2015 ■ Third Quarter

AGRICULTURAL Finance Monitor

Selected Quotes from Banker Respondents Across the Eighth Federal Reserve District

"The 2014 Farm Bill will not sufficiently provide a safety net for our customers. Young farmers will not pursue agriculture production due to weak earnings and high risk; older farmers are retiring for the same reasons." (Arkansas)

"We are experiencing expansion from all poultry integrators, so loan demand is firm and the contracts offer increased income." (Arkansas)

"While I am optimistic toward agriculture, it could be argued that commodities in general are on the down slide as this commodity super cycle winds down. This will mean more pressure on profit margins, especially for grain farmers. I am optimistic because I do not think this downturn will be as severe as the 1980s. Many agricultural producers have increased their net worth and follow good business practices, so they could continue for quite some time with tight margins." (Illinois)

"In the short term, farmers' income in our area is reliant on crop insurance because many did not plant soybeans due to the wet weather. The corn that was planted has a lot of places where it drowned out. Those who are fortunate enough to have livestock are relying on that income to get through the year." (Missouri)

"Harvest is progressing quickly in our area, but corn yields are expected to be below average overall. Almost 40 percent of the intended soybean acreage was not planted. Yields of early-planted soybeans are expected to be average at best, with yields of later-planted soybeans expected to be below average due to a very dry period during the pod-filling stage. The lower projected farm incomes will likely reduce loan demand for capital expenditures for both machinery and farmland." (Missouri)

"The future prospects for the agricultural sector are bright because of an increasing world population." (Tennessee)

NOTE: These are generally verbatim quotes, but some were lightly edited to improve readability.

The fourteenth quarterly survey of agricultural credit conditions was conducted by the Federal Reserve Bank of St. Louis from September 15, 2015, through September 30, 2015. The results presented here are based on the responses from 38 agricultural banks within the boundaries of the Eighth Federal Reserve District.[1] The Eighth District includes all or parts of seven Midwest and Mid-South states. These data are not adjusted for any seasonal patterns. Accordingly, users are cautioned to interpret the results carefully. Users are also cautioned against drawing firm conclusions about longer-run trends in farmland values and agricultural lending conditions.[2]

Executive Summary

Farm income in the third quarter weakened measurably from a year earlier according to the latest survey of agricultural bankers in the Eighth Federal Reserve District. Bankers expect further declines in the fourth quarter. Household spending and farm expenditures on capital goods also continued to decline in the third quarter. Land valuations were reported to be mixed in the third quarter. Compared with a year earlier, quality farmland values declined by 2.6 percent, but values for ranch or pastureland rose 4.7 percent in the third quarter. Cash rents for both quality farmland and ranch or pastureland rose modestly in the third quarter. Bankers expect land values and cash rents for quality farmland and ranchland or pastureland to decline in the next three months compared with a year earlier. Lending conditions exhibited few stresses in the third quarter, although loan demand and availability of funds were modestly lower than bankers had expected three months earlier. Interest rates, both variable and fixed, rose slightly across most loan products, with fixed-rate loan products generally rising more than variable-rate products. According to a special question in the survey, most agricultural bankers perceive a weaker-than-expected fall harvest and an unexpected sharp decline in livestock prices as the largest potential risks to farmers in their area. A second special question asked bankers their view of the farm sector's prospects over the next 5 to 10 years. About half were optimistic, while only about 15 percent were pessimistic.

Survey Results

Farm Income and Expenditures

Table 1 shows that a much larger percentage of bankers reported that farm income declined in the third quarter of 2015 compared with the same period a year earlier (index value of 61). As seen in Figure 3, though, the diffusion index of banker respondents was modestly higher in the third quarter than in the second quarter. This effectively means that a somewhat larger percentage of bankers reported higher farm income in the third quarter compared with the previous quarter. Because of some concern about the fall harvest and the recent dip in livestock prices, agricultural bankers have a rather dour view of farm income prospects in the fourth quarter of 2015 (index value of 23).

