2017 ■ Fourth Quarter

AGRICULTURAL Finance Monitor

Selected Quotes from Banker Respondents Across the Eighth Federal Reserve District

Timber is one of our crops, and we have seen good demand for timberland investments by individuals. Contract poultry production remains good, with grow-out times normal and production consistent. (Arkansas)

Input costs have not declined in relation to current crop prices, keeping operating margins very thin. High yields in our area helped offset low commodity prices. (Missouri)

The St. Louis metropolitan area continues to creep up U.S. Highway 61 toward this area. In response, demand for lower-quality land for recreation is rising as the economic outlook for people from the city improves. This also causes other classes of land to hold their value. (Missouri)

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

The twenty-third quarterly survey of agricultural credit conditions was conducted by the Federal Reserve Bank of St. Louis from December 15, 2017, through December 31, 2017. The results presented here are based on the responses from 23 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

A majority of agricultural bankers in the Eighth Federal Reserve District reported that farm income declined during the fourth quarter of 2017 compared with a year earlier. This finding is consistent with the past several surveys. Although bankers were modestly more optimistic about the near-term prospects for farm income, they still expect income in the first quarter of 2018 to fall below year-earlier levels. Actual and expected farm household spending and capital expenditures also remain below year-earlier levels. Quality farmland and ranch and pastureland values posted solid increases in the fourth quarter from a year earlier. Quality farmland values rose 5 percent in the fourth quarter, while ranchland and pastureland values surged nearly 15 percent. Cash rents for both land categories also increased in the fourth quarter from a year earlier. Compared with three months earlier, a slightly larger percentage of bankers reported that the demand for bank loans increased in the fourth quarter relative to a year earlier. Some further strengthening in loan demand is expected in the first quarter of 2018. Proportionately more bankers reported an erosion in loan repayment rates between the third and fourth quarters of 2017. Except for interest rates on loans secured by farm real estate, rates on most fixed- and variable-rate loan products were little changed in the fourth quarter compared with the previous quarter. There were three special questions in this quarter's survey. The first two questions asked bankers about the health of the rural economy in their area. A majority of bankers reported that the economy in their area could be characterized as poor to fair at the end of 2017. About three-quarters of bankers expect no change in local economic conditions in 2018. The final question asked bankers about their expectation for the return on farmland in 2018. Nearly all bankers believe that farmland returns in 2018 will be greater than 0 percent but less than 5 percent.

Survey Results

Farm Income and Expenditures

A majority of bankers continue to report declines in farm income relative to a year earlier. This finding is consistent with the past several surveys. As seen in Table 1, the diffusion index for farm income registered a value of 57 in the fourth quarter of 2017. The fourth-quarter value is little changed from

In the survey, bankers are regularly 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 fourth quarter of 2017. 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. We reasonably interpret a "remain constant" response as half a "decrease" response and half an "increase" response. Hence, index values from 0 to 99 indicate a majority witnessed/expected decreases; index values from 101 to 200 indicate a majority witnessed/expected increases; and an index value of 100 indicates an even split. More specifically, lower index values indicate proportionately more bankers witnessed/expected decreases.

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	
2017:Q4 (actual)	57
2018:Q1 (expected)	65
Household spending	
2017:Q4 (actual)	74
2018:Q1 (expected)	73
Capital spending	
2017:Q4 (actual)	43
2018:Q1 (expected)	61

NOTE: Actual and expected values for the indexes use all responses from the 2017:Q4 survey.

Table 2

Land Values and Cash Rents (year/year change)

	Percent or index value
Land values	
Quality farmland	5.0%
Expected 3-month trend	100
Ranchland or pastureland	14.8%
Expected 3-month trend	100
Cash rents	
Quality farmland	3.9%
Expected 3-month trend	86
Ranchland or pastureland	10.1%
Expected 3-month trend	95

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 2017:Q4 survey. Expected trends are presented as a diffusion index; see the note above for details about interpreting diffusion indexes.

