

# Agriculture's Business Climate



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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

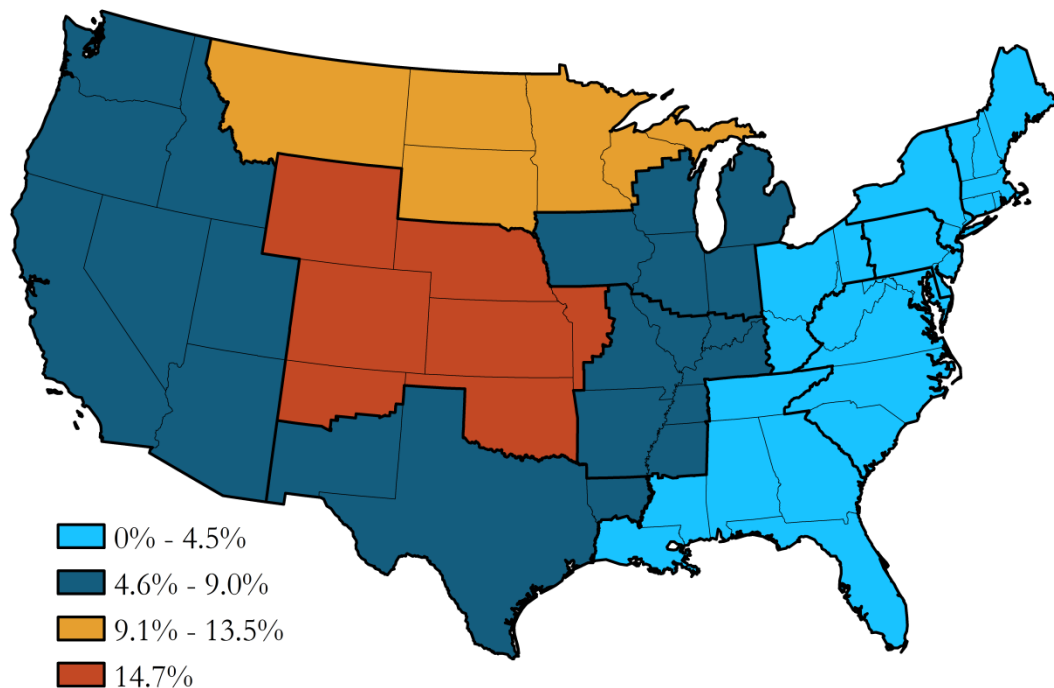
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# Of the 12 Fed Districts, the 10<sup>th</sup> District is the most concentrated in agriculture by some measures.

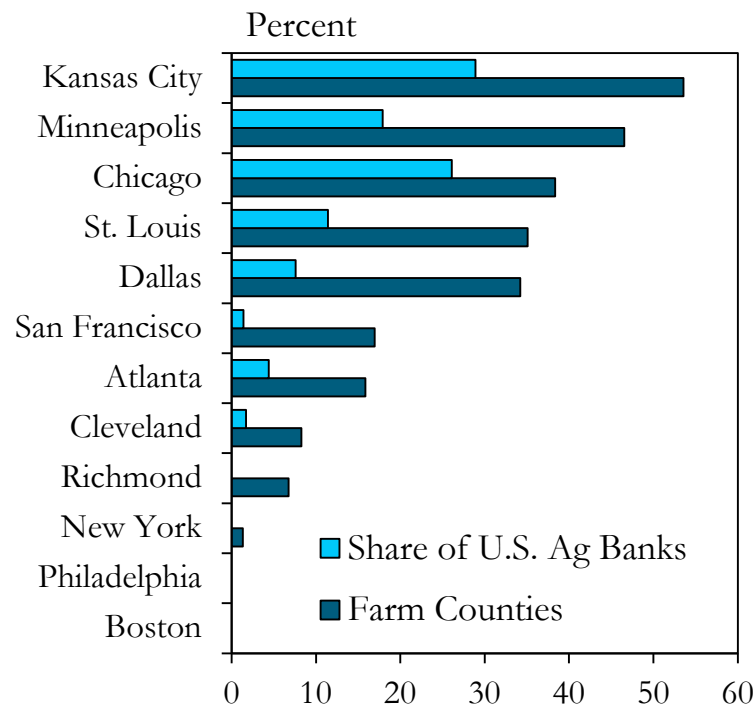
## Average Farm Income as a Share of Total Personal Income

Average Across Counties by Fed District



Source: BEA.

## Proportion of “Farm Dependent” Counties and Agricultural Banks



Source: BEA, USDA, Ag Finance Databook and staff calculations



# Outline

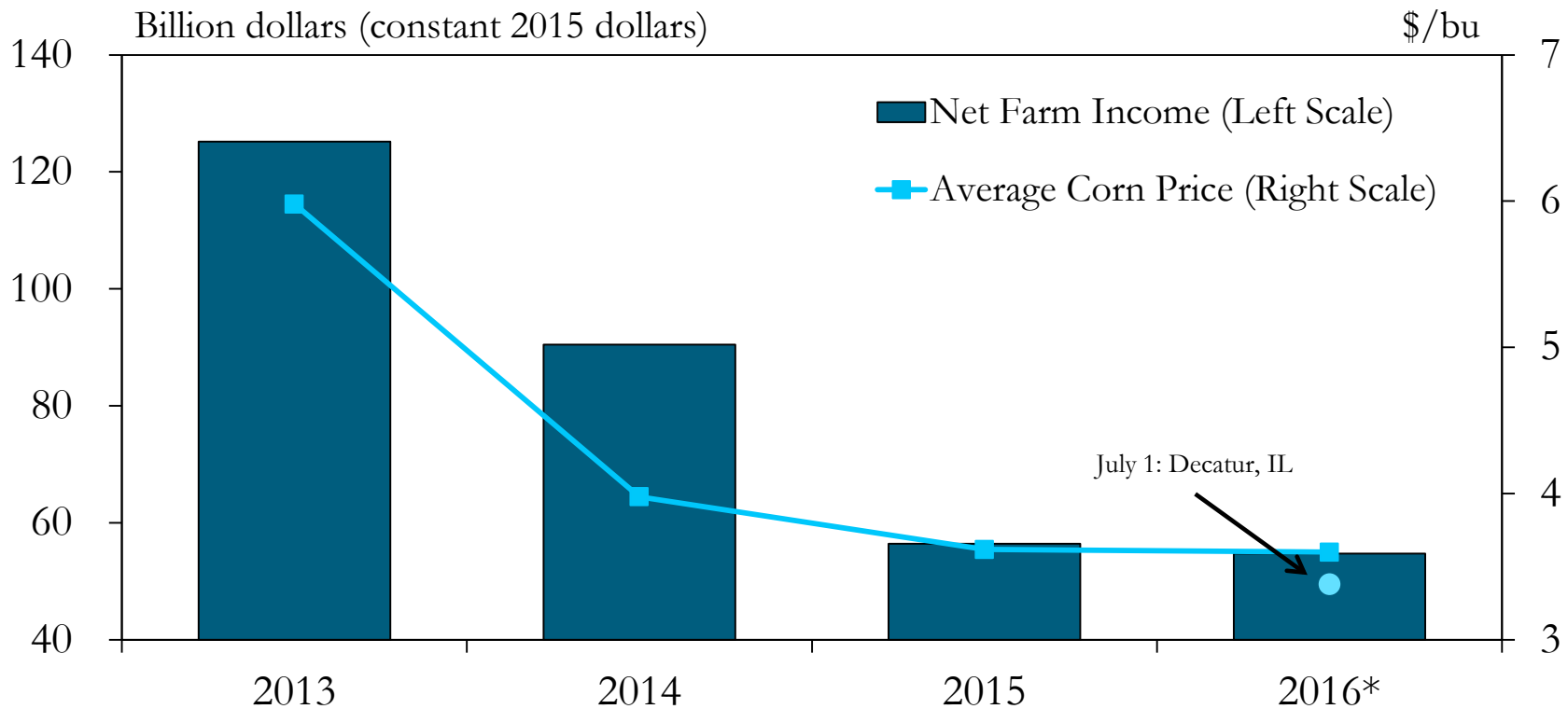
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- A 3<sup>rd</sup> consecutive year of a “downturn” in the ag economy.
- Supply factors at play year-to-year, but demand strength likely the long term driver.
- Recent global and macroeconomic developments have shaped the set of concerns in the ag economy.
- Financial stress among ag borrowers and ag lenders could be more pronounced in the near future.



# Farm income has dropped sharply from recent highs, along with crop prices.

## U.S. Real Net Farm Income



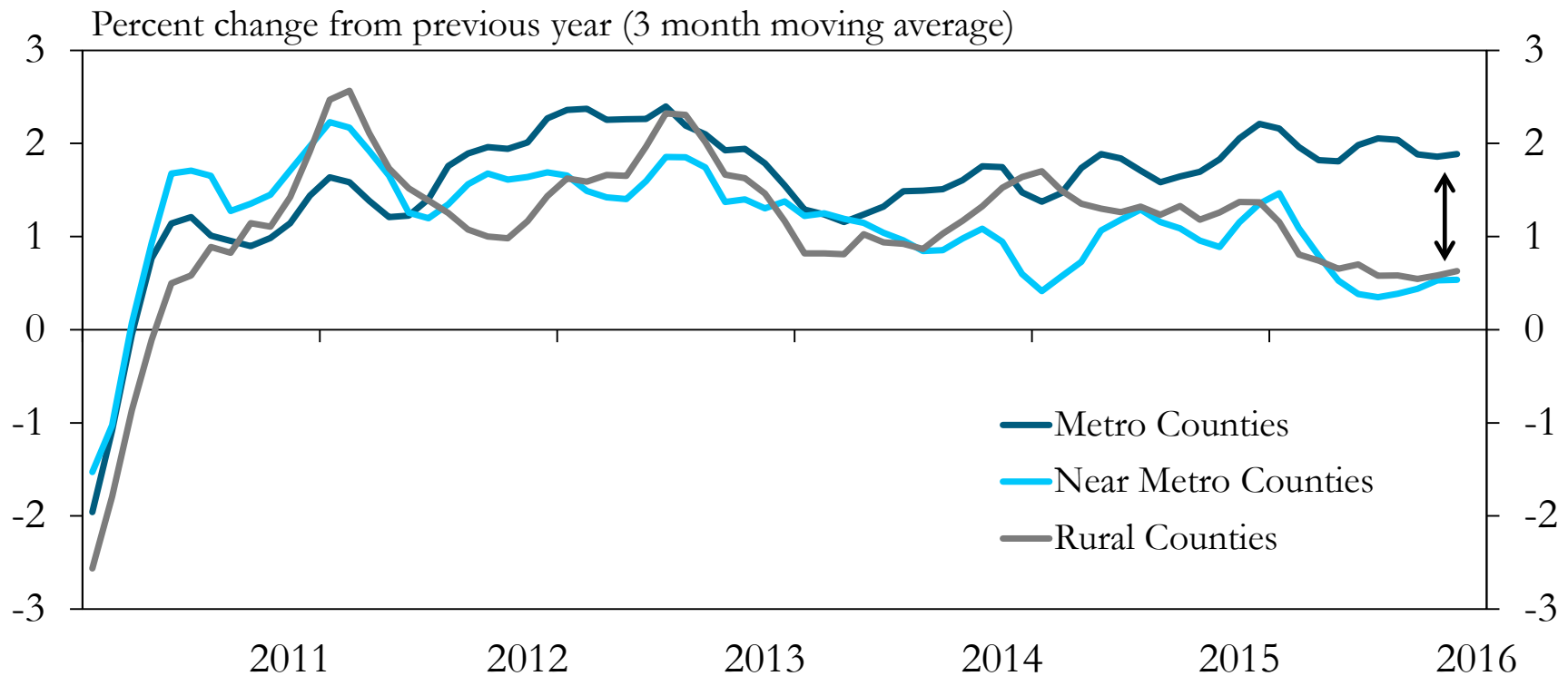
Source: USDA.