In the survey, bankers were asked two types of questions: (i) estimates of current dollar values and interest rates and (ii) expectations for future values. Dollar values and rates refer to the third quarter of 2015. Regarding expectations for future values, bankers were asked whether they expect values to increase, decrease, or remain constant (either relative to a year ago or relative to current values; see table descriptions). A "diffusion index" value was then created for "income and expenditures" and for the 3-month trends in "land values" and "cash rents" (per acre). The diffusion index was created by subtracting the percent of bankers that responded "decrease" from the percent that responded "increase" and then adding 100. Index values from 0 to 99 indicate overall expectations of decreasing values; index values from 101 to 200 indicate overall expectations of increasing values; and an index value of 100 indicates an even split.

The results reported in these tables refer to the entire Eighth Federal Reserve District.

Table 1

Income and Expenditures (versus year-ago levels)

	Index value
Farm income	
2015:Q3 (actual)	61
2015:Q4 (expected)	23
Household spending	
2015:Q3 (actual)	73
2015:Q4 (expected)	61
Capital spending	
2015:Q3 (actual)	48
2015:Q4 (expected)	29

NOTE: Actual and expected values for the indexes use all responses from the 2015:Q3 survey.

Table 2

Land Values and Cash Rents (year/year change)

	Percent or index value
Land values	
Quality farmland	–2.6%
Expected 3-month trend	50
Ranchland or pastureland	4.7%
Expected 3-month trend	77
Cash rents	
Quality farmland	0.7%
Expected 3-month trend	43
Ranchland or pastureland	2.5%
Expected 3-month trend	80

NOTE: Changes in land values and cash rents are calculated using a common sample of respondents for the most recent survey as well as the survey conducted a year ago. Expected trends of land values and cash rents are calculated using all responses from the 2015:Q3 survey. Expected trends are presented as a diffusion index; see note above for details about interpreting diffusion indexes.

Along with the expectation of lower farm income, farmers and ranchers continued to scale back household expenditures and capital spending. As seen in Table 1, the index of household spending (73) and capital equipment expenditures (48) suggests a strong consensus among bankers that the two measures fell relative to the same time last year. In fact, Figures 4 and 5 show that the indexes fell to their lowest levels since our survey began. Table 1 also suggests further retrenchment in farm household spending (61) and capital expenditures (29) in the fourth quarter relative to a year earlier. Readers are cautioned that farm income is highly volatile and subject to seasonal patterns that occur in the agricultural sector.

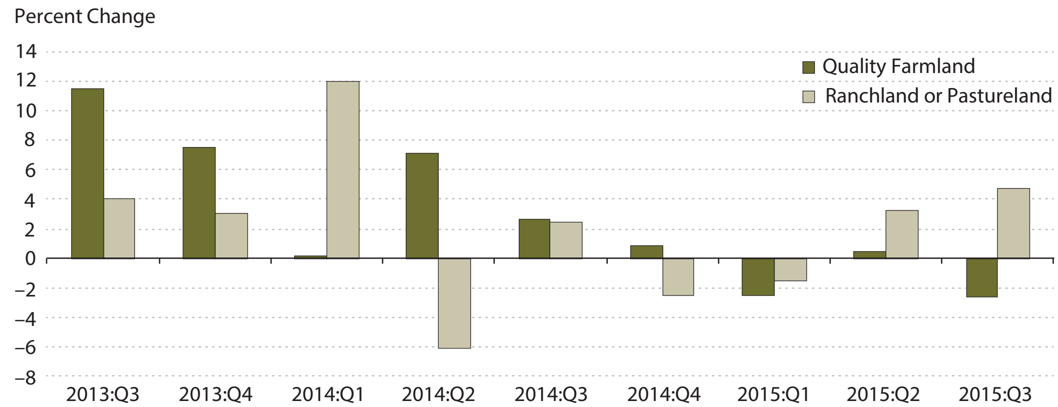
Current and Expected Land Values and Cash Rents