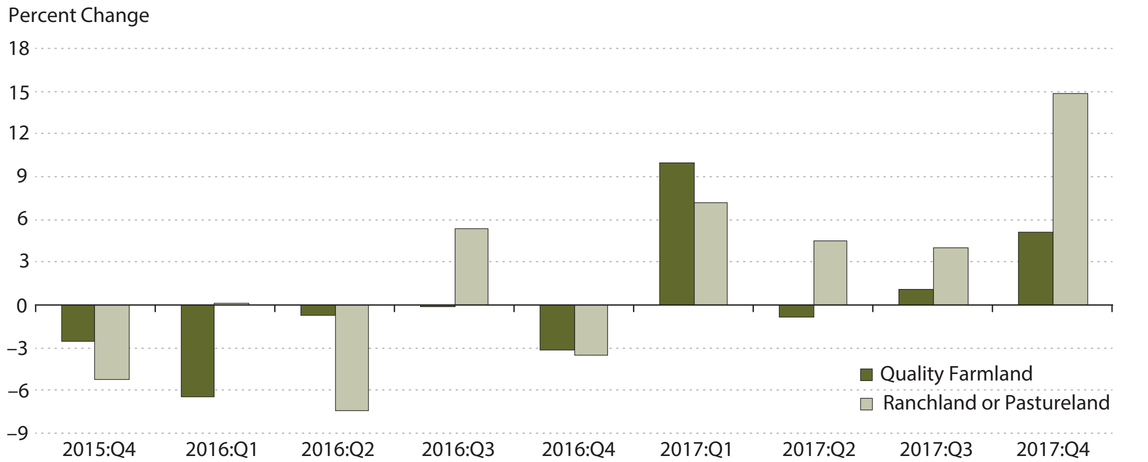
the previous quarter (58) and marks the 16th consecutive quarter with a value below 100. [NOTE: An index value of 100 would indicate an equal percentage of bankers reported increases and decreases in farm income relative to a year earlier.] Our survey found that bankers were modestly more optimistic when asked about the prospects for farm income in the first quarter of 2018, yielding a diffusion index of 65. Still, this indicates that proportionately more bankers expect farm income in the first quarter of 2018 to be below year-earlier levels. Proportionately more bankers reported that household spending fell in the fourth quarter, yielding a diffusion index of 74. The fourth-quarter index was appreciably below the third-quarter value of 92. Going forward, banker expectations for household spending in the first quarter of 2018 is little changed (index value of 73). Proportionately more bankers continue to report that capital expenditures by farmers are below year-earlier levels. In the fourth quarter of 2017, the capital spending diffusion index registered 43, nearly identical to the previous quarter's value of 44. Some modest improvement in capital spending is expected in the first quarter of 2018. (See Table 1 and Figures 3 to 5.) Readers are reminded that farm income is highly volatile and subject to seasonal fluctuations. Readers are also reminded that the index values in Table 1 are based on all responses received for the fourth-quarter survey and thus can differ from the values reported in Figures 3 to 5. [See note at the bottom of Figure 8.]

Current and Expected Land Values and Cash Rents

Table 2 reports year-to-year changes in current-quarter land values and cash rents, as well as banker expectations for the trend in land values and cash rents over the follow-

Figure 1

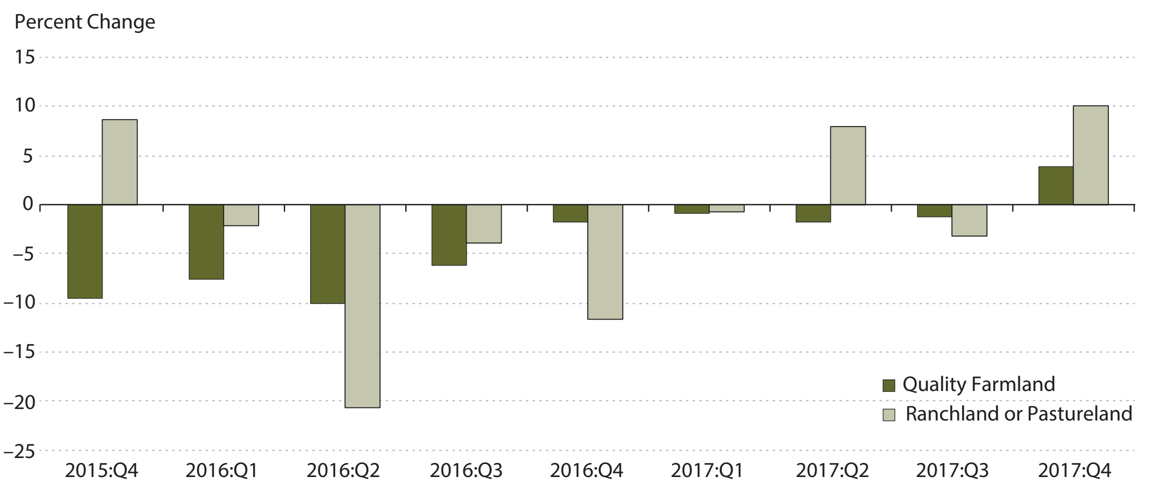
Year-Over-Year Change in Average Eighth District Land Values



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.

ing three months. Measured from a year earlier, quality farmland values rose 5 percent in the fourth quarter. This increase compares favorably with the roughly 1 percent gain registered in the third quarter. Meanwhile, ranchland and pastureland values increased by a healthy 14.8 percent in the fourth quarter, far surpassing the 4 percent increase registered in the third quarter and the largest gain in the short history of the *Agricultural Finance Monitor*. On net, bankers expect quality farmland and ranchland and pastureland values to remain unchanged over the next three months (diffusion indexes of 100). Cash rents for both land categories increased in the fourth quarter from a year earlier. Cash rents for quality farmland rose by 3.9 percent, while rents for ranchland and pastureland rose by 10.1 percent. Proportionately more bankers expect that cash rents for quality farmland and ranchland or pastureland will decline over the next three months (diffusion indexes below 100). See Figures 1 and 2.

