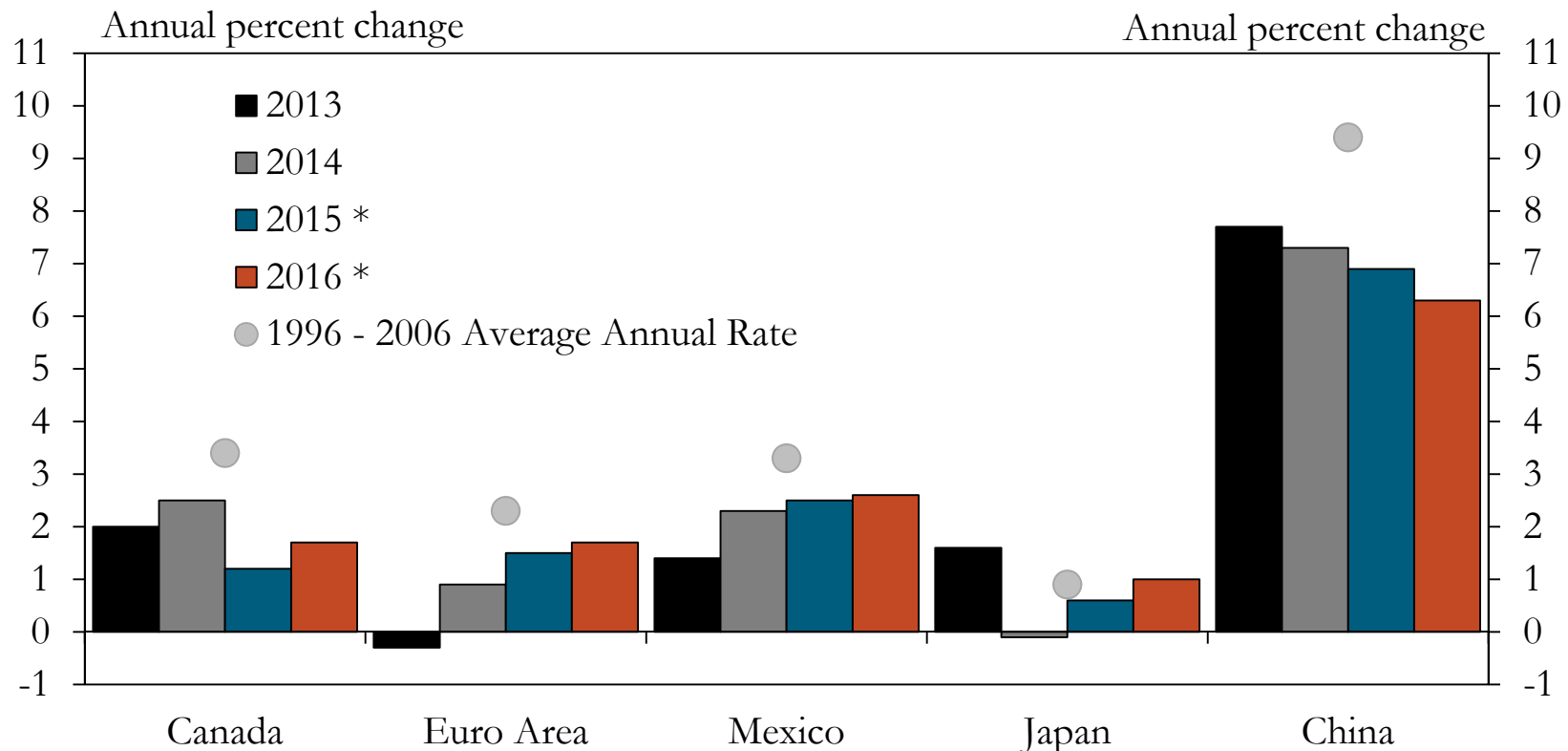


* Nominal Trade-weighted broad index
Source: Federal Reserve Board and Haver Analytics



The stronger dollar reflects relatively weak global economic growth in 2014 and 2015.