The four-quarter percentage changes in land values and cash rents are reported in Table 2.[3] In the third quarter of 2015, quality farmland values fell modestly (2.6 percent) compared with a year earlier. As seen in Figure 1, in two of the past four reporting periods, quality farmland values have declined modestly compared with year-earlier levels; however, the net percentage change over this four-quarter period is negative. By contrast, ranch or pastureland values increased from year-earlier levels for the second consecutive quarter. Indeed, ranch or pastureland values rose 4.7 percent in the third quarter, the largest increase since the first quarter of 2014. Similar to recent surveys, a majority of bankers expect both quality farmland and ranchland or pastureland values to decline in the fourth quarter of 2015 compared with a year ago.

Cash rents rebounded modestly in the third quarter of 2015 compared with a year earlier. Quality farmland cash rents rose 0.7 percent in the third quarter, while rents for ranchland or pastureland rose 2.5 percent. Bankers expect that cash rents for both quality farmland and pastureland or ranchland will decline in the fourth quarter. However, there appears to be a stronger conviction that cash rents for quality farmland will decline, as suggested by its much

Figure 1

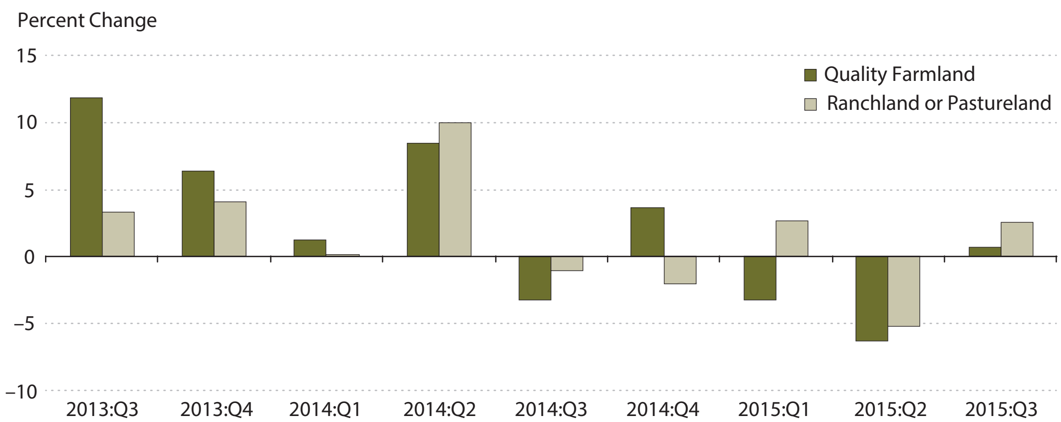
Year-Over-Year Change in Average Eighth District Land Values



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

Figure 2

Year-Over-Year Change in Average Eighth District Cash Rents



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

lower index value of 43, versus an index value of 80 for ranchland or pastureland. Figure 2 shows the history of year-over-year percentage changes in cash rents since the third quarter of 2013.

Outcomes Relative to Previous-Quarter Expectations

Survey-based data are regularly used by economists and analysts to form expectations about near-term trends in a particular industry. Accordingly, Table 3 shows third-quarter farm income, farm household expenditures, and several other key variables relative to agricultural banker expectations in the previous (2015:Q2) survey. Relative to their earlier expectations, bankers reported that farm income and household spending fell, but by less than what they had expected. By contrast, the index of capital spending (35) was lower than what they had expected (48). The demand for loans and the availability of funds in the third quarter turned out to be modestly less than bankers had expected, but the rate of loan repayment was modestly stronger than expected—an actual index value of 83 versus

Table 3

2015:Q3 Variables (versus year-ago levels)

	Index value
Farm income	
Expected	36
Actual	55
Difference	18
Household spending	
Expected	61
Actual	74
Difference	13
Capital spending	
Expected	48
Actual	35
Difference	–13
Demand for loans	
Expected	108
Actual	104
Difference	–4
Availability of funds	
Expected	104
Actual	91
Difference	–13
Rate of loan repayment	
Expected	78
Actual	83
Difference	4

NOTE: All variables are reported using a diffusion index. See the note above Table 1 for details about interpreting diffusion indexes. For comparison purposes, we compute diffusion indexes using only those banks that responded to the given questions in both the past and the current quarters. Components may not sum to totals due to rounding.

an expected value of 78. Figures 6 to 8 show the indexes of actual and expected loan demand, availability of funds, and loan repayment rates since the fourth quarter of 2012.

