Ag Finance Conditions

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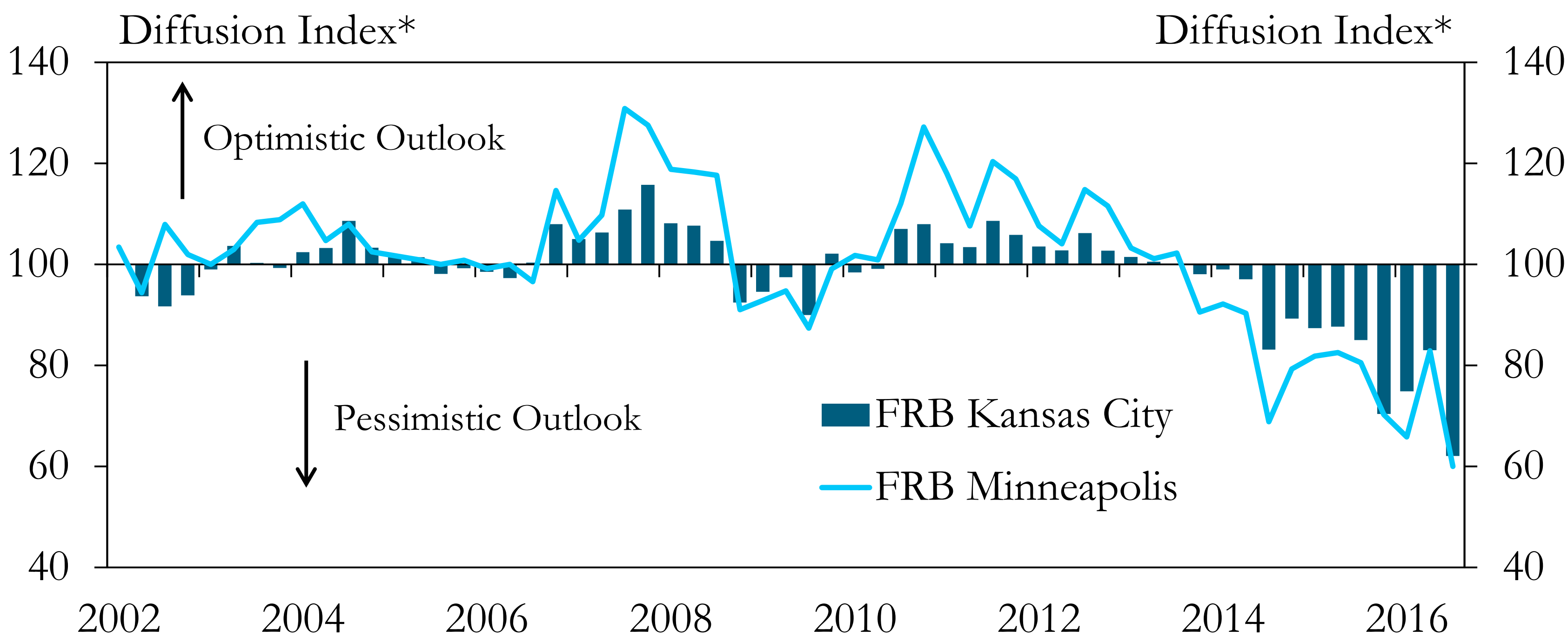
Nathan Kauffman
Omaha Branch Executive and Economist
Federal Reserve Bank of Kansas City

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

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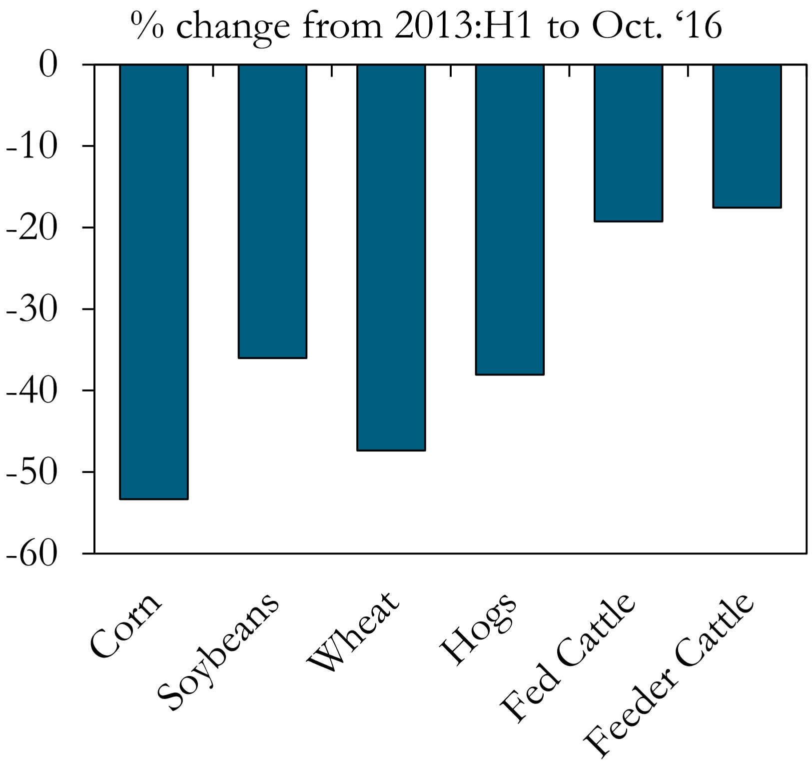
Outlook Themes

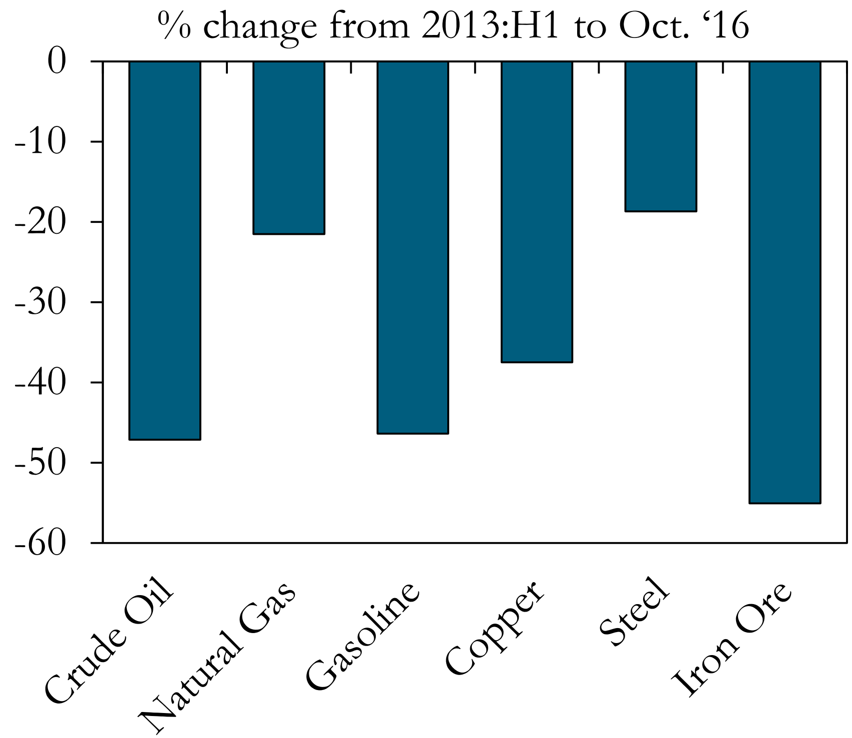
- Ag Borrowers: Low commodity prices, poor cash flow, and reduced working capital.
- Ag Lenders: Heightened loan demand and slower repayment rates, but delinquencies still low.
- Liquidity challenges have not led to widespread solvency problems. What might 2020 look like?

