

Ag Finance Conditions



FEDERAL RESERVE BANK *of* KANSAS CITY

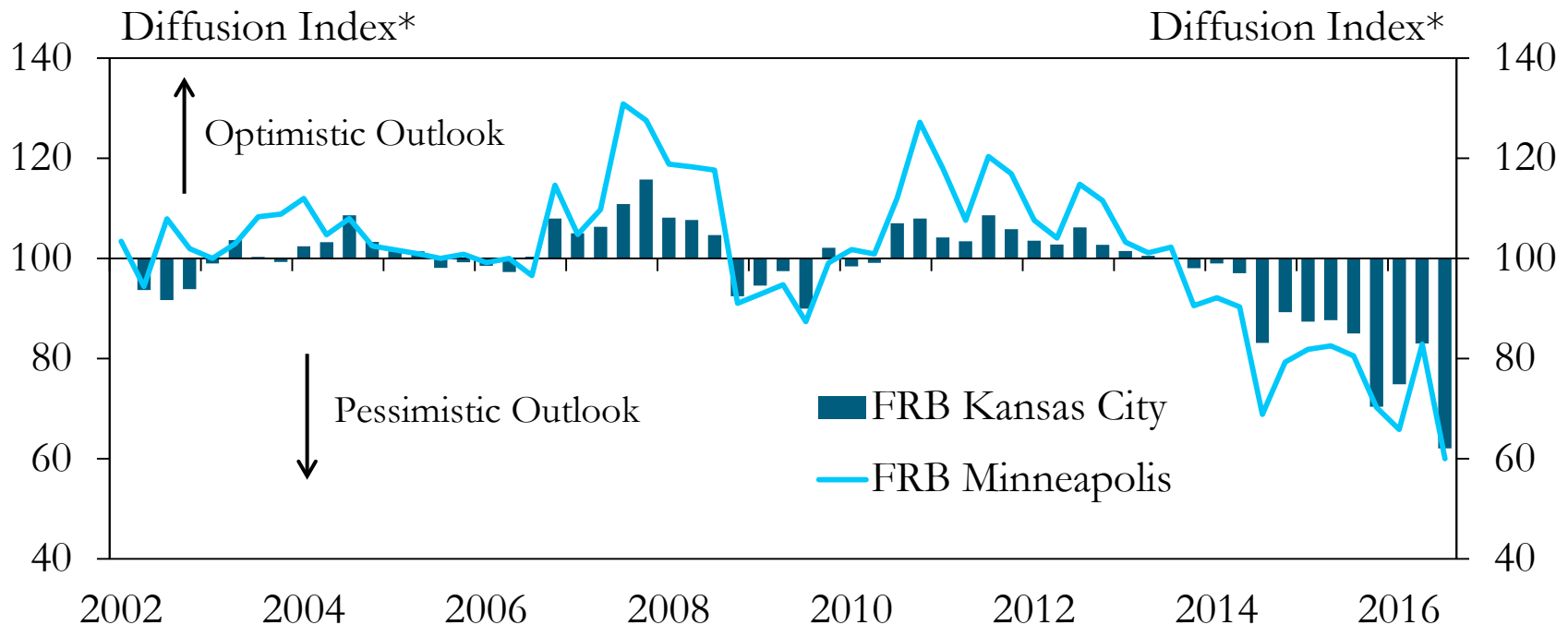
November 29, 2016

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Federal Reserve Bank of Kansas City

The outlook for ag finance has become increasingly pessimistic through the downturn.

Agricultural Credit Conditions Outlook Index



* The index shows the difference between the percentage of bankers who expected all indicators (farm income, loan repayment rate, and farmland values) to increase and the percentage of bankers who expected all three indicators to decrease in the next quarter.
Source: Federal Reserve Bank of Kansas City



Outlook Themes

- Ag Borrowers: Low commodity prices, poor cash flow, and reduced working capital.
- Ag Lenders: Heightened loan demand and slower repayment rates, but delinquencies still low.
- Liquidity challenges have not led to widespread solvency problems. What might 2020 look like?

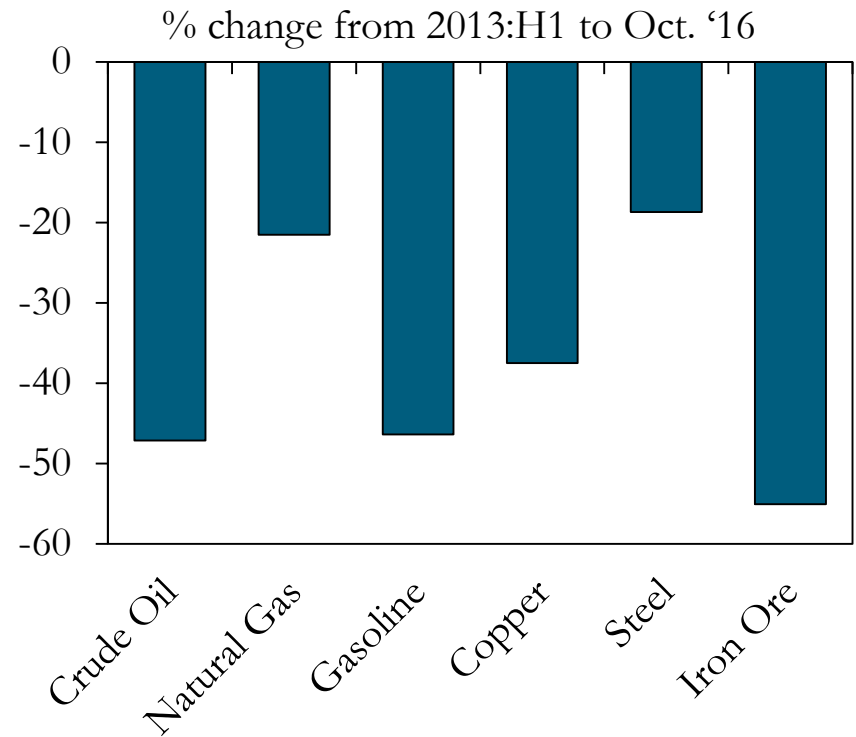
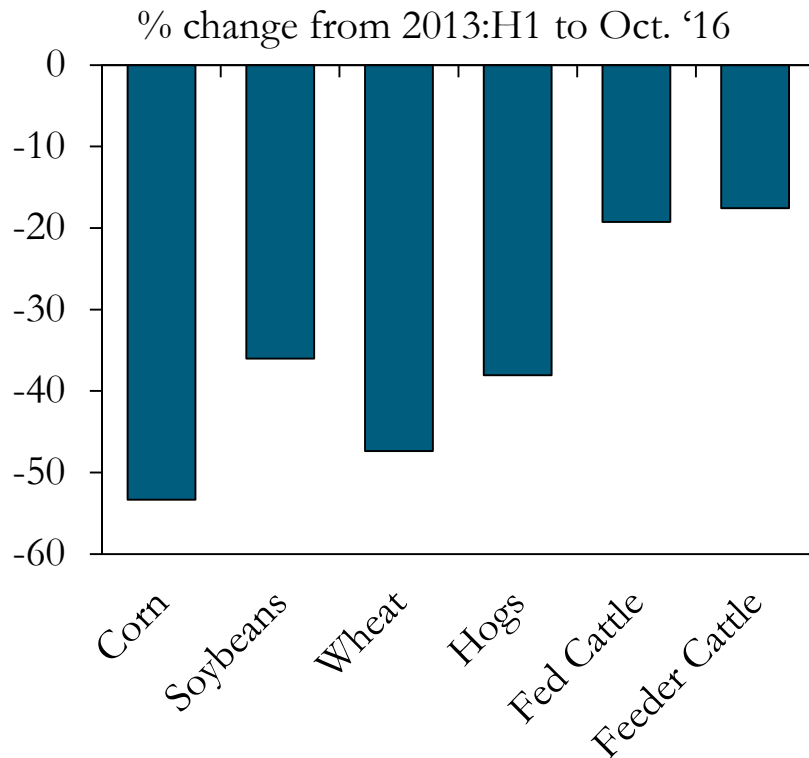


Farm Borrower Conditions



Commodity prices, not just in ag, have fallen sharply since 2013.