Financial Conditions

Table 4 reports our survey respondents' assessment of current (2015:Q3) and prospective (2015:Q4) bank lending conditions in the Eighth District compared with a year earlier. As noted in previous surveys, the actual index values reported in Table 4 may differ from those reported in Table 3 because Table 4 uses all responses to the 2015:Q3 survey, instead of a common sample between the current and previous surveys. The results from Table 4 suggest that bankers expect a modest upswing in loan demand in the fourth quarter but a more sizable drop in the rate of loan repayment. They further expect little change in the availability of funds in the fourth quarter compared with a year earlier.

Table 4

Lending Conditions (versus year-ago levels)

	Index value
Demand for loans	
2015:Q3 (actual)	97
2015:Q4 (expected)	106
Availability of funds	
2015:Q4 (actual)	100
2015:Q4 (expected)	100
Rate of loan repayment	
2015:Q3 (actual)	80
2015:Q4 (expected)	74

NOTE: Demand for loans, availability of funds, and rate of loan repayment are reported using a diffusion index. See the note above Table 1 for details about interpreting diffusion indexes. Actual and expected values for indices use all responses from the 2015:Q3 survey.

Table 5 presents average interest rates on fixed- and variable-rate loan products in the second quarter of 2015 compared with rates in the third quarter of 2015. Interest rates rose modestly across the three fixed- and variable-rate loan categories during the third quarter. For fixed-rate loans, loans on operating rates rose 11 basis points, loans for machinery or other intermediate-term loans rose 10 basis points, and loans secured by real estate rose 8 basis points. On average, interest rates on variable-rate loans for these three products also rose, but by much less—ranging from 2 to 5 basis points.

Special Questions

Table 6 reports the results of two special questions posed to the bankers in the survey. The first question was designed to reveal potential sources of risk to the farming and ranching sector in the short-term. The bankers were asked to rank the following risks from 1 to 5, with 1 indicating the highest probability of occurrence (in their view) and 5 indicating the lowest probability of occurrence: (a) a sharp rebound in petroleum prices, (b) a weaker-than-expected fall harvest, (c) a sharp fall in livestock (cattle, hogs, and poultry) prices, (d) an unexpected increase in interest rates, and (e) a larger-than-expected decline in

NOTE: All variables in Figures 3 through 8 are reported using a diffusion index. See the note above Table 1 for details about interpreting diffusion indexes. For comparison purposes, we compute diffusion indexes using only those banks that responded to the given questions in both the past and the current quarters. Expected values for indices in 2015:Q4 are calculated using only the responses from the 2015:Q3 survey.