Farm Borrower Conditions

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

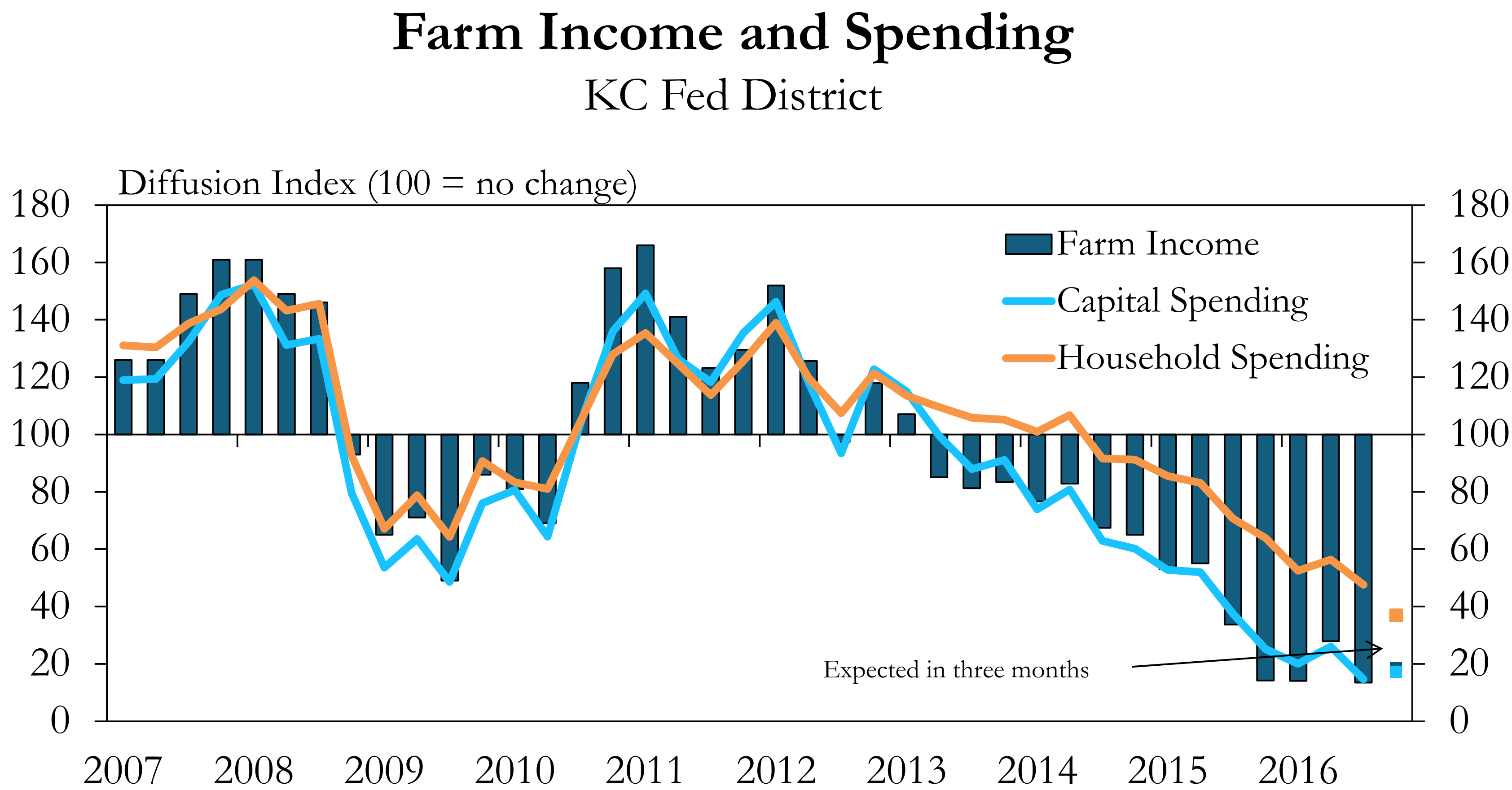
Change in Commodity Prices since 2013





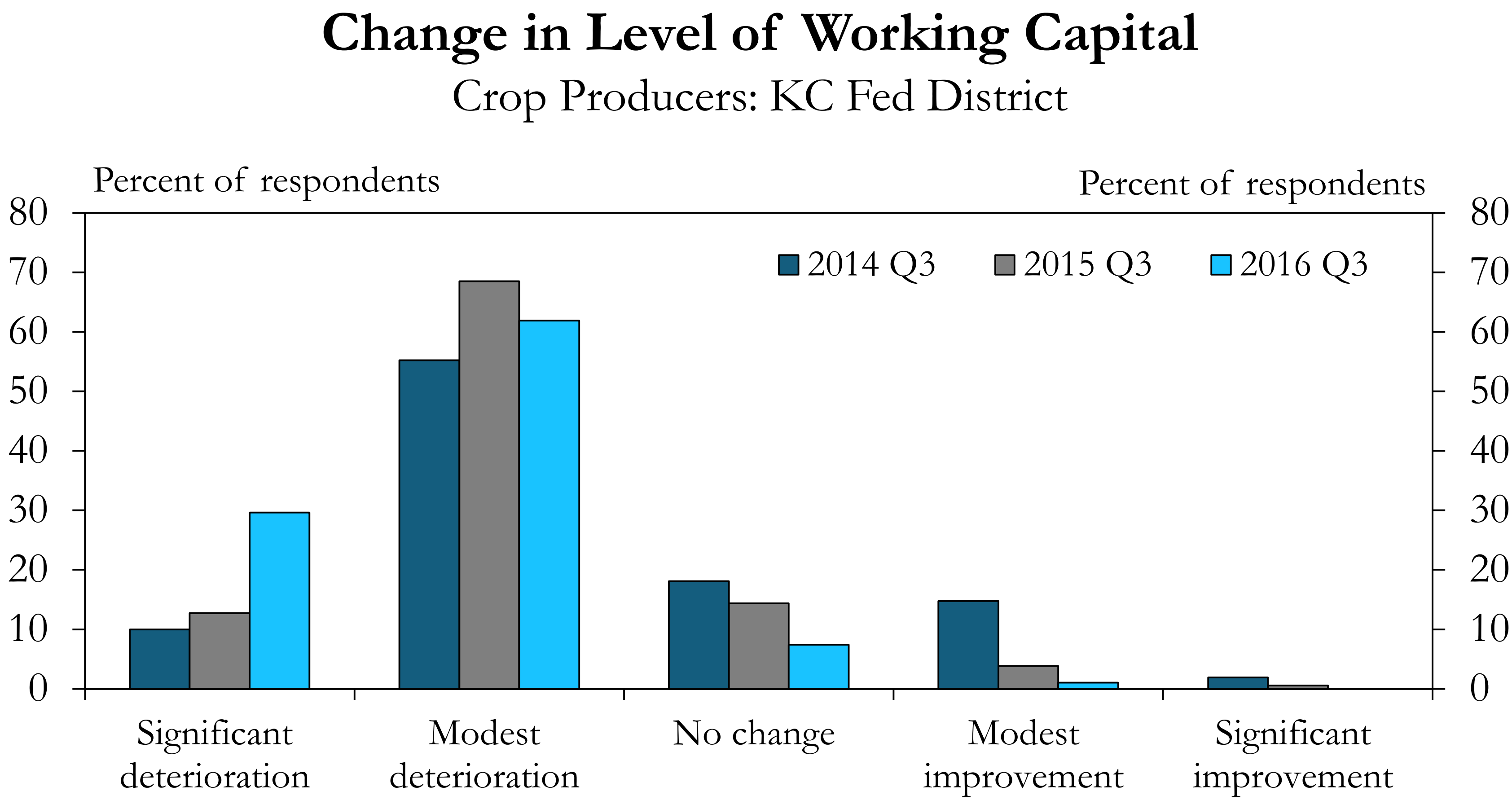
Sources: *Wall Street Journal* and Haver Analytics.

