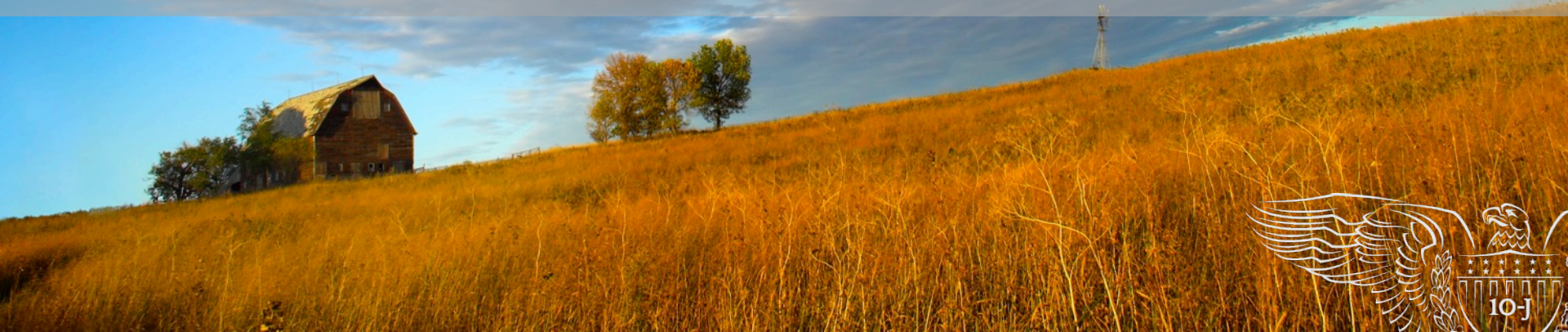


U.S. Economy in High Gear, but Ag Stuck in Neutral

Nate Kauffman, Federal Reserve Bank of Kansas City

October 17, 2018



Outlook Themes

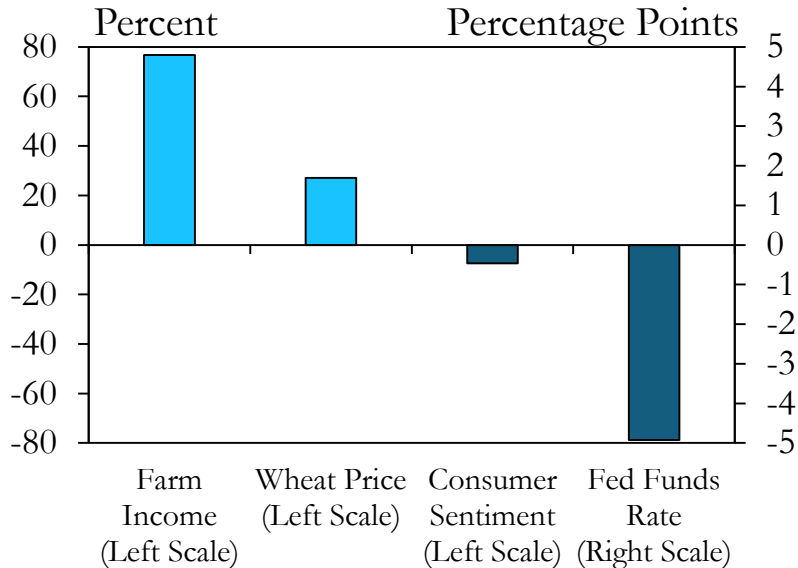
- Momentum in the national economy has persisted, but the agricultural economy has remained in a prolonged downturn.
- Agricultural credit conditions have continued to deteriorate gradually, although the value of farm real estate has remained a relative bright spot.
- Signs of stabilization in agriculture earlier in the year have become more questionable with ongoing trade disputes.
- Interest rates have continued to rise at a gradual pace, putting pressure on highly leveraged operations.



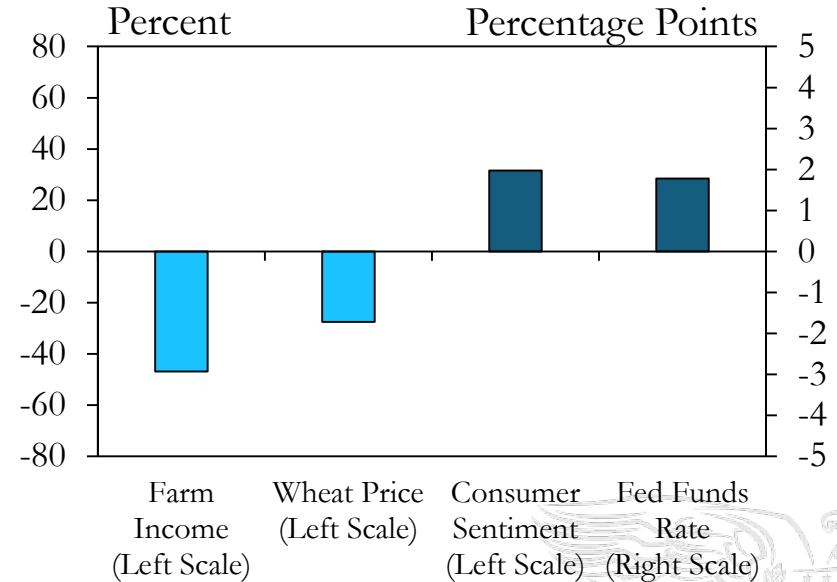
The outlooks for agriculture and the U.S. economy have reversed since 2013.

Indicators for Ag Economy and Broader U.S. Economy

Change from 2007–2013



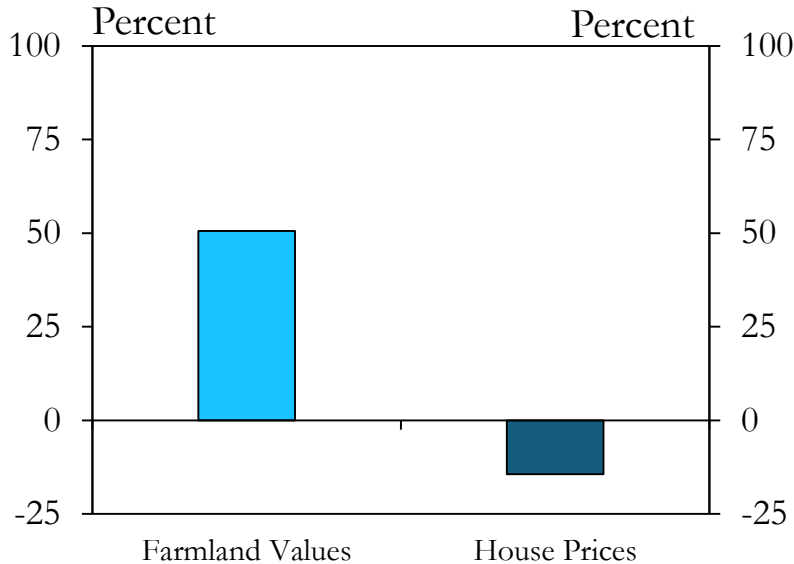
Change from 2013–2018



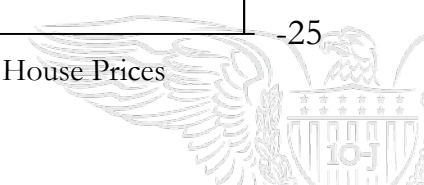
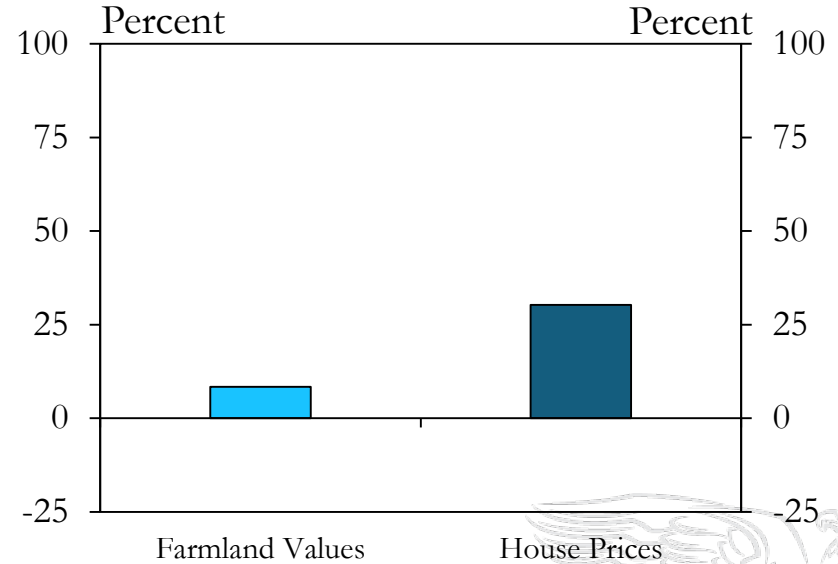
Residential real estate markets have also picked up while farmland markets have cooled.

U.S. House Prices and Farmland Values

Change from 2007–2013



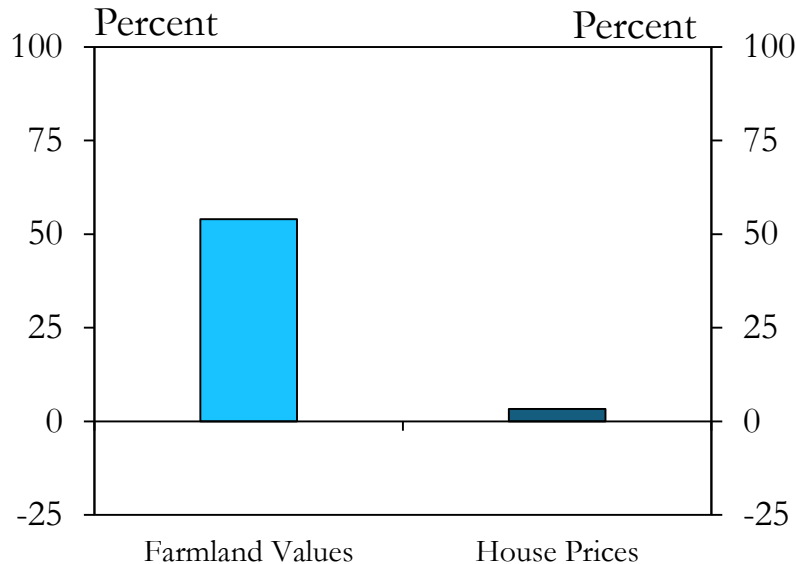
Change from 2013–2018



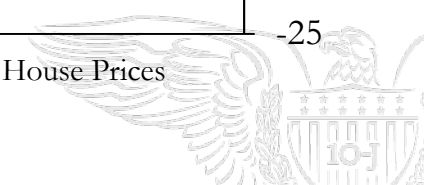
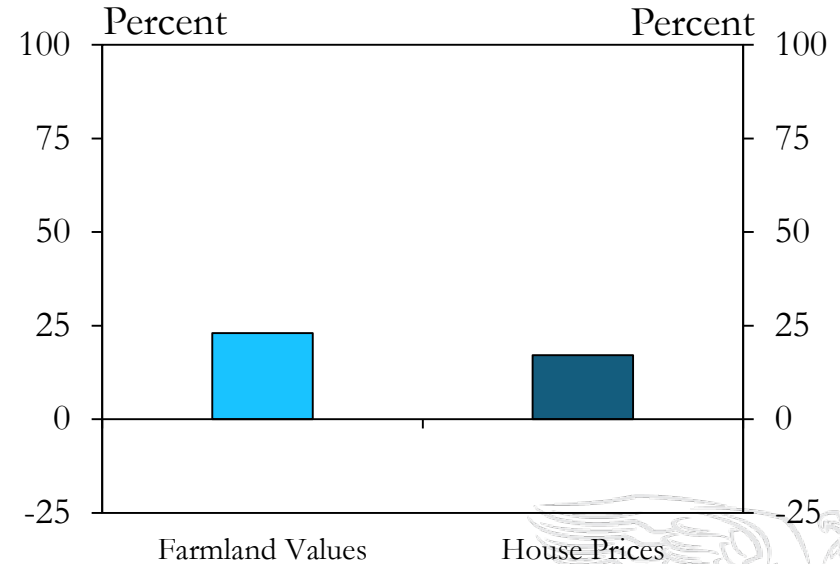
In Oklahoma, farmland values have continued to rise, but more gradually, and house prices have also gained strength.