Global Real GDP Growth



* Forecast

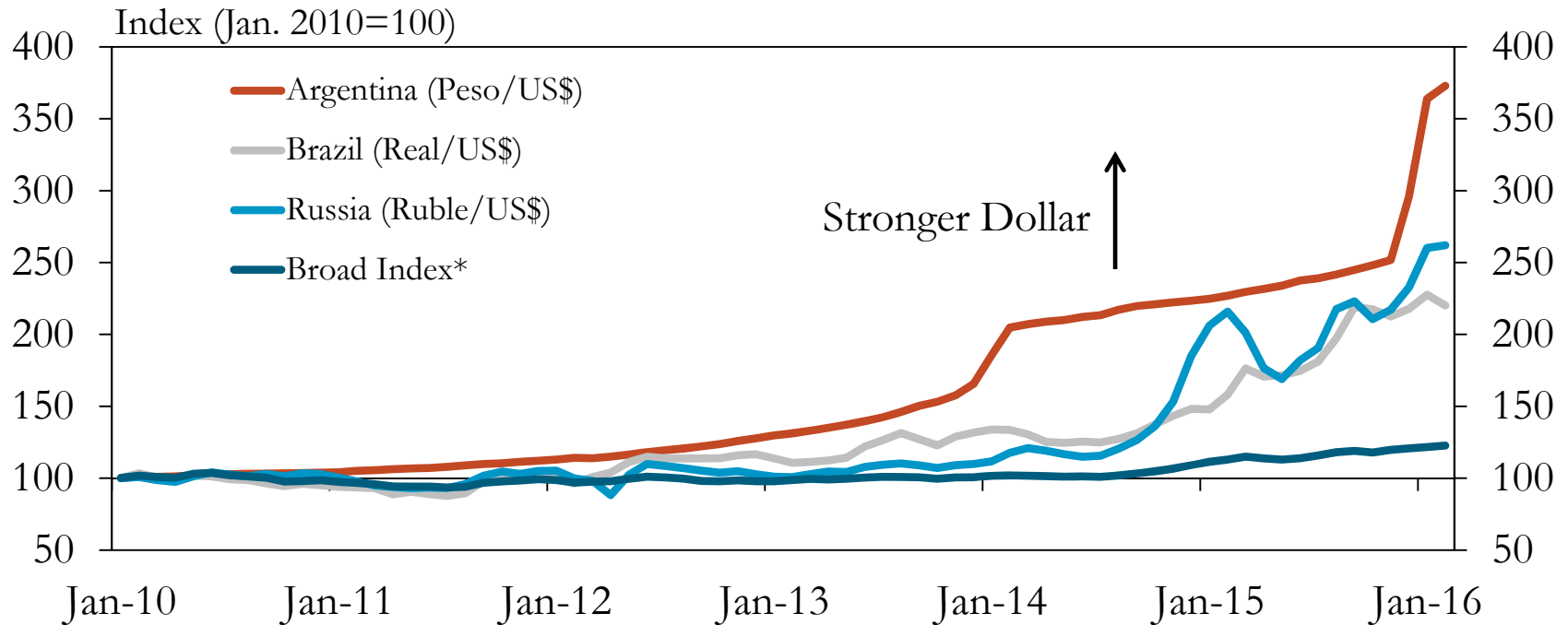
Source: IMF January 2016 Update

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The dollar has surged even more dramatically against key regions competing in global ag export markets.

Currency Exchange Rates



*Nominal broad trade-weighted exchange value of the U.S. dollar
Sources: FRB, IMF and Haver Analytics.

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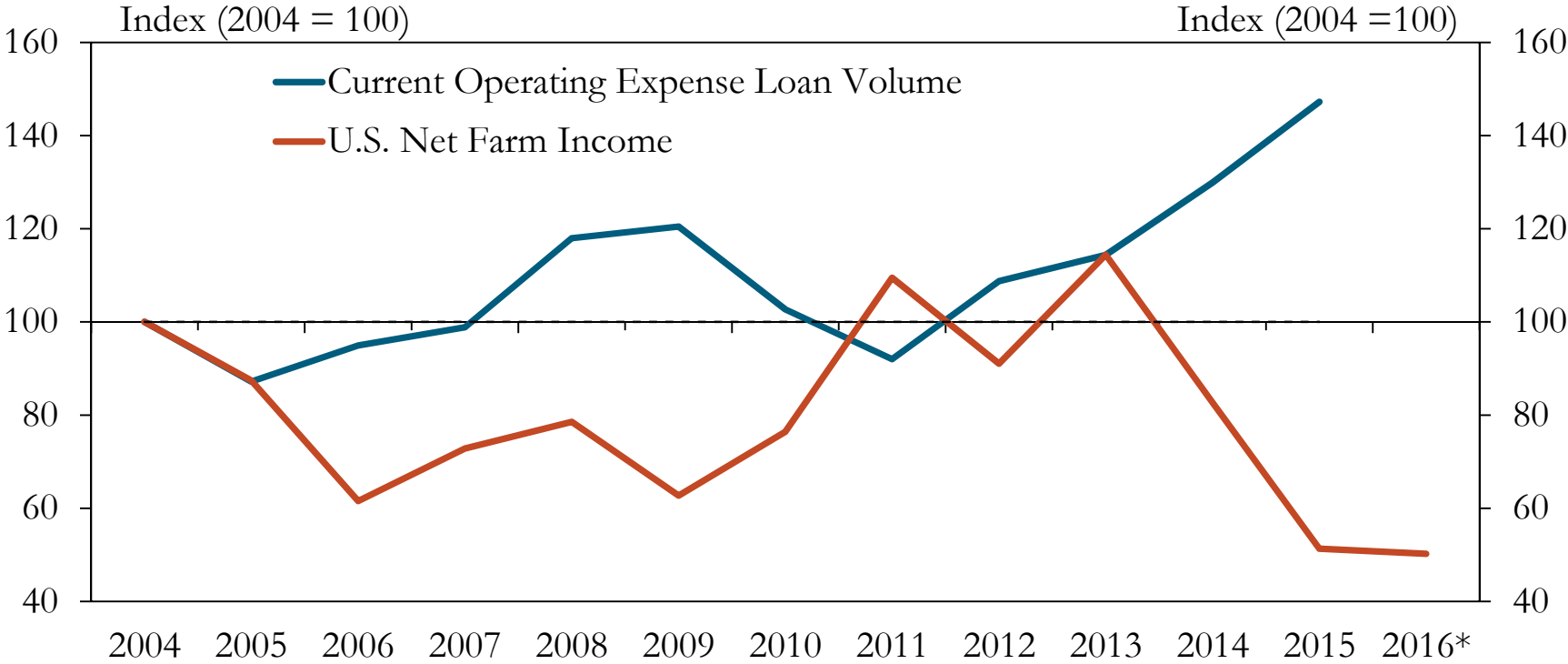