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



Source: Federal Reserve Bank of Kansas City

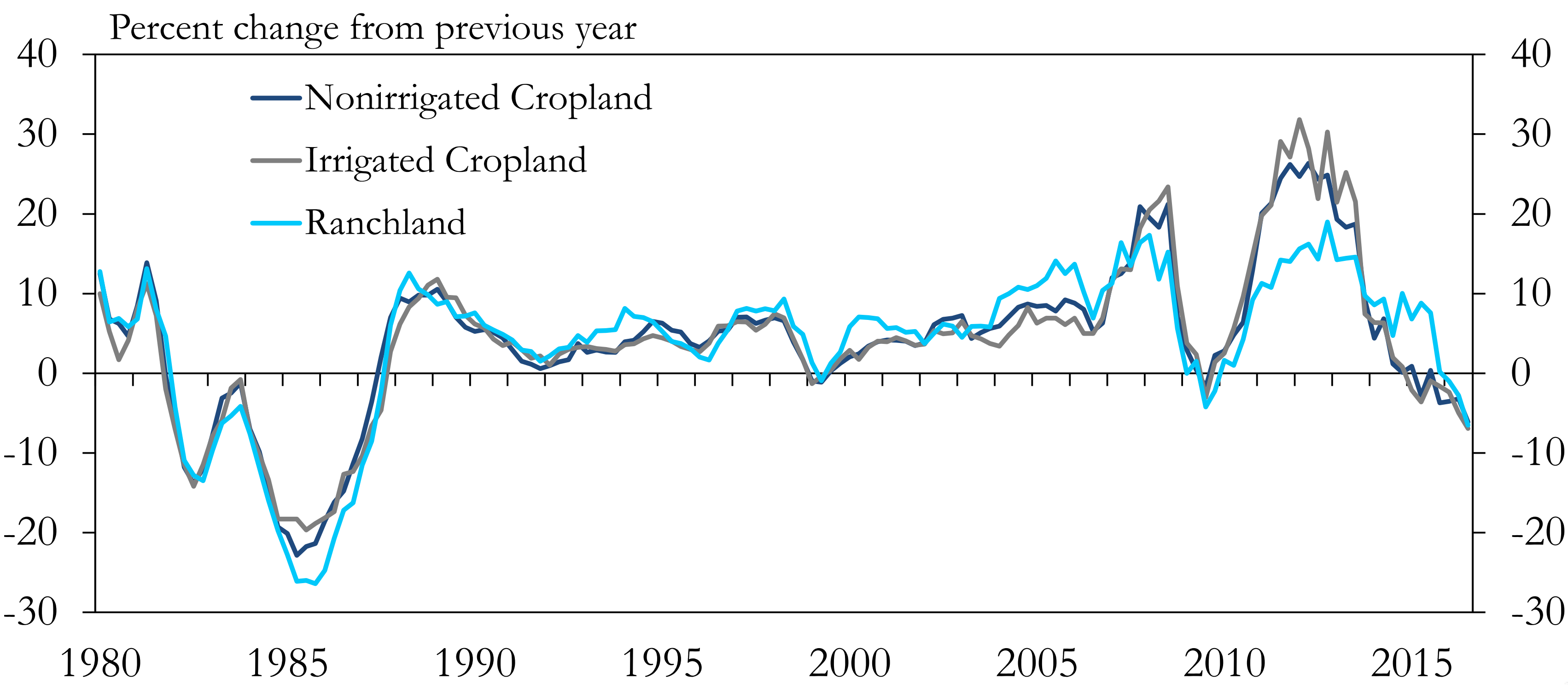
Liquidity has deteriorated more notably in 2016.