Change in Commodity Prices since 2013

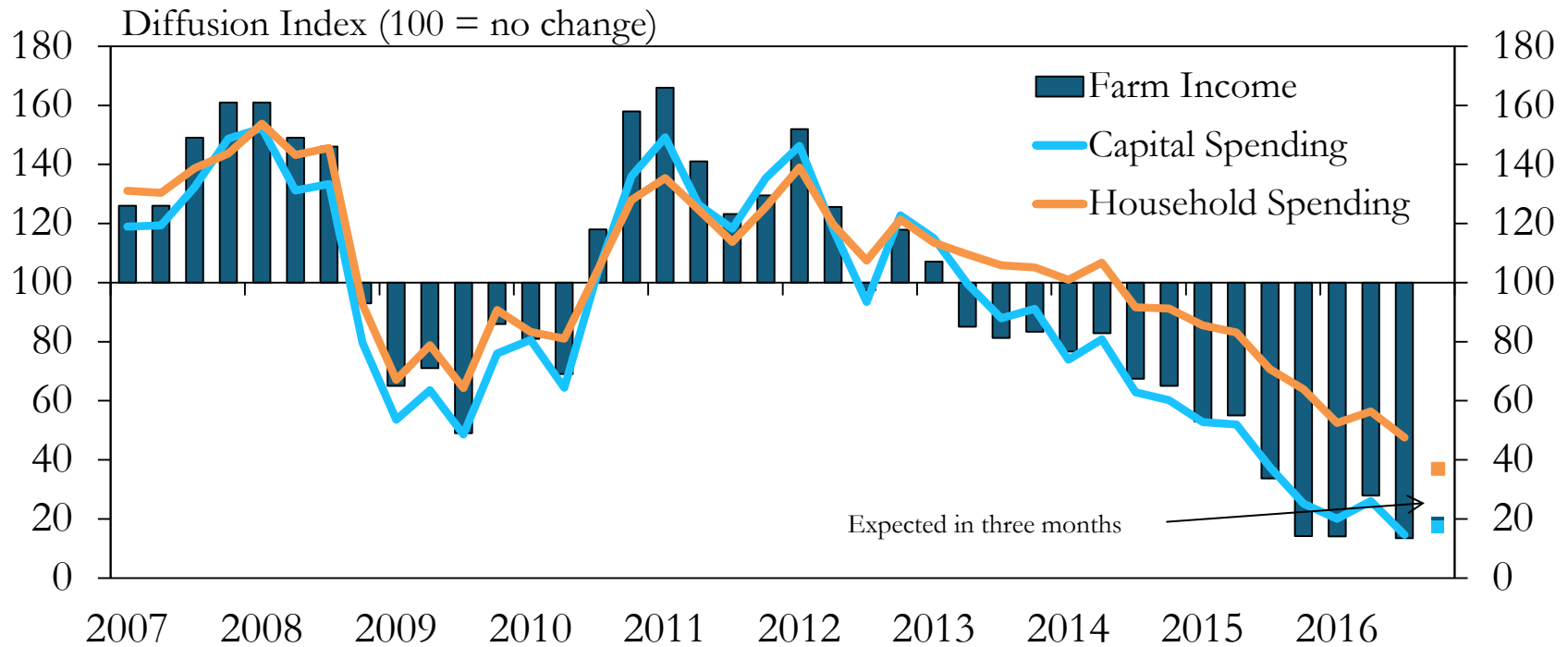


Sources: *Wall Street Journal* and Haver Analytics.



Farm income and farm spending have declined at an accelerating pace.

Farm Income and Spending KC Fed District



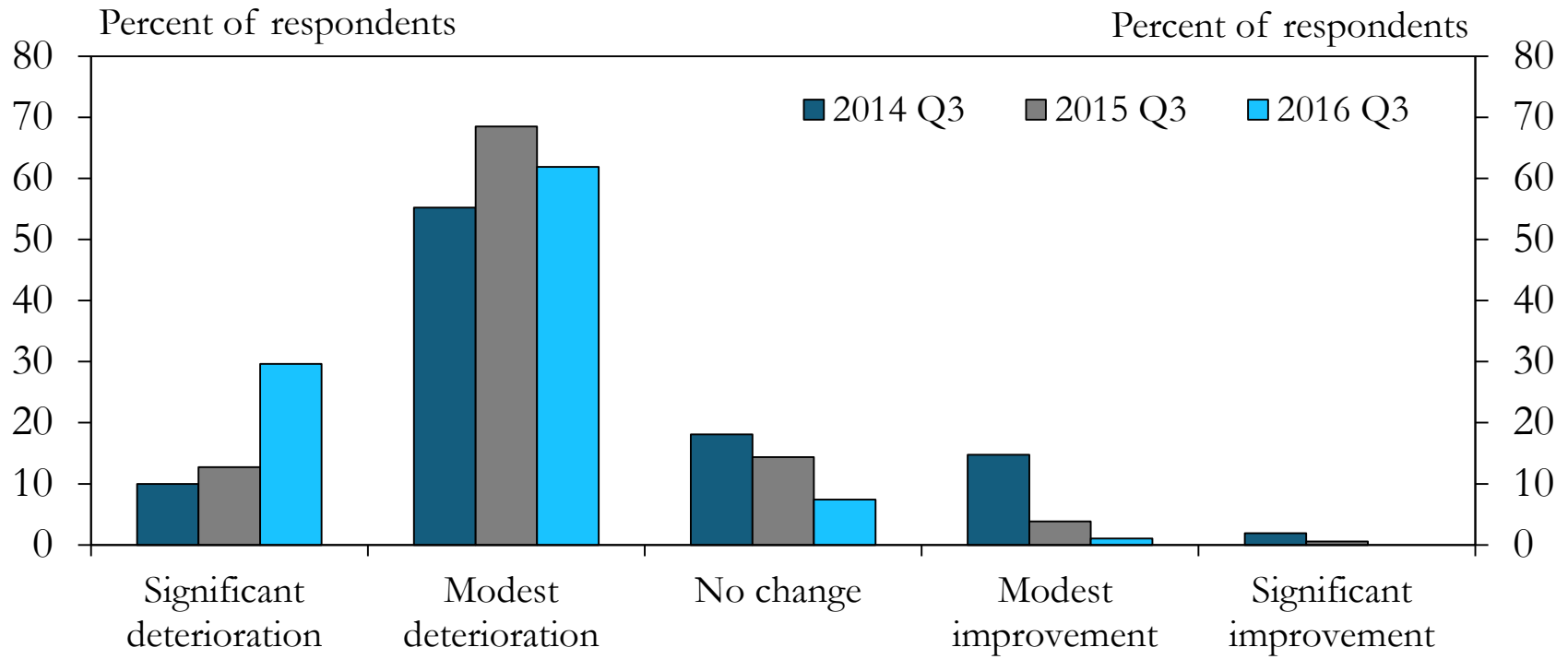
Source: Federal Reserve Bank of Kansas City