Oklahoma House Prices and Farmland Values

Change from 2007–2013

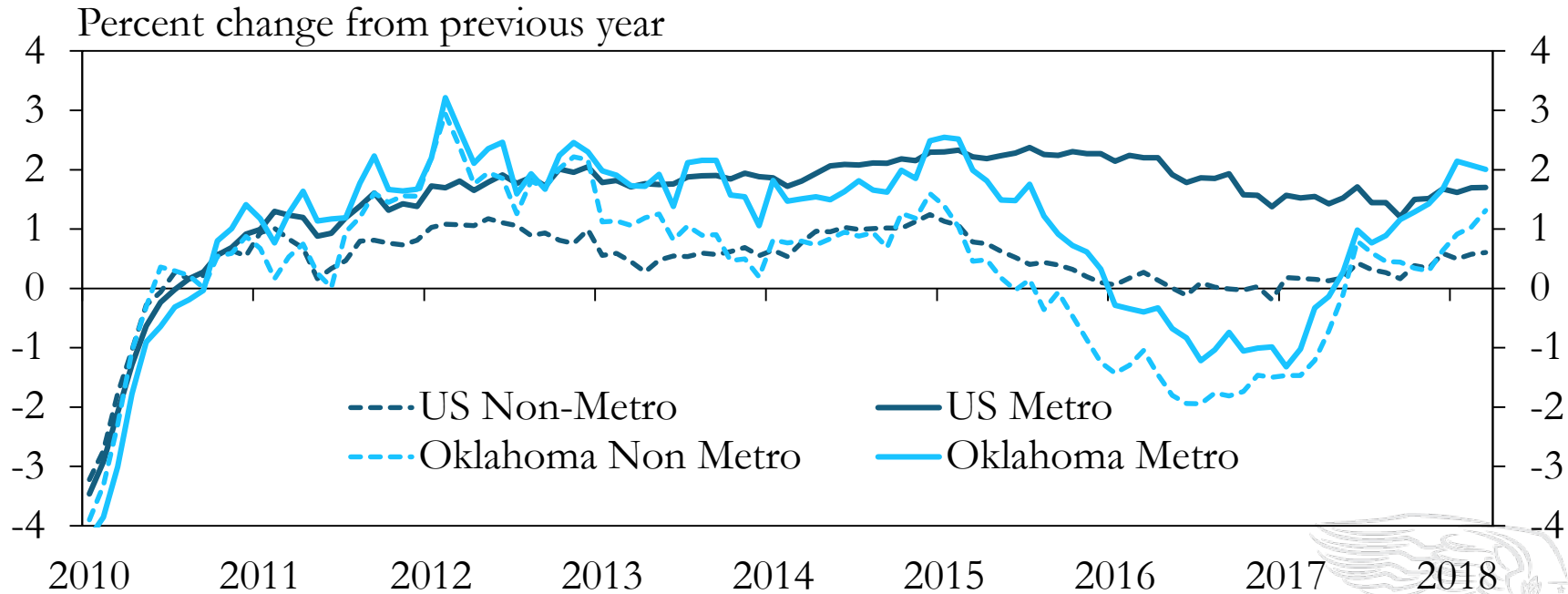


Change from 2013–2018



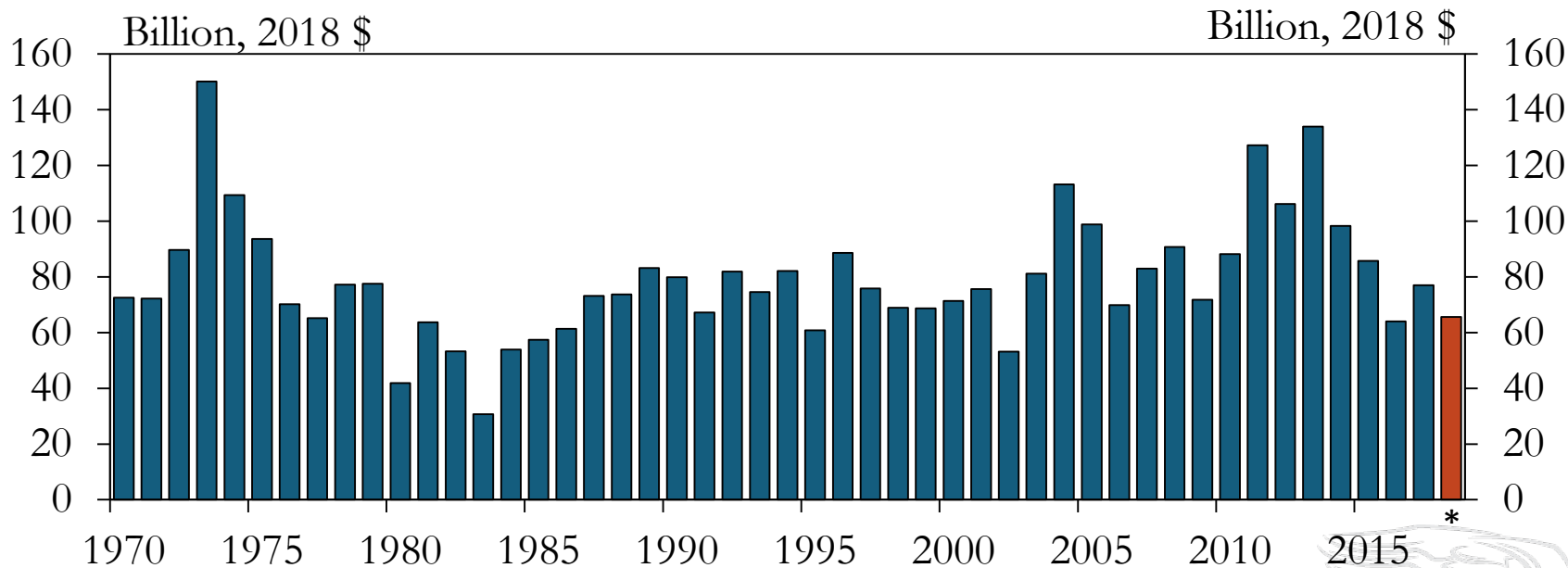
In addition, job growth in metro areas has outpaced growth in rural areas the past several years.

Employment Growth



And farm income has remained less than half of its recent peak.

U.S. Net Farm Income



* 2018 Forecast

Source: USDA



The forecast of lower farm income in 2018 was primarily driven by higher production expenses.

Farm Income Forecast Change by Component



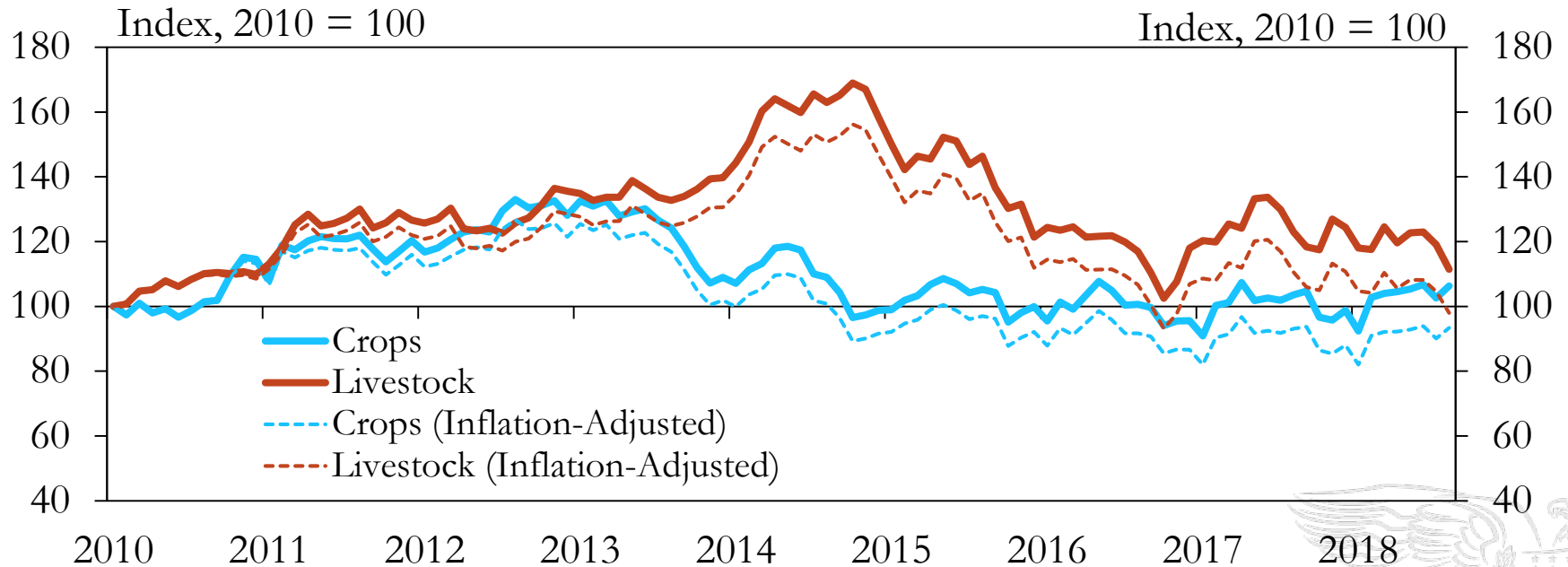
Note: Farm income estimate for 2017; forecast for 2018.