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Some of the recent challenges are not unique to agriculture.

## Indiana Employment Growth



Source: BLS.

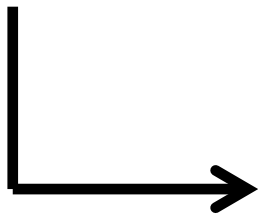
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Outside of agriculture, the last three years have been notable for the global economy.

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- Fiscal challenges
- Monetary policy divergence
- Oil price collapse
- Exchange rate volatility
- Renewed China concerns
- Global financial market turmoil
- Grexit, Brexit, \_rexit?

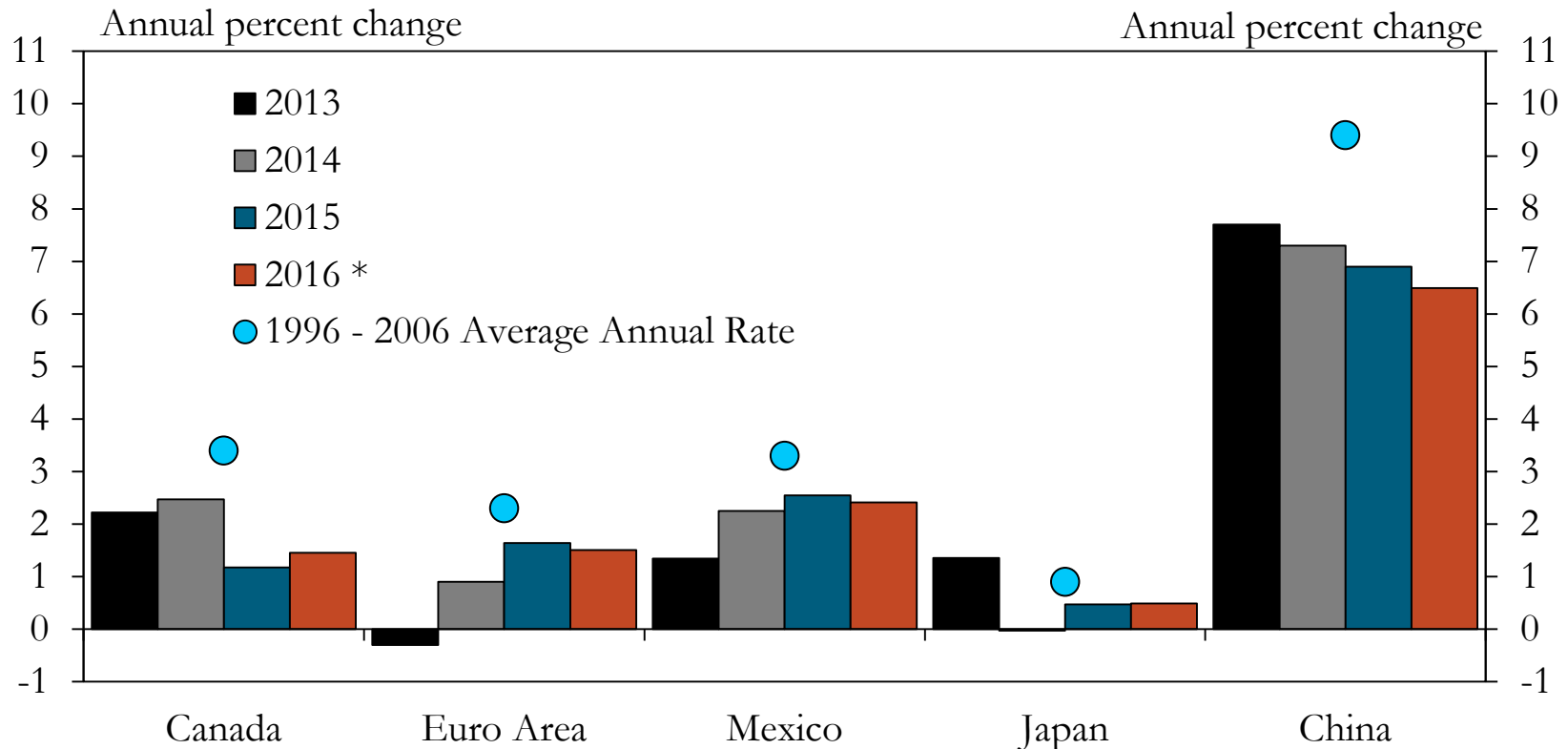


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# Global economic growth has been sluggish the last few years.

## Global Real GDP Growth



\* Forecast

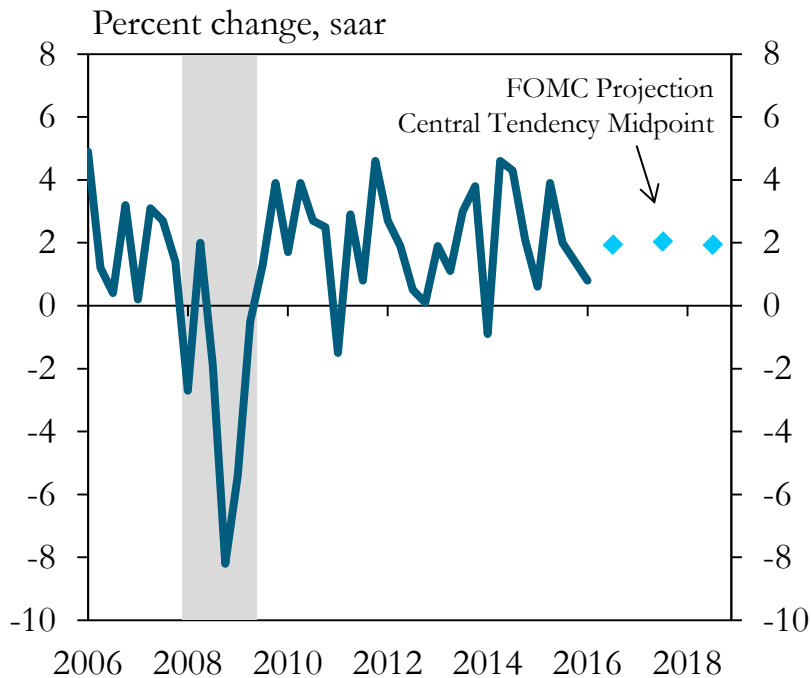
Source: IMF April 2016 Update

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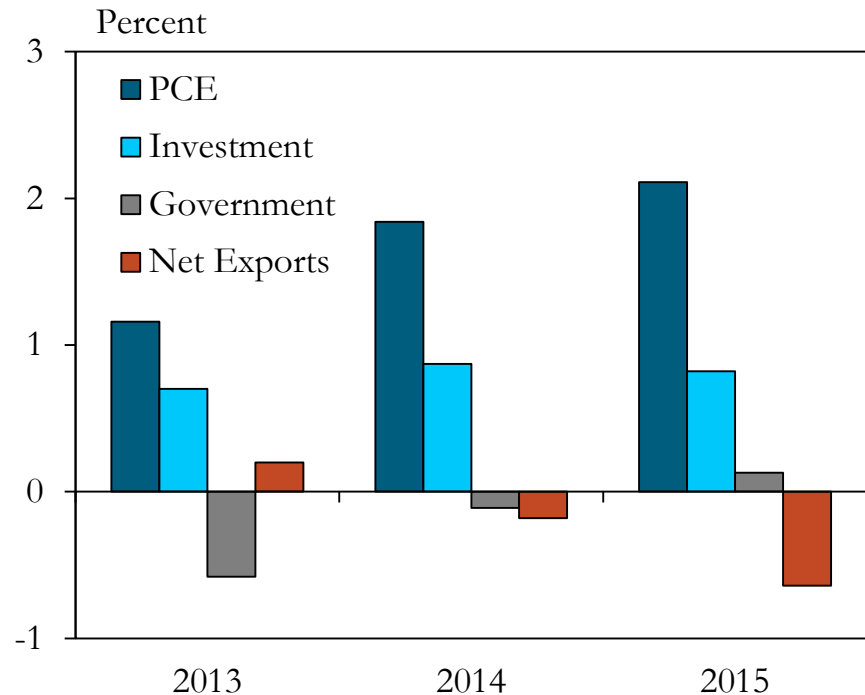
U.S. growth has been slightly better,  
driven by the strength of the consumer.

## U.S. Real GDP Growth



Source: BEA, Federal Reserve Board, and Haver Analytics.

## Contributions to GDP Growth



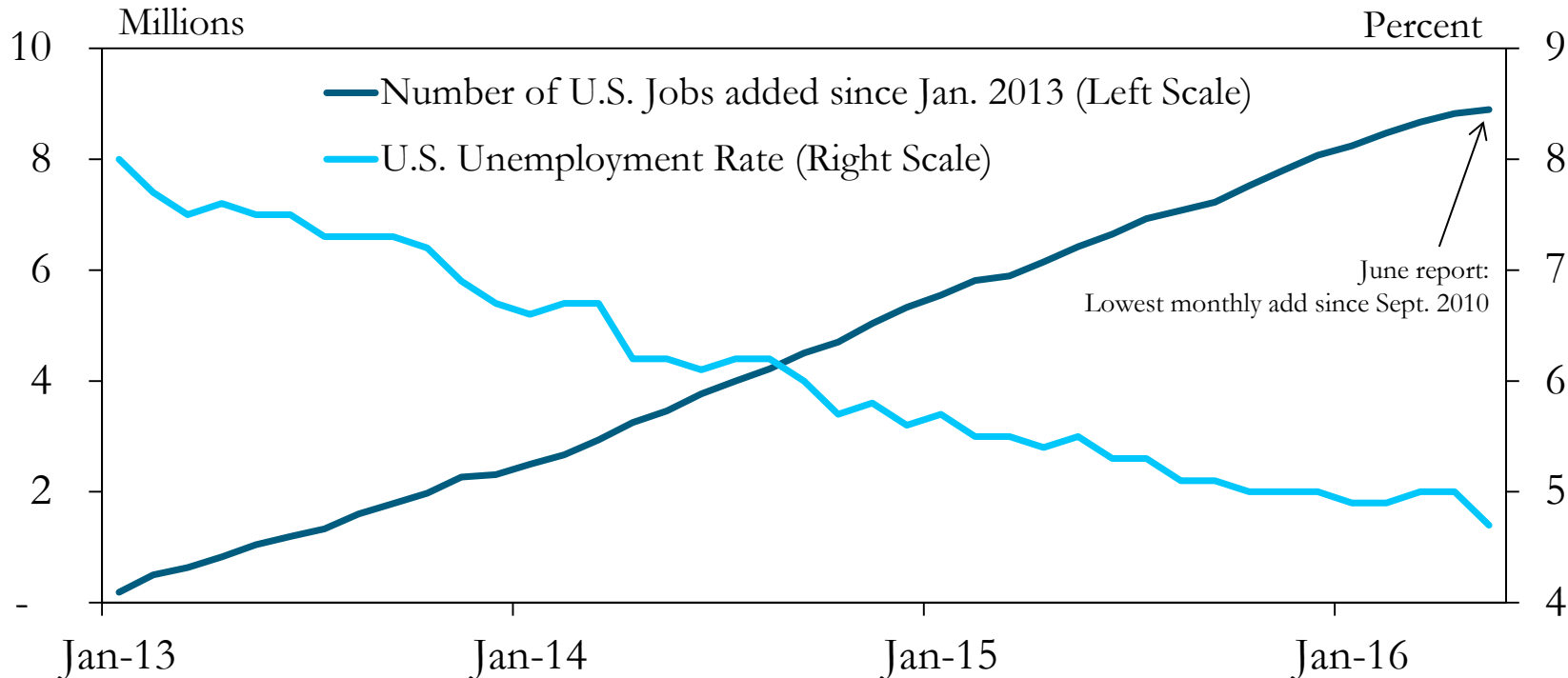
Source: BEA and Haver Analytics.