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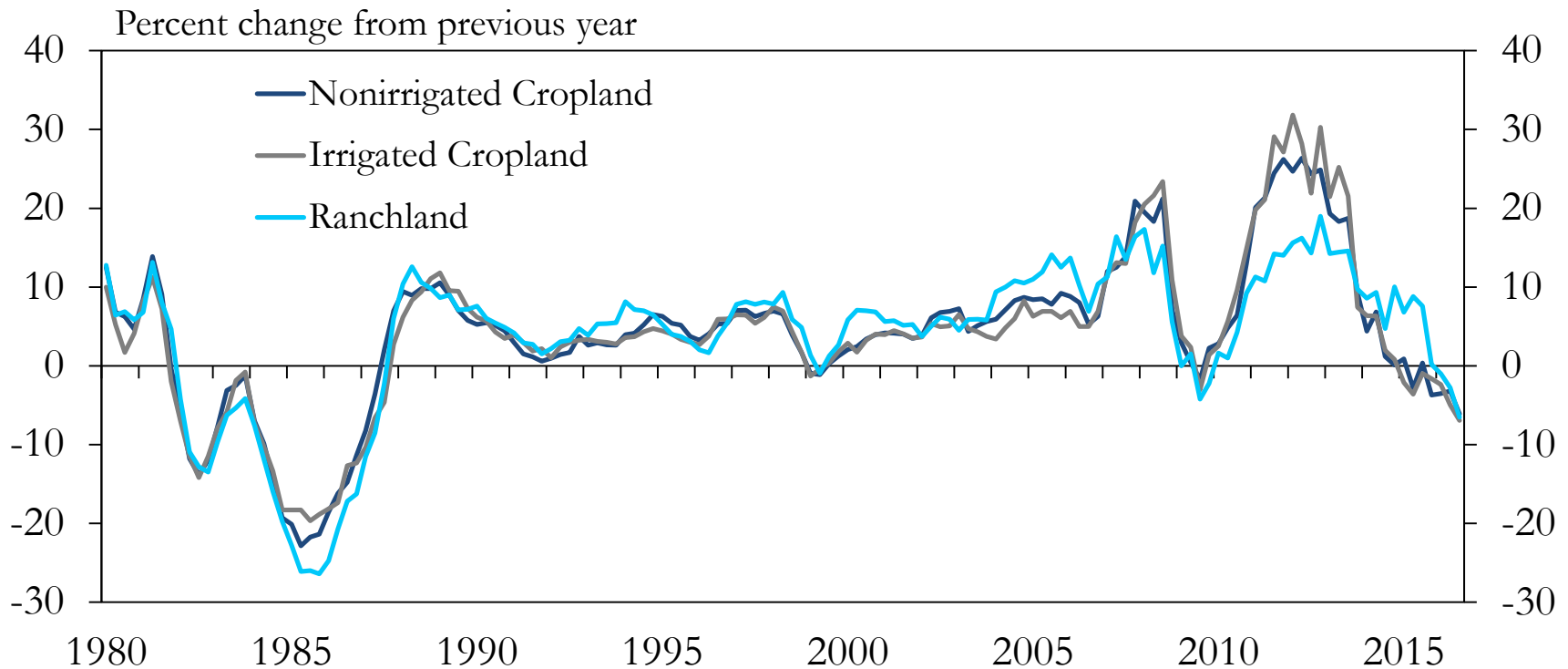
Liquidity has deteriorated more notably in 2016.

Change in Level of Working Capital Crop Producers: KC Fed District



Land values have moderated slightly, but the strength has been a significant silver lining in the downturn.

Farmland Values – KC Fed District



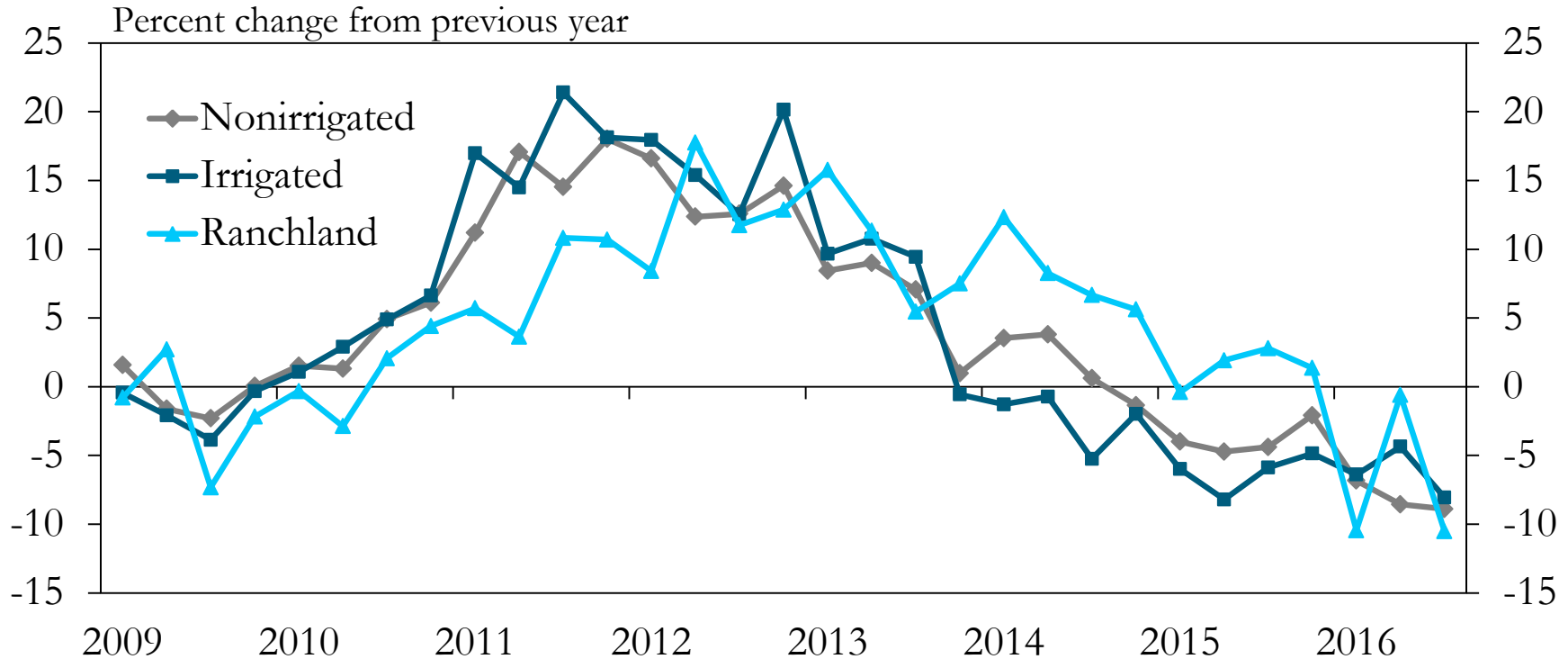
Source: Federal Reserve Bank of Kansas City

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Cash rents have softened somewhat,
which has provided some cost relief.