Source: USDA and staff calculations.



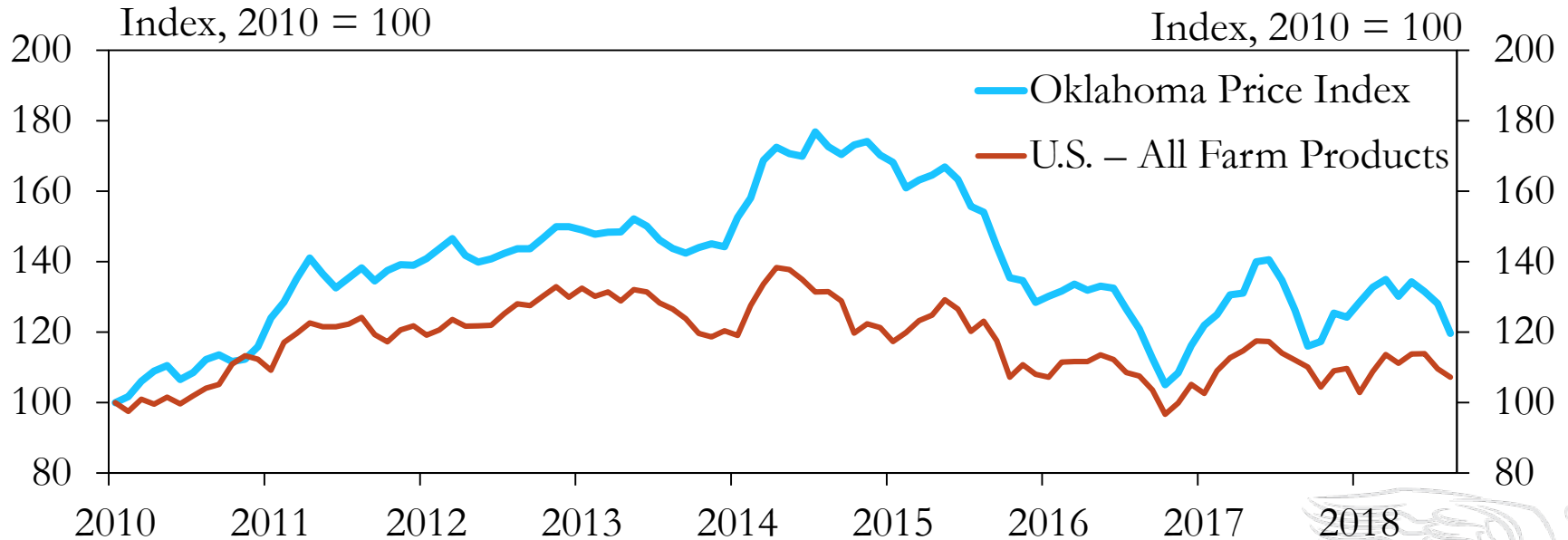
Lower commodity prices also have been a primary driver of the sustained weakness.

U.S. Agricultural Prices



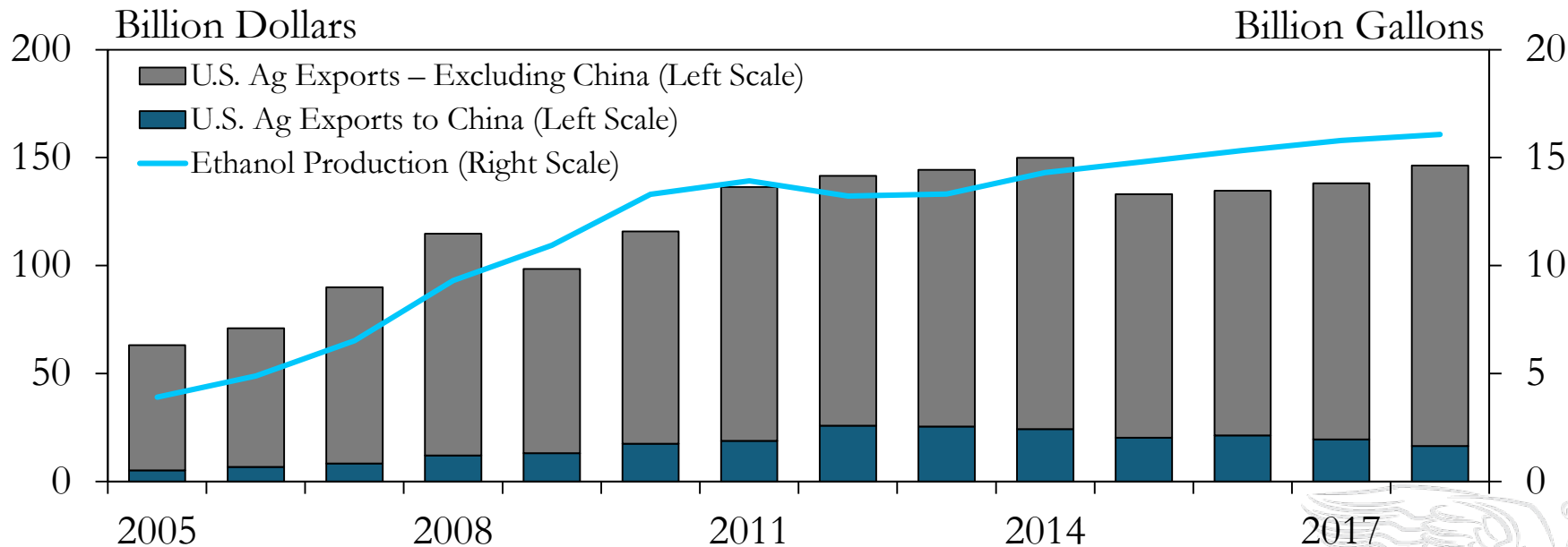
Commodity prices in Oklahoma have generally remained flat for the past two years.

Agricultural Price Indices



Despite heightened trade risks, key sources of demand for ag products have been relatively steady.

U.S. Ag Exports and Ethanol Production



Note: 2018 estimated based on changes year-to-date through June compared with the previous year.

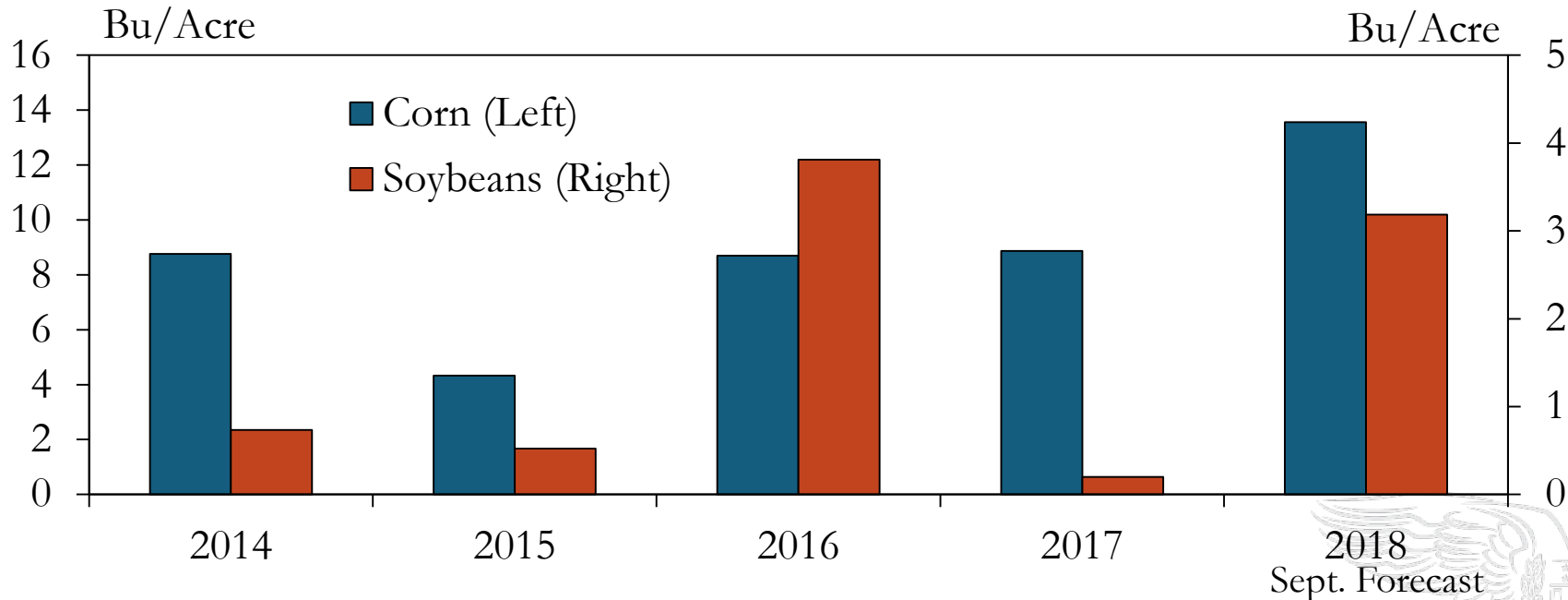
Source: USDA, U.S. EIA, and Renewable Fuels Association.



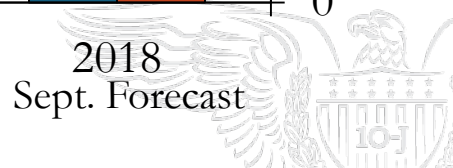
Demand has remained strong, but higher-than-expected crop production has weighed on prices.

U.S. Corn and Soybean Yields

Deviation from Trend

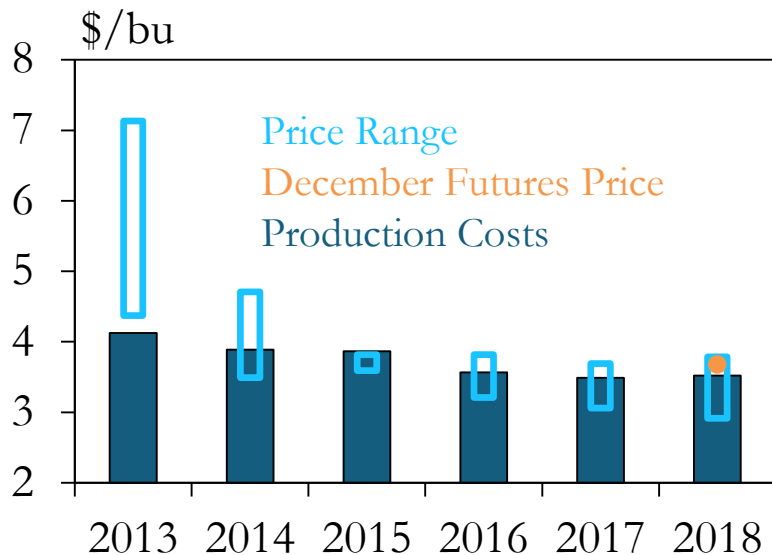


Source: USDA and staff calculations.