*The downturn in ag is intensifying.
Implications for lending?*



The drop in farm income has reduced cash flow, and increased short-term lending needs.

U.S. Farm Income and Operating Loans



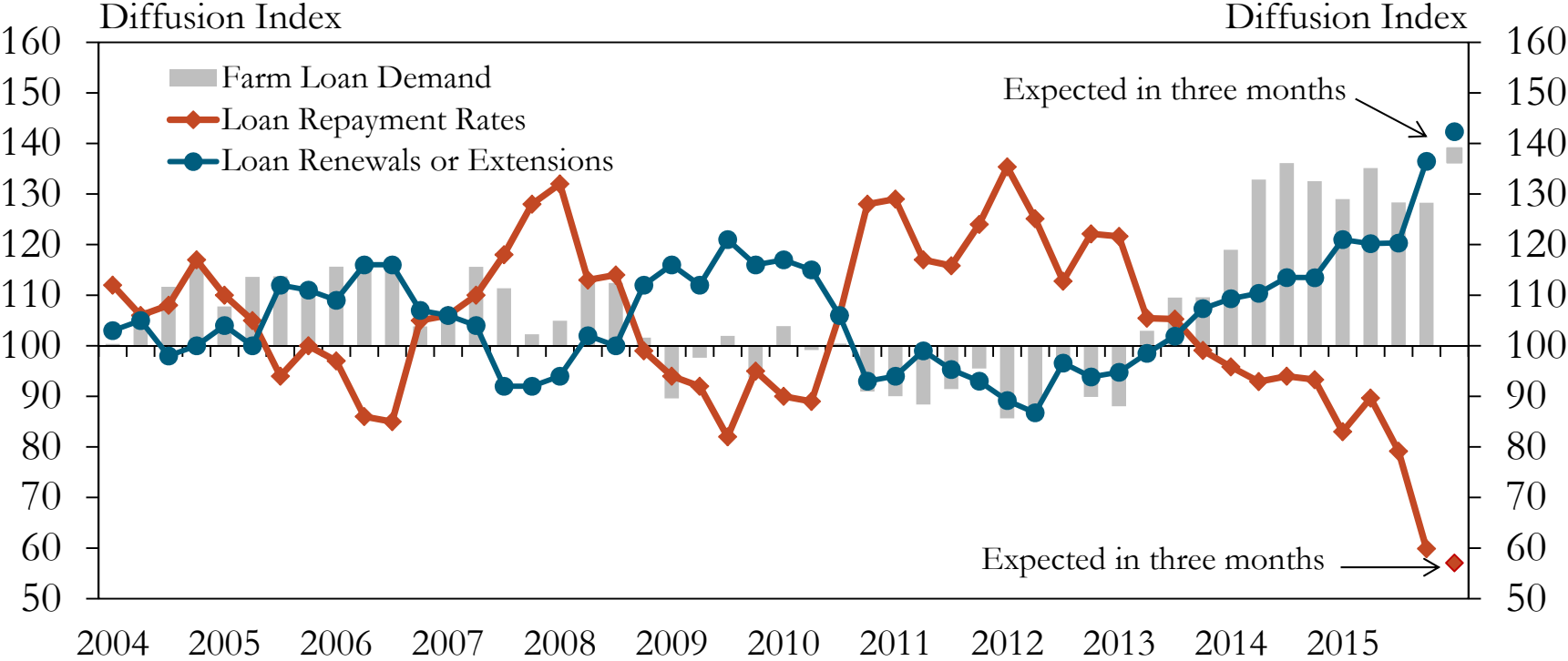
Sources: Agricultural Finance Databook Table A.3 and USDA.