Source: Federal Reserve Bank of Kansas City

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

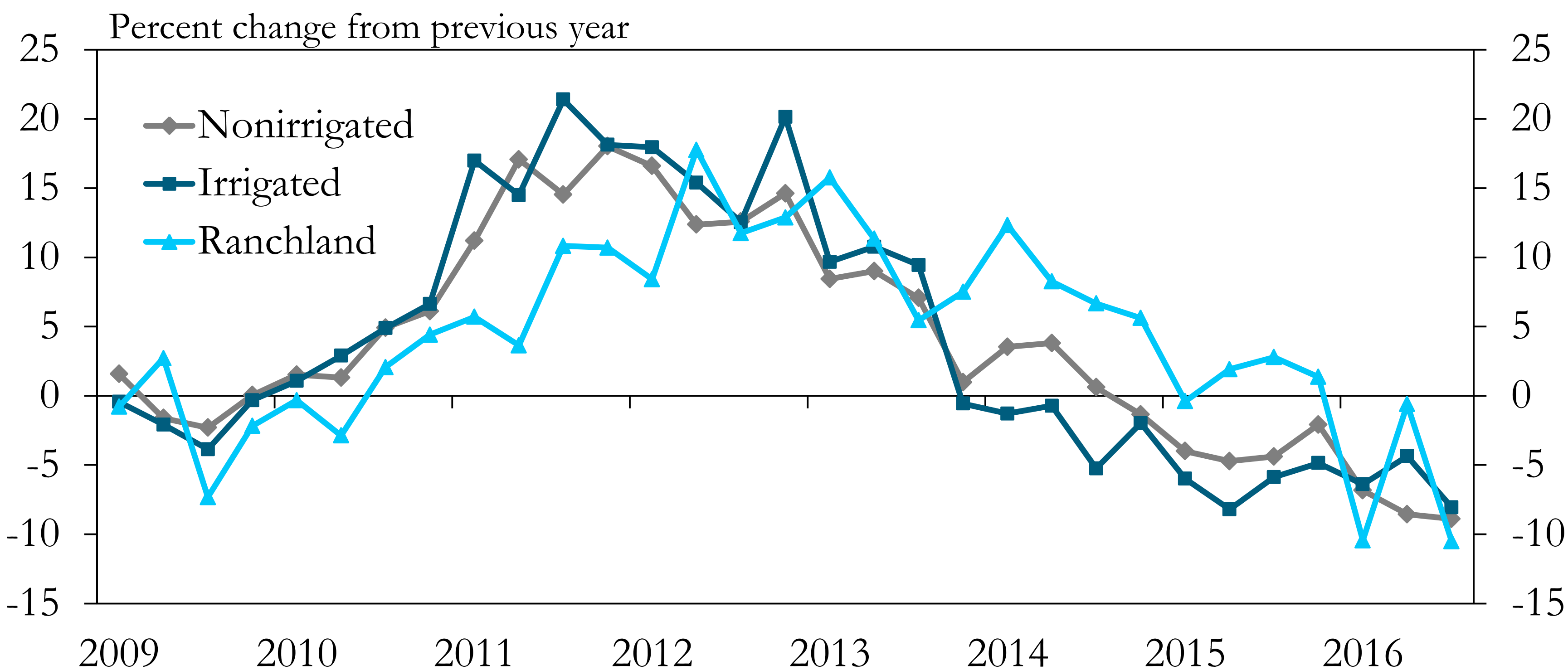
Farmland Values – KC Fed District



Source: Federal Reserve Bank of Kansas City

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

Cash Rents – KC Fed District

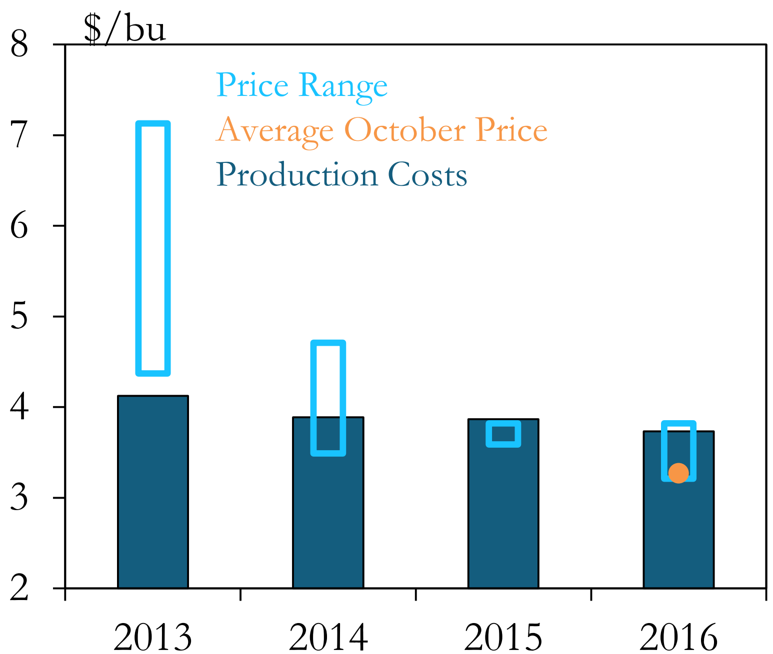


Source: Federal Reserve Bank of Kansas City

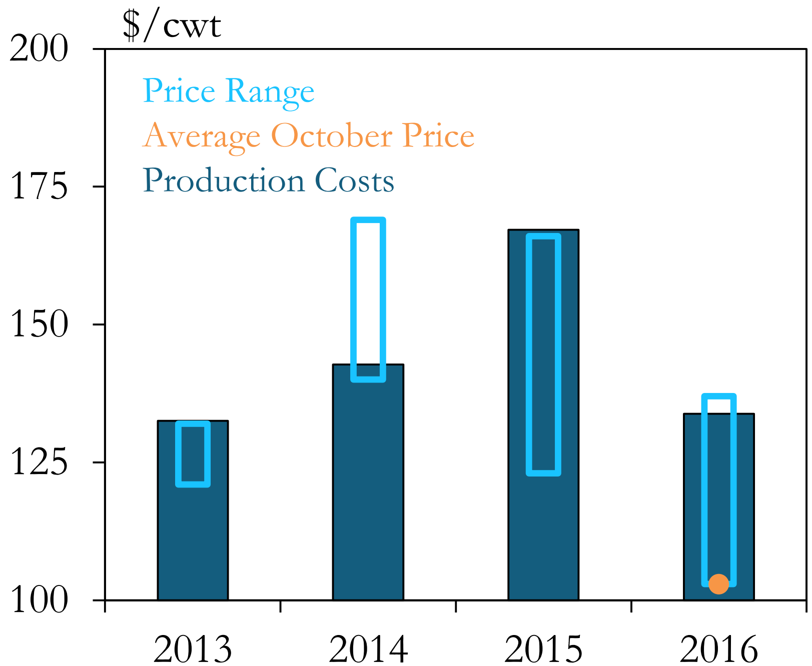
But profit margins remain poor in both the crop and livestock sector.

U.S. Crop Sector Profit Margins

Corn



Cattle

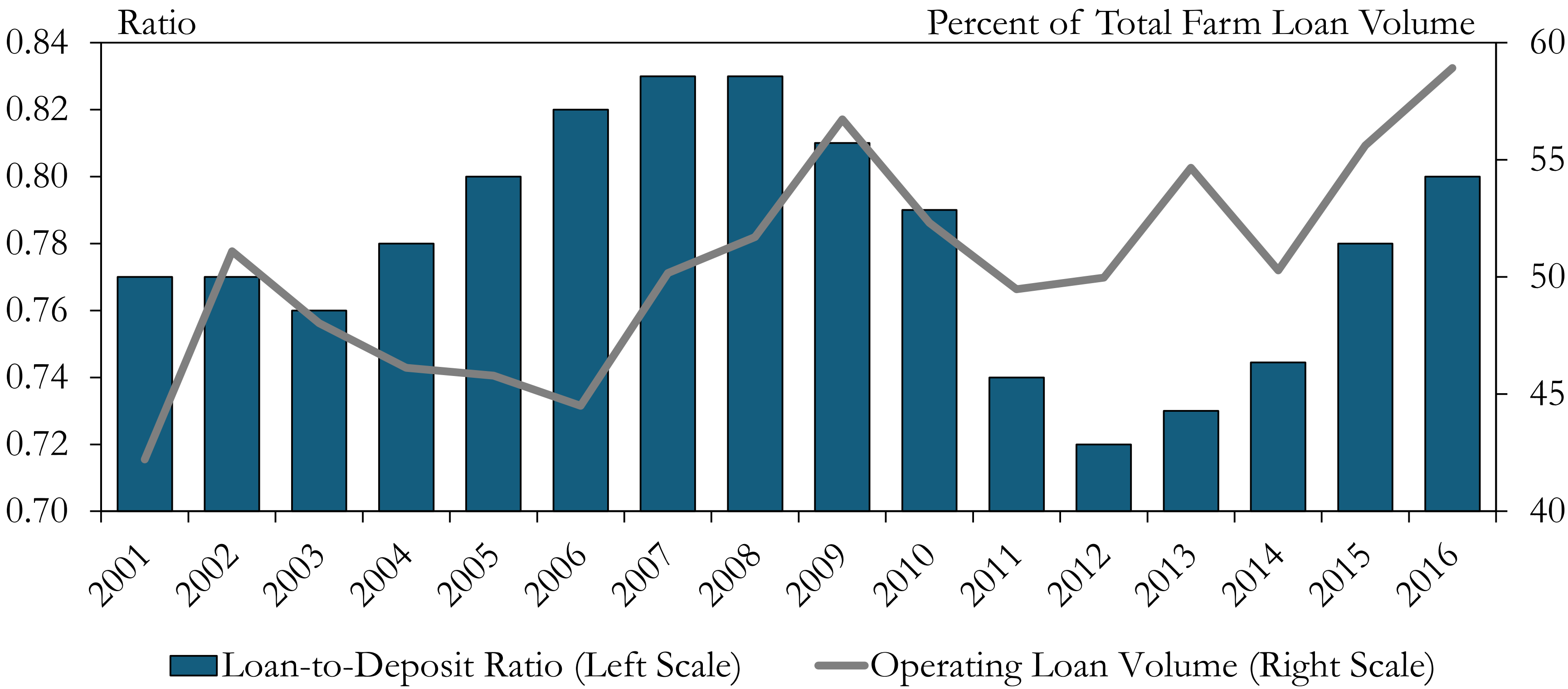


Sources: USDA and Haver Analytics.
Note: Production costs are calculated from USDA's Economic Research Service (Commodity Costs and Returns) and national yield averages for each year shown, but exclude the opportunity cost of unpaid labor from the calculation.