# U.S. labor markets have improved steadily, but have wobbled recently.

## U.S. Labor Market



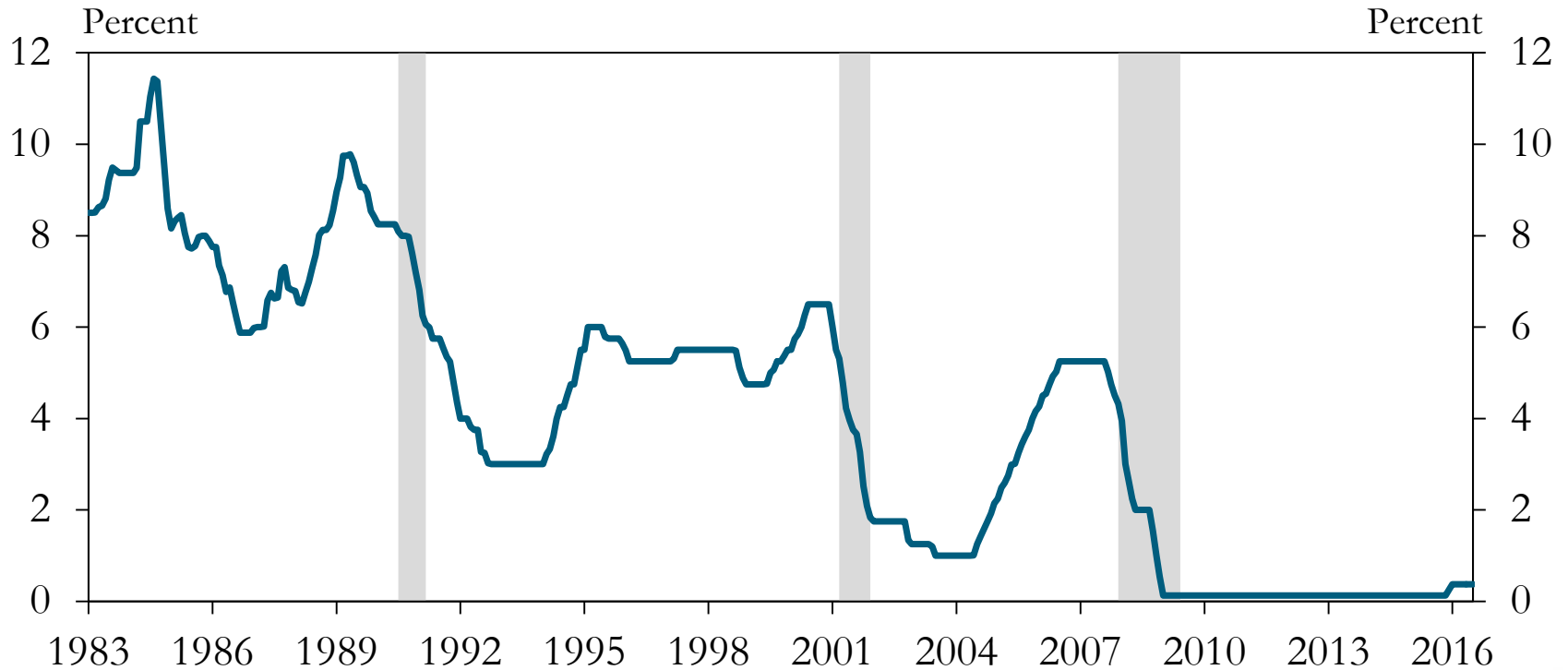
Sources: Bureau of Labor Statistics and Haver Analytics.

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Monetary policy remains very accommodative.

## Federal Funds Target Rate



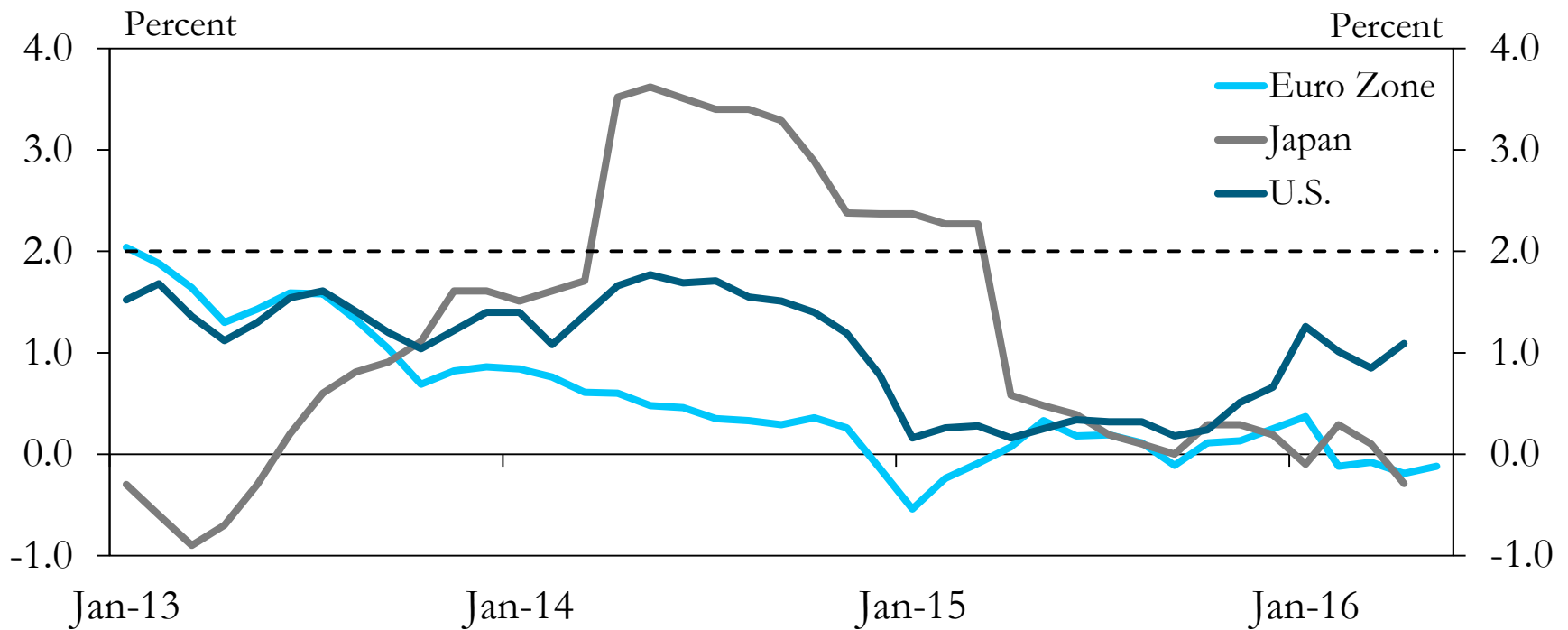
Sources: Federal Reserve Board and Haver Analytics

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Inflation has been persistently low,  
both in the U.S. and abroad.

## Inflation Indexes

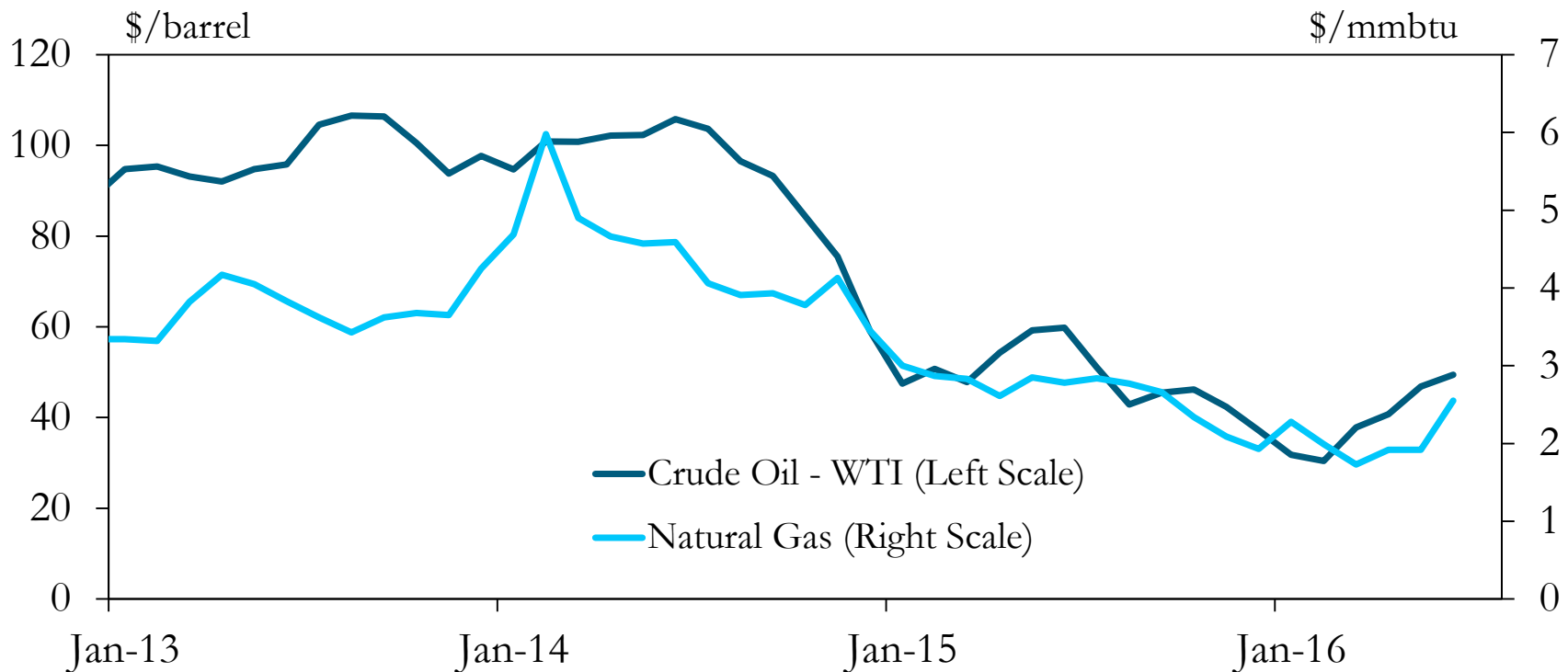


Source: Haver Analytics.



Despite a modest rebound, low energy prices have kept inflationary pressures subdued.

