

# Farm Economy and Outlook for Ag Lending



FEDERAL RESERVE BANK *of* KANSAS CITY

Nathan Kauffman  
Omaha Branch Executive and Economist  
Federal Reserve Bank of Kansas City

February 26, 2016

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

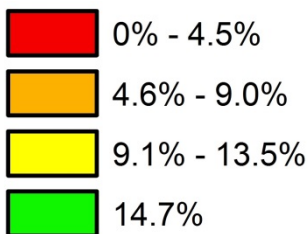
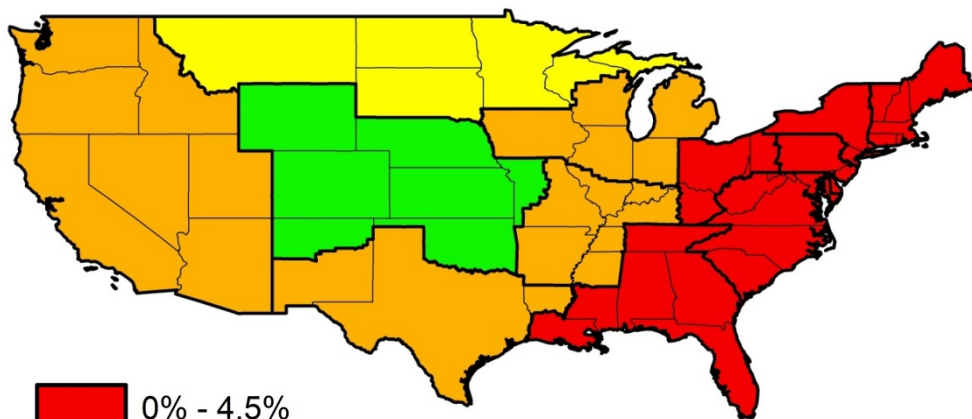
FEDERAL RESERVE BANK *OF* KANSAS CITY



# Of the 12 Fed Districts, the 10<sup>th</sup> District is the most concentrated in agriculture by some measures.

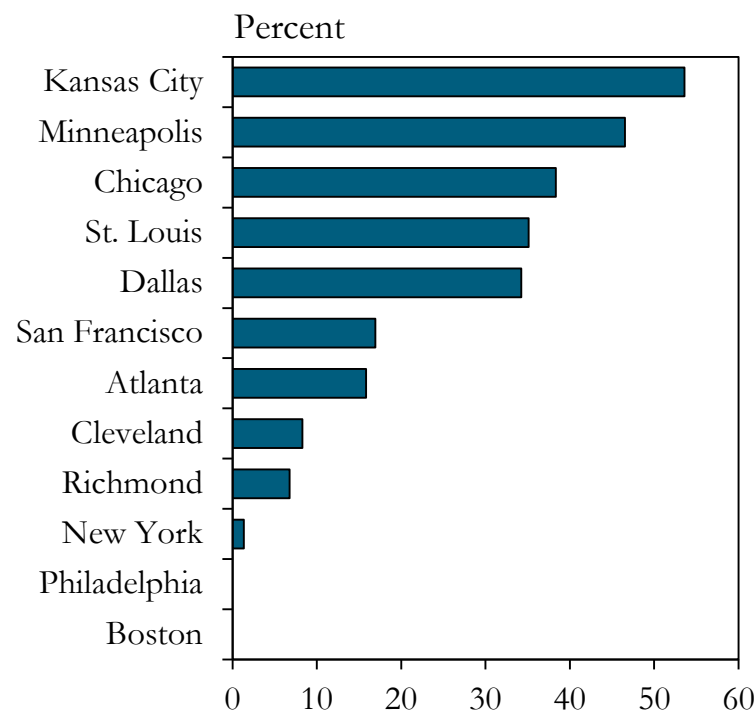
## Average Farm Income as a Share of Total Personal Income

Average Across Counties by Fed District



Source: BEA.

## Proportion of “Farm Dependent” Counties



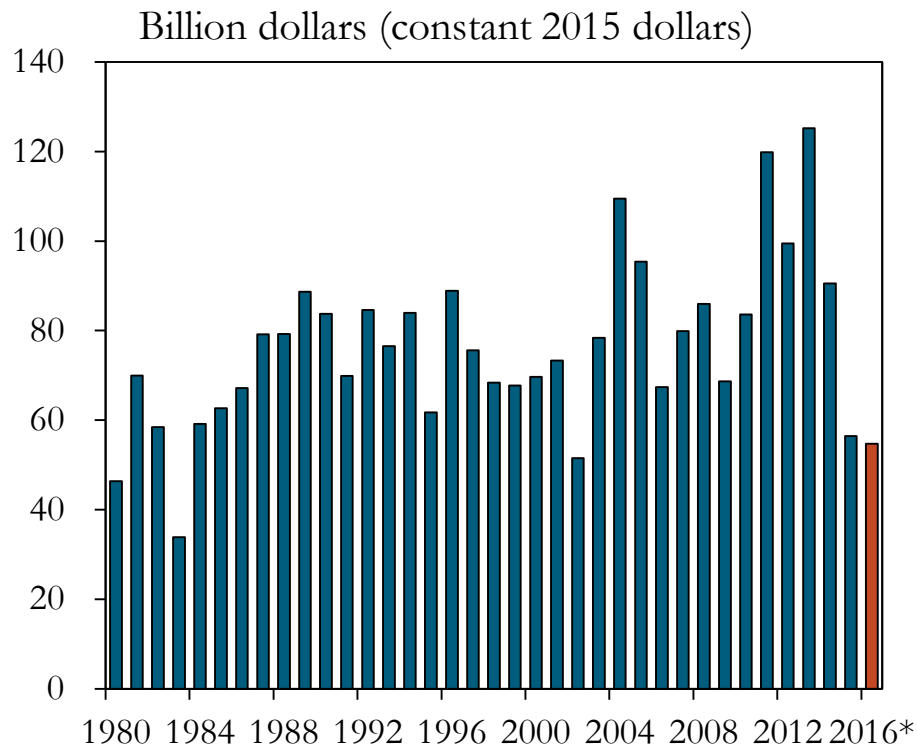
Source: BEA, USDA, and staff calculations