Credit conditions have gradually deteriorated.

Tenth District Credit Conditions

2015, Fourth Quarter

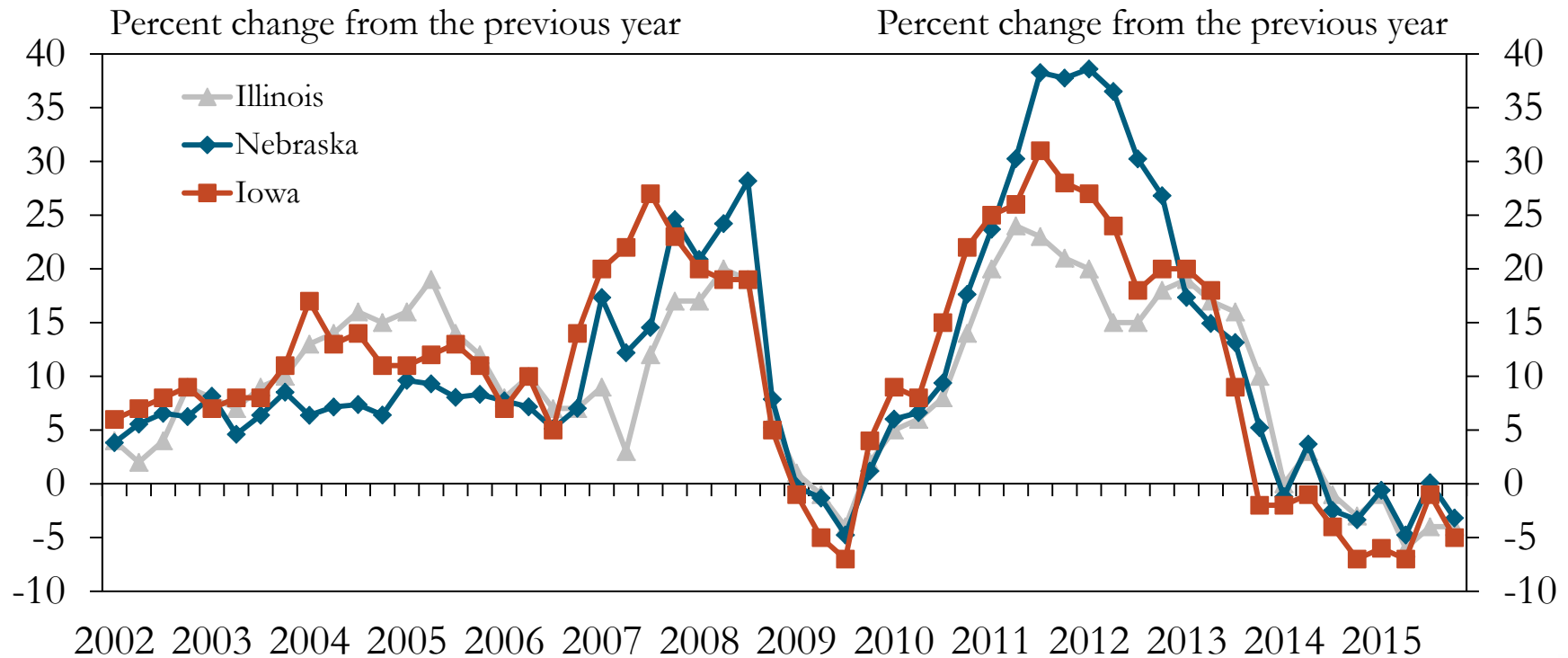


Source: Federal Reserve Bank of Kansas City, Survey of Ag Credit Conditions



Farmland values have also declined,
but only at a modest pace.

Changes in High Quality Farmland Values



Source: Federal Reserve Banks of Kansas City and Chicago.