Figure 3

Farm Income: Expected and Actual Values

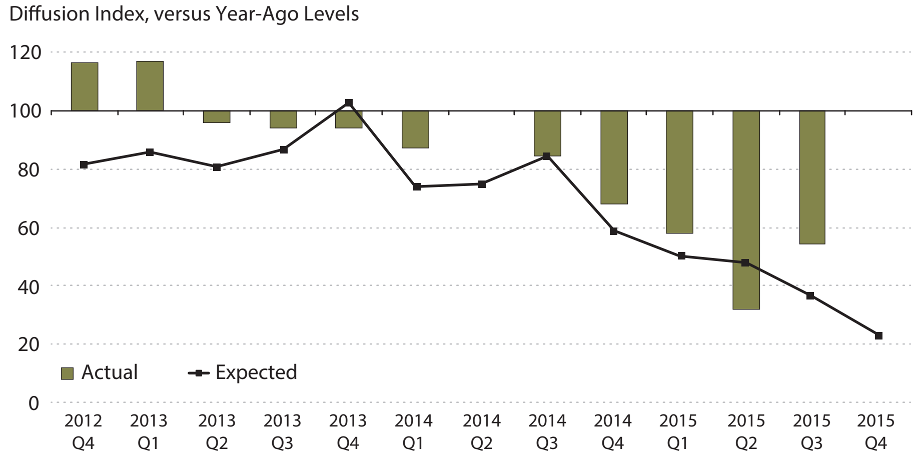


Figure 4

Household Spending: Expected and Actual Values

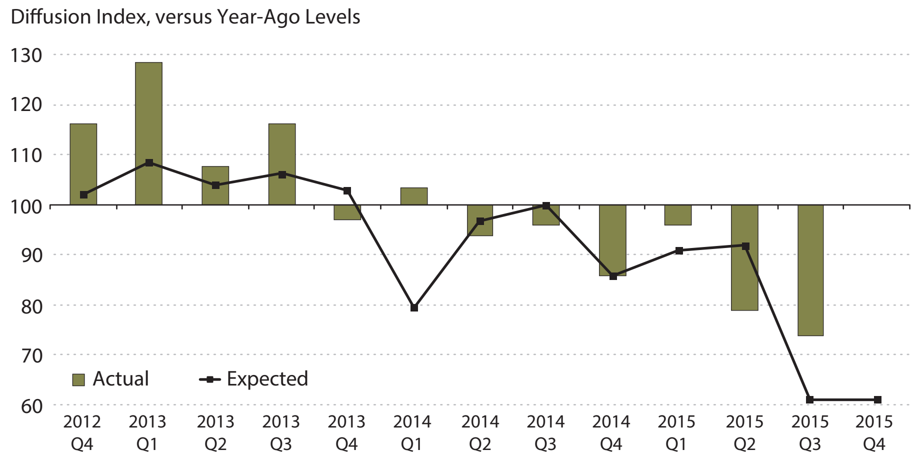
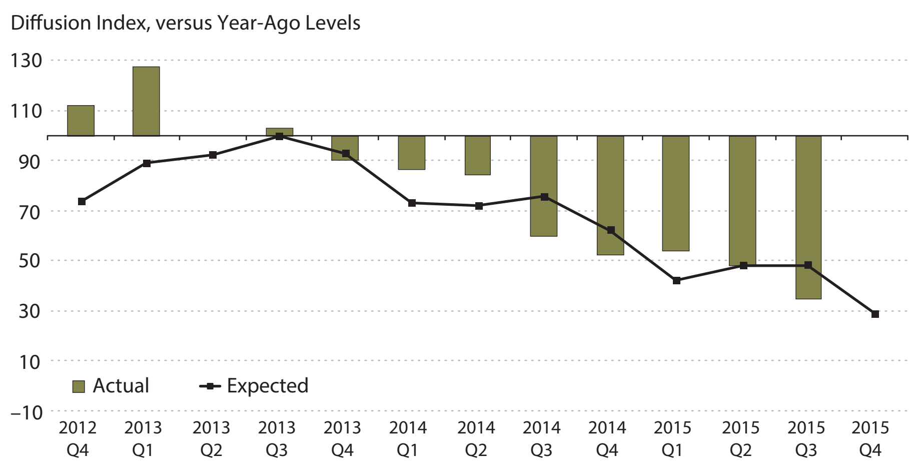


Figure 5

Capital Spending: Expected and Actual Values



NOTE: All variables in Figures 3 through 8 are reported using a diffusion index. See the note above Table 1 for details about interpreting diffusion indexes. For comparison purposes, we compute diffusion indexes using only those banks that responded to the given questions in both the past and the current quarters. Expected values for indices in 2015:Q4 are calculated using only the responses from the 2015:Q3 survey.