Cash Rents – KC Fed District



Source: Federal Reserve Bank of Kansas City

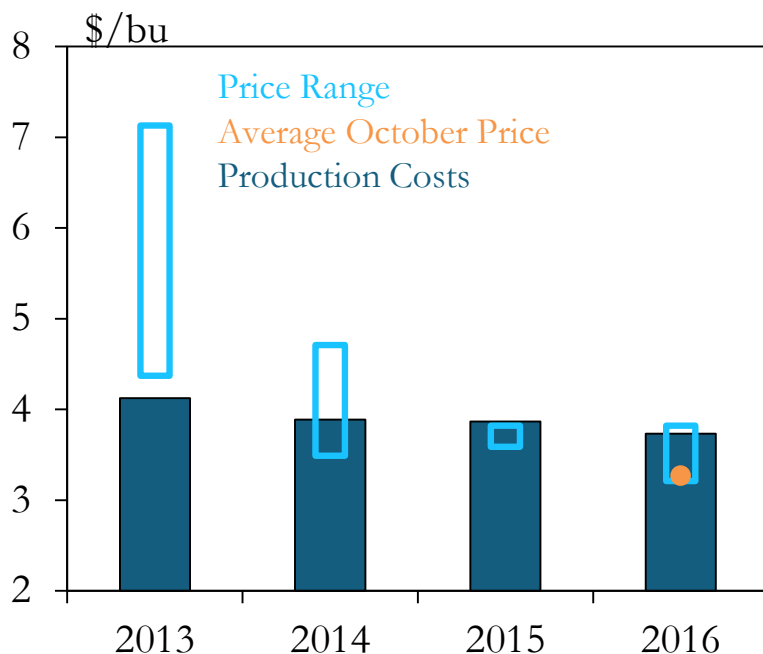
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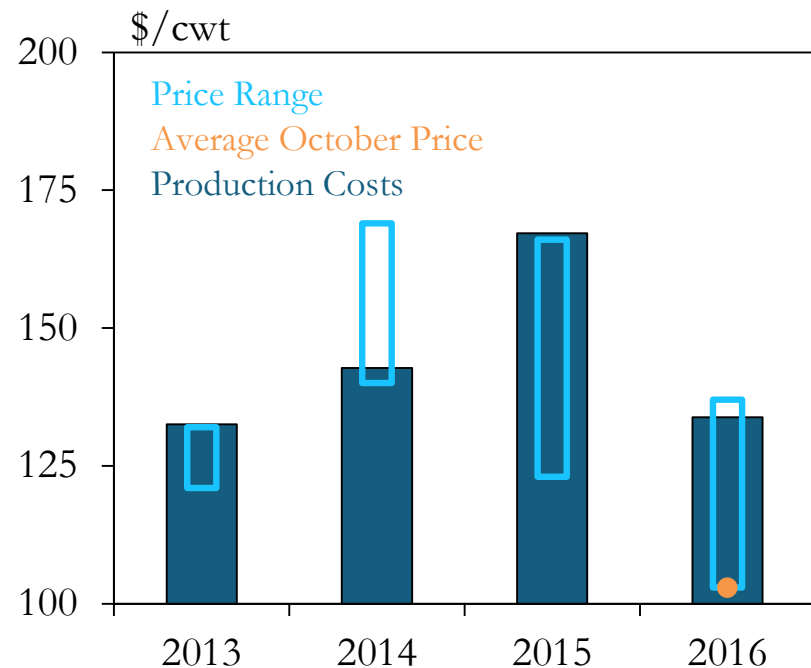
But profit margins remain poor in both the crop and livestock sector.

U.S. Crop Sector Profit Margins

Corn



Cattle



Sources: USDA and Haver Analytics.

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.

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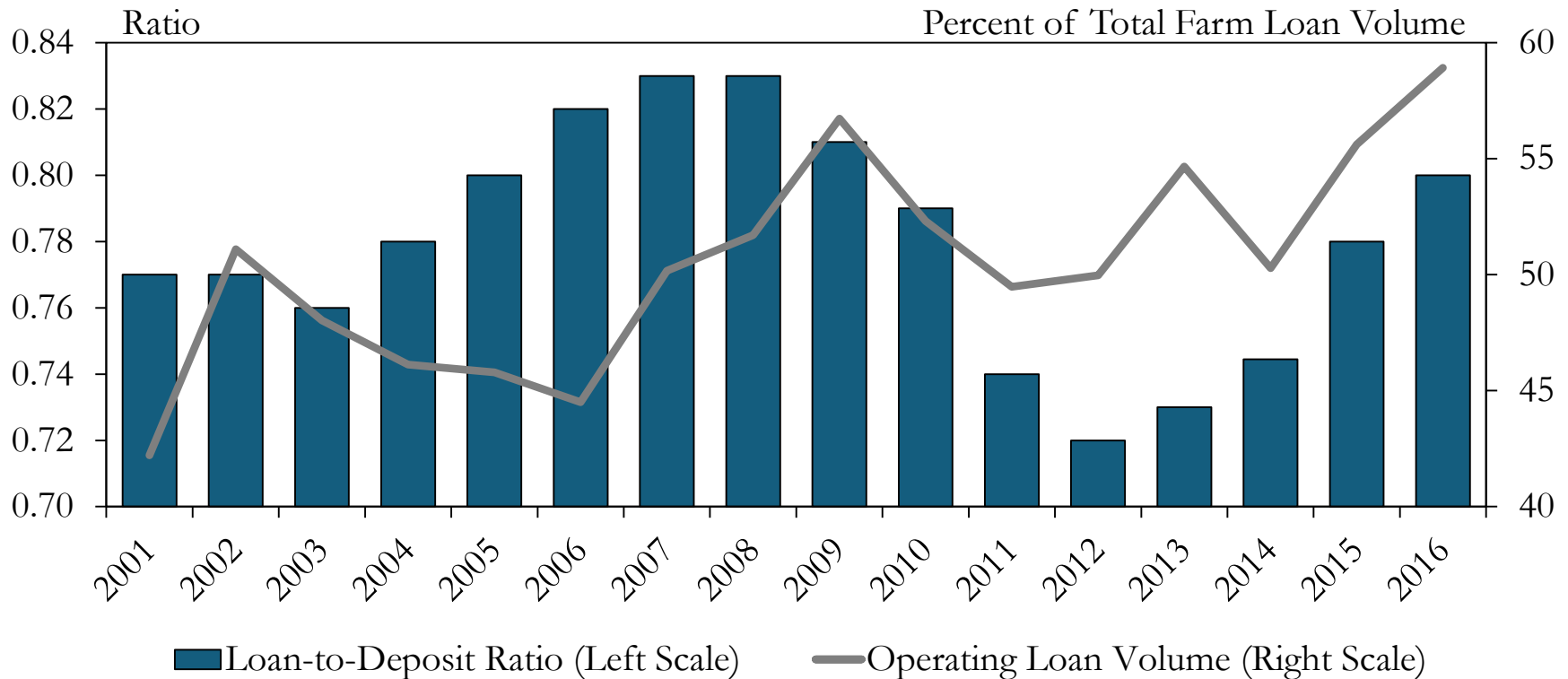


Ag Lending Conditions



Reduced cash flow has sparked persistent increases in demand for financing.