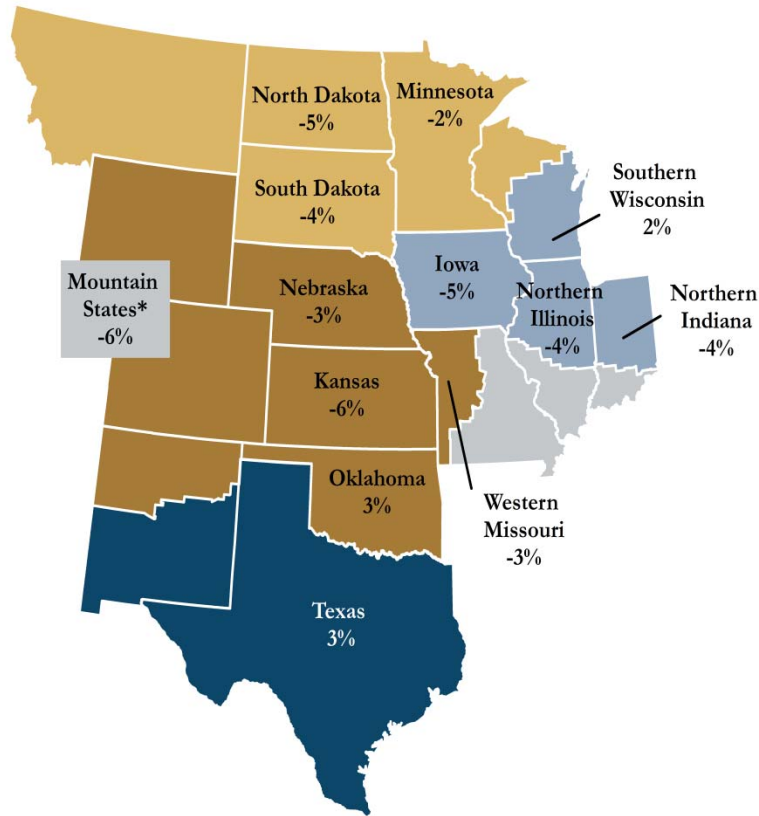
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Despite only modest reductions in average farmland values, the variation has increased dramatically.

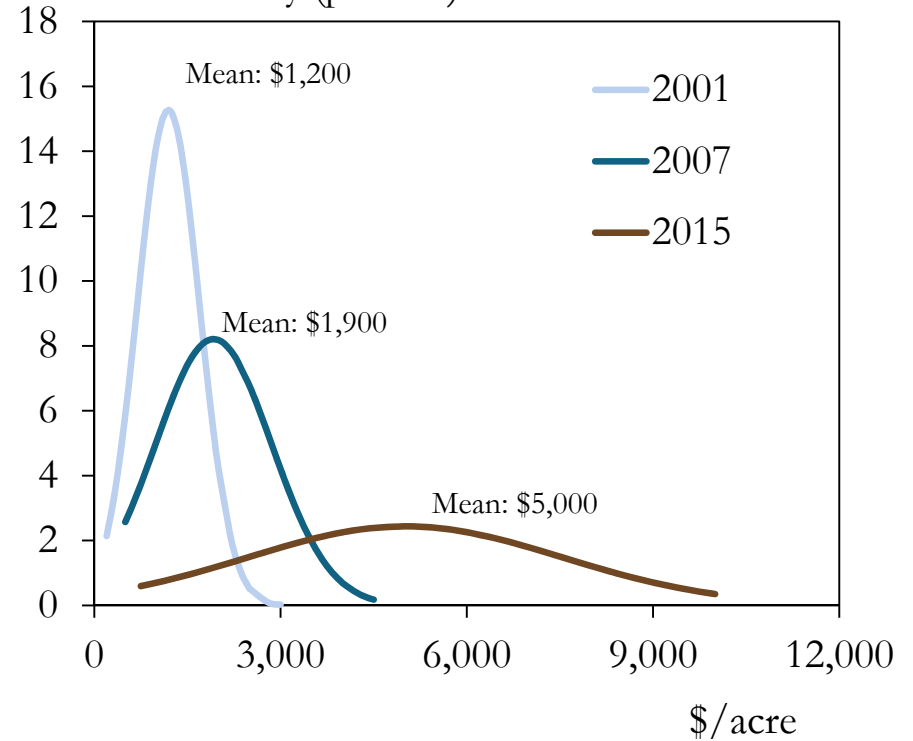
Value of Non-irrigated Cropland, Fourth Quarter 2015

Percent change from previous year



Distribution of Tenth District Irrigated Farmland Values

Probability (percent)