## U.S. Energy Prices

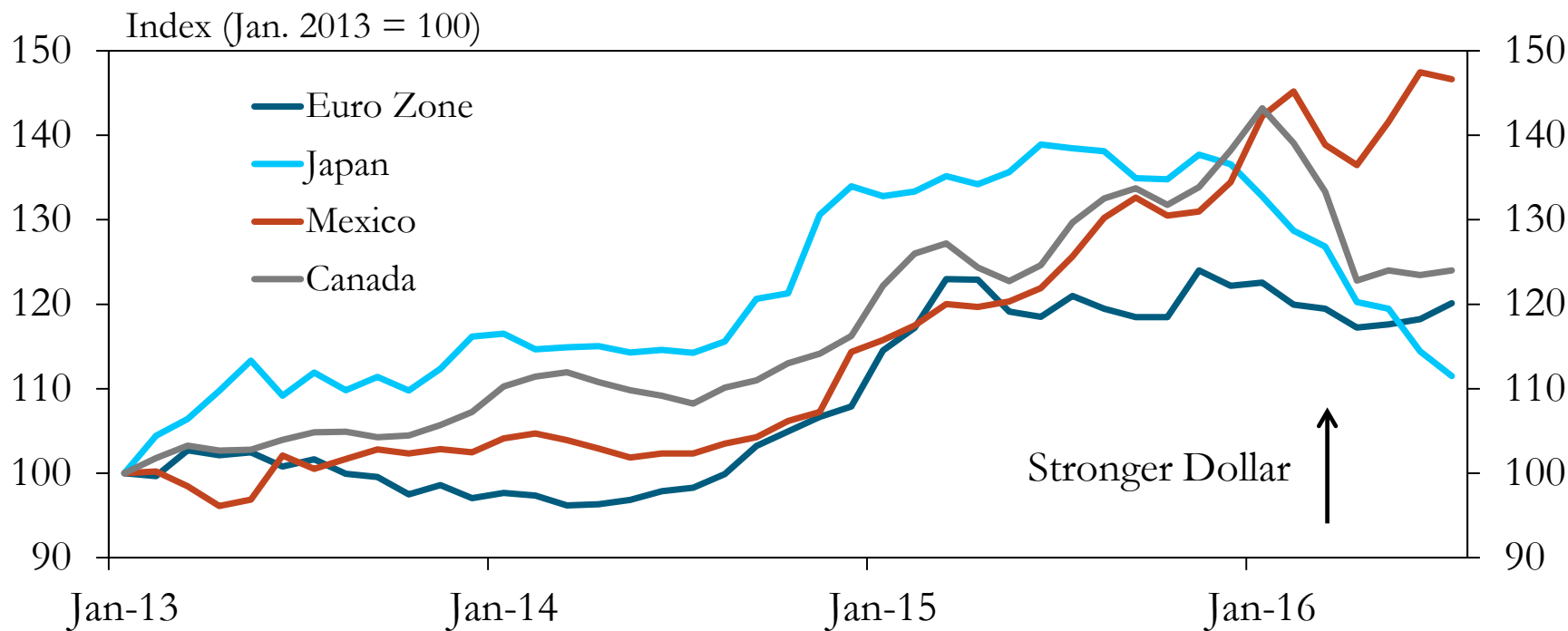


Sources: EIA and Haver Analytics.



The dollar has weakened some in 2016, but the gains of recent years have kept U.S. inflation low.

## Currency Exchange Rates



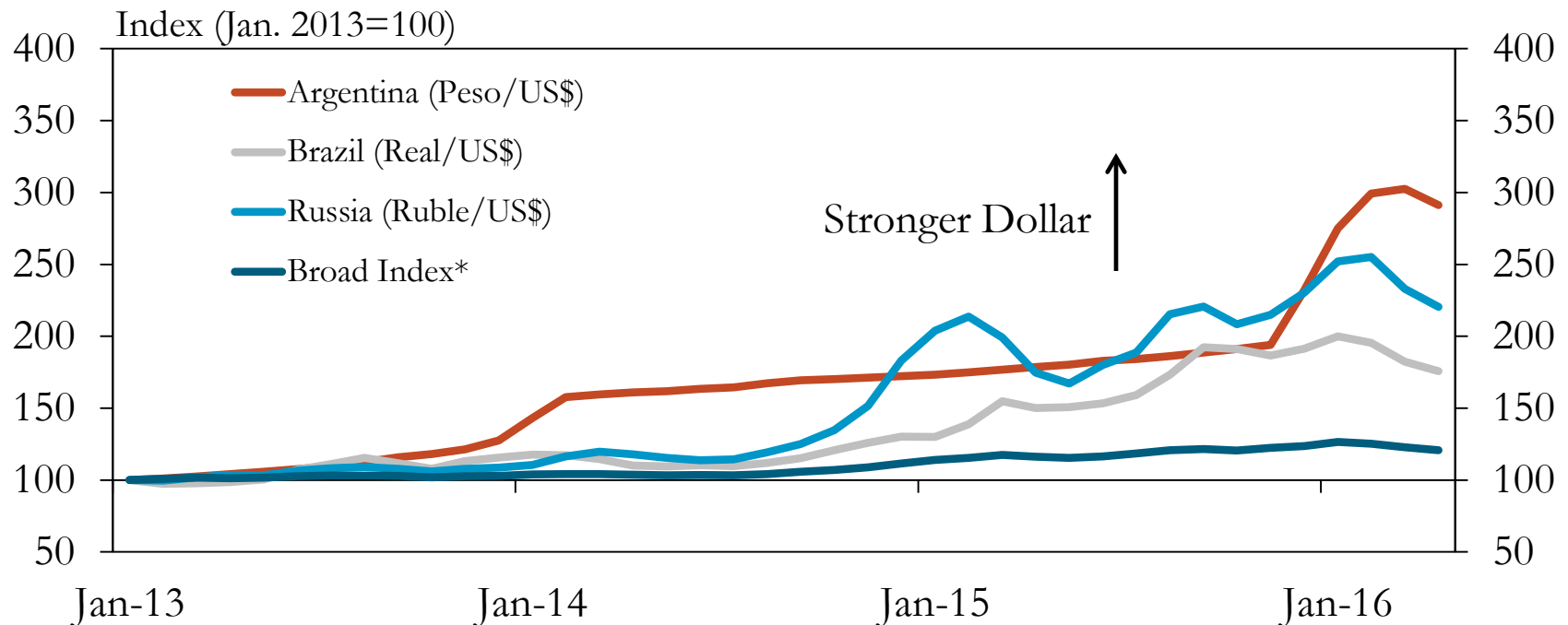
Sources: Federal Reserve Board and Haver Analytics.

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# The dollar has surged even more dramatically against regions competing for ag exports.

## Currency Exchange Rates

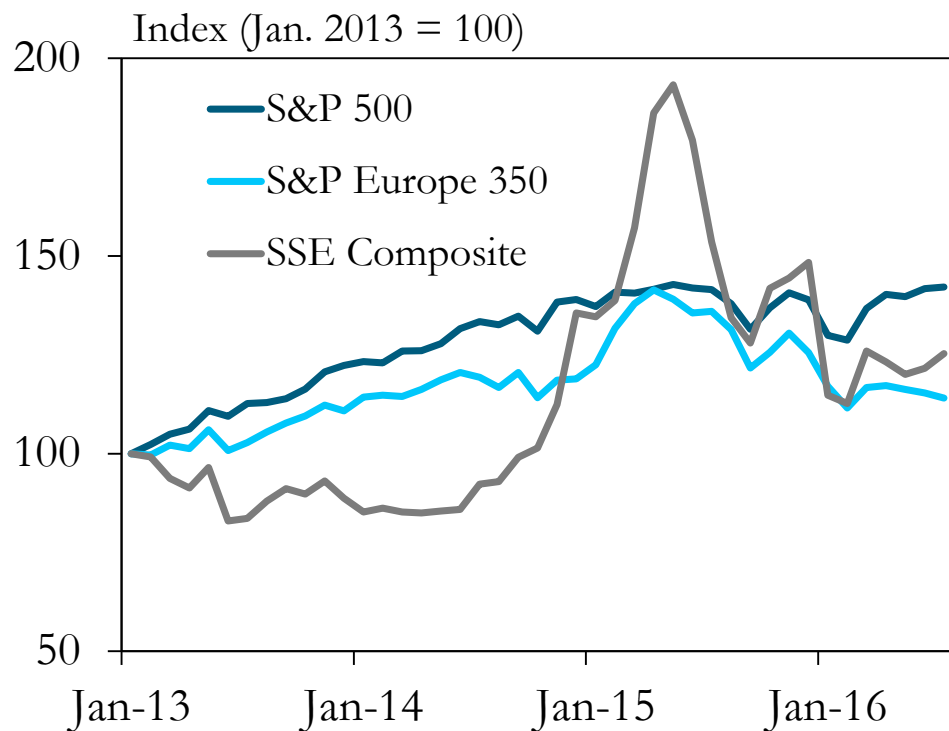


\*Nominal broad trade-weighted exchange value of the U.S. dollar  
Sources: FRB, IMF and Haver Analytics.

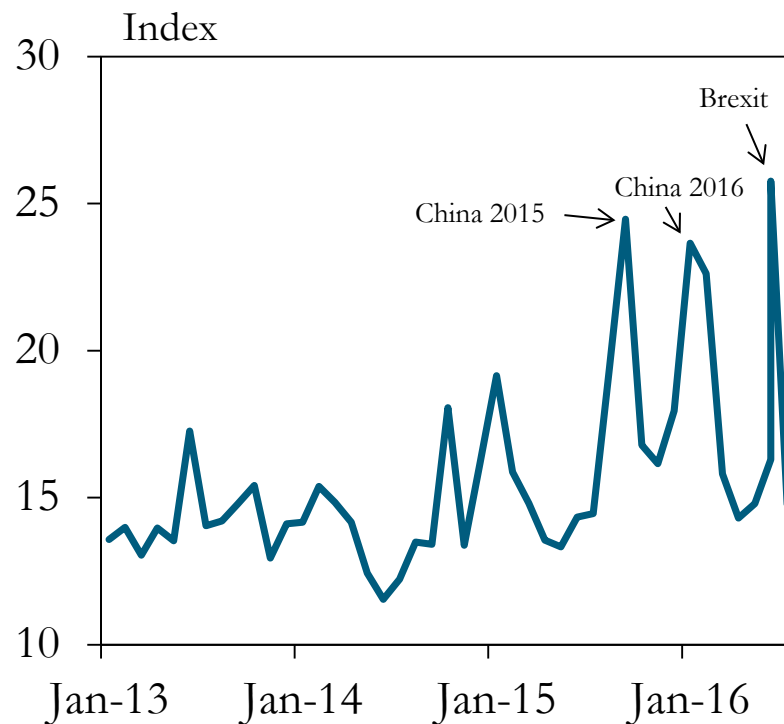


Financial markets have also been marked by episodes of significant volatility.

### Stock Market Indices



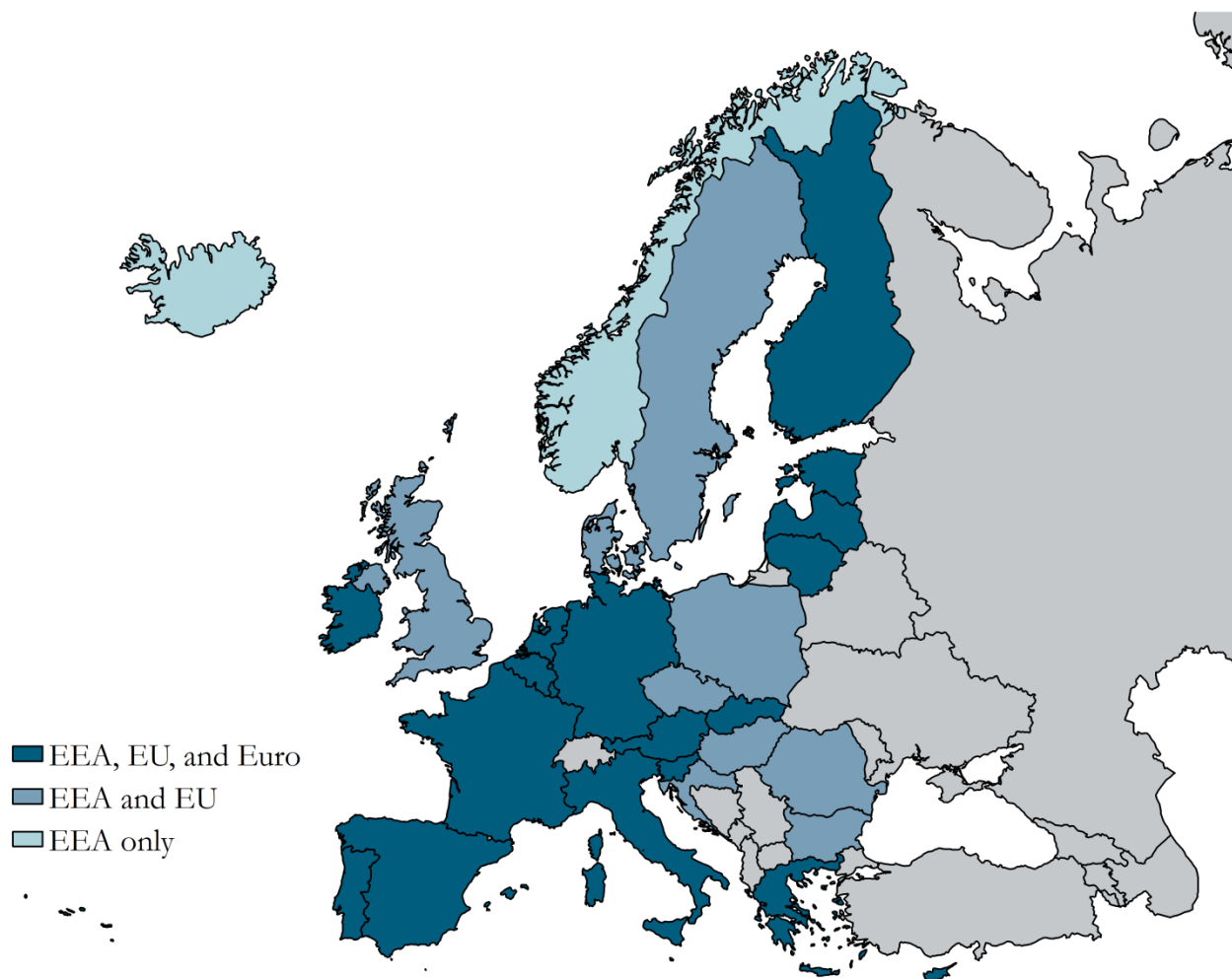
### Market Volatility Index (VIX)



Sources: Standard & Poor's, Yahoo Finance, WSJ, and Haver Analytics.