Farm Lending at Agricultural Banks



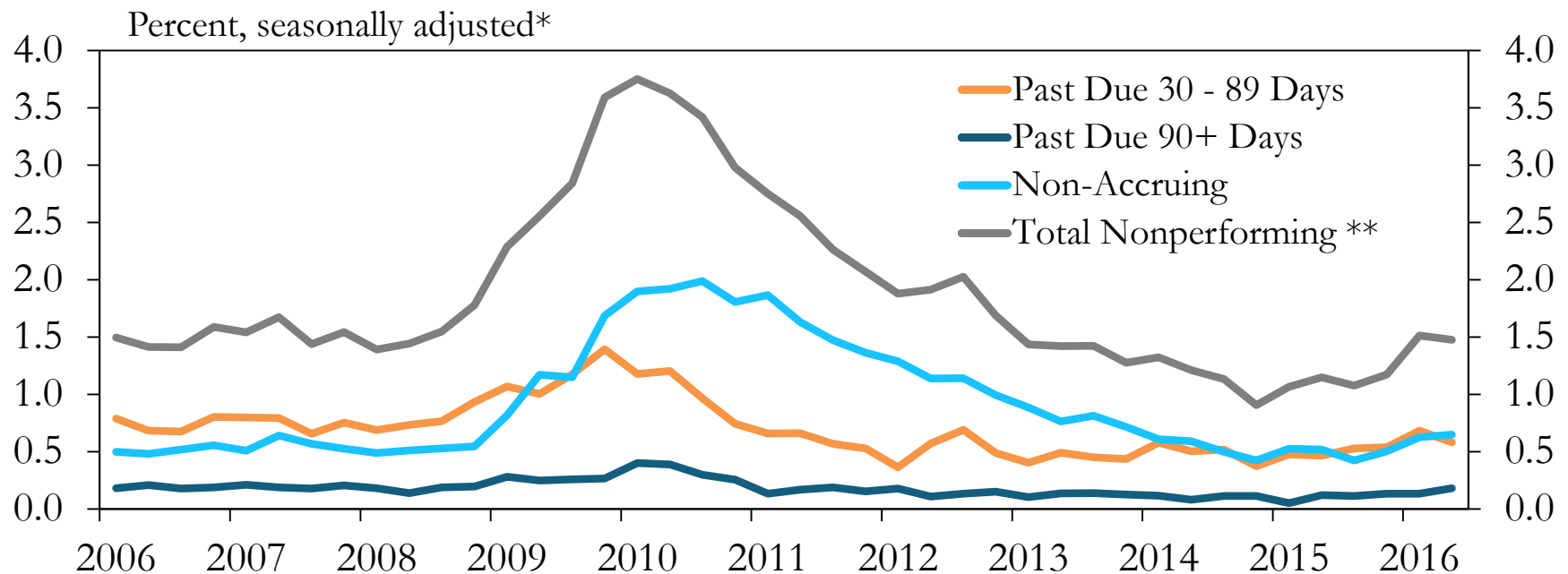
Source: Federal Reserve Bank of Kansas City, Agricultural Finance Databook

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Farm loan delinquency rates have remained low, but have edged up slightly.

Past Due and Non-Accruing Farm Loans at Commercial Banks



* Percent of all outstanding non-real estate farm production loans at commercial banks.

** Total nonperforming loans includes the share of all past due, non-accruing and net charge-off loans.

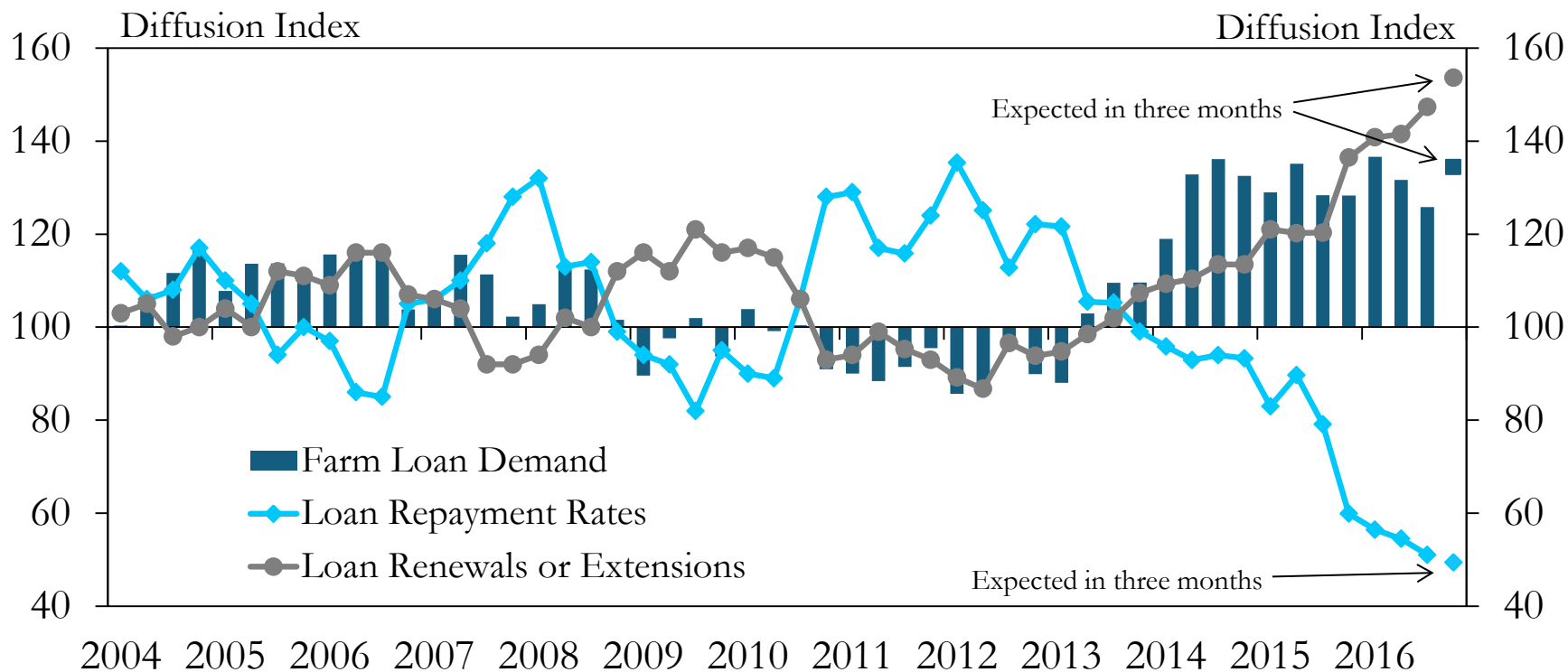
Source: Federal Reserve Bank of Kansas City's Agricultural Finance Databook.

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Repayment rates have slipped as loan demand has continued to rise.