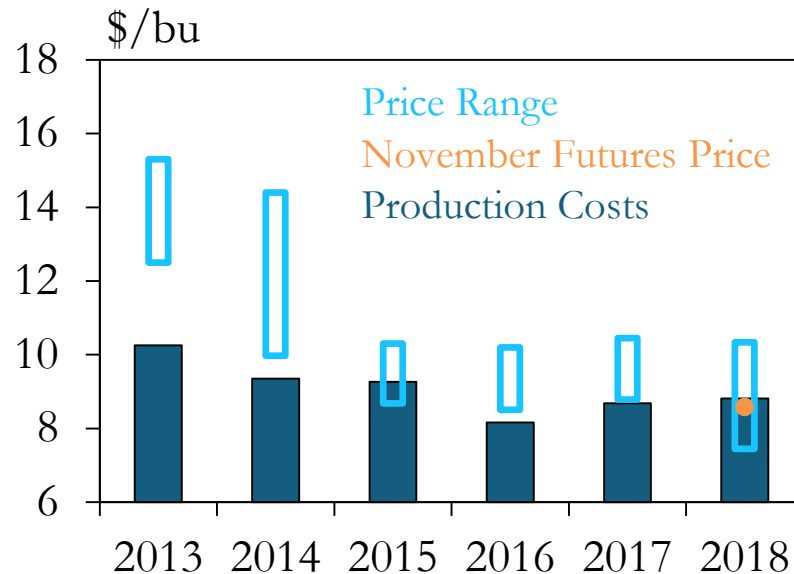


The sustained weakness in crop prices has limited profit opportunities.

Corn Profit Margins



Soybean Profit Margins



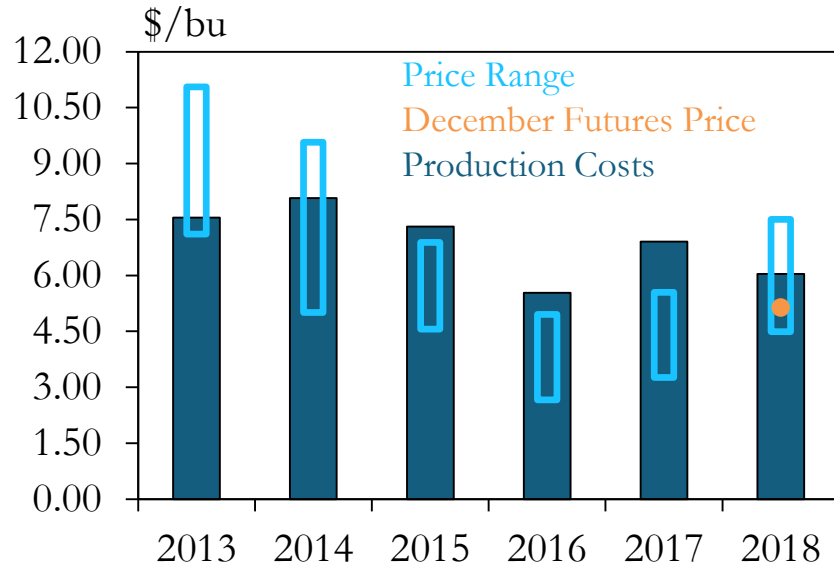
Note: Production costs are calculated from USDA's Economic Research Service (Commodity Costs and Returns) and national yield averages for each year shown, but exclude the opportunity cost of unpaid labor from the calculation.

Source: USDA, Haver Analytics and CME.

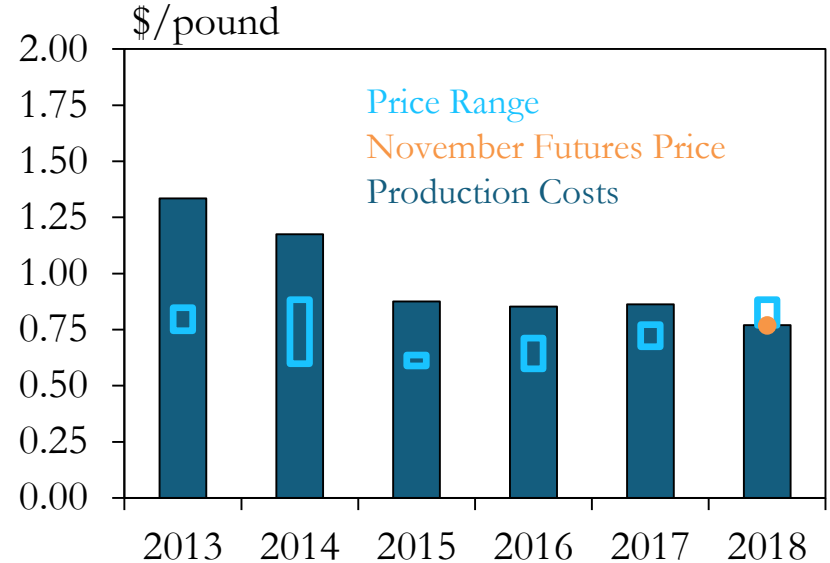


Profitability for wheat and cotton producers, however, has improved somewhat after being weak the past few years.

Wheat Profit Margins



Cotton Profit Margins



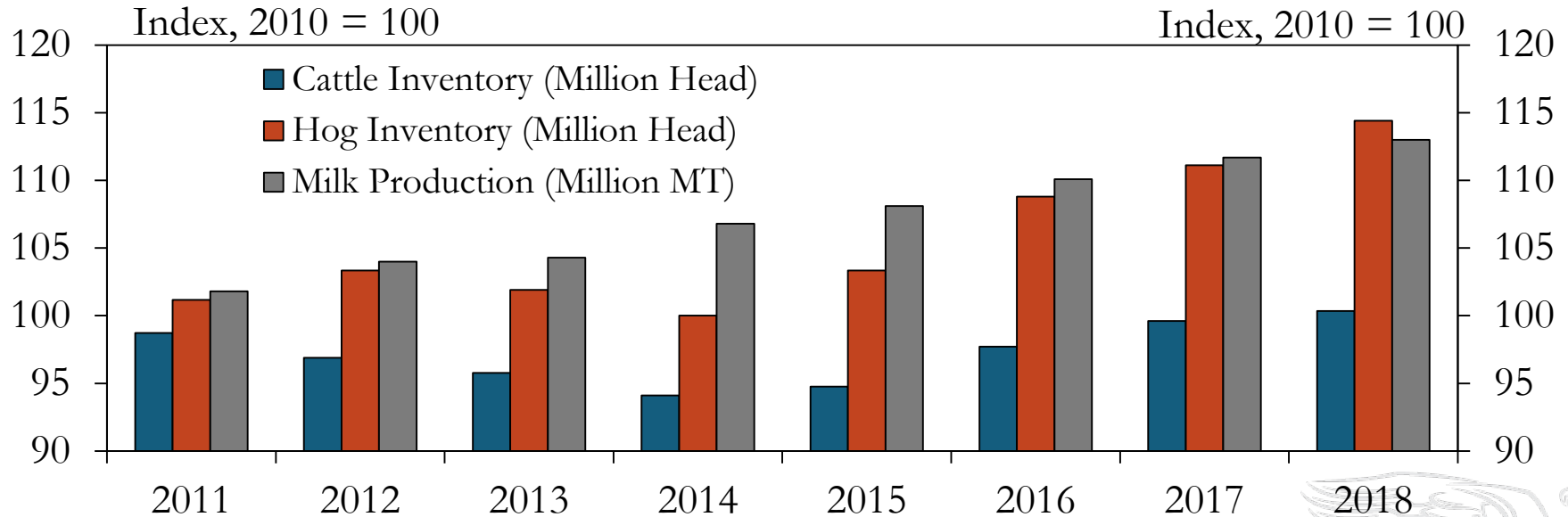
Note: Production costs are calculated from USDA's Economic Research Service (Commodity Costs and Returns) and national yield averages for each year shown, but exclude the opportunity cost of unpaid labor from the calculation.

Source: USDA, Haver Analytics and CME.



Production of other ag commodities has also increased notably.

U.S. Commodity Production and Inventories



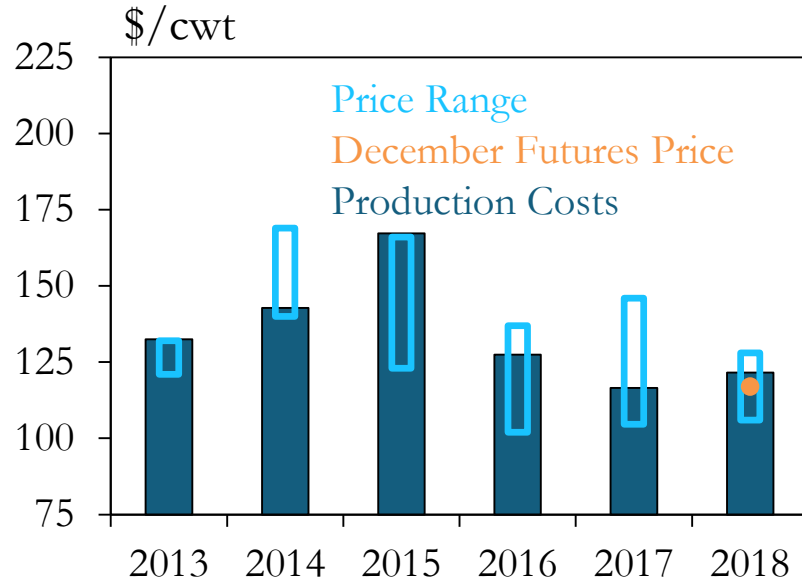
Note: Annual milk production data available through 2017.

Source: USDA.

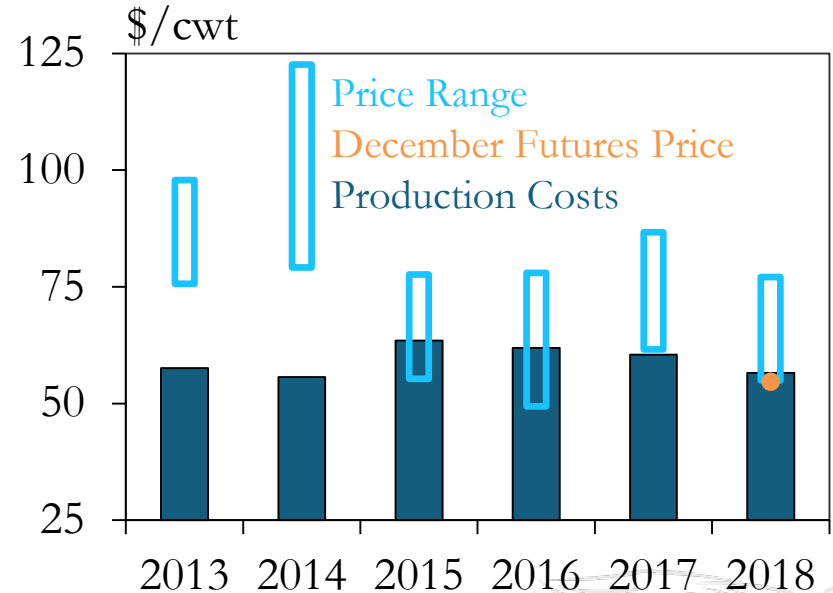


Profitability in the livestock sector has fluctuated, but generally has been positive in the hog industry.