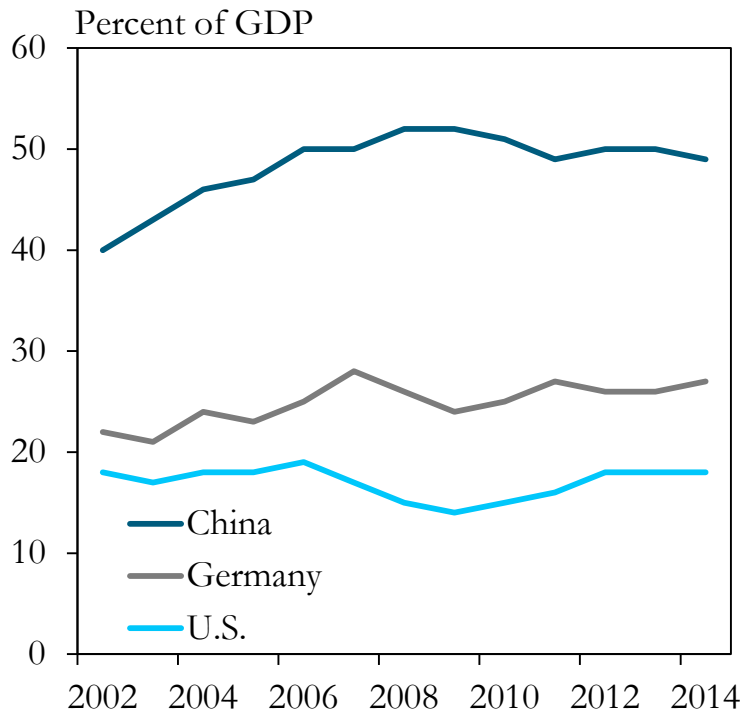
The many possible outcomes of Brexit point to an ongoing environment of uncertainty.





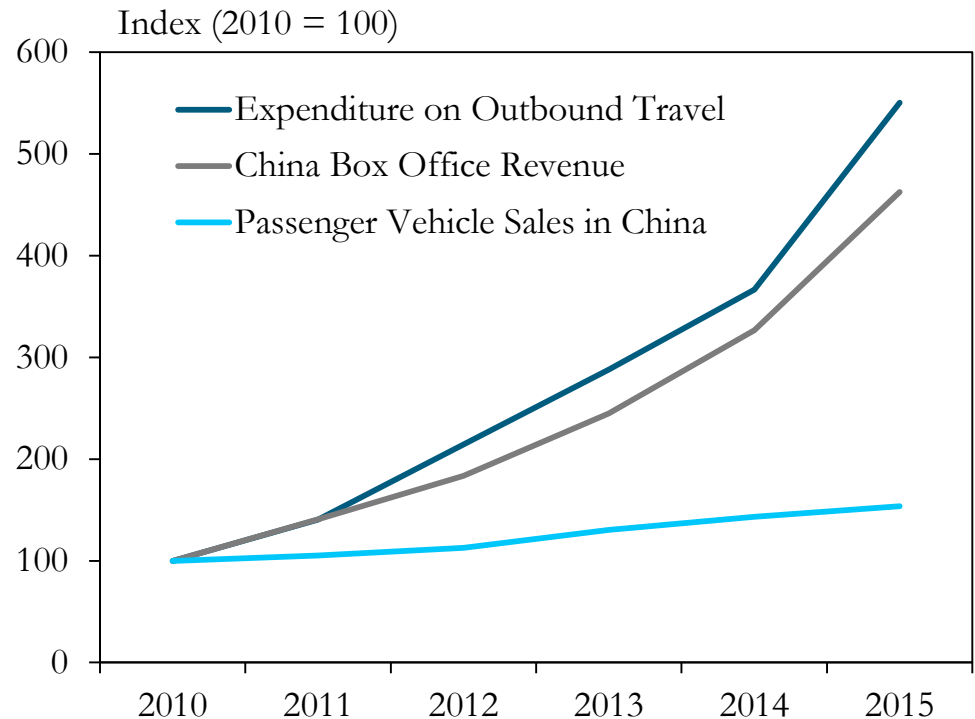
# Despite recent concerns about China, some indicators point to momentum in the Chinese economy.

## Gross Savings



Source: World Bank.

## China Consumer Spending



Sources: World Travel & Tourism Council, China Association of Automobile Manufacturers, Motion Picture Association of America, and Haver Analytics.



# Summarizing Recent Economic Trends

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## Industries doing well:

- concentrated in the services sector.
- located in metropolitan areas.
- closely tied to the U.S. consumer.

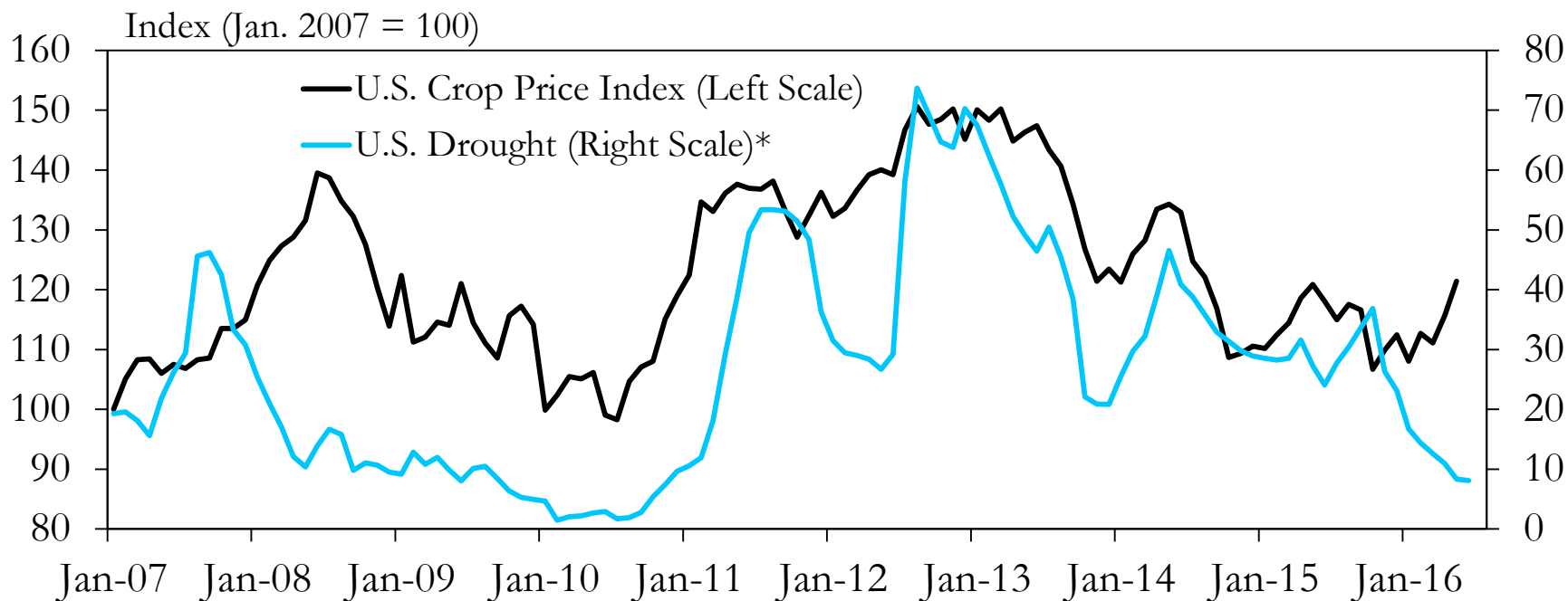
## Industries facing headwinds:

- concentrated in goods production.
- commodity-dependent.
- export-oriented.
- located in non-metro areas.
- vulnerable to global uncertainty.



In agriculture, weather plays a crucial role in determining crop prices in the short-term.

## U.S. Crop Prices and Drought



Sources: USDA, University of Nebraska-Lincoln and NOAA.

\* Includes lower 48 states only.

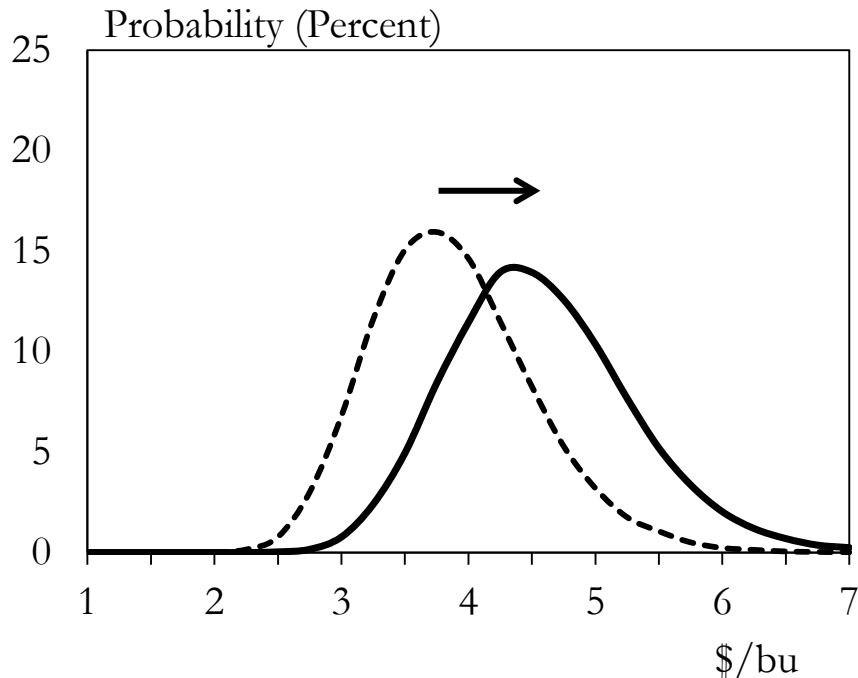
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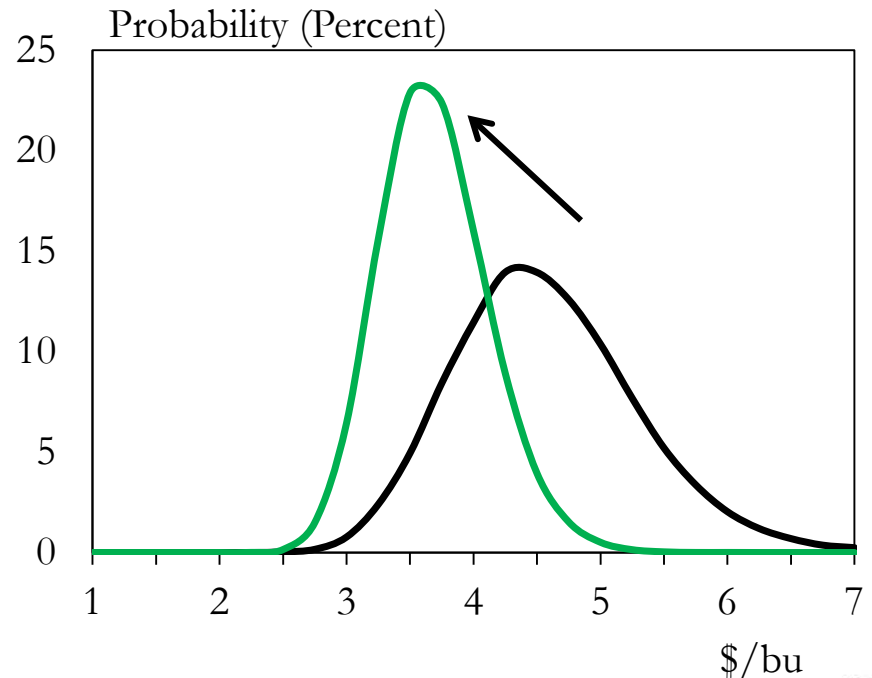
# And weather has been a significant factor in 2016 price expectations.