Credit Conditions – KC Fed District



Source: Federal Reserve Bank of Kansas City

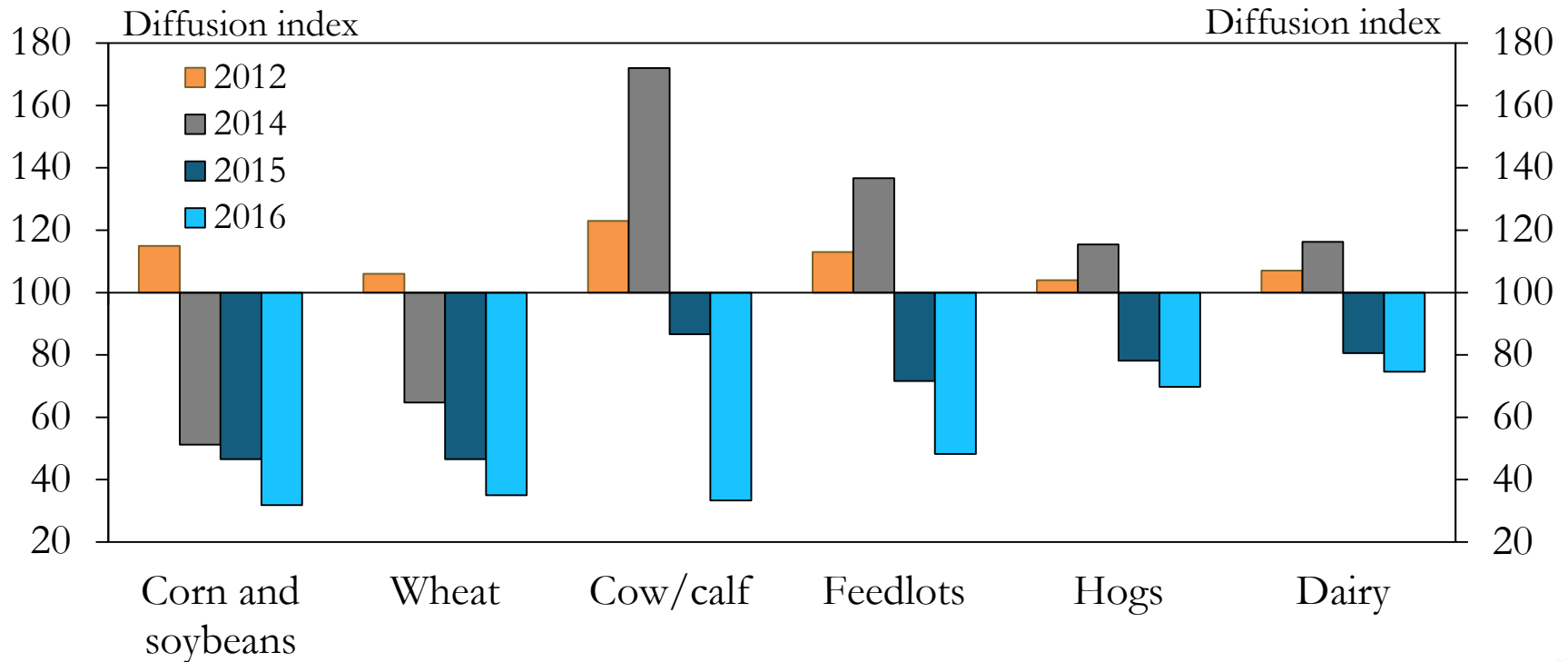
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Going forward, repayment rates are expected to weaken further.

Farm Loan Repayment Rate Expectations

KC Fed District



Source: Federal Reserve Bank of Kansas City

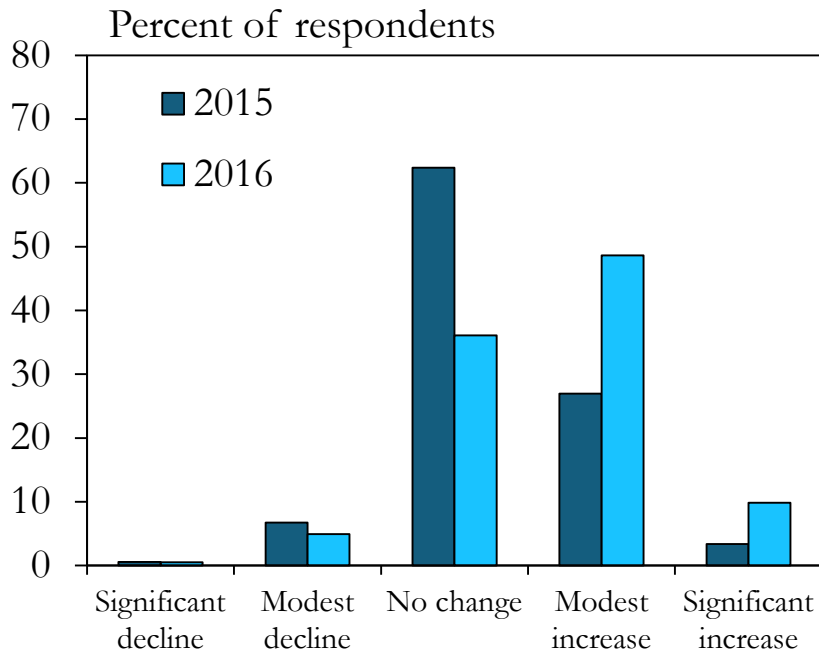
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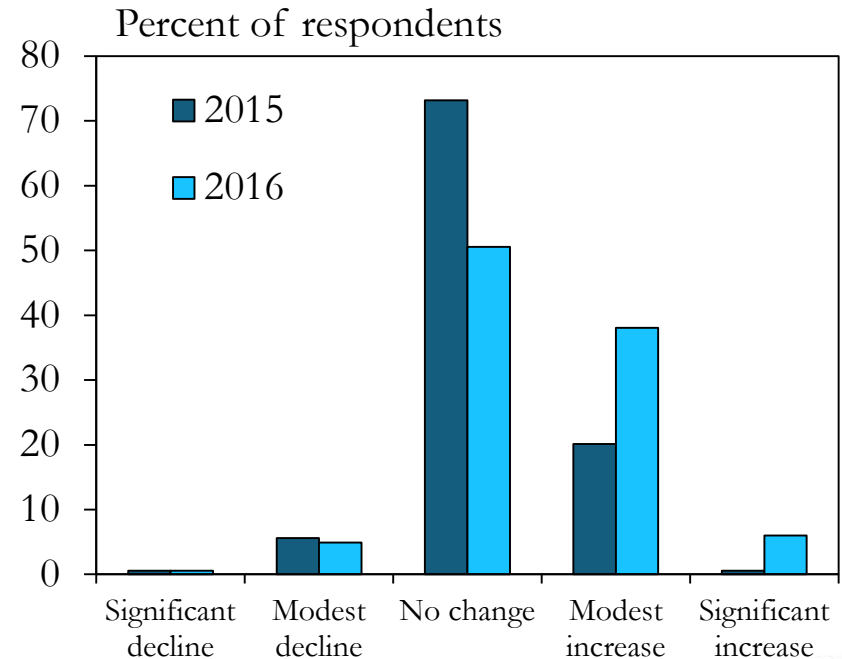
Lenders have recognized heightened risk in their farm loan portfolios.