FEDERAL RESERVE BANK OF KANSAS CITY



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

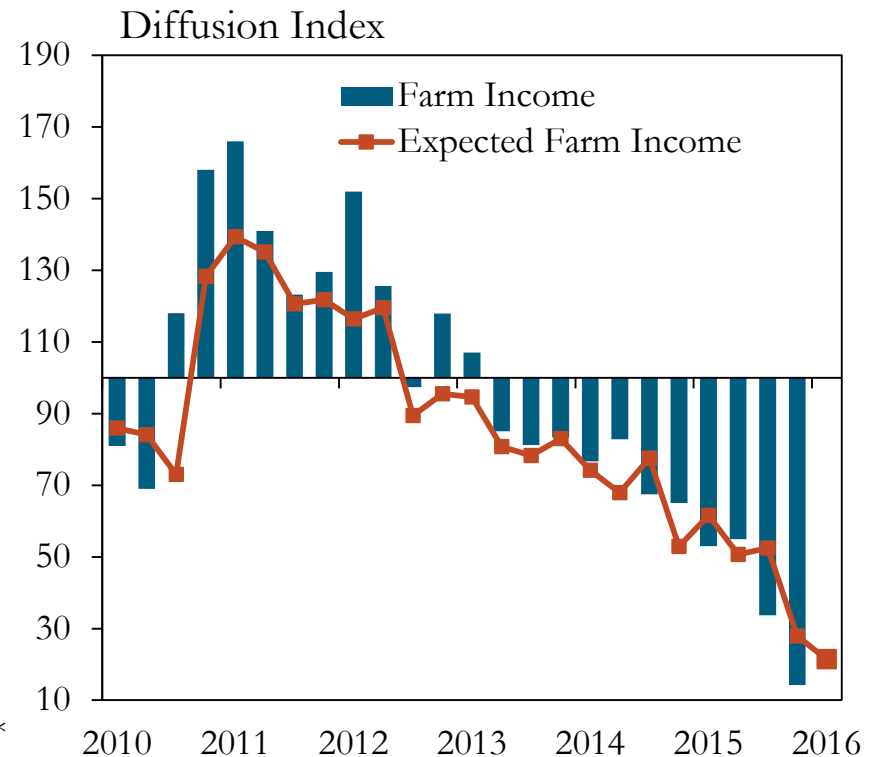
## U.S. Real Net Farm Income



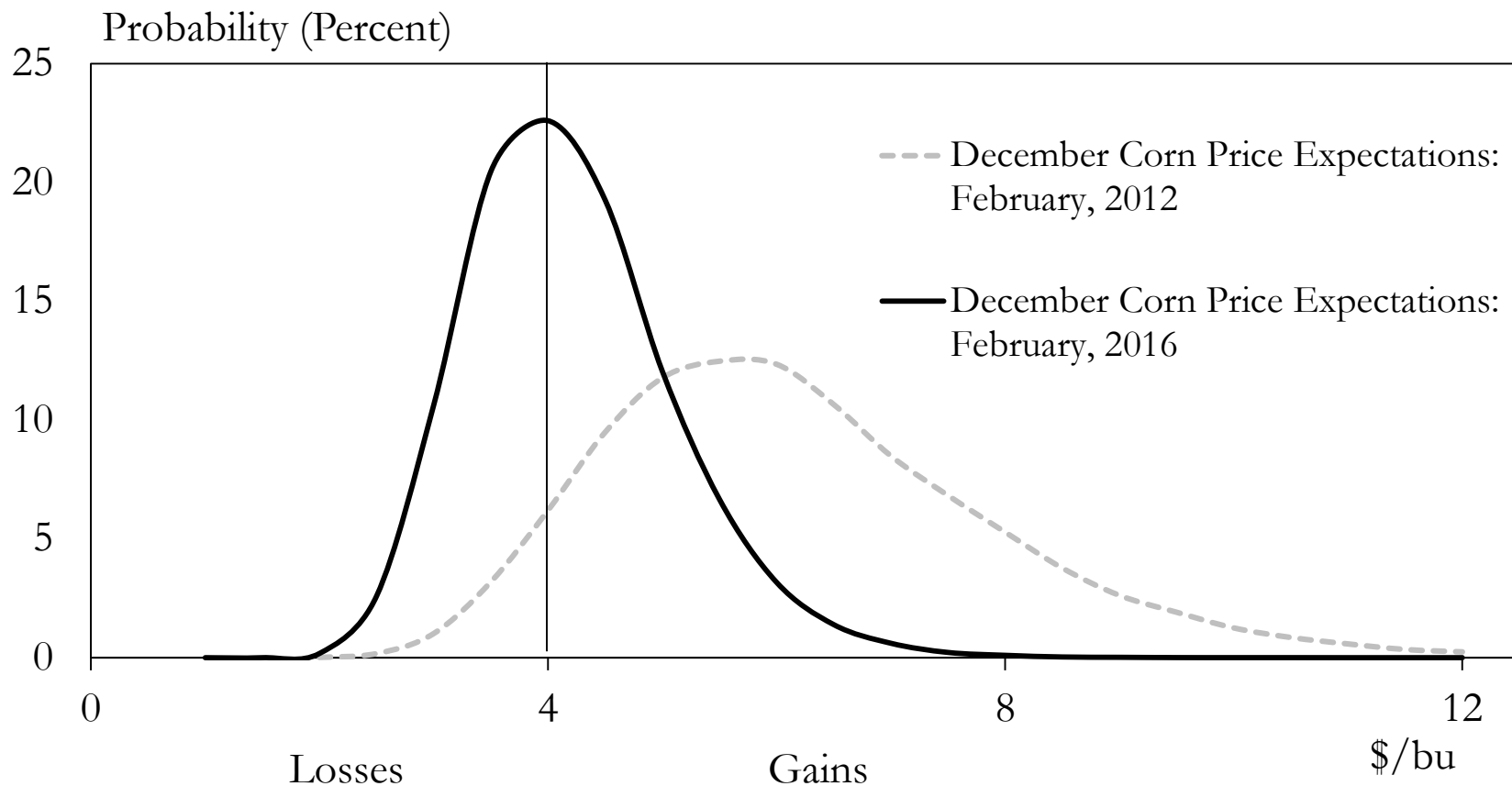
Sources: USDA and Federal Reserve Bank of Kansas City.

\* Forecast for 2016.

## Tenth District Farm Income



# Expected crop prices have shifted dramatically in recent years.



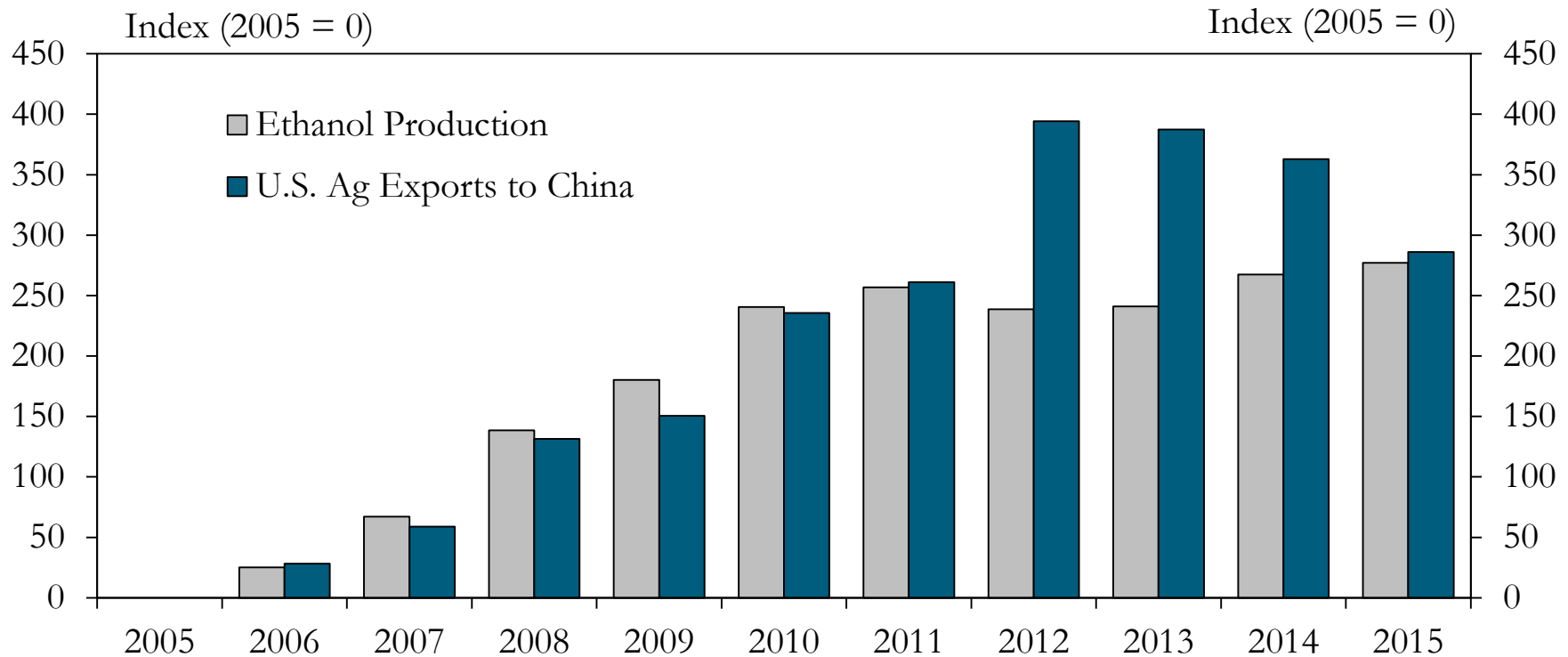
Source: Calculations based on data from barchart.com