## U.S. Corn Price Expectations

--- December Corn Price Expectations: April 1, 2016  
— December Corn Price Expectations: June 15, 2016



— December Corn Price Expectations: June 15, 2016  
— December Corn Price Expectations: July 5, 2016



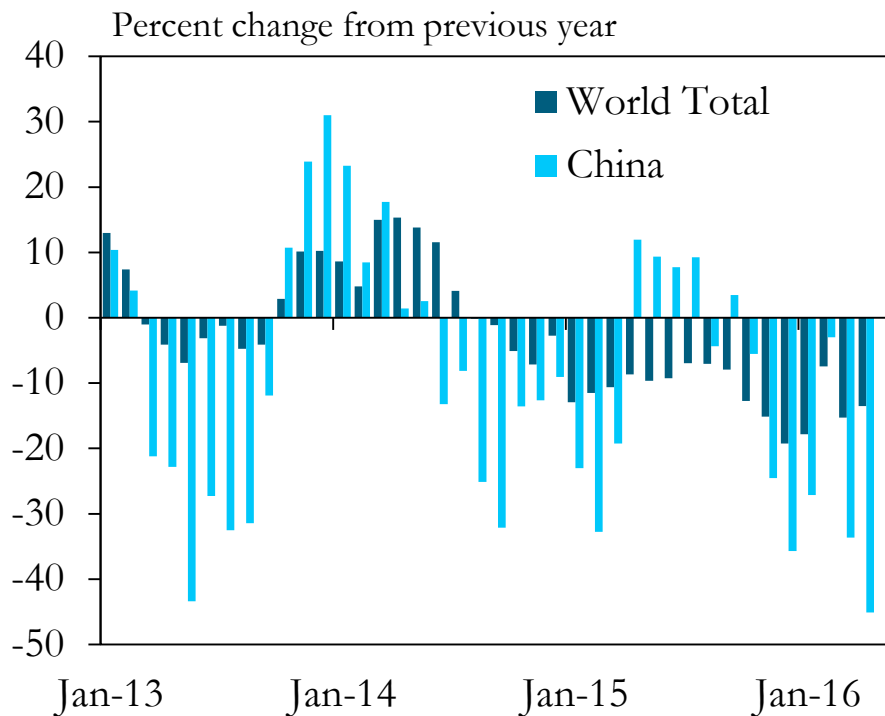
Source: Calculations based on data from barchart.com

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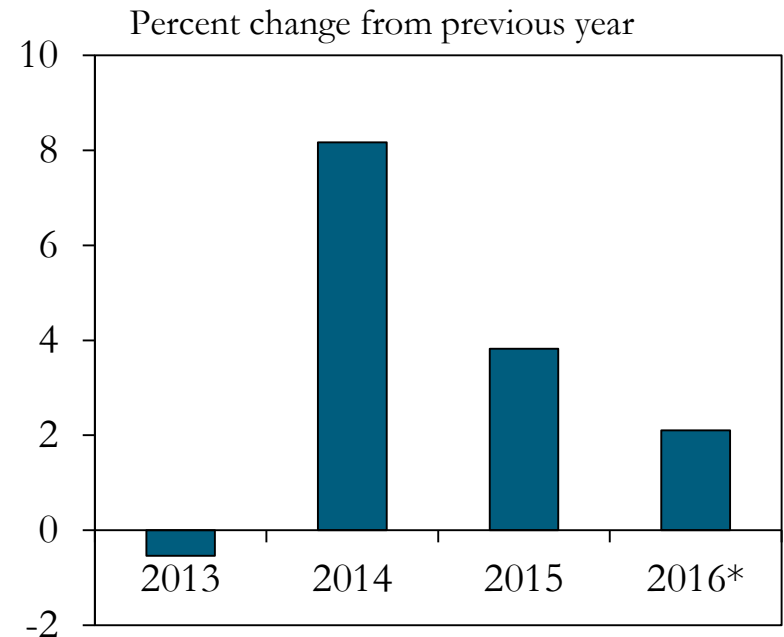
But demand strength will be the key  
long-term driver.

## Value of U.S. Ag Exports



Source: USDA.

## U.S. Ethanol Production



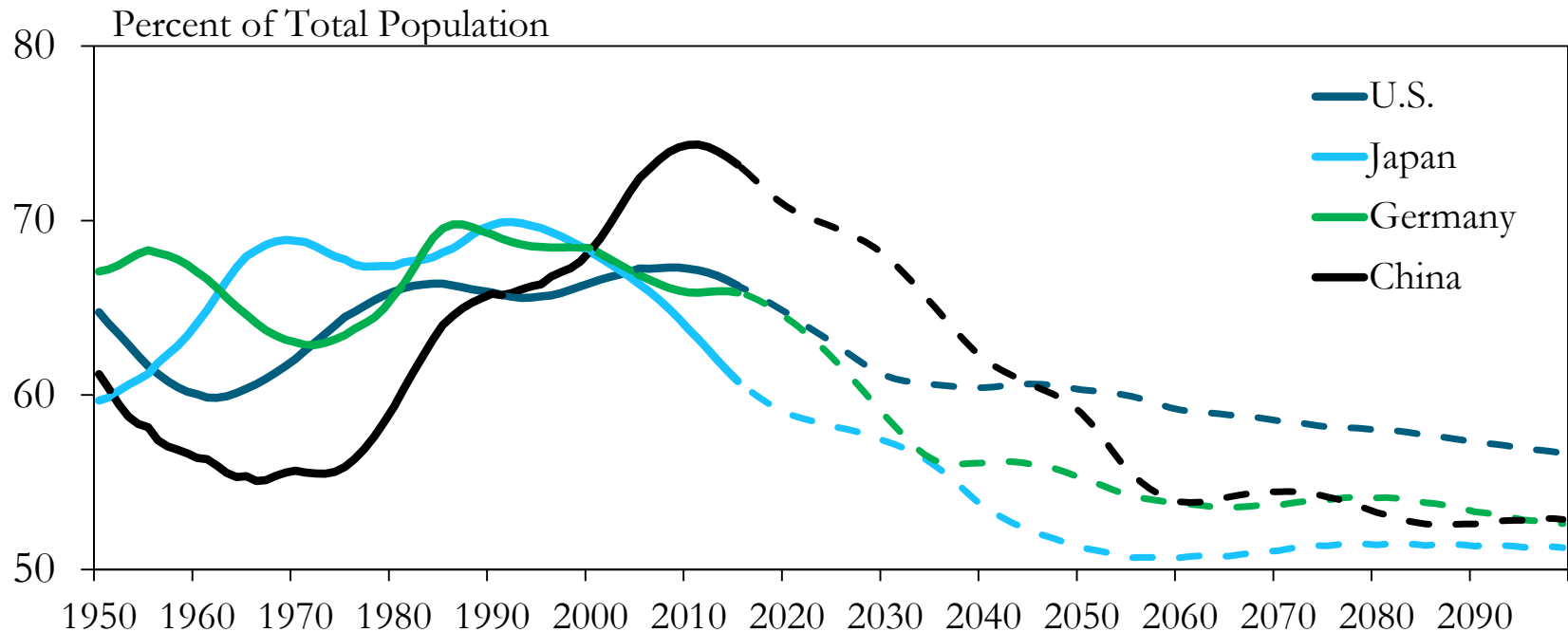
\* Year-to-date average through June 24, 2016.

Source: EIA.



Understanding demographic trends will be key to understanding future global demand.

## Working Age Population



Sources: United Nations and Haver Analytics.



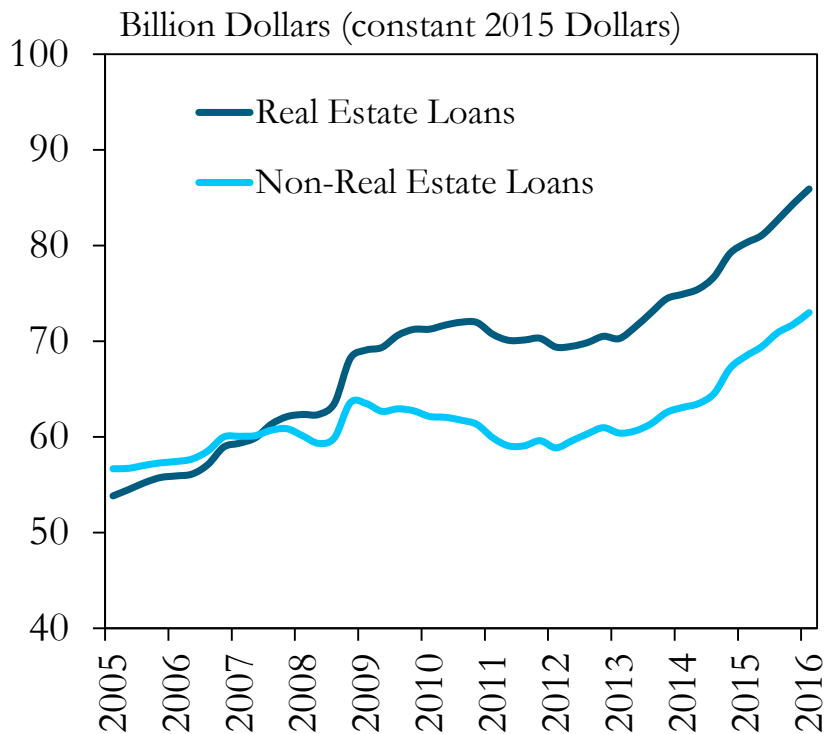
*The U.S. ag economy continues to adapt to transitions in supply and demand.*