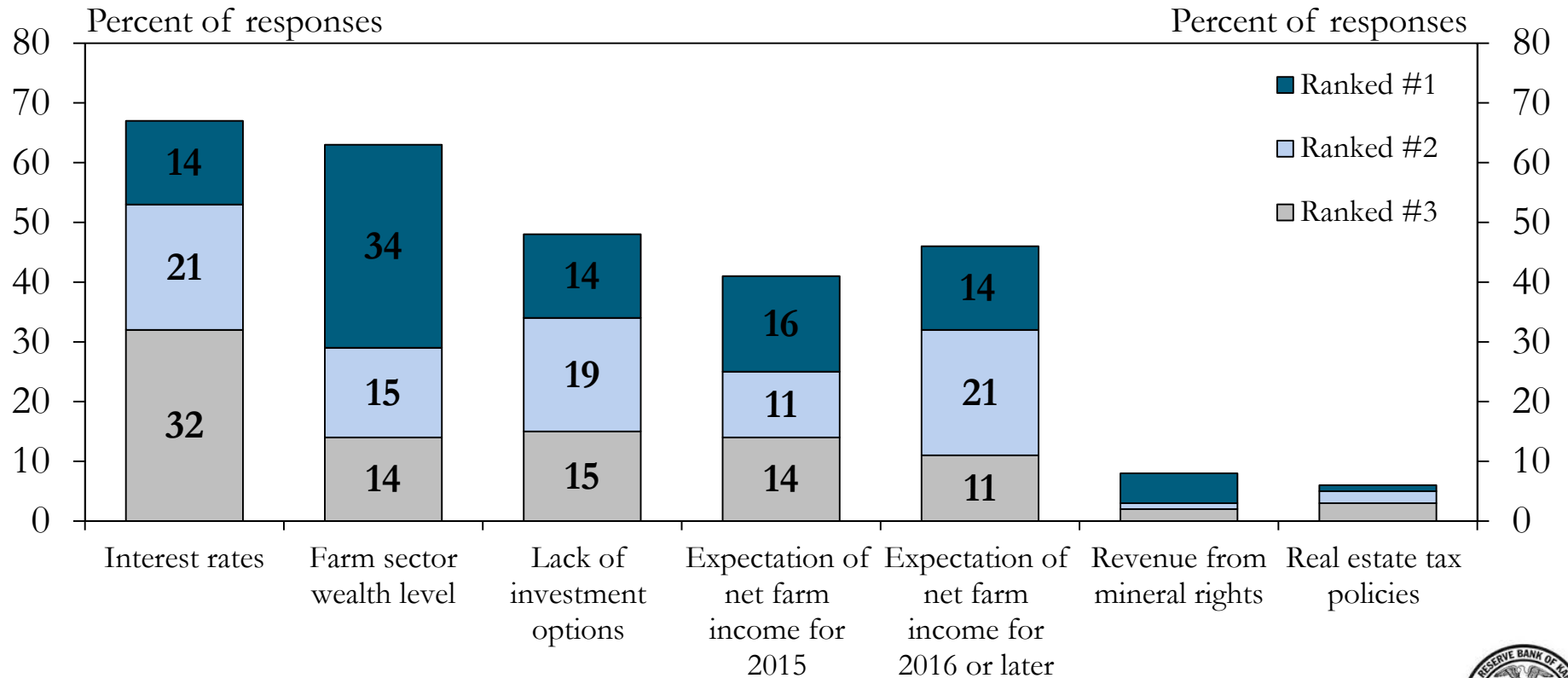
Source: Federal Reserve Bank of Kansas City

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Bankers have noted several key factors that have shaped the path of farmland values.

Factors Contributing to Farmland Values, 2015



Source: Federal Reserve Bank of Kansas City

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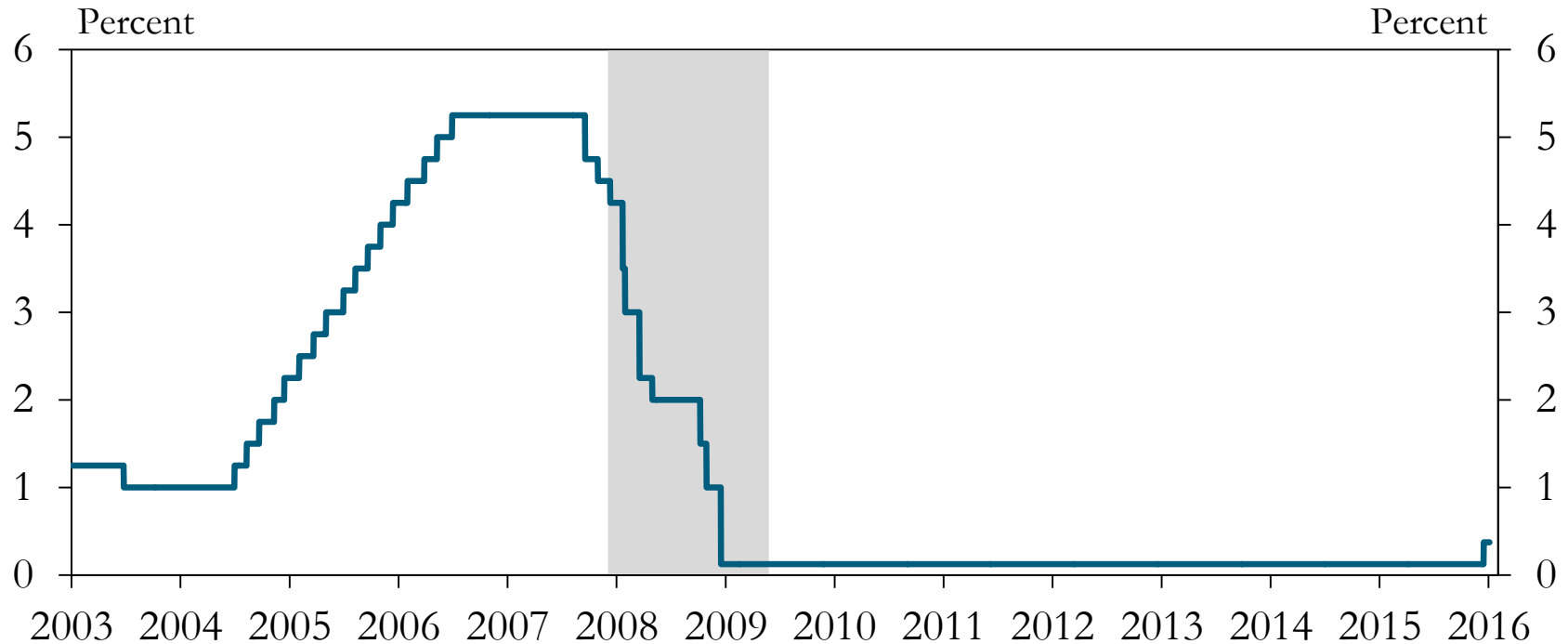