FEDERAL RESERVE BANK OF KANSAS CITY



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



Recent developments in China have accentuated concerns surrounding future demand.

## China Stock and Manufacturing Indexes



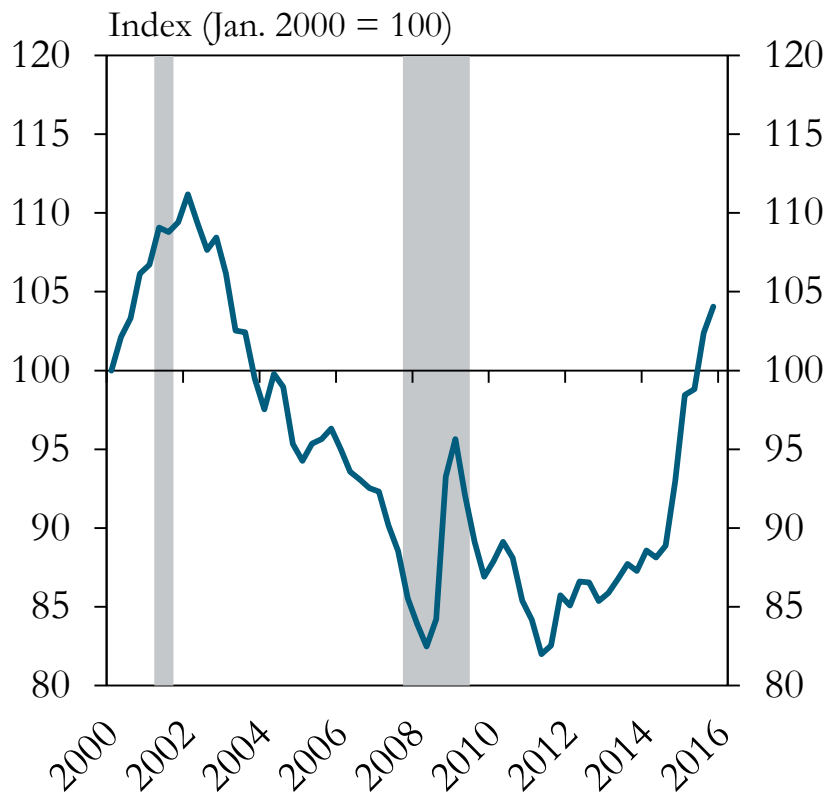
Source: Yahoo! Finance

FEDERAL RESERVE BANK OF KANSAS CITY

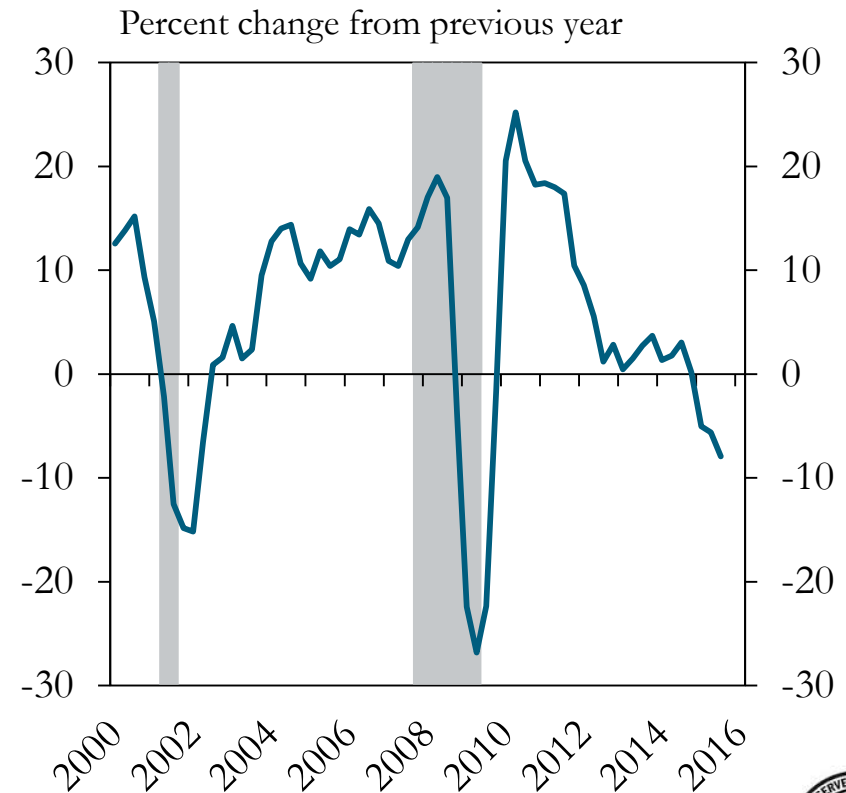


In general, U.S. exports have been weak, driven by further strengthening of the U.S. dollar.