Cattle Profit Margins



Hog Profit Margins



Note: Production costs are calculated from USDA's Economic Research Service (Commodity Costs and Returns) and national yield averages for each year shown, but exclude the opportunity cost of unpaid labor from the calculation.

Source: USDA, Haver Analytics and CME.

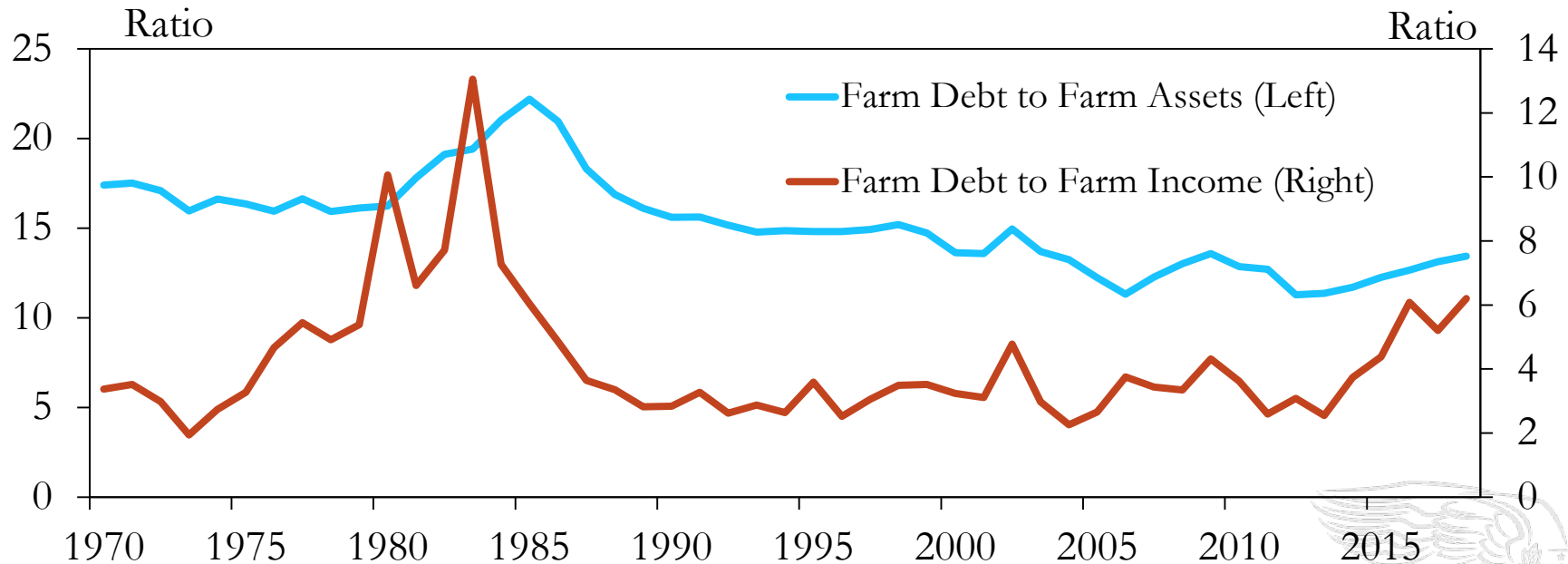


Farm Finances



With lower ag prices, liquidity has deteriorated, but measures of solvency have remained strong.

U.S. Farm Sector Solvency and Liquidity Metrics



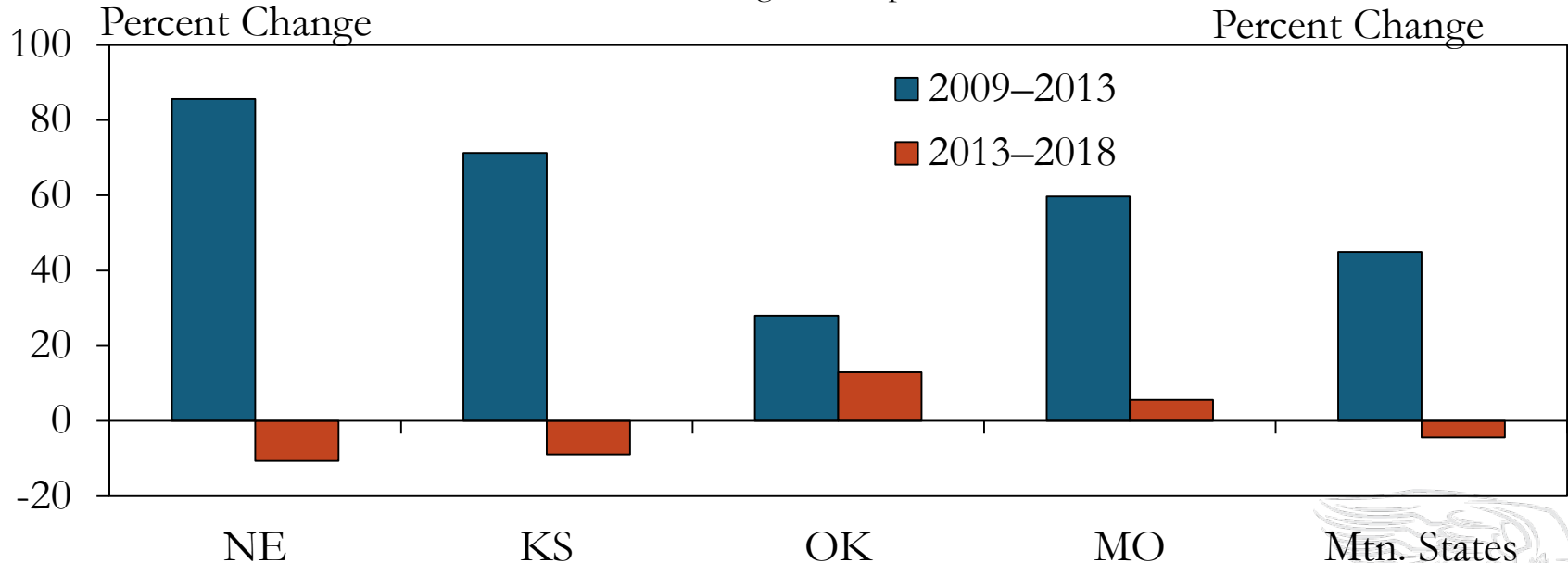
Source: USDA.



Although farmland values have declined in most states, the decreases have been quite modest.

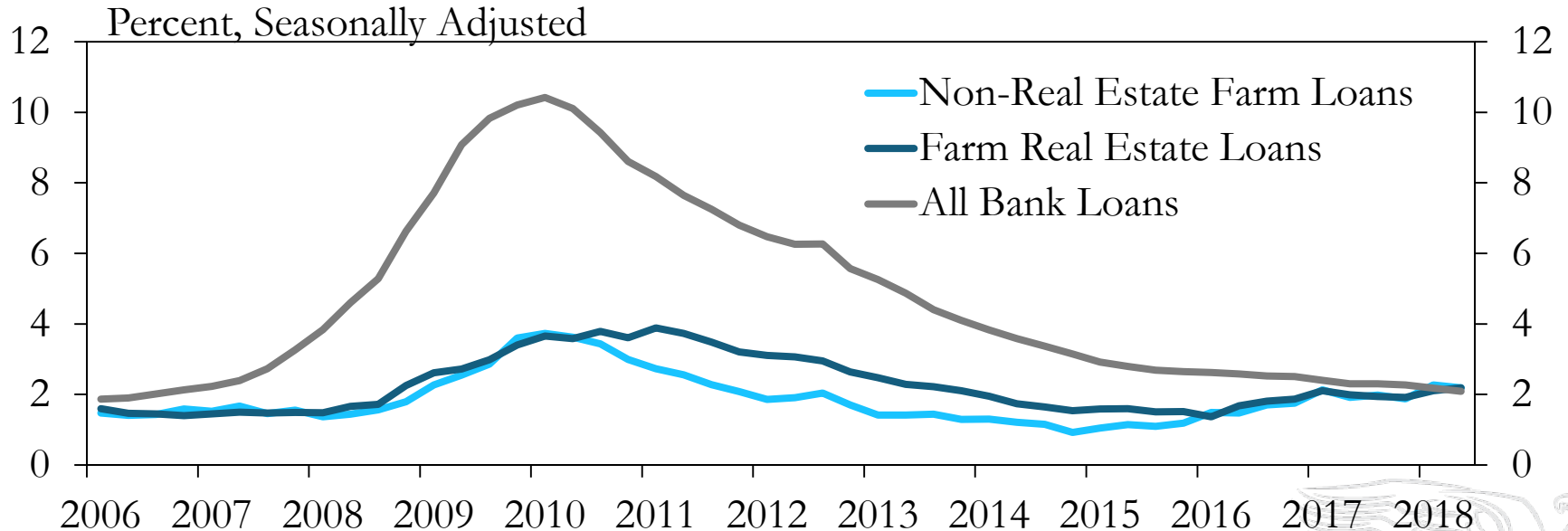
KC Fed Region - Farmland Values

Non-irrigated Cropland



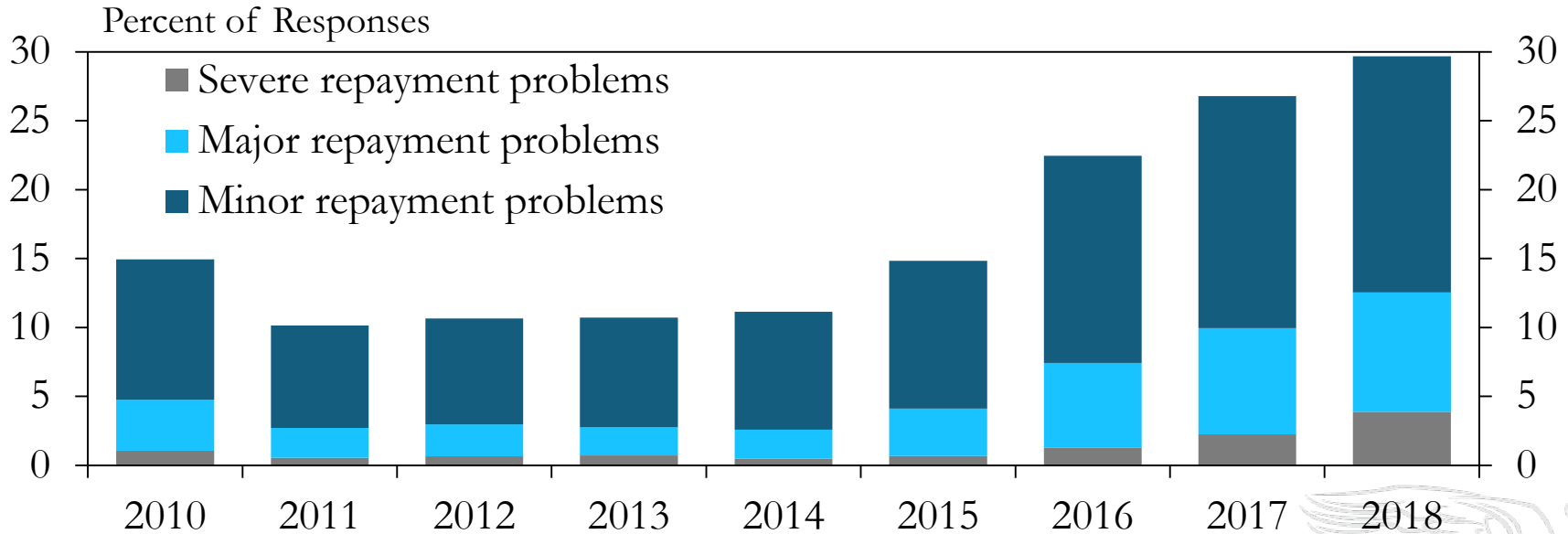
And although repayment challenges have increased over the past few years, delinquencies remain low.