Ag Lending Conditions

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

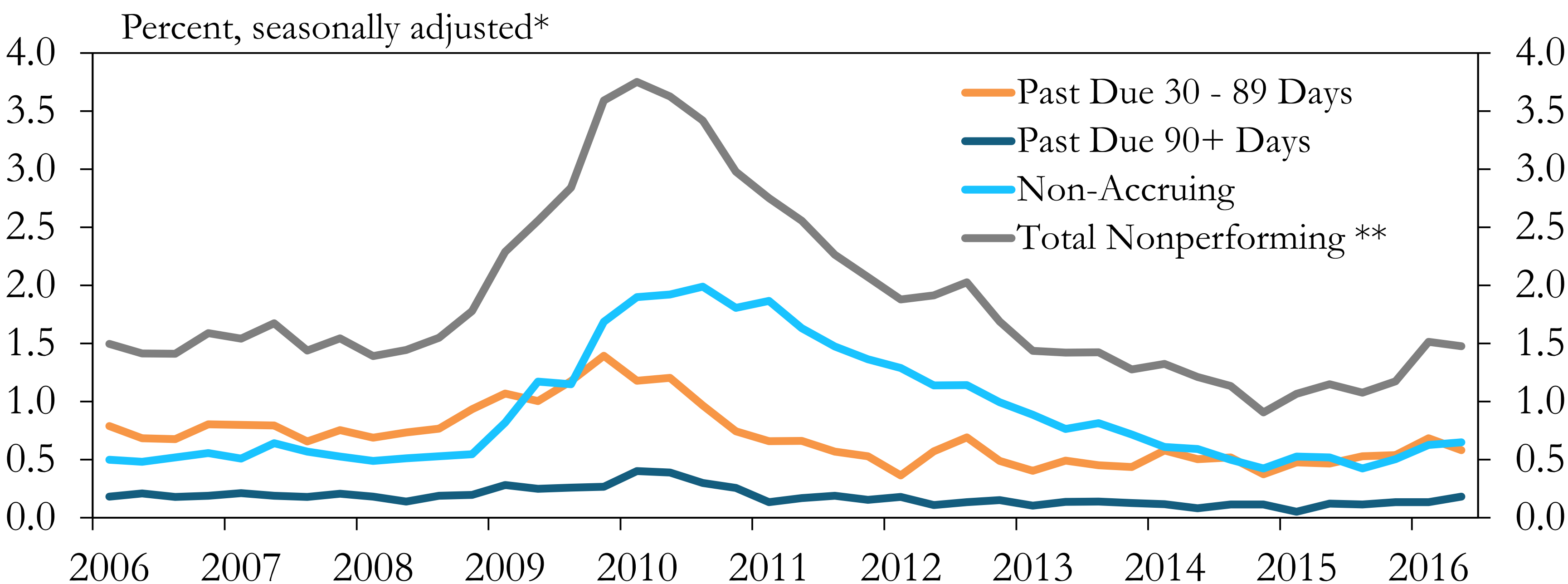
Farm Lending at Agricultural Banks



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

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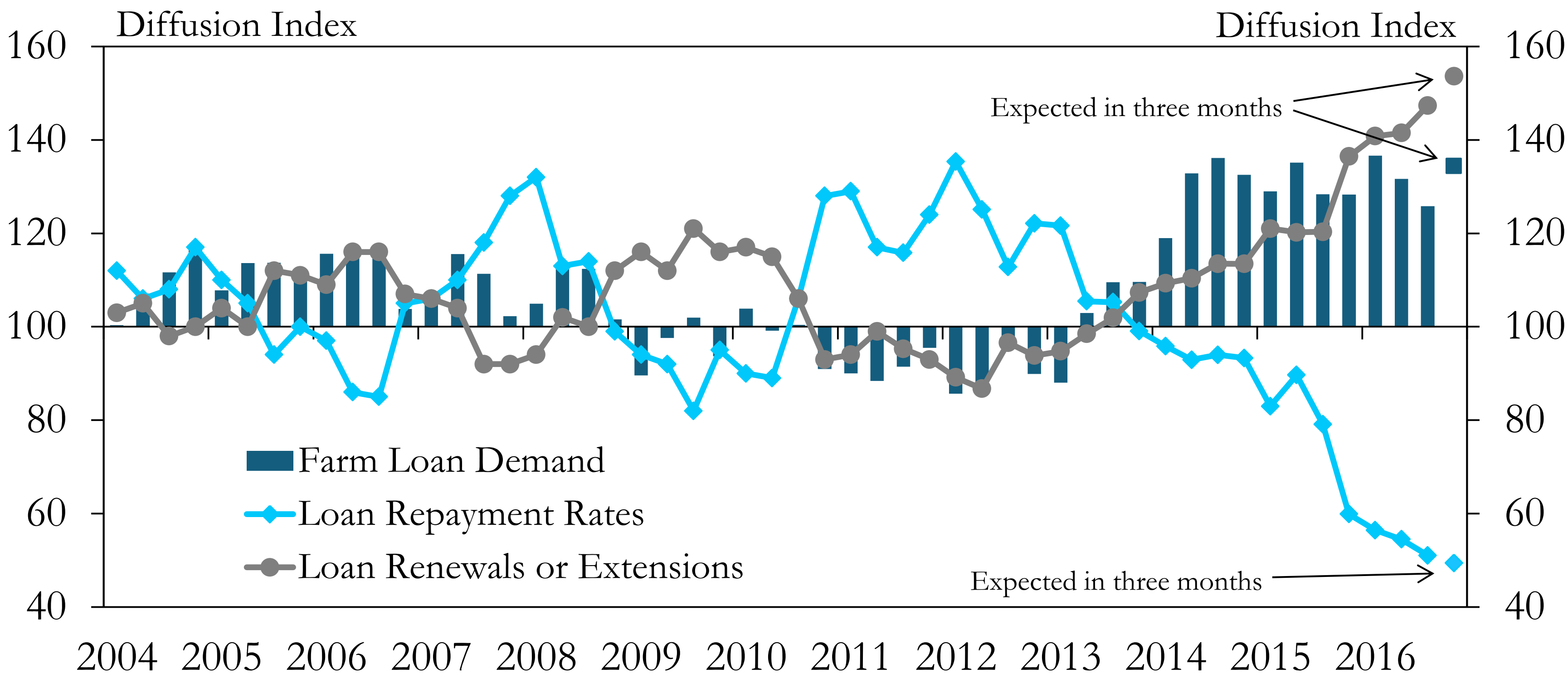
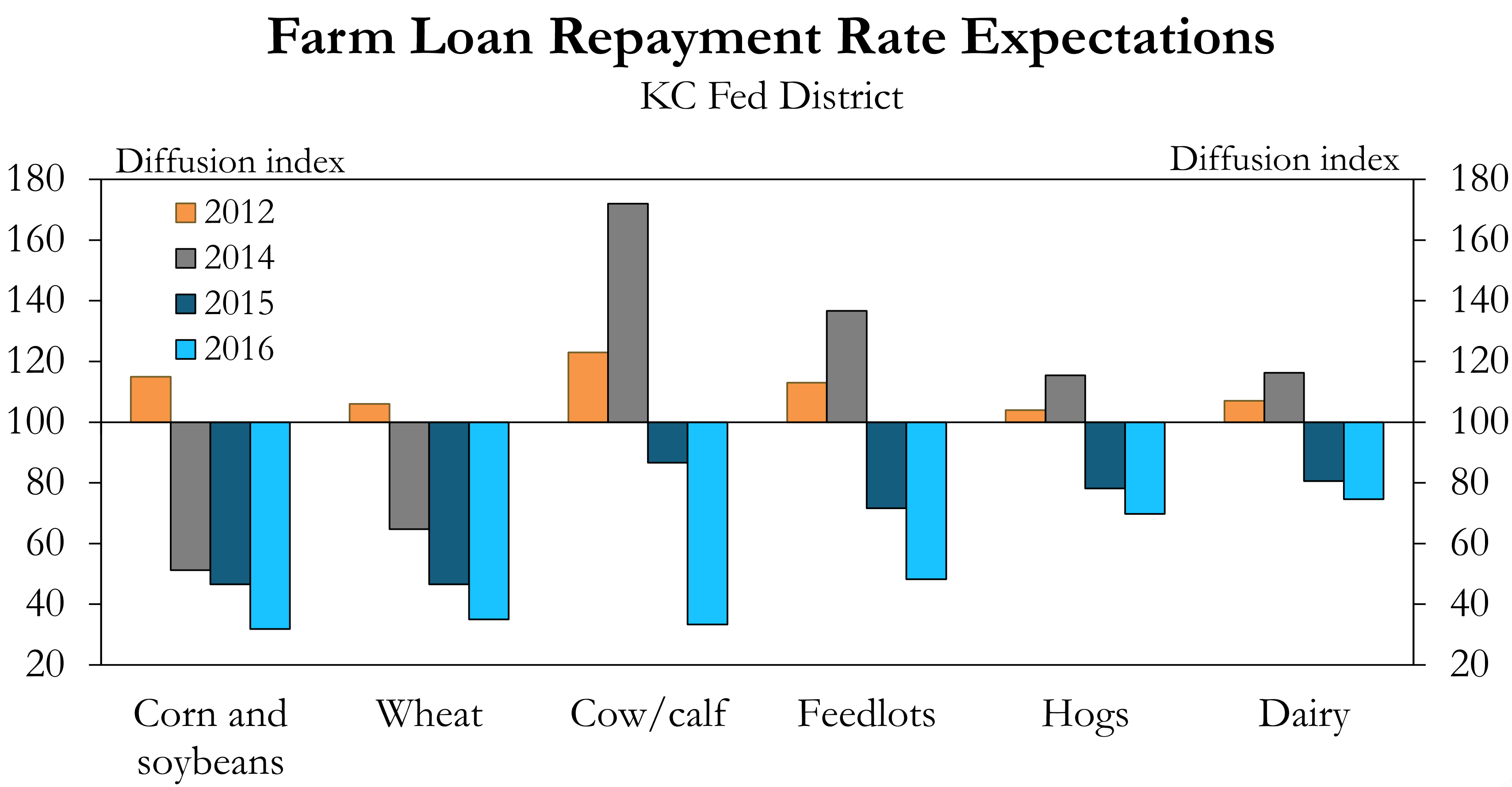
Repayment rates have slipped as loan demand has continued to rise.