**Value of U.S. Dollar\***



**Value of U.S. Exports**

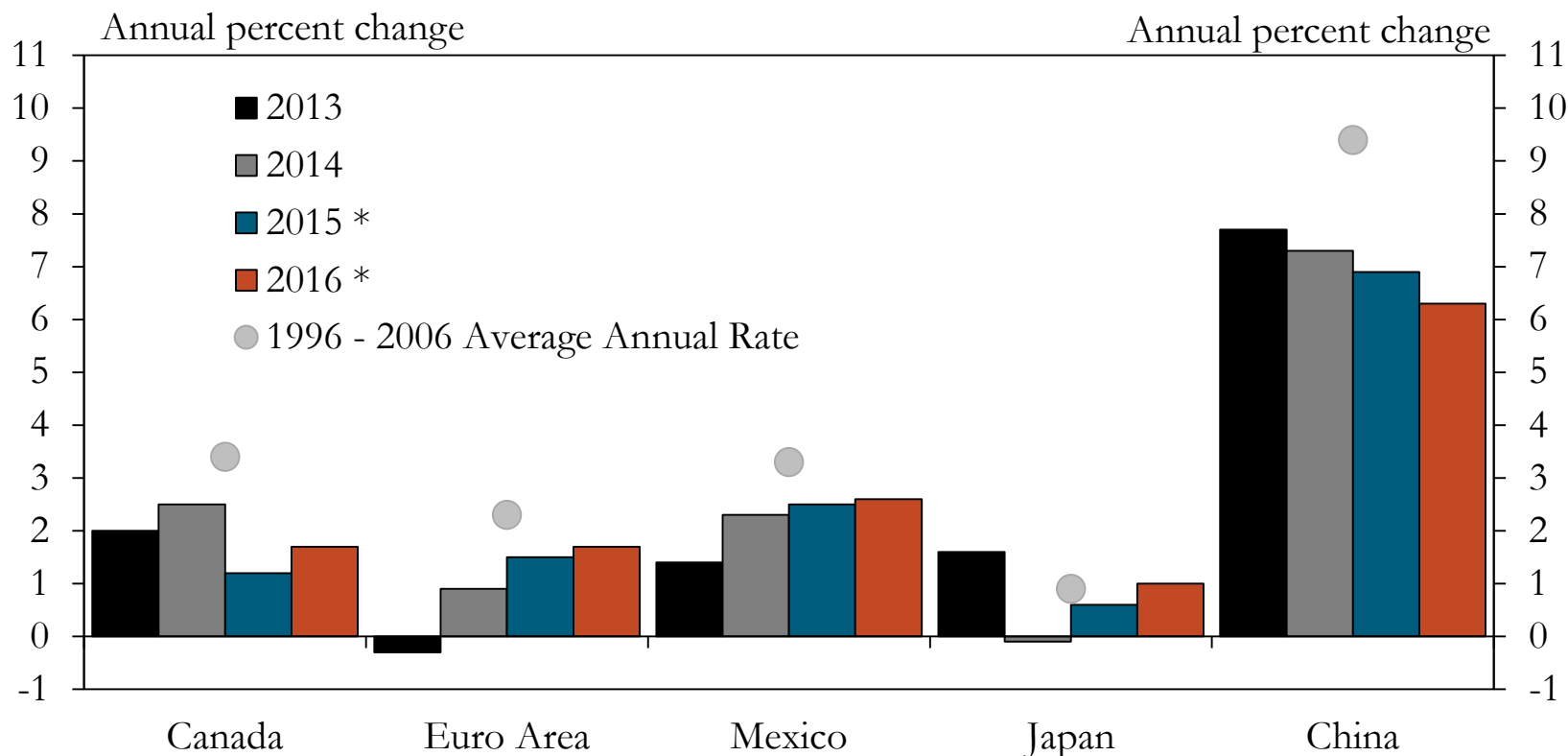


\* Nominal Trade-weighted broad index  
Source: Federal Reserve Board and Haver Analytics



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

## Global Real GDP Growth



\* Forecast

Source: IMF January 2016 Update

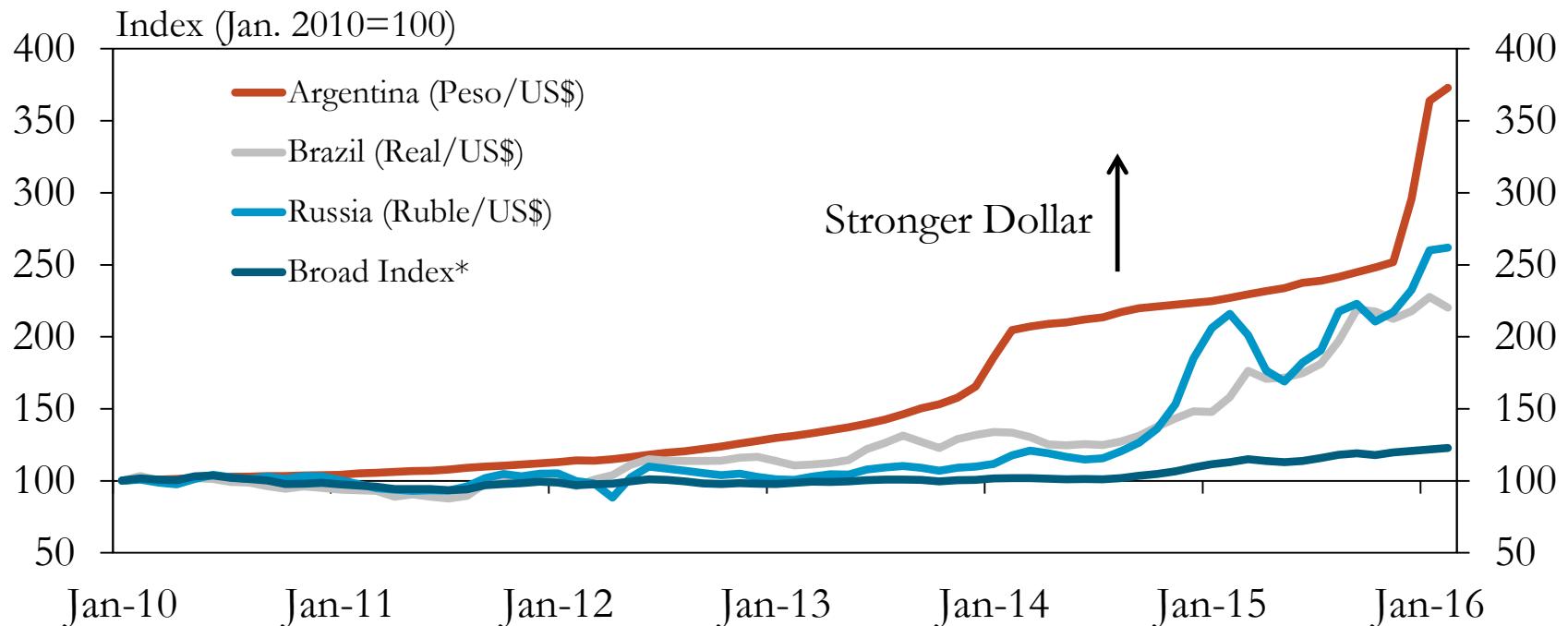
FEDERAL RESERVE BANK OF KANSAS CITY





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.