Commercial Bank Delinquencies



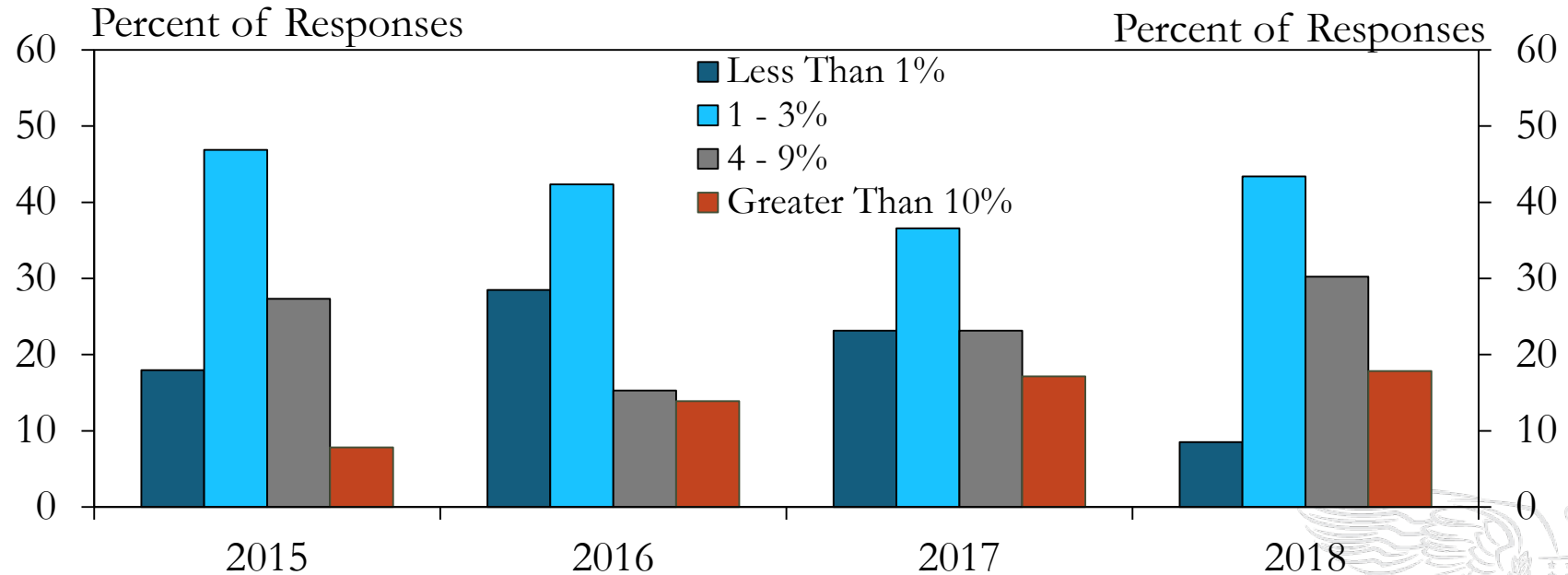
Still, loan repayment problems in the farm sector have continued to build.

KC Fed District Loan Repayment Problems



And an increasing number of applications for farm operating loans has been denied at agricultural banks.

Denials of Farm Operating Loan Applications



Source: Federal Reserve Bank of Kansas City.

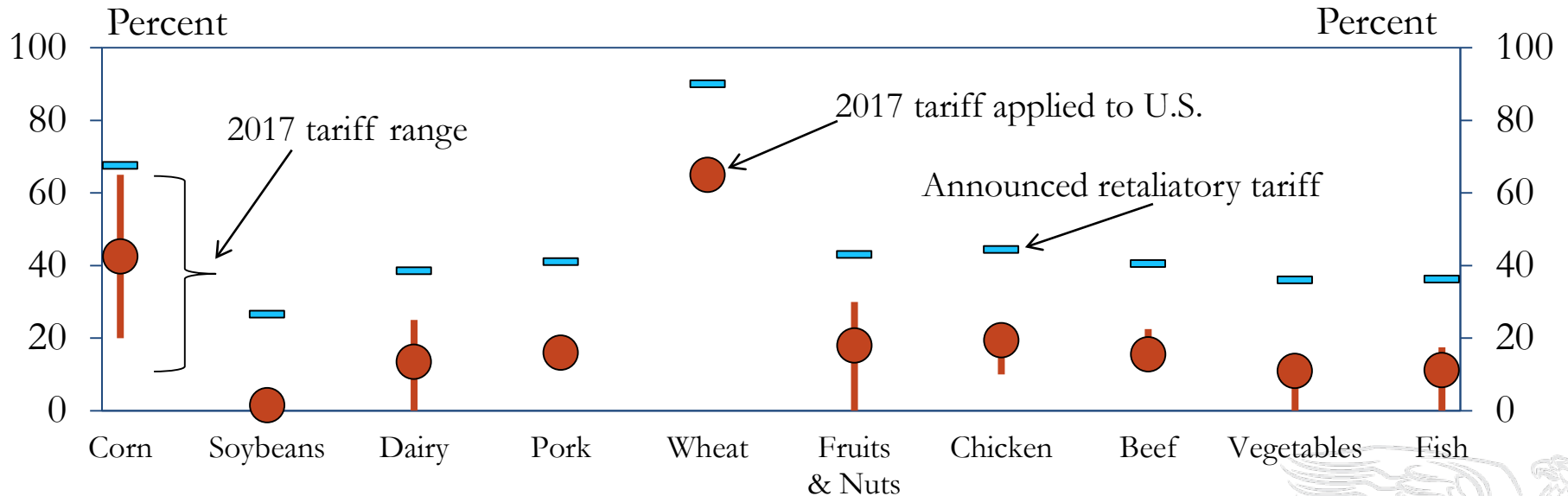


Agricultural Trade



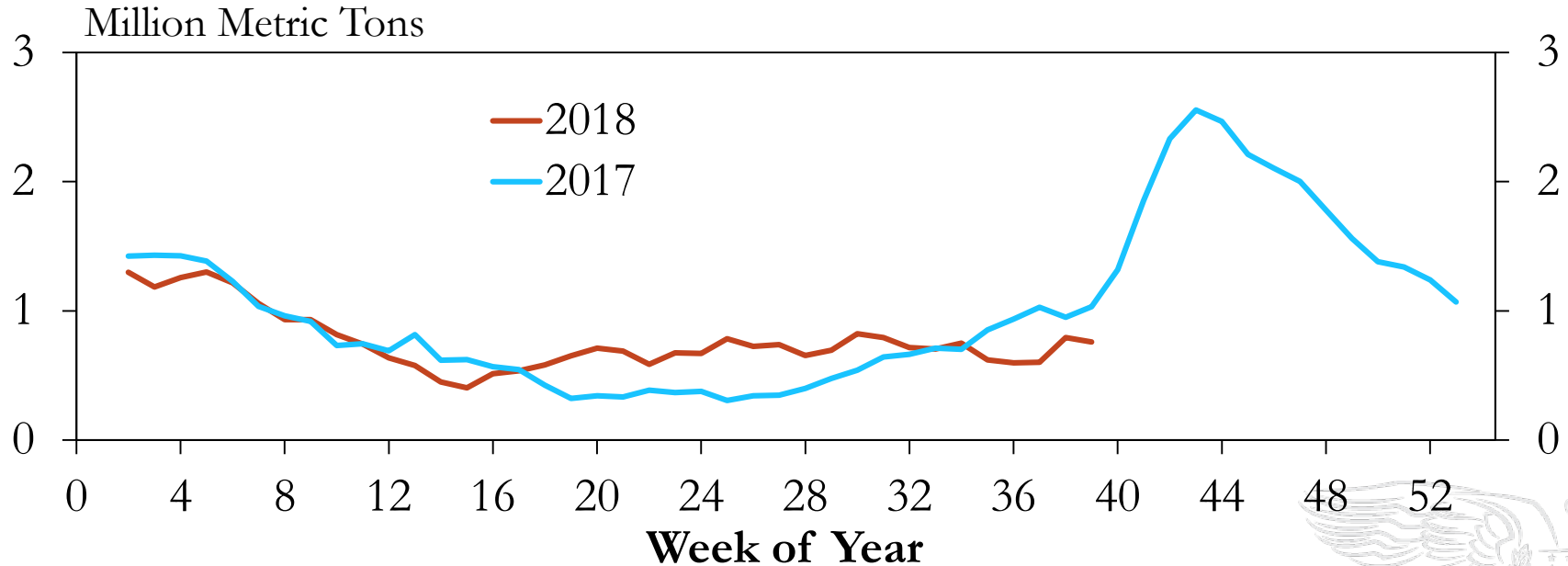
Trade disputes have elevated the risk for the agricultural sector in 2018.