How might a changing interest rate environment affect the ag economy?



The Fed raised the Fed Funds target rate by 25 bp in December.

Federal Funds Target Rate



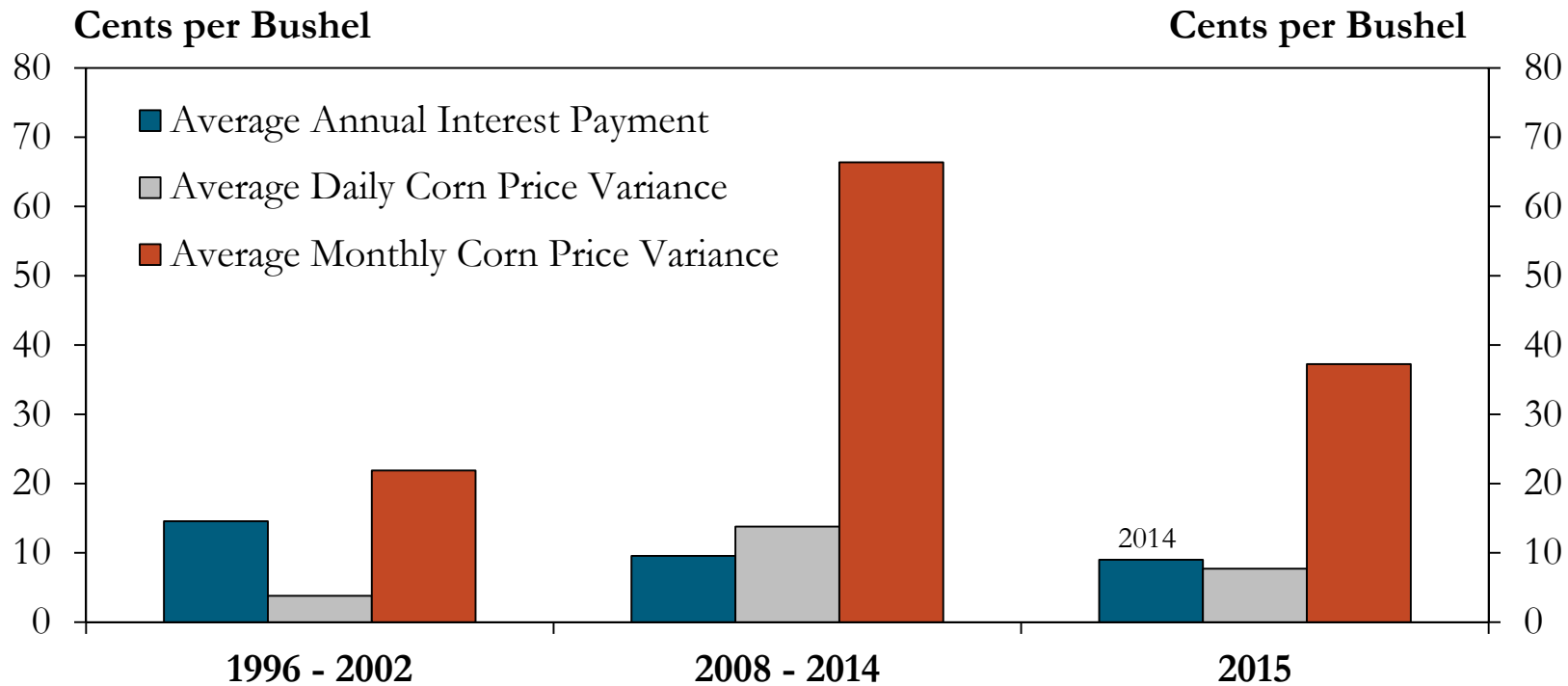
Sources: Federal Reserve Board and Haver Analytics

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Interest expenses, however, are small when compared to fluctuations in commodity prices.