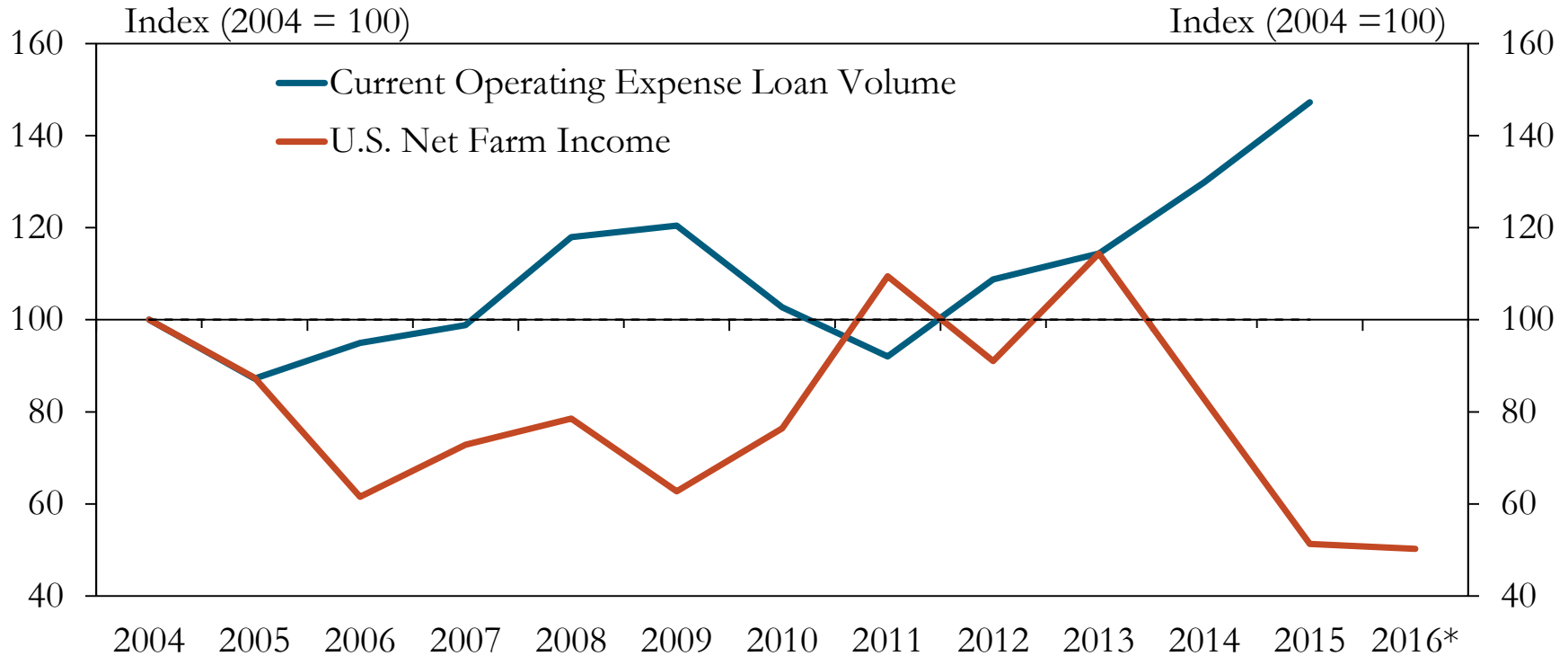


*The downturn in ag is intensifying.  
Implications for lending?*



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

## U.S. Farm Income and Operating Loans



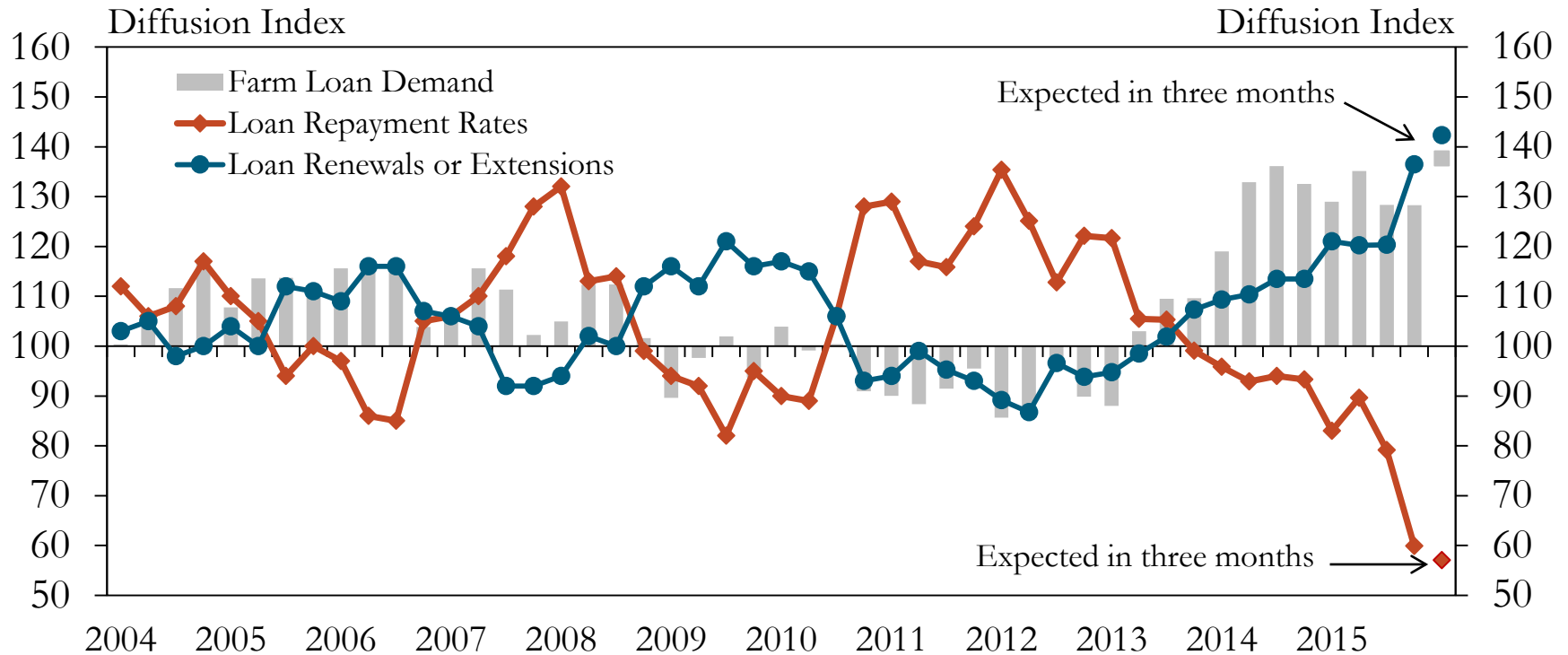
Sources: Agricultural Finance Databook Table A.3 and USDA.