Most-Favored Nation Tariff Rates: China



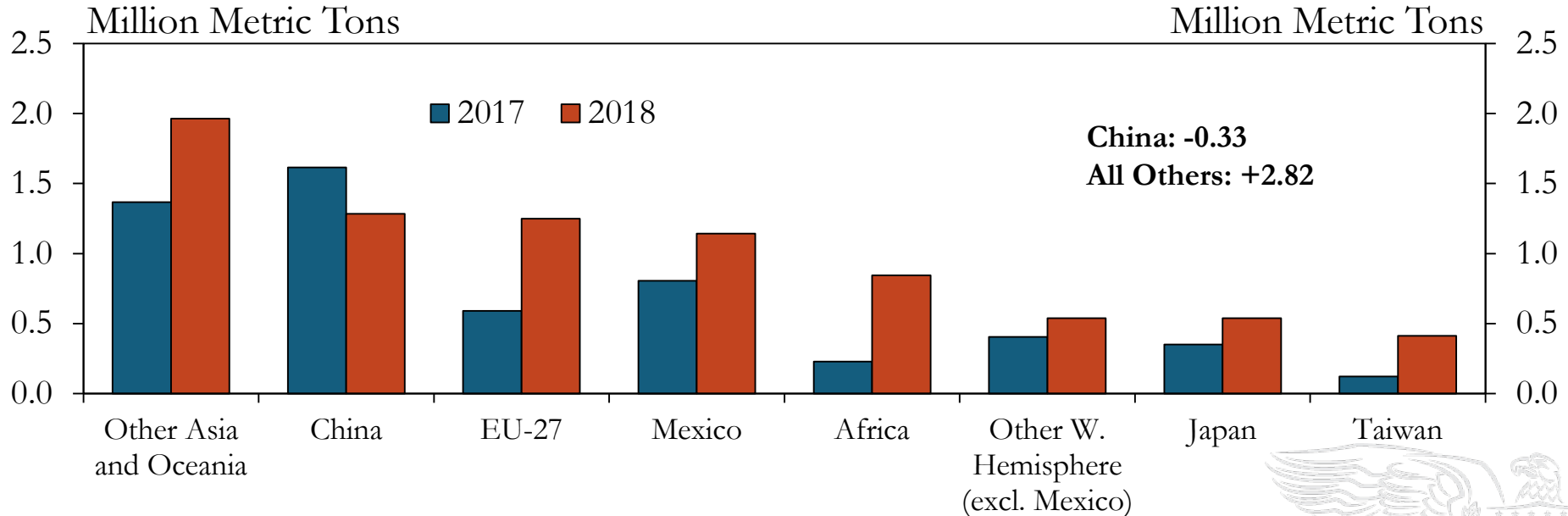
Soybean exports were strong earlier in the year, but the strength has started to become more questionable.

U.S. Soybean Exports



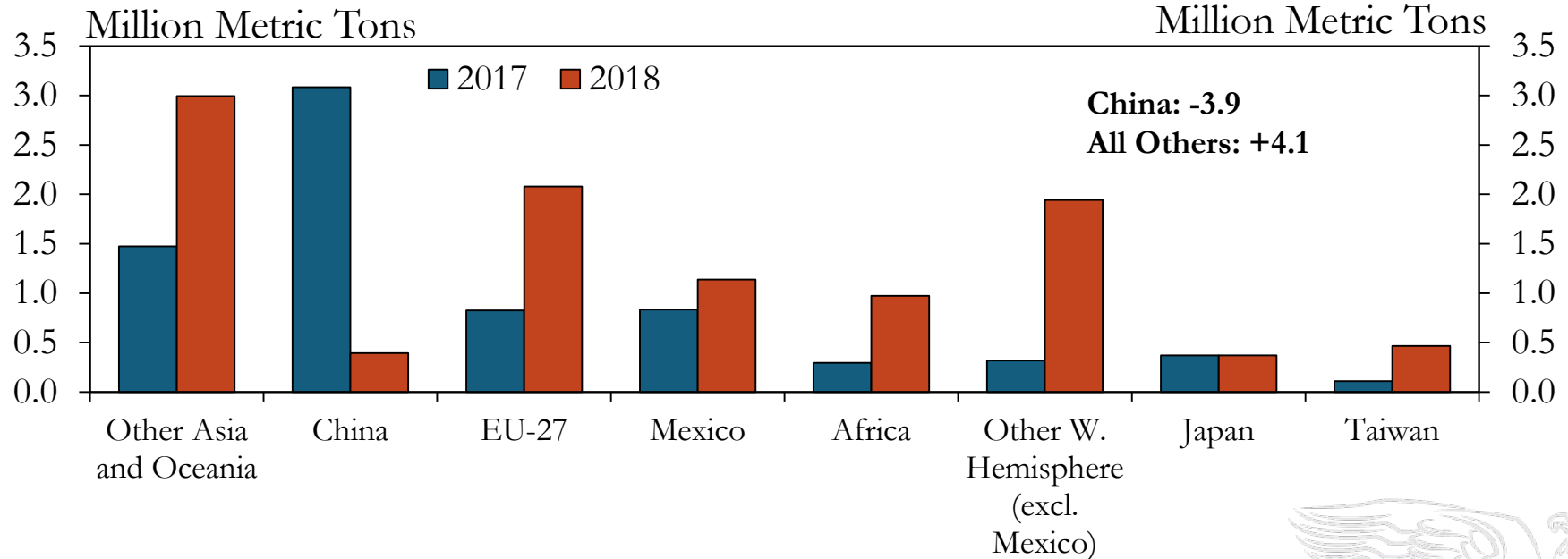
Earlier in the year, export strength was driven by demand from regions outside of China.

U.S. Soybean Exports, Q2



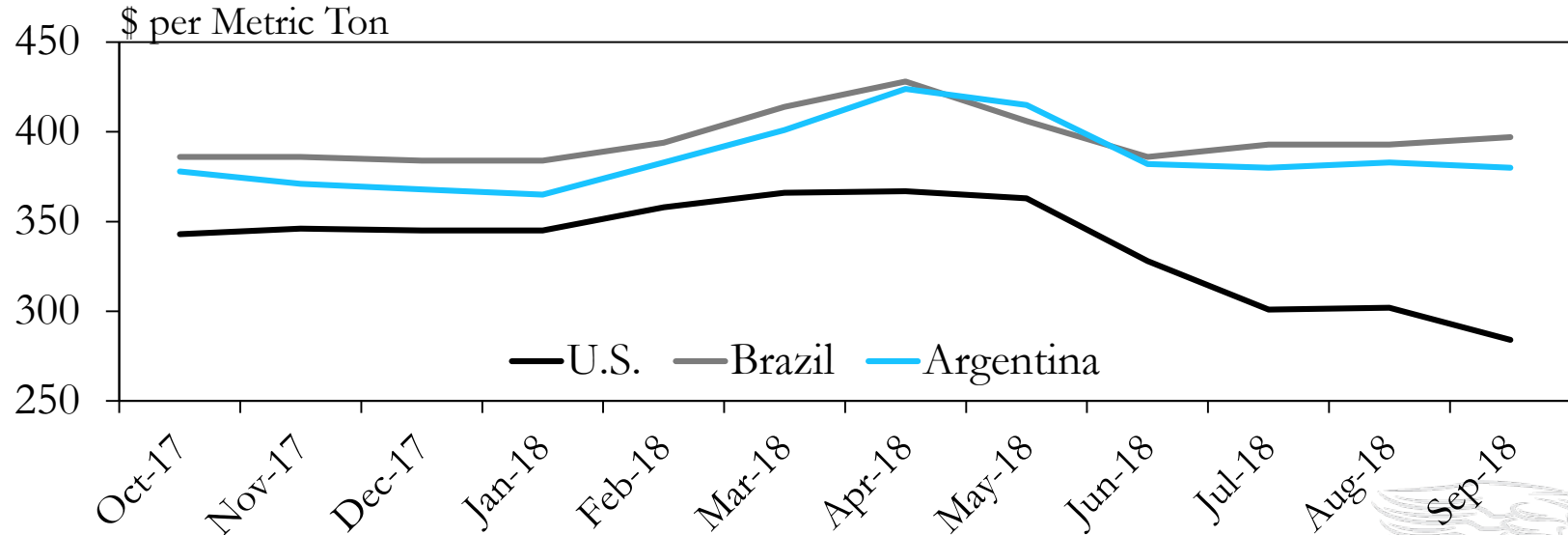
Recently, however, U.S. soybean exports to China have dropped sharply.

U.S. Soybean Exports, Q3



And the spread between soybean prices in the U.S. and South America has widened significantly.

U.S. and South America Soybean Prices

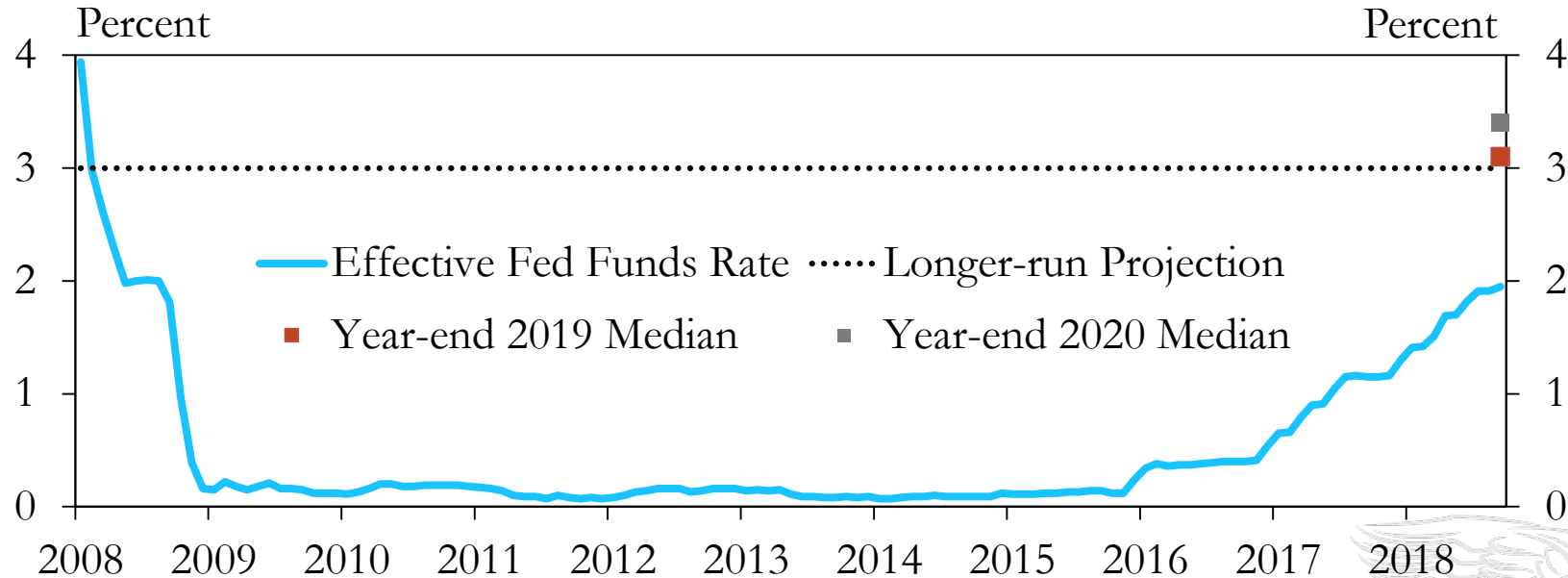


Monetary Policy and Interest Rates



Monetary policy has continued to adjust.