Figure 6

Demand for Loans: Expected and Actual Values

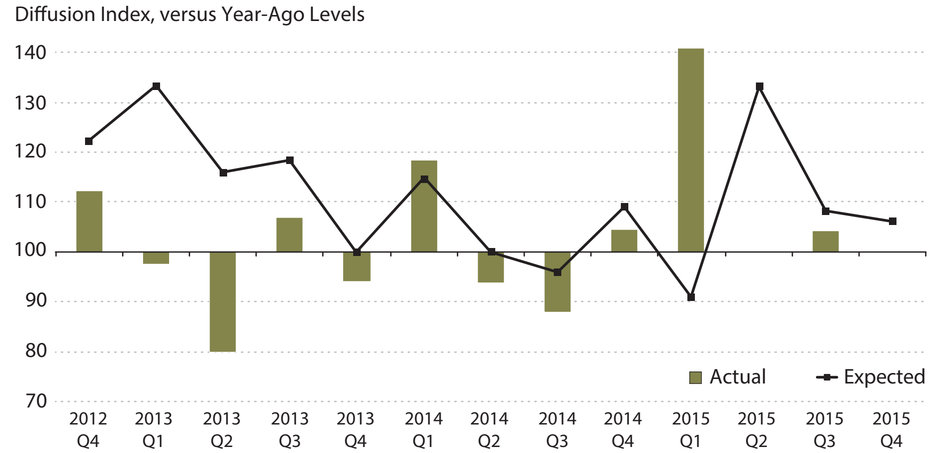


Figure 7

Availability of Funds: Expected and Actual Values

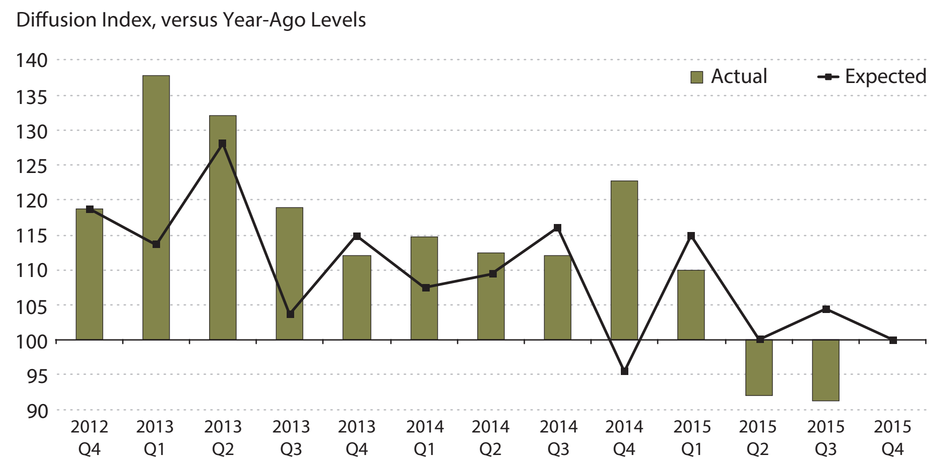


Figure 8

Rate of Loan Repayment: Expected and Actual Values

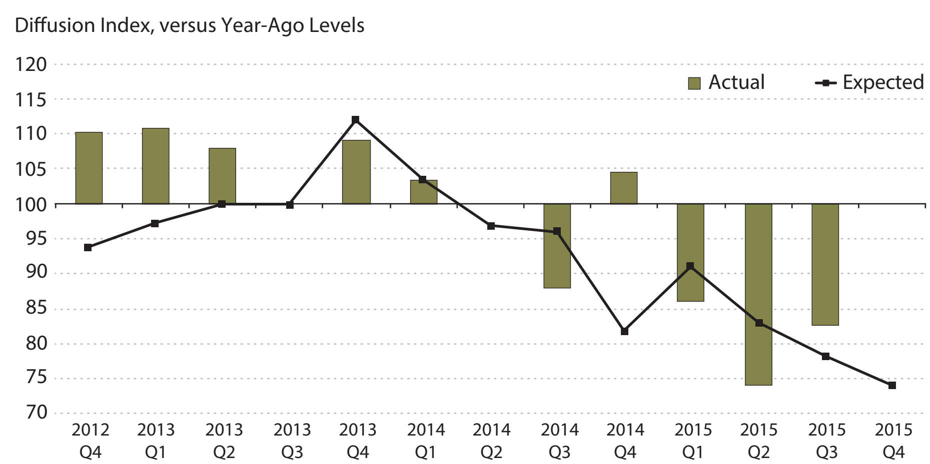


Table 5

Interest Rates (%)