*Implications for ag credit and financial stress?*

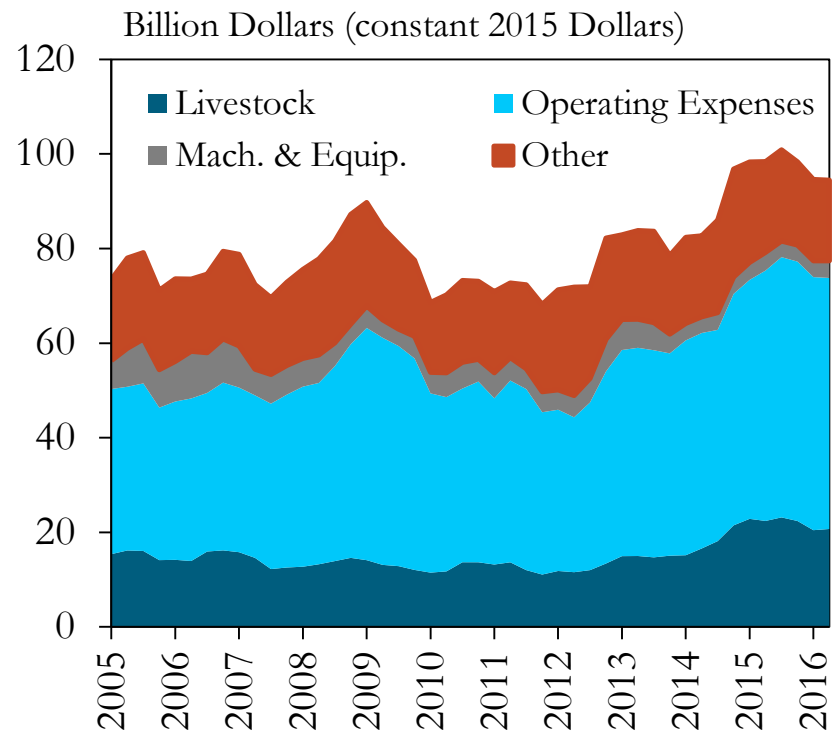


# Financing needs began rising notably in 2013, and have remained high.

## Total US Farm Debt at Commercial Banks



## Composition of Non-Real Estate Farm Debt



Source: Federal Reserve Bank of Kansas City, Ag Finance Database

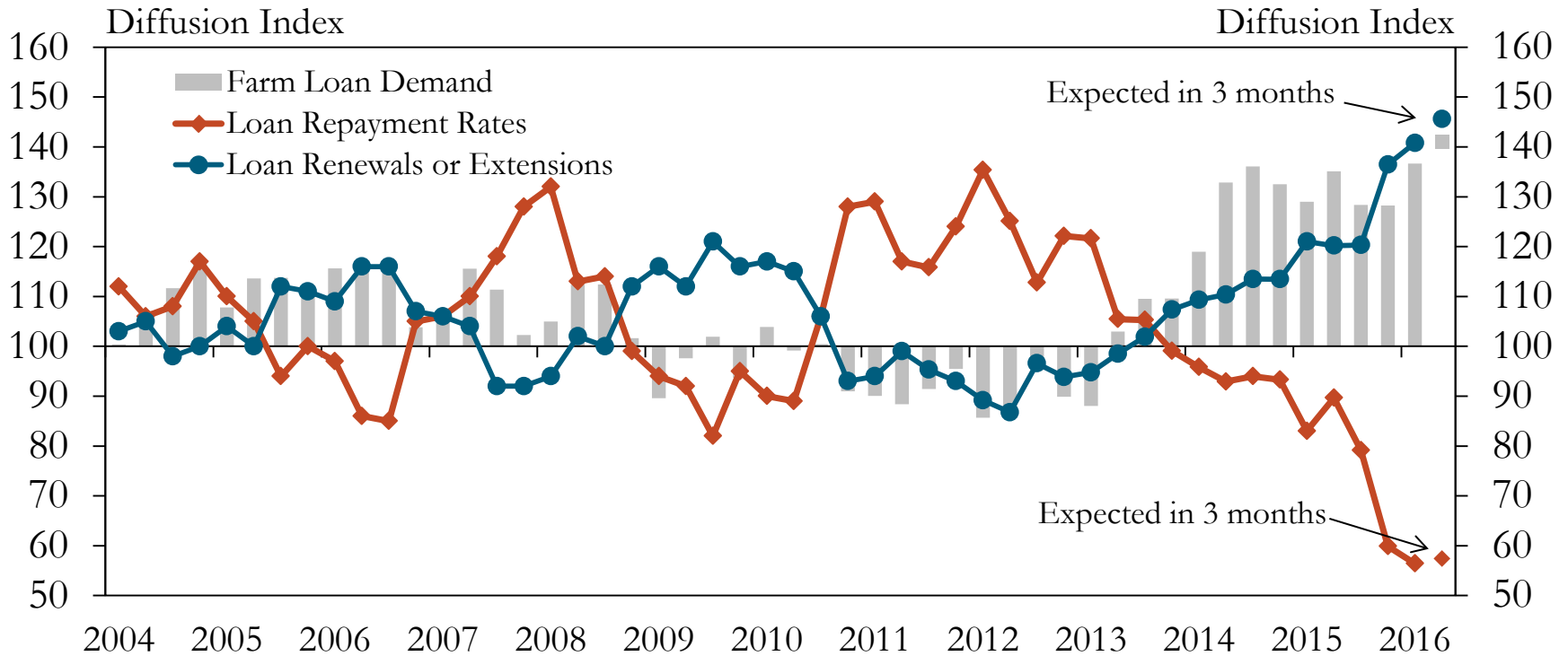
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# Credit conditions have gradually deteriorated.

## Agricultural Credit Conditions – KC Fed District



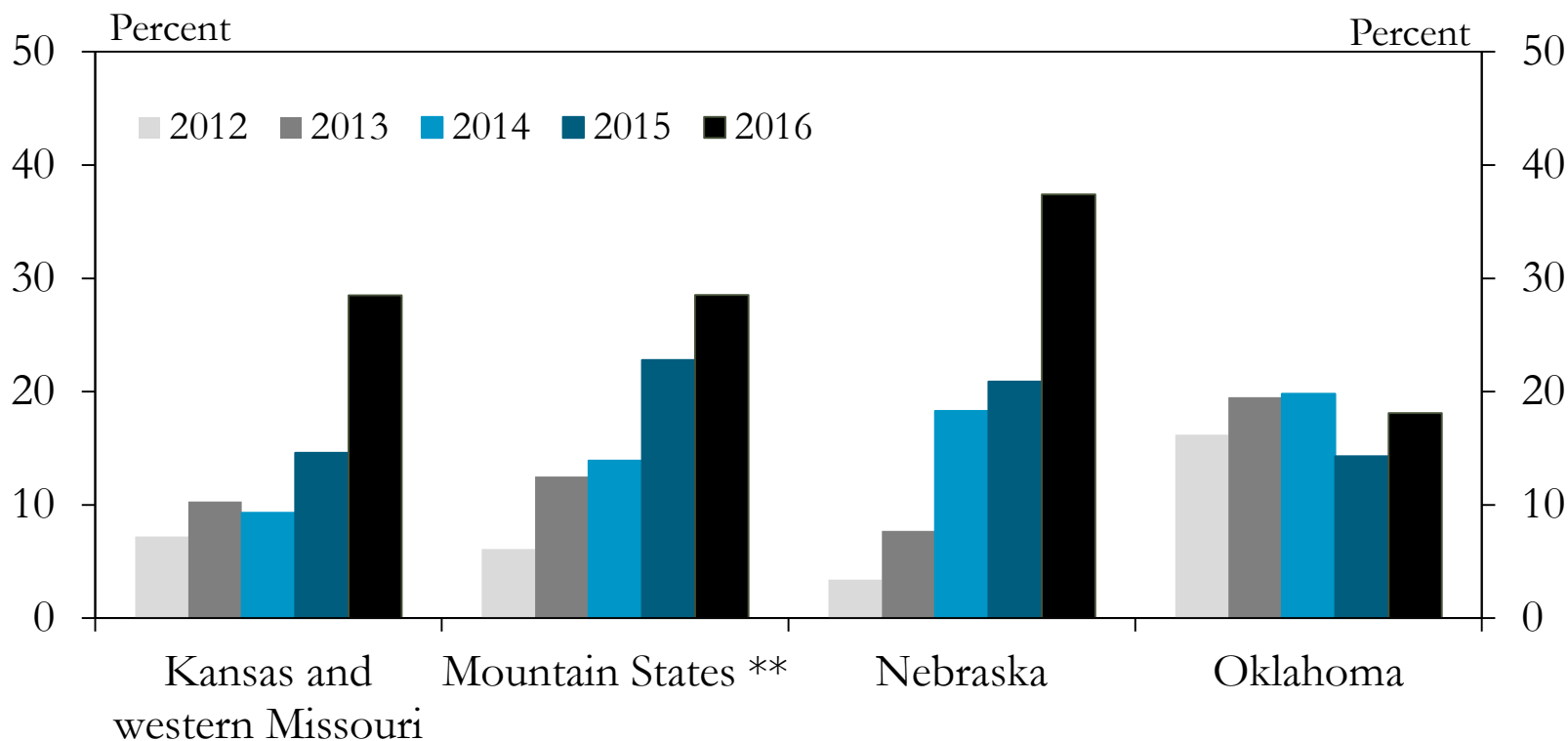
Source: Federal Reserve Bank of Kansas City, Survey of Ag Credit Conditions

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# Carryover debt in the Kansas City Fed District was notably higher in 2016.

## Borrowers with an Increase in Carryover Debt First Quarter

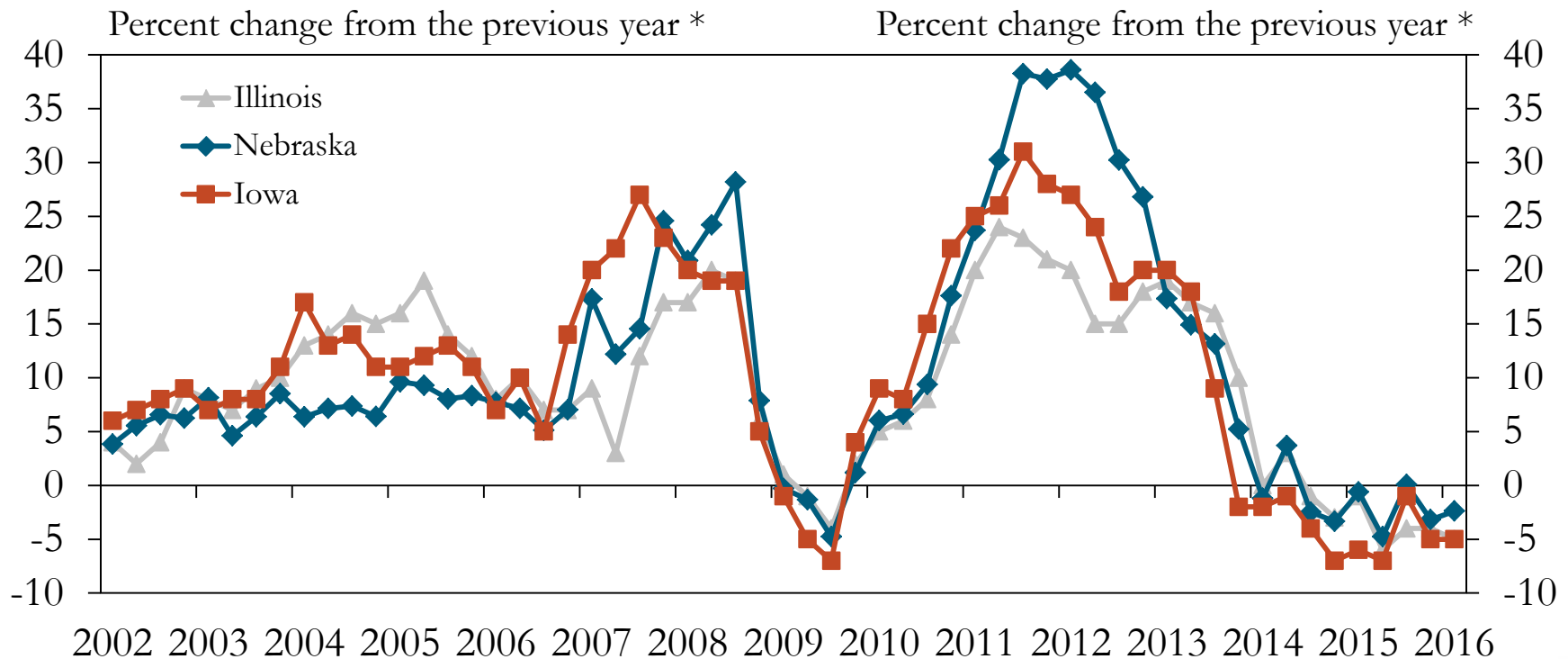


\*\* Mountain States include Colorado, northern New Mexico and Wyoming, which are grouped because of limited survey responses from each state.