FEDERAL RESERVE BANK OF KANSAS CITY



# Credit conditions have gradually deteriorated.

## Tenth District Credit Conditions 2015, Fourth Quarter



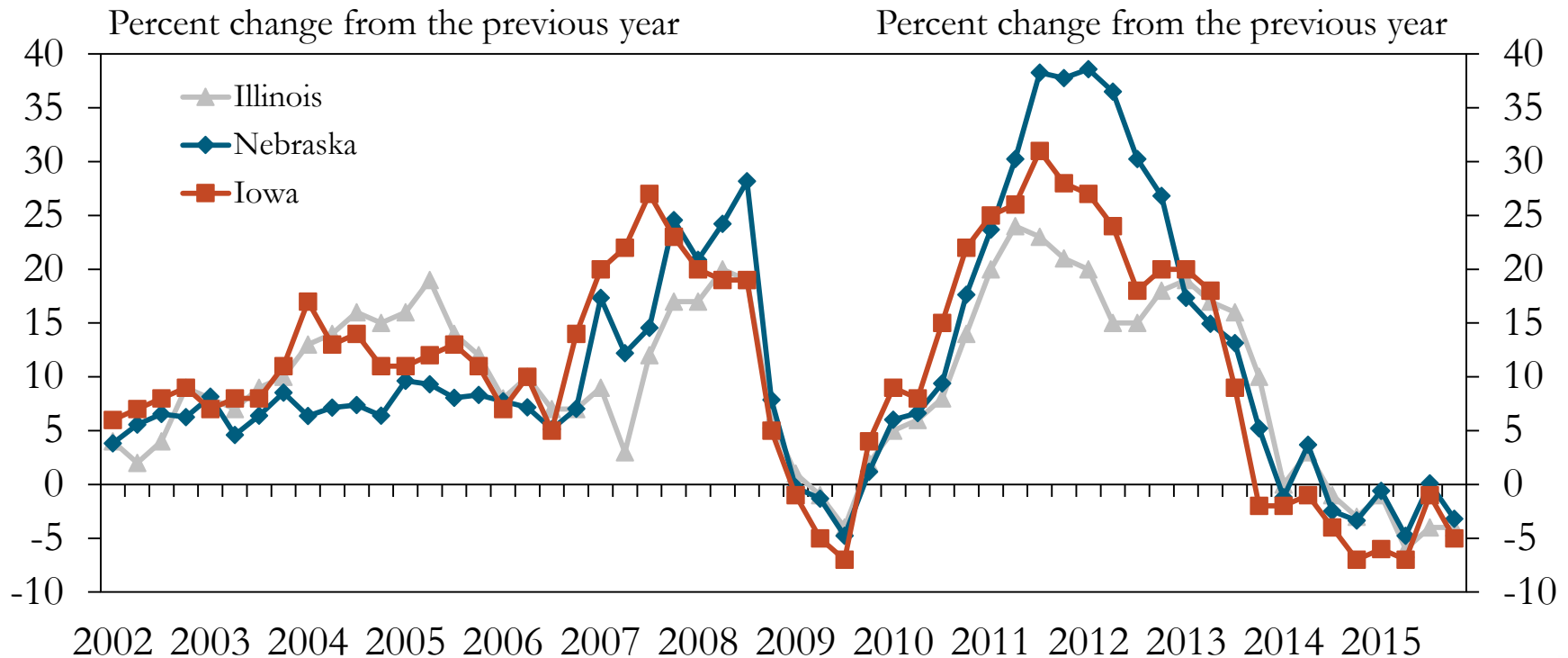
Source: Federal Reserve Bank of Kansas City, Survey of Ag Credit Conditions

FEDERAL RESERVE BANK OF KANSAS CITY



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.

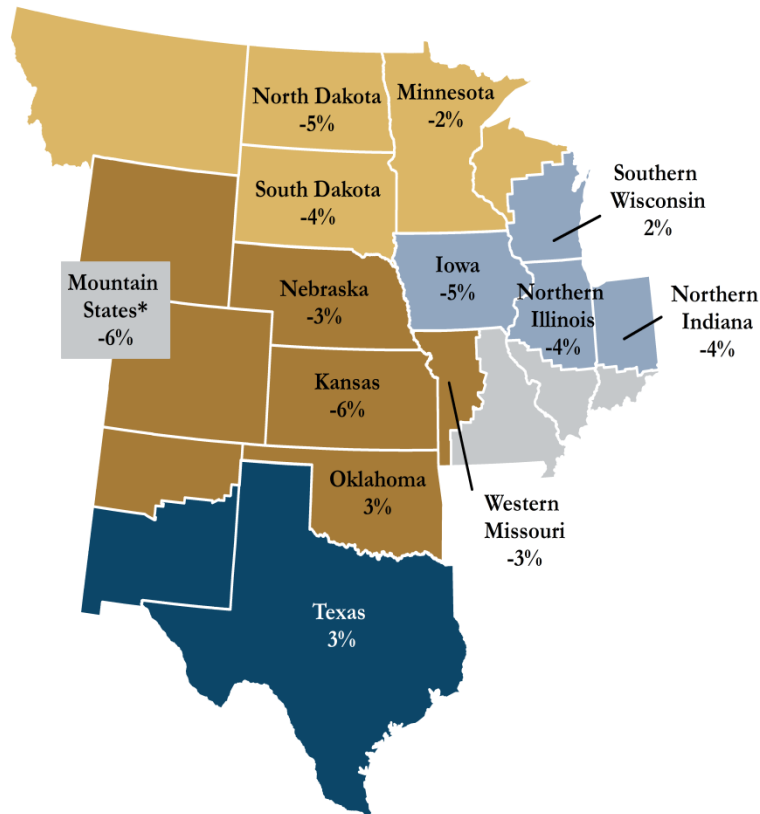
FEDERAL RESERVE BANK OF KANSAS CITY



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

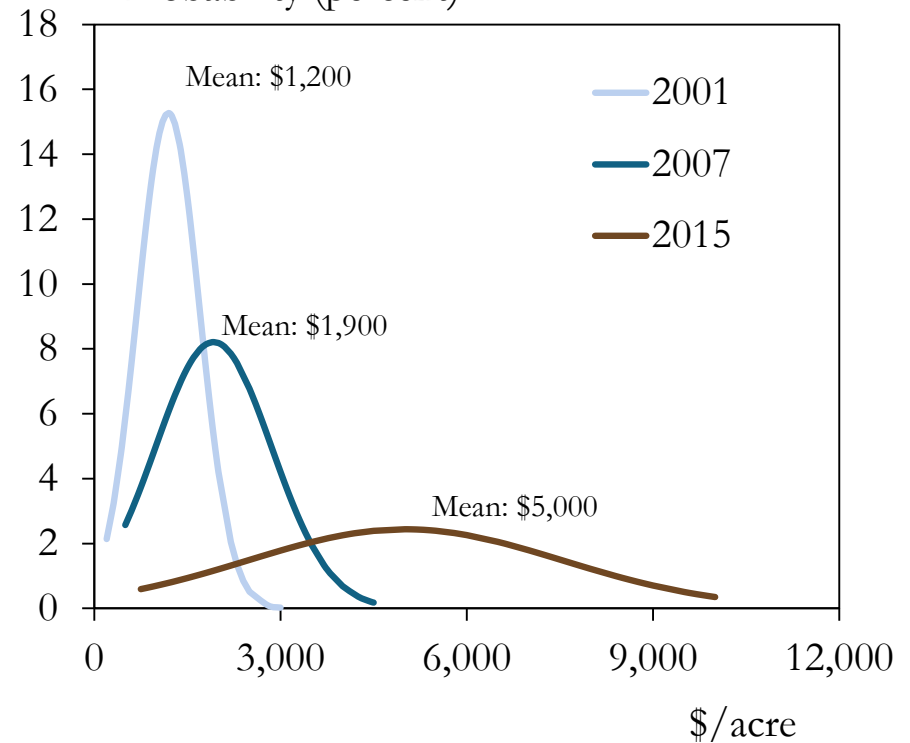
## Value of Non-irrigated Cropland, Fourth Quarter 2015