Change in Ag Bank “Watch” and “Classified” Lists KC Fed District

Watch List



Classified List



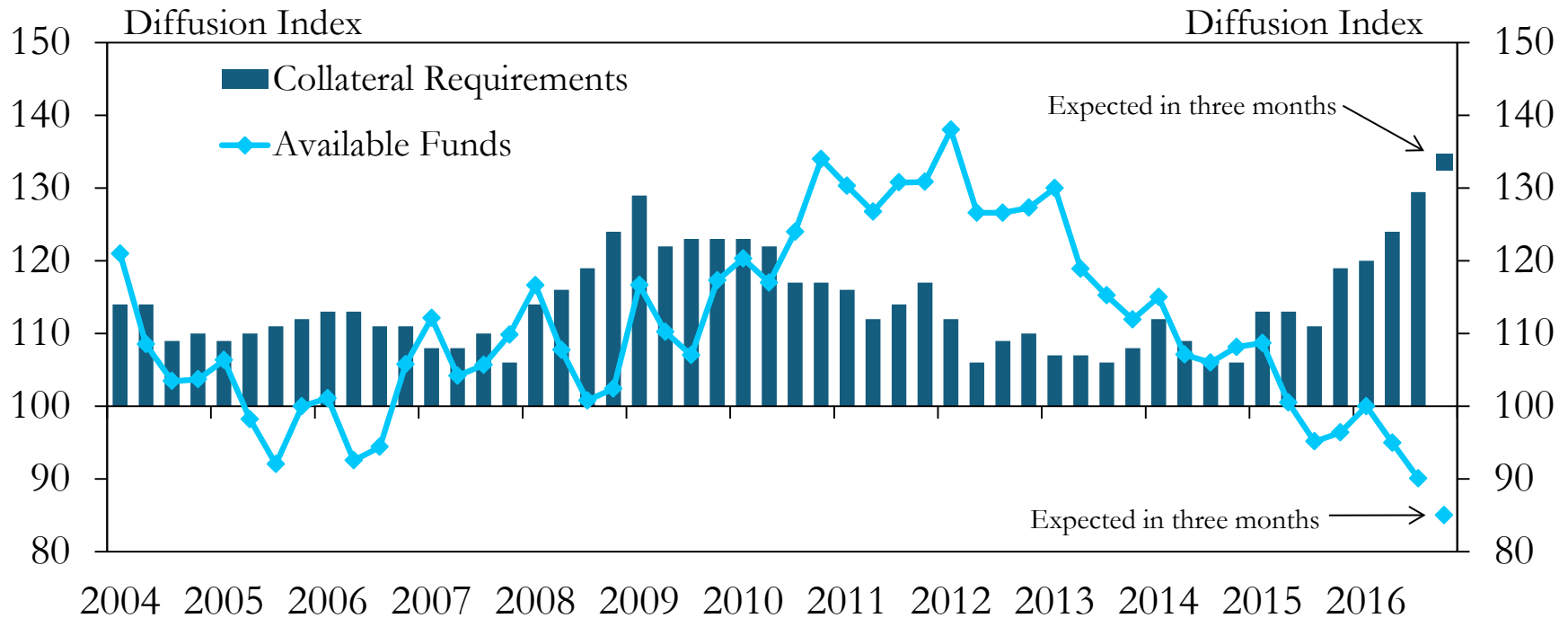
Source: Federal Reserve Bank of Kansas City

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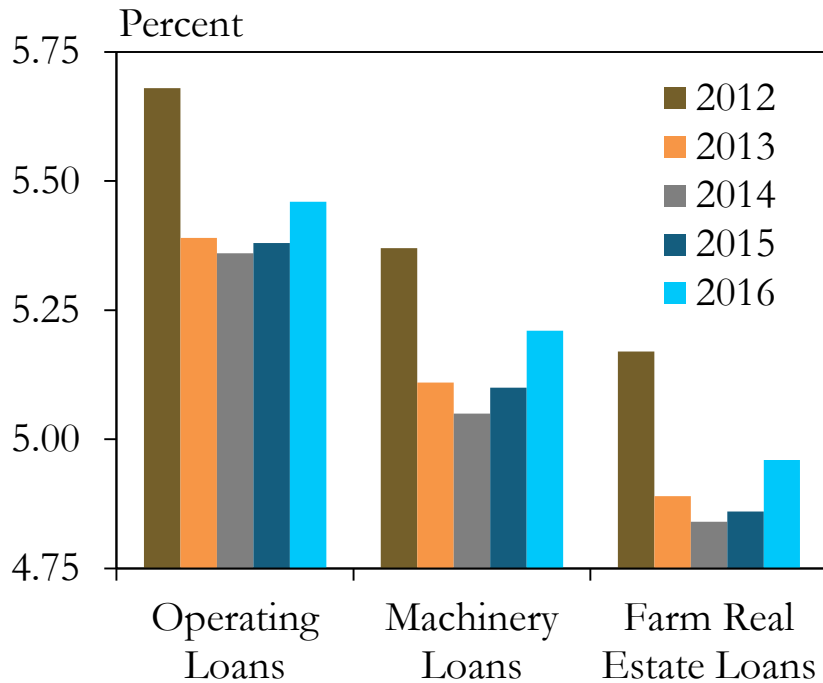
Collateral requirements have risen steadily and fund availability has declined.

Credit Conditions – KC Fed District

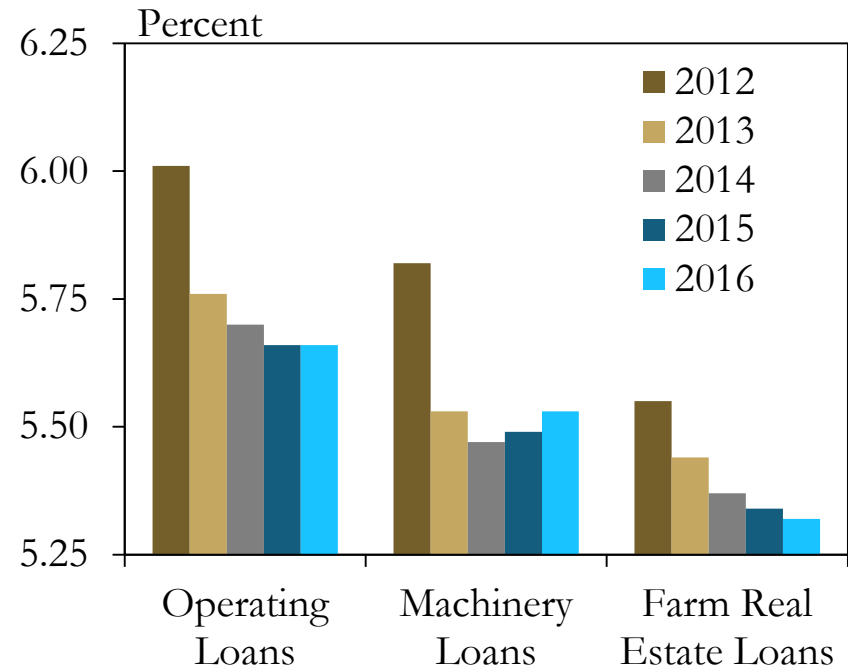


Interest rates have edged up, particularly for variable rate ag loans.