Credit Conditions – KC Fed District



Source: Federal Reserve Bank of Kansas City

Going forward, repayment rates are expected to weaken further.



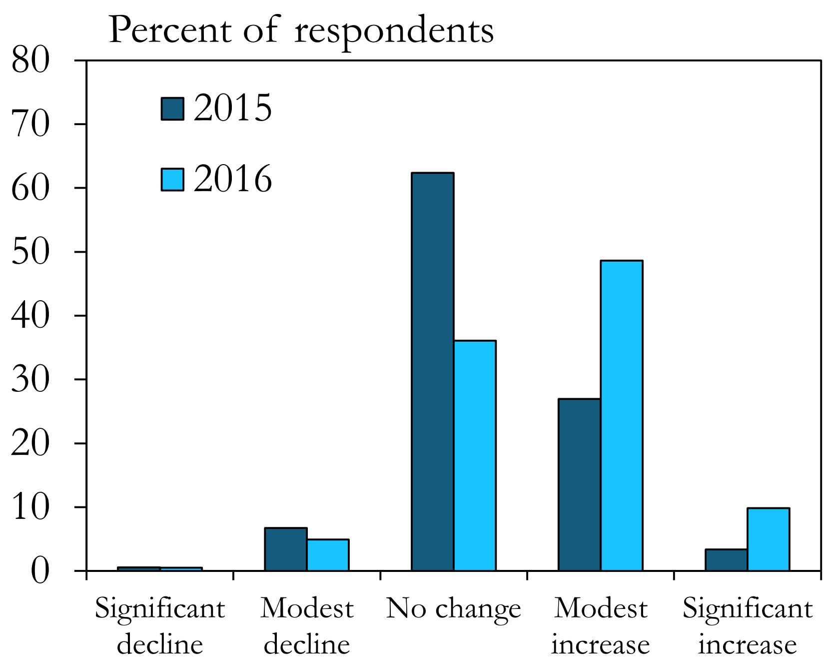
Source: Federal Reserve Bank of Kansas City

Lenders have recognized heightened risk in their farm loan portfolios.

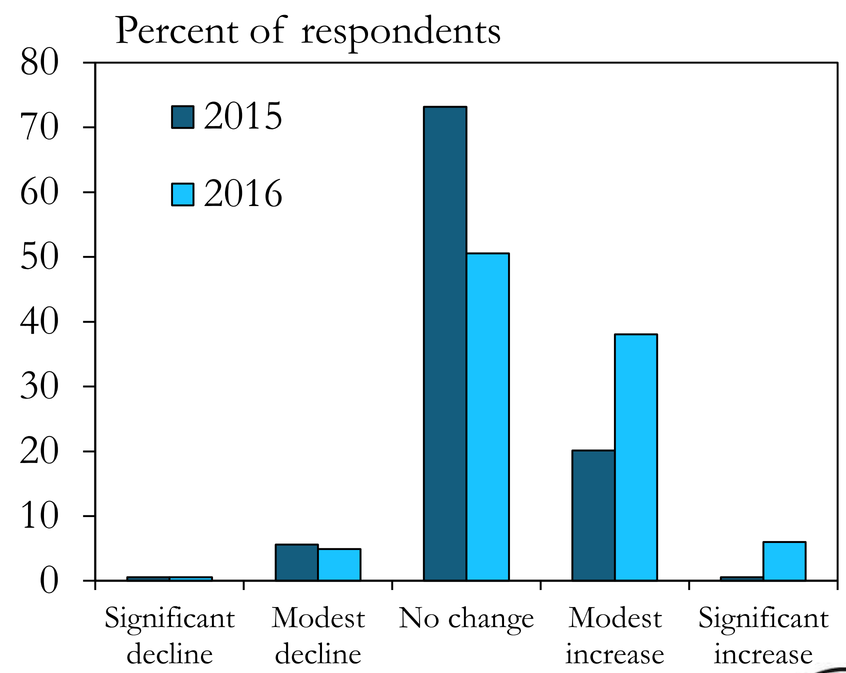
Change in Ag Bank "Watch" and "Classified" Lists