Percent change from previous year



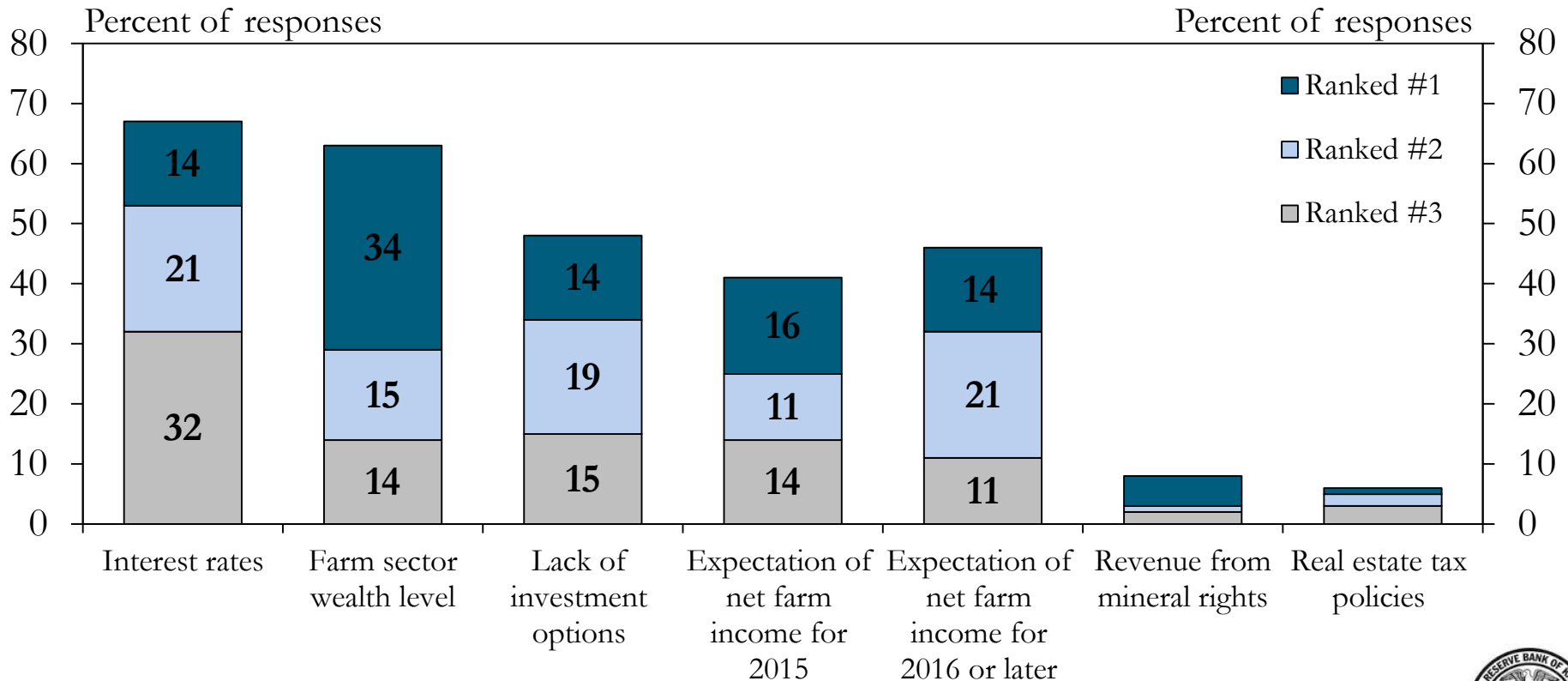
## Distribution of Tenth District Irrigated Farmland Values

Probability (percent)



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

## Factors Contributing to Farmland Values, 2015



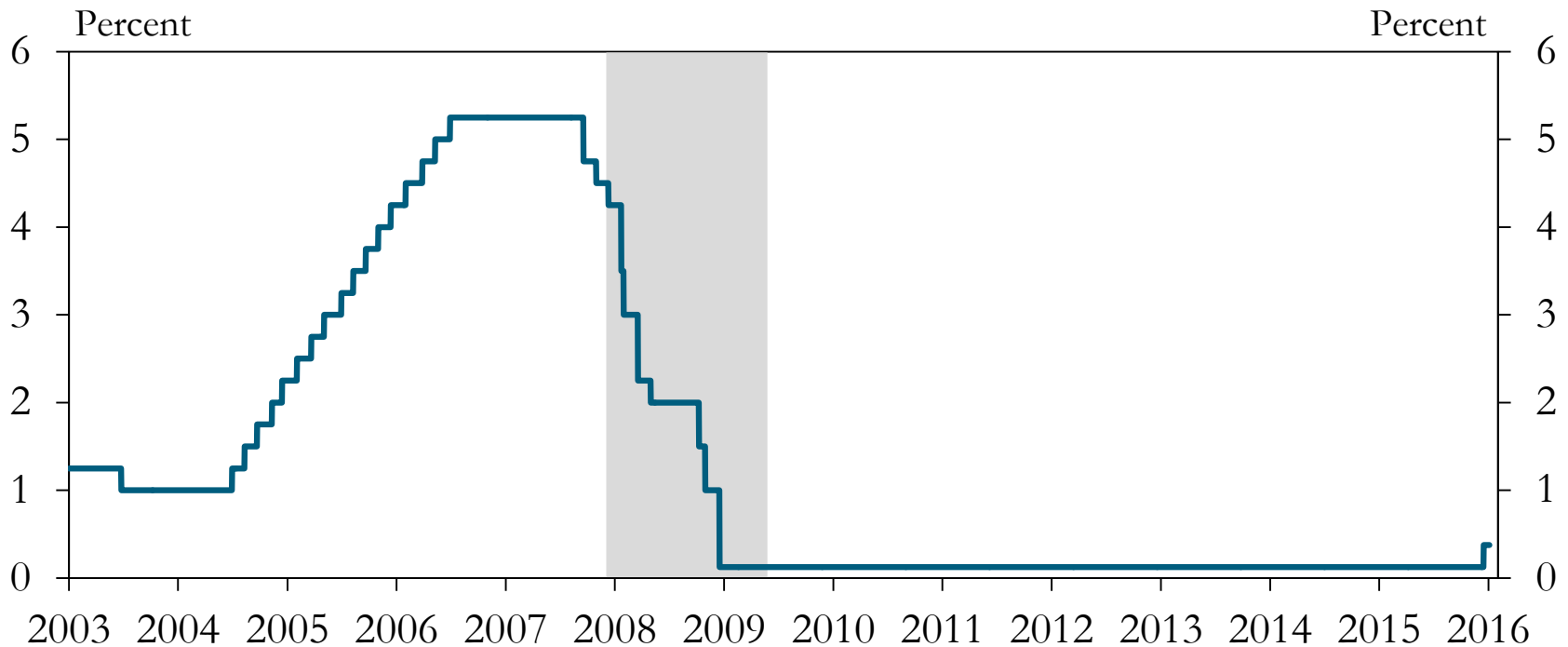
*How might a changing interest rate environment affect the ag economy?*