Farmland values have trended lower, but at a modest pace.

## Changes in High Quality Farmland Values



\*Percent changes are calculated using responses only from those banks reporting in both the past and the current quarters.

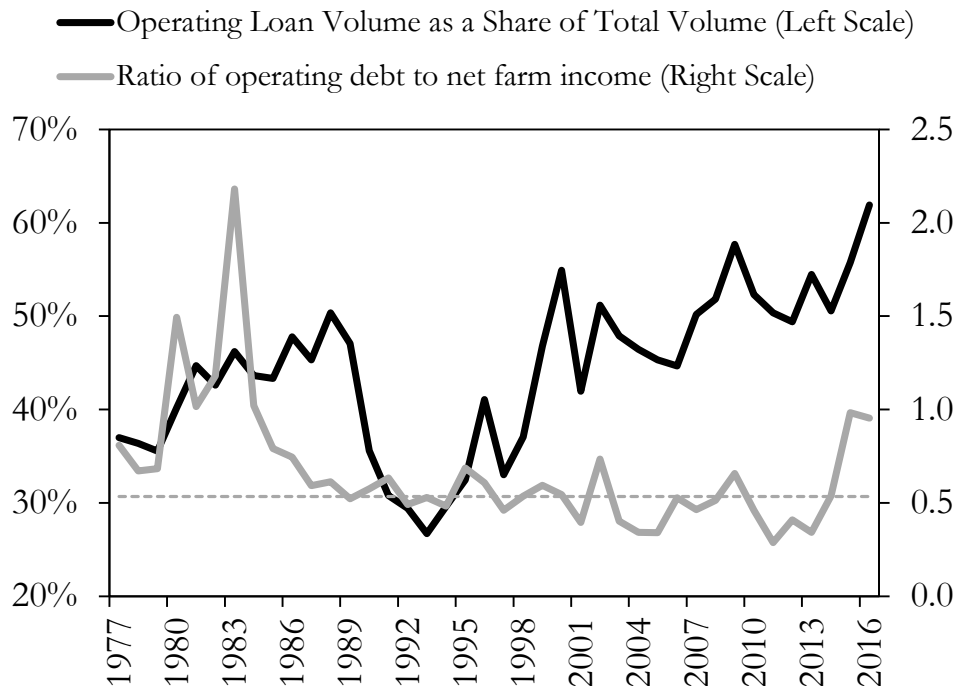
Source: Federal Reserve Bank of Kansas City

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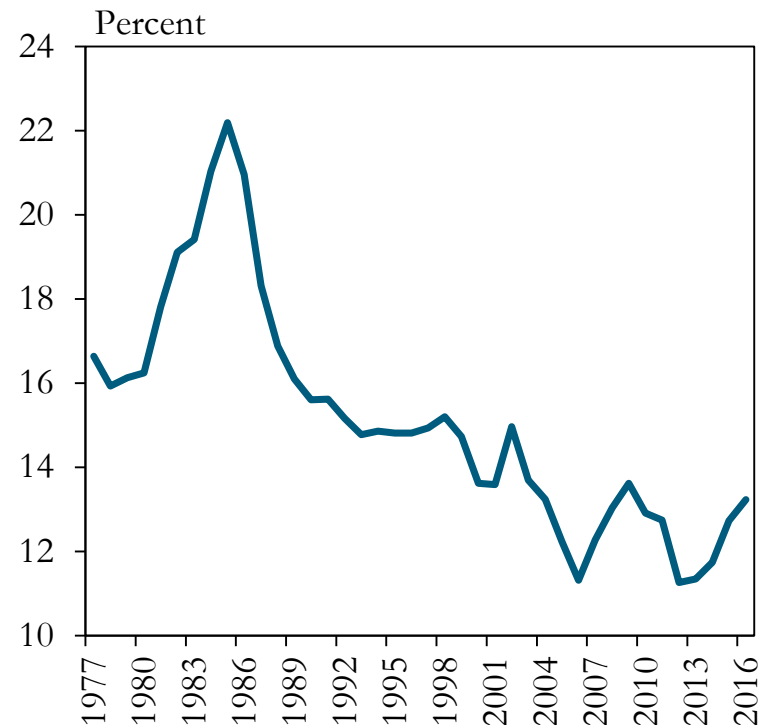
In the short-term, liquidity may be a more significant concern than solvency.

## U.S. Farm Sector Operating Loan Volume (Commercial Banks)



Source: Federal Reserve Bank of Kansas City

## U.S. Farm Sector Debt-to-Asset Ratio



Source: USDA.

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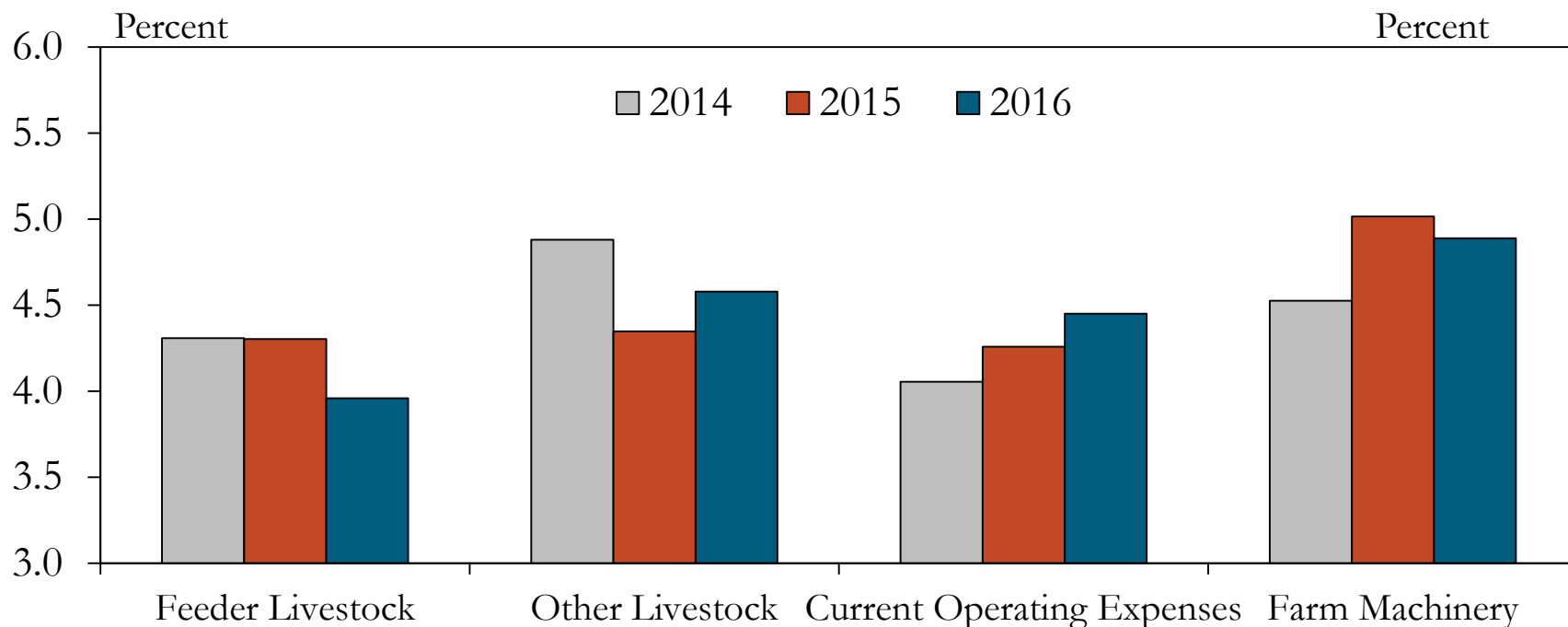
*How might a changing interest rate environment affect the ag economy?*



# Farm interest rates have increased, but only slightly.

## Interest Rates on Non-Real Estate Farm Loans

Second Quarter



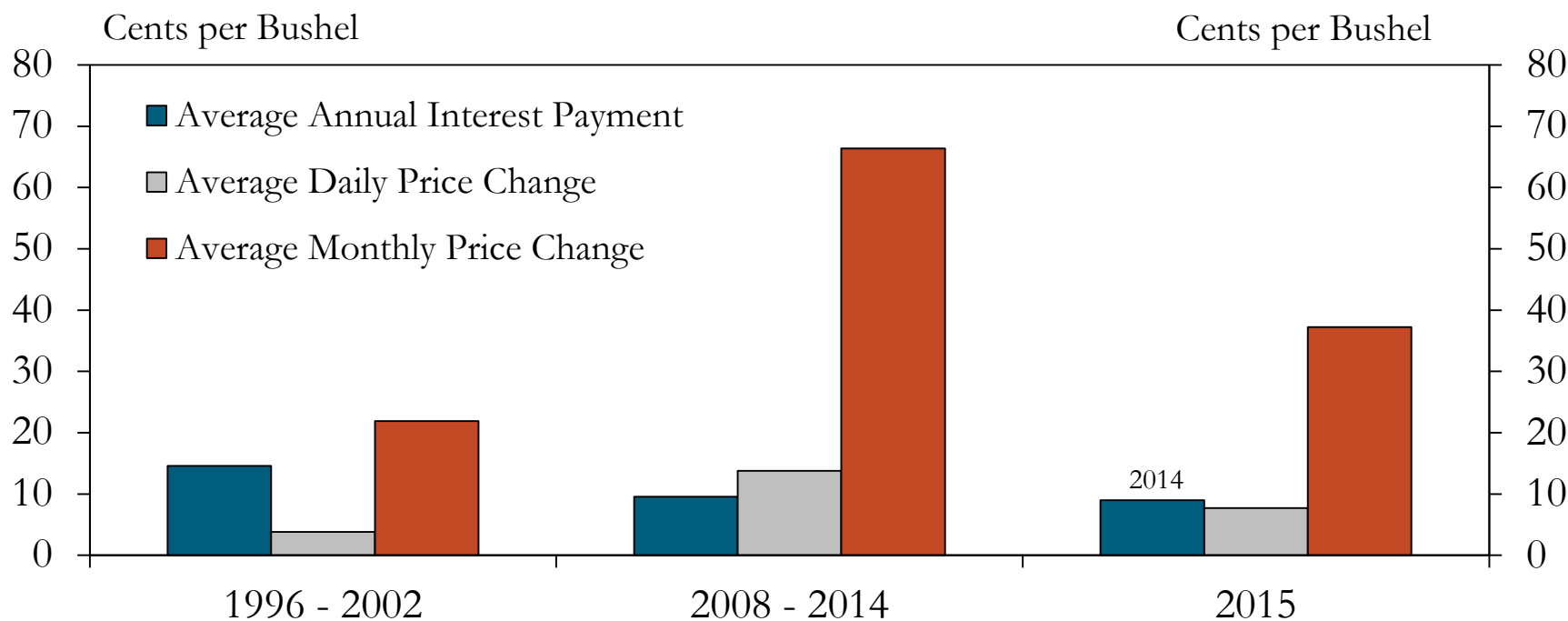
Source: Agricultural Finance Databook, Table A.5

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

## U.S. Corn Producers - Interest Expenses and Price Fluctuations



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



# Concluding Points

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- The U.S. **ag** economy faces ongoing headwinds.
  - Heightened inventories and global competition
  - Sluggish economic growth outside of the U.S.
  - Uncertain global demand
  - Reduced prices
  - Tighter profit margins
  - Heightened financial stress
  - Regional economic impacts
- Businesses who have recognized these trends and positioned themselves appropriately will find opportunities.





# Questions?

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