KC Fed District

Watch List



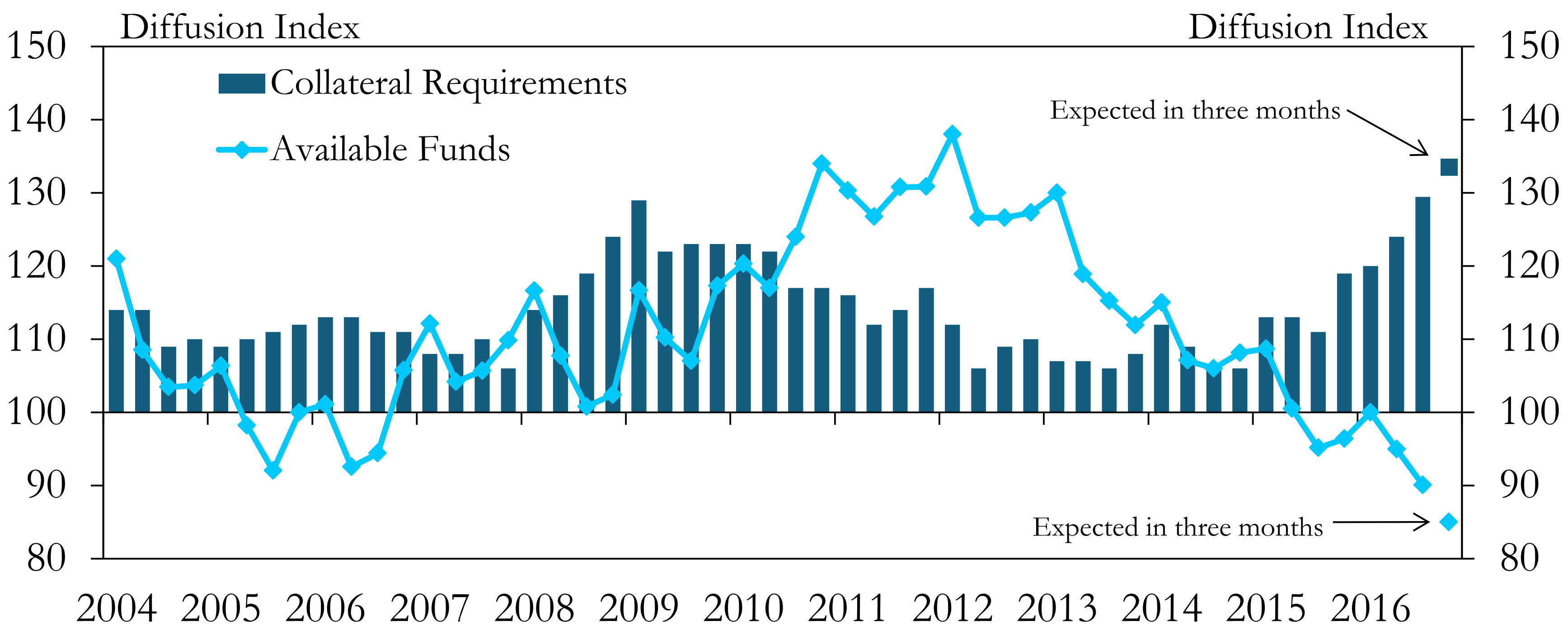
Classified List



Source: Federal Reserve Bank of Kansas City

Collateral requirements have risen steadily and fund availability has declined.

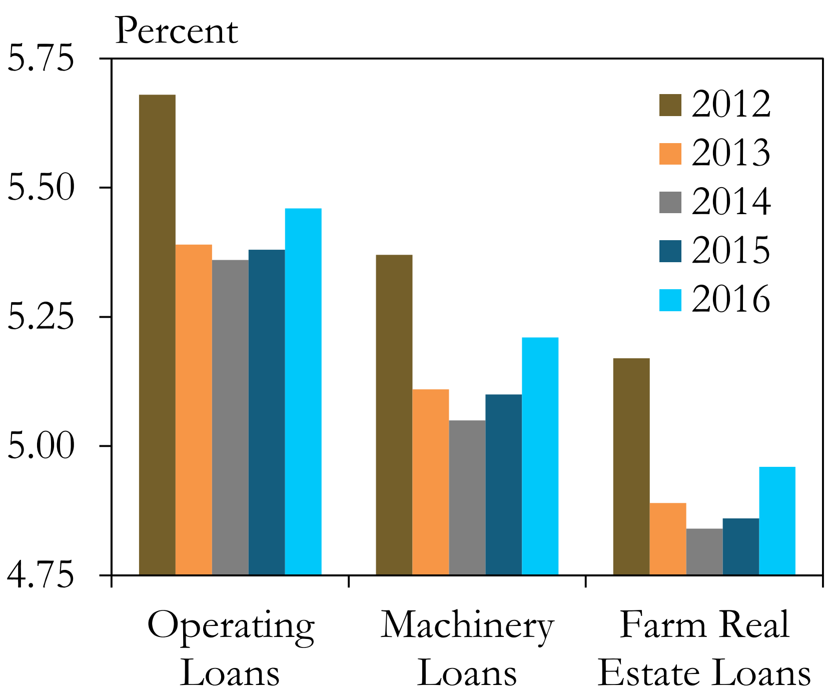
Credit Conditions – KC Fed District



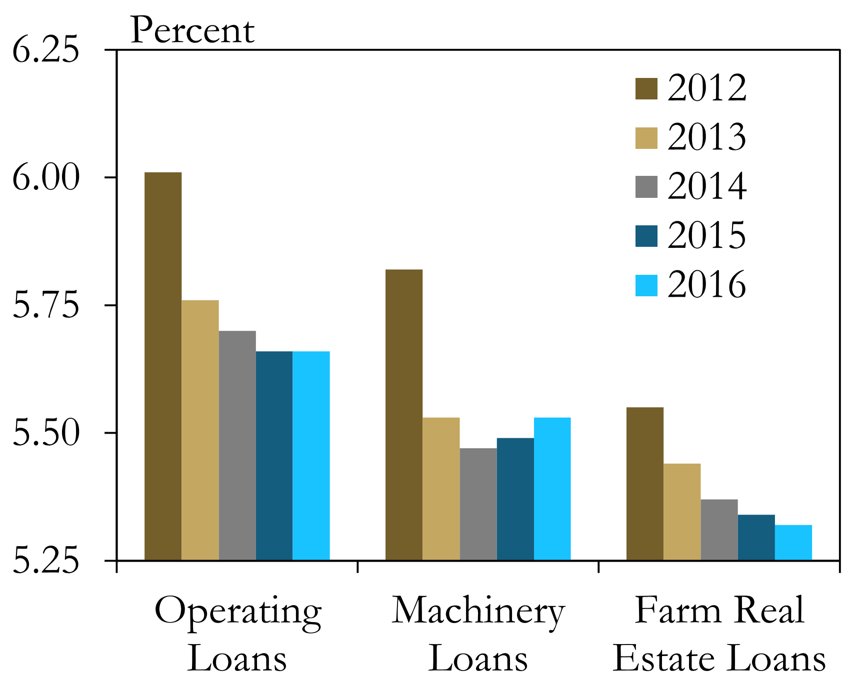
Source: Federal Reserve Bank of Kansas City