Effective Federal Funds Rate

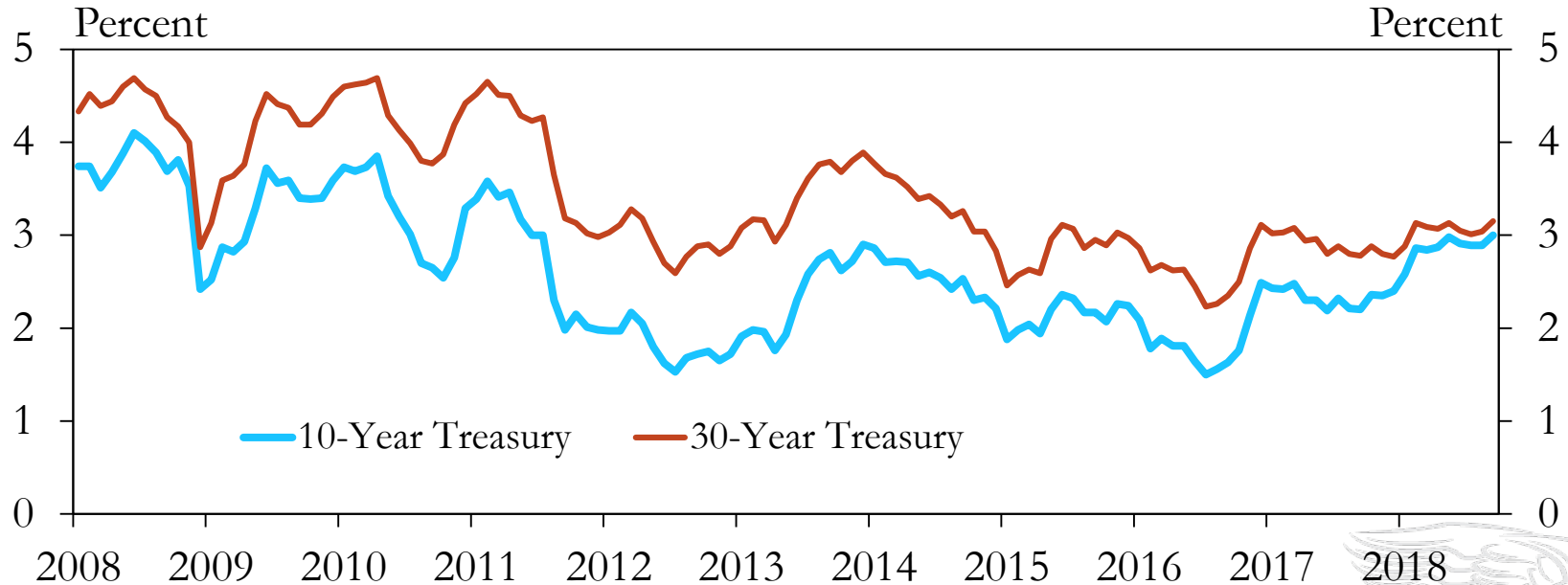


Source: Federal Reserve Board of Governors and Haver Analytics.



Longer-term interest rates have also risen from recent years' lows.

Yield on U.S. Treasury Securities

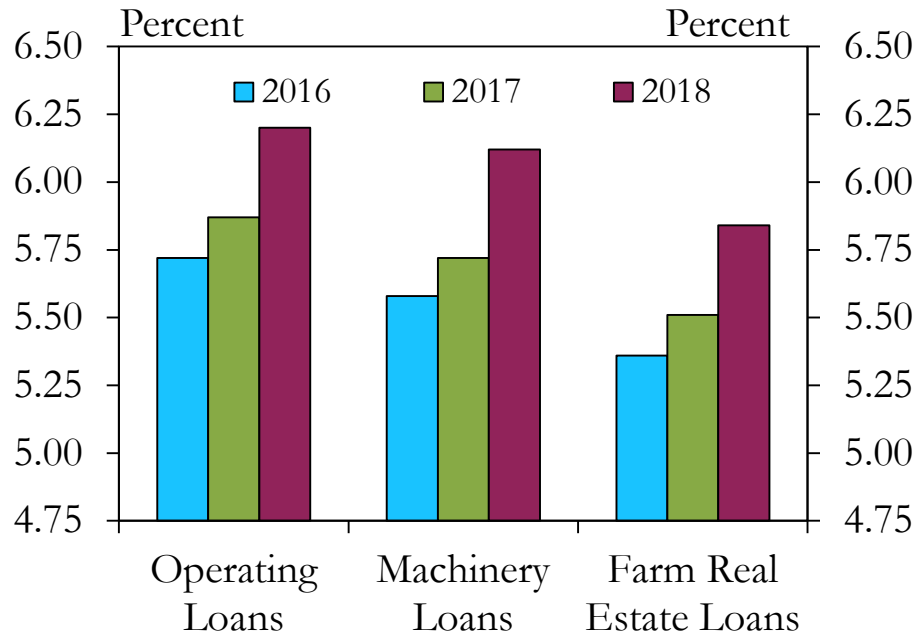


Source: Federal Reserve Board of Governors and Haver Analytics.

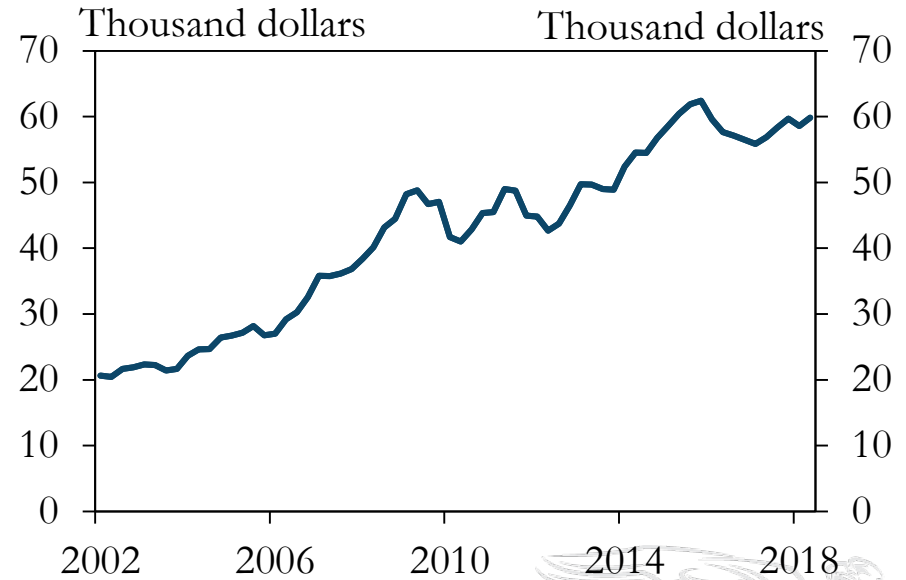


Interest rates on ag loans have edged higher and average loan sizes have continued to increase.

Fixed Interest Rates



Average Size of Farm Operating Loans

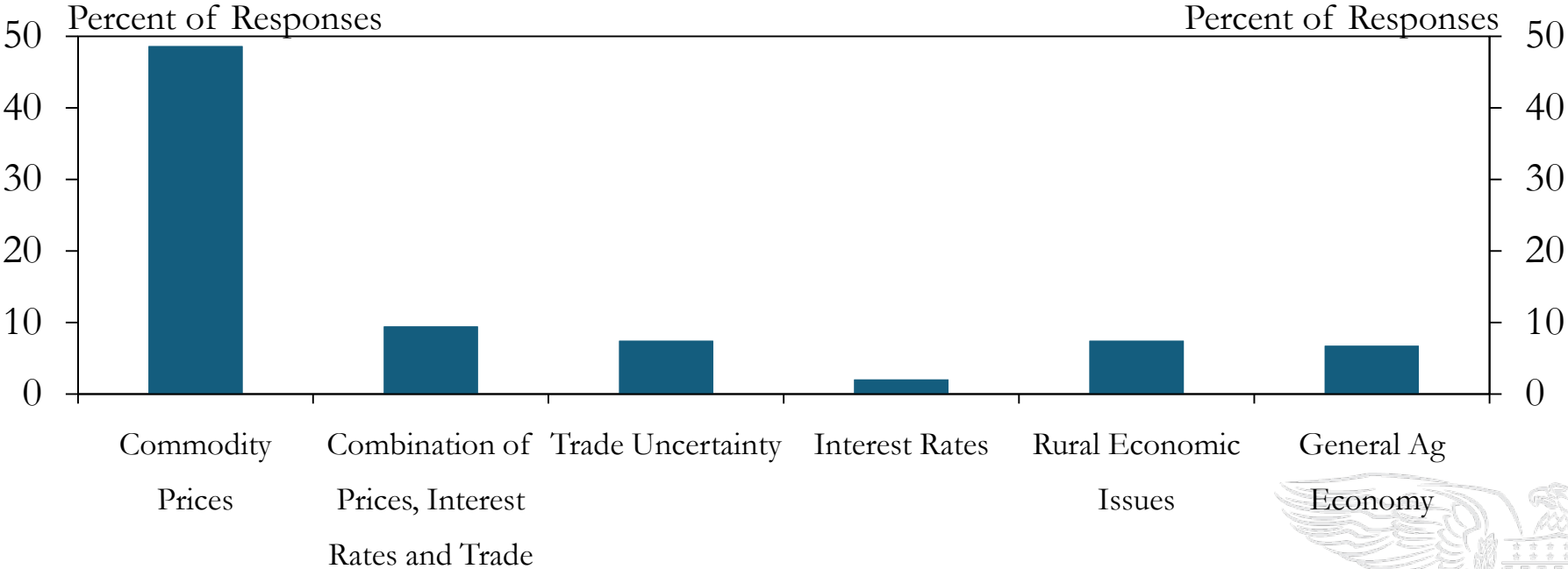


Source: Federal Reserve Bank of Kansas City.



Most agricultural lenders, however, highlight developments in commodity prices as the primary concern for rural areas.

Potential Barriers to Regional Economic Growth



Source: Federal Reserve Bank of Kansas City.



Concluding Remarks

- National economic indicators remain relatively strong, driven by growth in metro areas, consumer spending, and the services sector.
- The agricultural sector remains one of the weakest in the region as commodity prices have dropped recently alongside trade disputes.
- The near-term test for U.S. agriculture is beginning now, after the fall harvest. Risks will mount if China maintains its reduced pace of soybean imports from the U.S., and if planting in South America accelerates.
 - Uncertainty around the next Farm Bill also remains.



Questions?

Nate Kauffman

Omaha Branch Executive and Economist
Federal Reserve Bank of Kansas City – Omaha Branch