Variable Interest Rates



Fixed Interest Rates

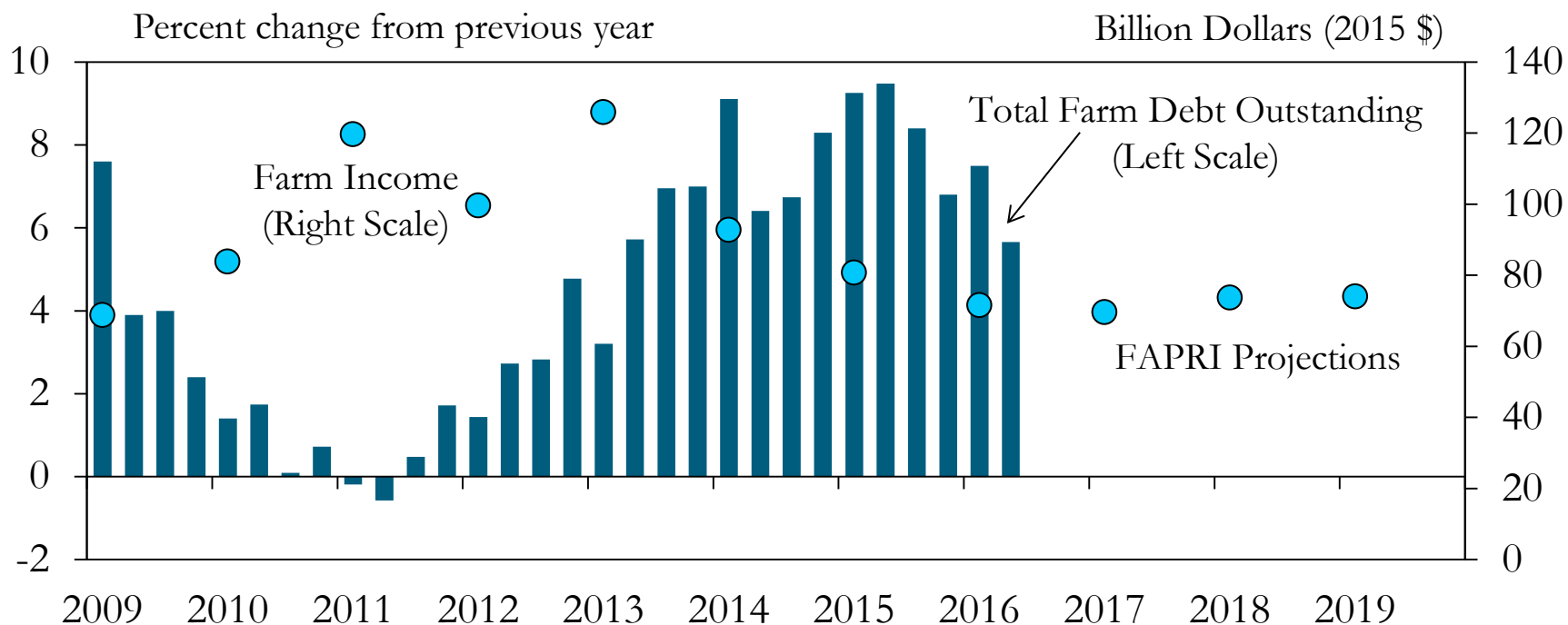


Where might these trends lead in
the next 5 years?



Farm income is expected to remain low. Will growth in farm debt slow?

U.S. Farm Debt at Commercial Banks and Farm Income

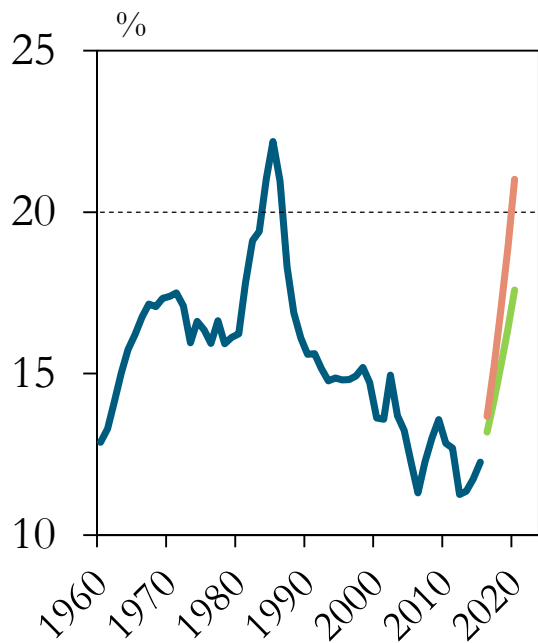


Sources: Federal Reserve Bank of Kansas City, USDA and University of Missouri FAPRI



If debt continues to grow, and land values fall gradually, significant problems may not arise until 2020 or later.

**Farm Sector
Debt-to-Asset Ratio**



**Number of Years to Reach
Debt-to-Asset Ratio of 20%**

Annual Change in Farm Debt

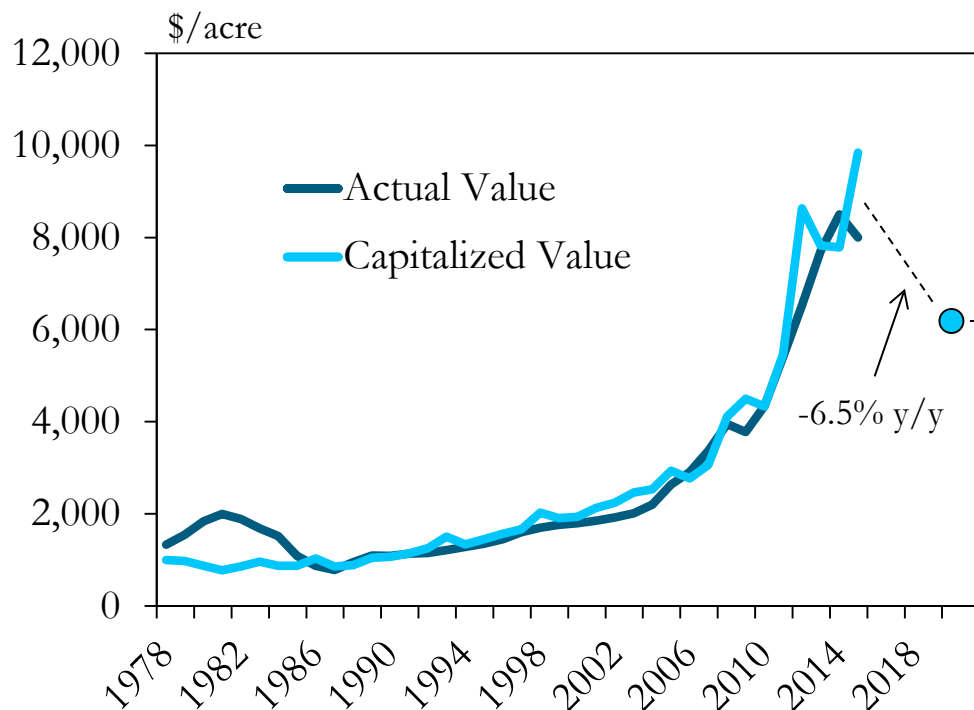
Annual Change in
Farmland Values

| | 0% | 2% | 4% | 6% | 8% | 10% |
|------|------|------|------|-----|-----|-----|
| 0% | -- | 24.7 | 12.5 | 8.4 | 6.4 | 5.2 |
| -2% | 31.7 | 13.7 | 8.9 | 6.6 | 5.3 | 4.4 |
| -4% | 15.6 | 9.4 | 6.8 | 5.4 | 4.5 | 3.8 |
| -6% | 10.3 | 7.2 | 5.8 | 4.6 | 3.9 | 3.4 |
| -8% | 7.7 | 5.8 | 4.7 | 3.9 | 3.4 | 3.0 |
| -10% | 6.0 | 4.8 | 4.0 | 3.4 | 3.0 | 2.7 |
| -12% | 5.0 | 4.1 | 3.5 | 3.1 | 2.7 | 2.5 |



Long-run assumptions about interest rates and corn prices are important in the outlook for land values.

Iowa Cropland Values



Interest Rate
(30 yr. Treasury)

Corn Price*

| | |
|------|--------|
| 2.0% | \$2.36 |
| 2.5% | \$2.94 |
| 3.0% | \$3.53 |
| 3.5% | \$4.12 |
| 4.0% | \$4.72 |

* Assumes land accounts for 30% of total costs and average yields of 175 bu/acre.



Concluding Remarks

- The downturn in ag has been gradual so far. Strength in farmland markets has helped.
- Although financial stress is increasing for some borrowers, on the current path, significant stress is not likely in the next year or two.
- Longer-run projections, however, raise some concerns for 2020 or later. The severity of the concerns will significantly depend on the rate of growth in farm debt.



Questions?

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