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

Variable Interest Rates



Fixed Interest Rates

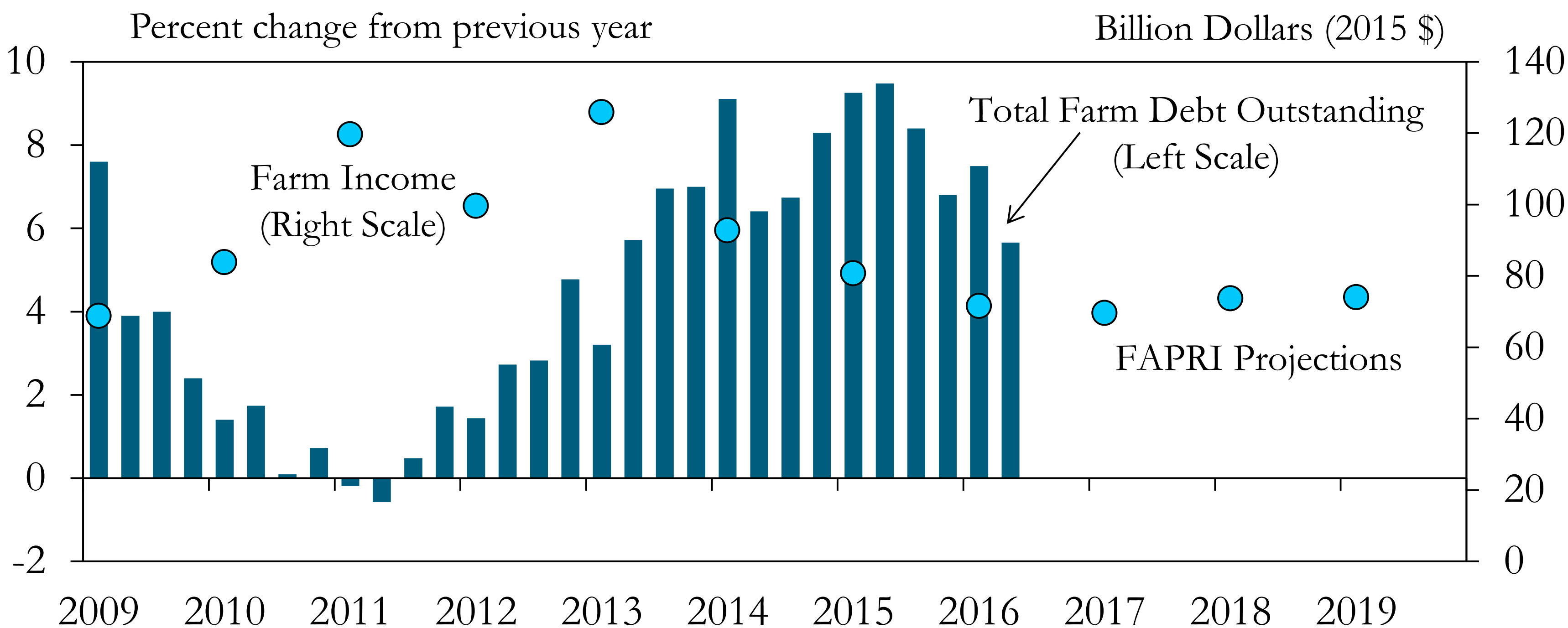


Source: Federal Reserve Bank of Kansas City

Where might these trends lead in the next 5 years?

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

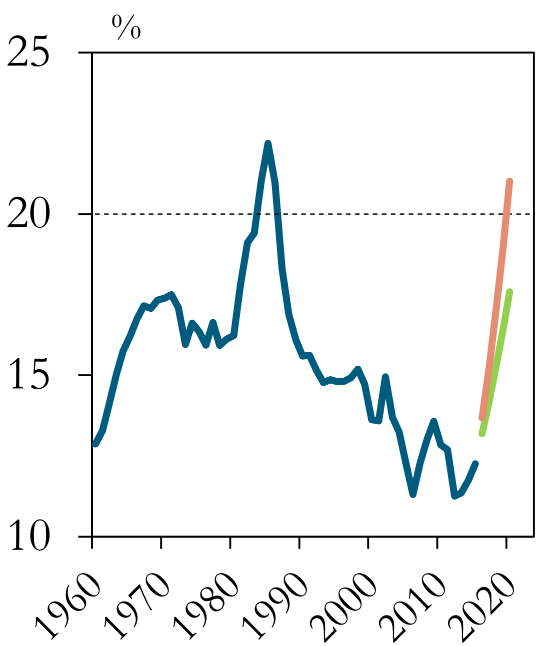
U.S. Farm Debt at Commercial Banks and Farm Income



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



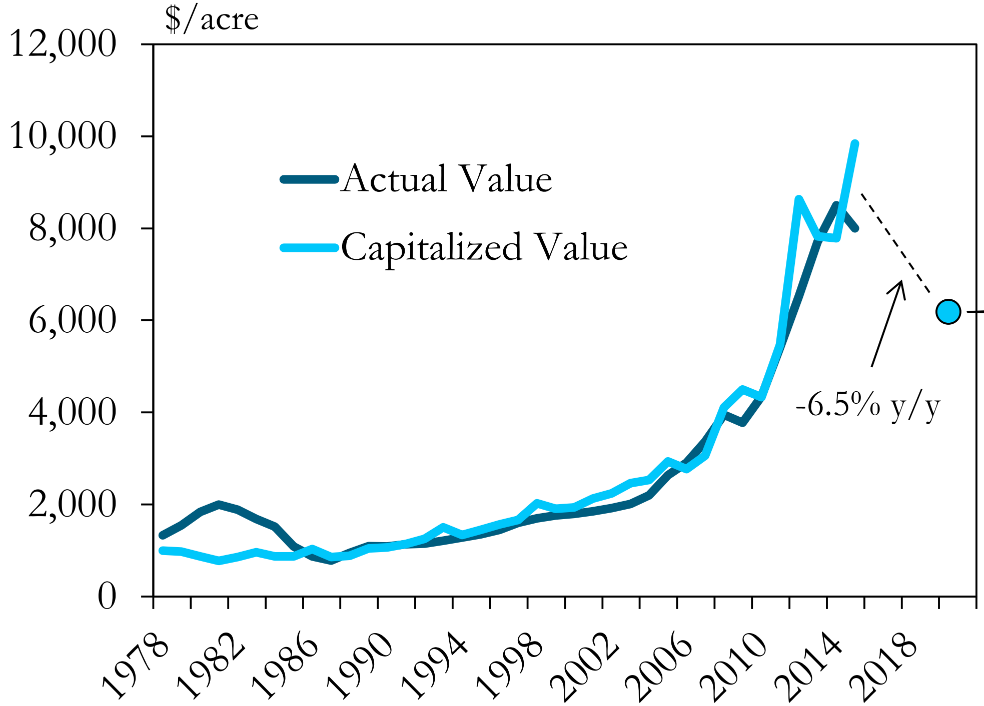
Number of Years to Reach Debt-to-Asset Ratio of 20%

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?

Nathan Kauffman
Omaha Branch Executive and Economist
Federal Reserve Bank of Kansas City
Email: nathan.kauffman@kc.frb.org
Website: http://www.kansascityfed.org/omaha/