	2015:Q3	2015:Q2	Change
Operating			
Fixed	5.43	5.32	0.11
Variable	4.88	4.86	0.02
Machinery/ intermediate-term			
Fixed	5.52	5.42	0.10
Variable	5.15	5.12	0.03
Farm real estate			
Fixed	5.17	5.09	0.08
Variable	4.96	4.92	0.05

NOTE: For comparison purposes, we calculate interest rates in both periods using a common sample of banks that responded to the given questions in both the past and the current quarters. Components may not sum to totals due to rounding.

farmland prices. Table 6 reports the shares of the responses for the risks chosen as having the highest probability of occurrence. The results show that, overwhelmingly, bankers view a weaker-than-expected fall harvest and a sharp fall in livestock prices as the largest potential risks to farmers in their area. Relatively few bankers thought that the other three events have the largest probability of occurrence.

The second special question asked agricultural bankers to think long-term and assess the prospects for the agricultural sector in their area over the next 5 to 10 years. For the most part, bankers were optimistic, or at least neutral, about the longer-term prospects for the farming and ranching industry in their area. A little less than half of banker respondents were optimistic, while only about 15 percent were pessimistic. A little more than one-third (36 percent) were neutral about the industry's longer-term prospects. ■

Table 6

Special Questions

Please rank the following risks to the farming and ranching sector in your area over the second half of 2015, with 1 indicating the highest probability of occurrence and 5 indicating the lowest probability of occurrence.

Share of ranking 1 (highest probability of occurring)	
Petroleum prices rebound sharply	4.0
The fall harvest is weaker than expected	60.0
Livestock prices (cattle, hogs, and poultry) fall sharply	24.0
Interest rates rise unexpectedly	4.0
Farmland prices fall by more than expected	8.0

What is your assessment of the prospects for the agricultural sector in your area over the next 5 to 10 years?

Share of total respondents	
Optimistic	48.5
Pessimistic	15.2
Neutral	36.4

Notes

[1] An agricultural bank, for survey purposes, is defined as a bank for which at least 15 percent of its total loans outstanding finances agricultural production or purchases of farmland, farm equipment, or farm structures. As of September 30, 2015, there were 247 banks in the Eighth Federal Reserve District that met this criteria.

[2] Readers are also cautioned that the number of responses in each zone is relatively small. Statistically, this tends to suggest that the responses in each zone have a larger plus-or-minus margin of error than for the District as a whole. We have eliminated the zone-by-zone responses until the response rate improves.

[3] The annual percentage change in land values and cash rents are based on common responses. That is, a respondent must have been in both the 2015:Q3 and 2014:Q3 samples.

The survey is produced by staff at the Federal Reserve Bank of St. Louis: Gary Corner, Senior Examiner, Banking Supervision and Regulation Division; Lowell R. Ricketts, Senior Analyst, Community Affairs Research; and Usa Kerdnunvong, Research Associate, and Kevin L. Kliesen, Business Economist and Research Officer, Research Division. We thank staff at the Federal Reserve Bank of Kansas City for initial and ongoing assistance with the agricultural credit survey.

If you have comments or questions, please contact Kevin Kliesen at kevin.l.kliesen@stls.frb.org.

The Eighth Federal Reserve District is headquartered in St. Louis and includes branch offices in Little Rock, Louisville, and Memphis; the District includes the state of Arkansas and portions of Illinois, Indiana, Kentucky, Mississippi, Missouri, and Tennessee.

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