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

## Federal Funds Target Rate

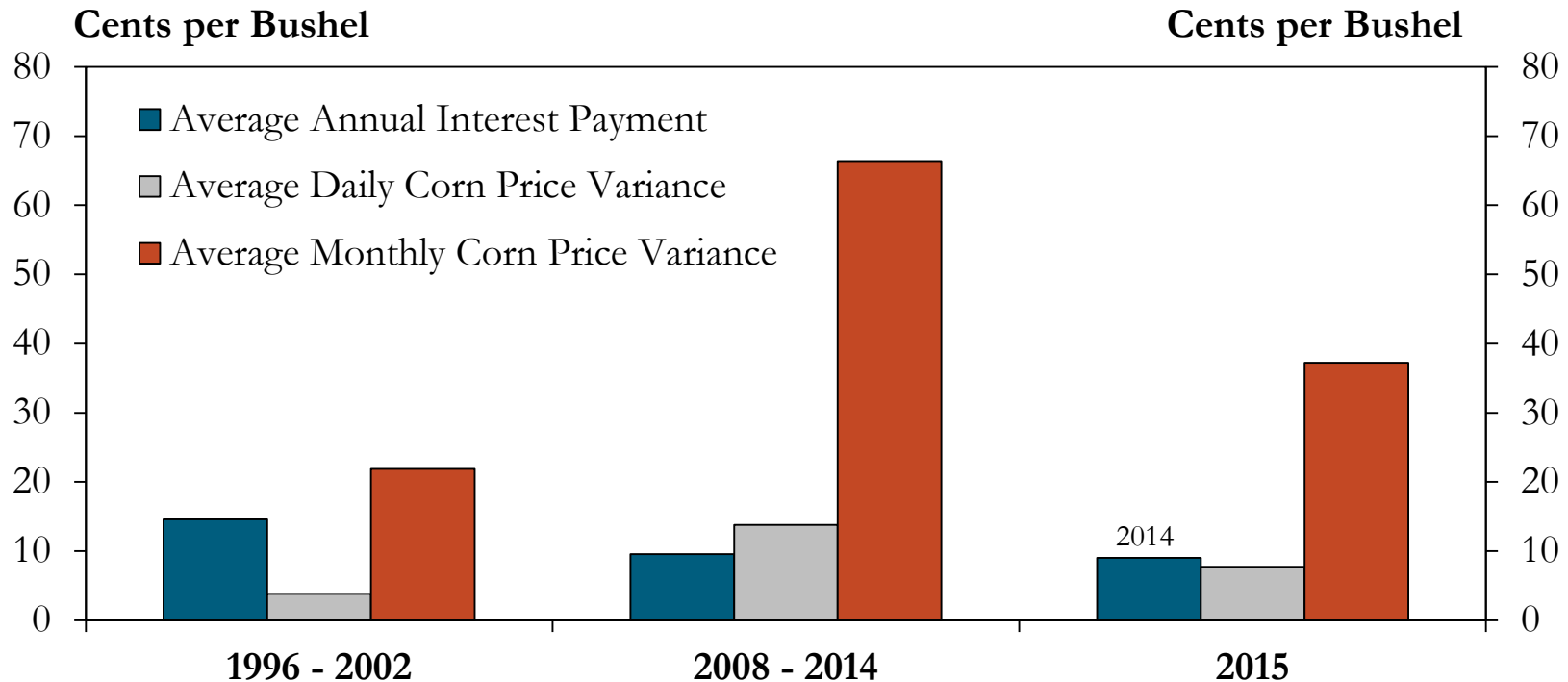


Sources: Federal Reserve Board and Haver Analytics



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

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

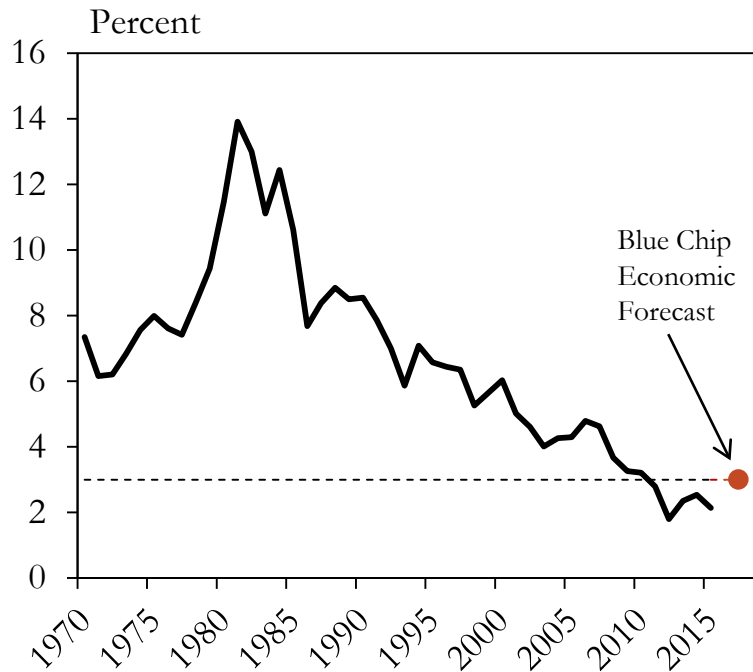


Sources: USDA, barchart.com and author's calculations.

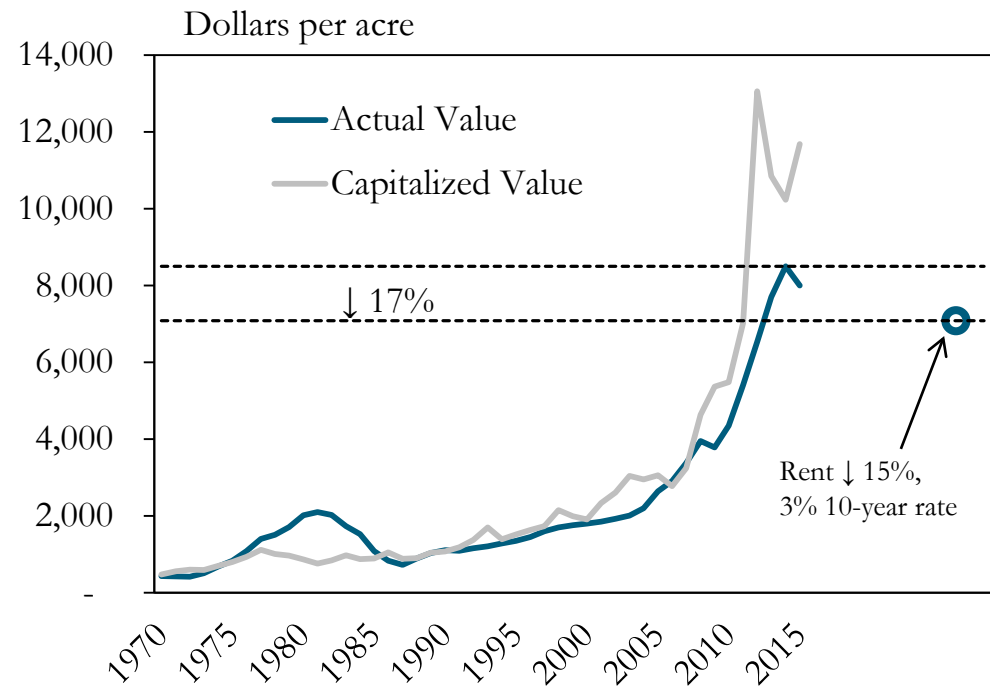


# Expectations of future interest rates and cash rents suggest farmland values could decline further.

## 10-Year Treasury Yields



## Iowa Cropland Values



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

FEDERAL RESERVE BANK OF KANSAS CITY



# 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?

---

## **Nathan Kauffman**

Omaha Branch Executive and Economist  
Federal Reserve Bank of Kansas City

Email: [nathan.kauffman@kc.frb.org](mailto:nathan.kauffman@kc.frb.org)

Website: <http://www.kansascityfed.org/omaha/>