U.S. Corn Producers: Interest Costs and Price Fluctuations



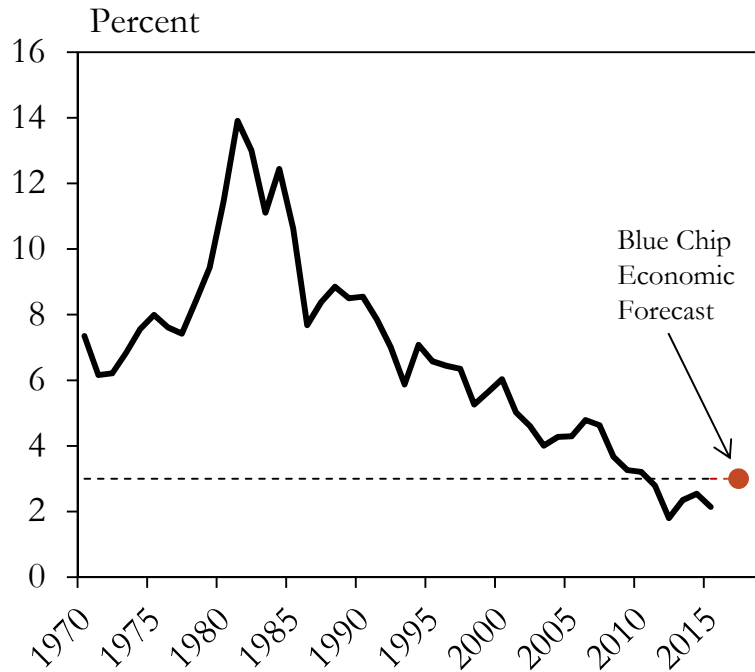
Sources: USDA, barchart.com and author's calculations.

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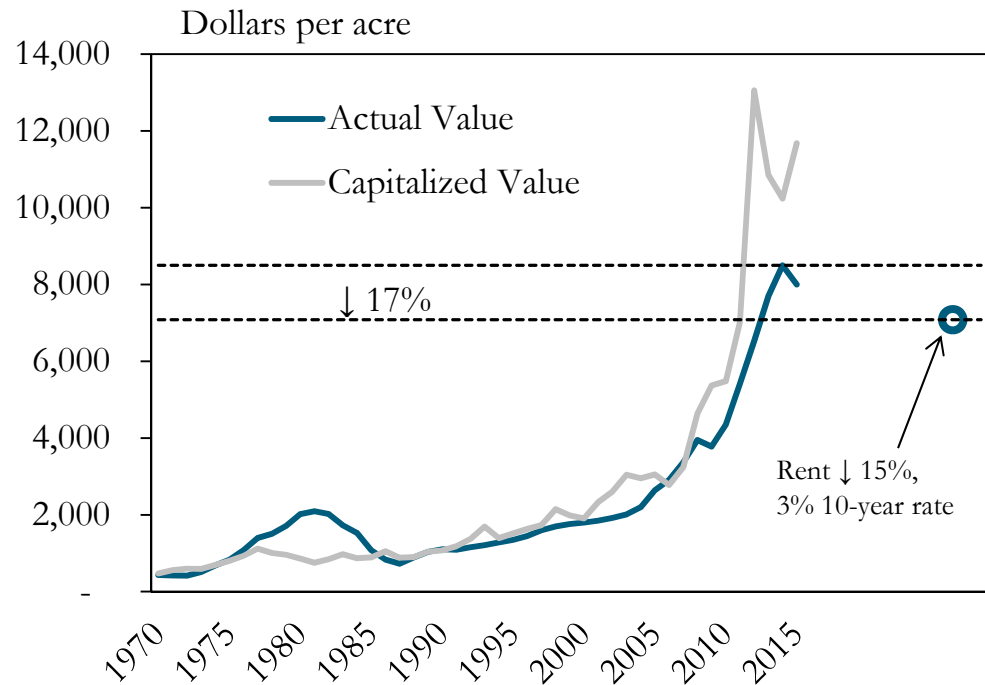


Expectations of future interest rates and cash rents suggest farmland values could decline further.

10-Year Treasury Yields



Iowa Cropland Values



Sources: USDA, Haver Analytics, Blue Chip Economic Forecasts and author's calculations

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Concluding Points

- Farm income has continued to weaken with low commodity prices.
 - Supply-side headwinds: strong U.S. and global production.
 - Demand-side headwinds: ethanol, export markets, and China.
- Effects of the downturn in the farm economy:
 - Tightening credit conditions.
 - Pressure on cash rents and farmland values.
 - Consolidation (opportunities for some).
 - Accelerating decline where rural = ag.



Questions?

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