Table 3

2017:Q4 Variables (versus year-ago levels)

	Index value
Farm income	
Expected	71
Actual	59
Difference	–12
Household spending	
Expected	88
Actual	76
Difference	–12
Capital spending	
Expected	53
Actual	41
Difference	–12
Demand for loans	
Expected	117
Actual	122
Difference	6
Availability of funds	
Expected	89
Actual	94
Difference	6
Rate of loan repayment	
Expected	88
Actual	76
Difference	–12

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.

Table 4

Lending Conditions (versus year-ago levels)

	Index value
Demand for loans	
2017:Q4 (actual)	122
2018:Q1 (expected)	124
Availability of funds	
2017:Q4 (actual)	96
2018:Q1 (expected)	105
Rate of loan repayment	
2017:Q4 (actual)	77
2018:Q1 (expected)	86

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 2017:Q4 survey.

Table 5

Interest Rates (%)

	2017:Q4	2017:Q3	Change
Operating			
Fixed	5.83	5.83	0.00
Variable	5.42	5.43	–0.02
Machinery/ intermediate-term			
Fixed	5.81	5.81	0.00
Variable	5.46	5.51	–0.05
Farm real estate			
Fixed	5.60	5.41	0.19
Variable	5.08	5.30	–0.23

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.

Outcomes Relative to Previous-Quarter Expectations

Table 3 reports diffusion indexes for farm income, household expenditures, and three bank-related metrics for the fourth quarter of 2017. We also report the expected values for the fourth quarter based on banker responses from the previous quarter's survey. [NOTE: For Table 3, we compute diffusion indexes using only those banks that responded to both the 2017 third- and fourth-quarter surveys.] In general, the fourth-quarter diffusion indexes for the income and expenditure categories were lower than the expectations reported in the third-quarter survey. All else equal, this suggests that Eighth District agricultural conditions in the fourth quarter were modestly worse than bankers had expected three months earlier. Not surprisingly, bankers reported that the demand for loans and the availability of funds was slightly higher than expected, and the rate of loan repayment was modestly worse than expected in the fourth quarter.

Financial Conditions

Table 4 reports our survey respondents' assessment of current and prospective bank lending conditions in the Eighth District compared with four quarters earlier. In the

Figure 3

Farm Income: Expected and Actual Values

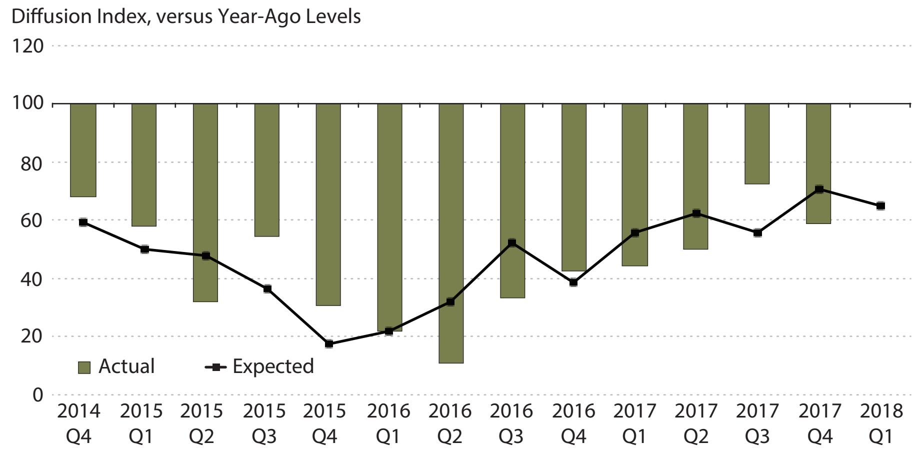


Figure 4

Household Spending: Expected and Actual Values

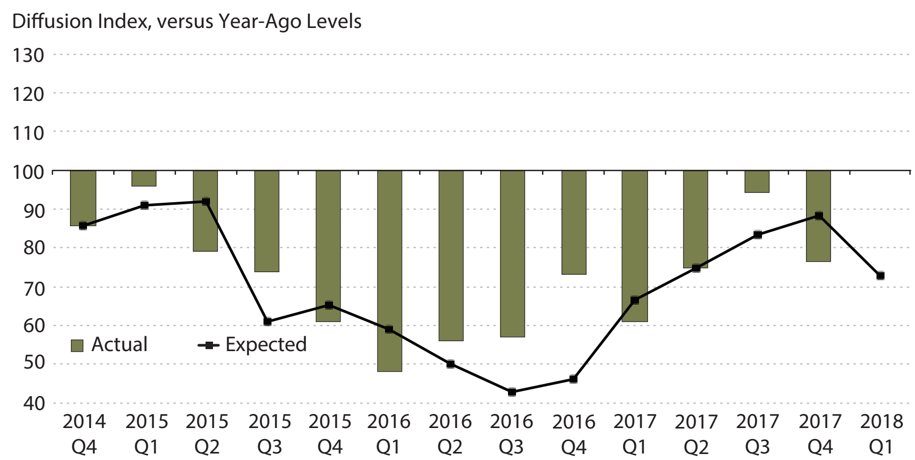
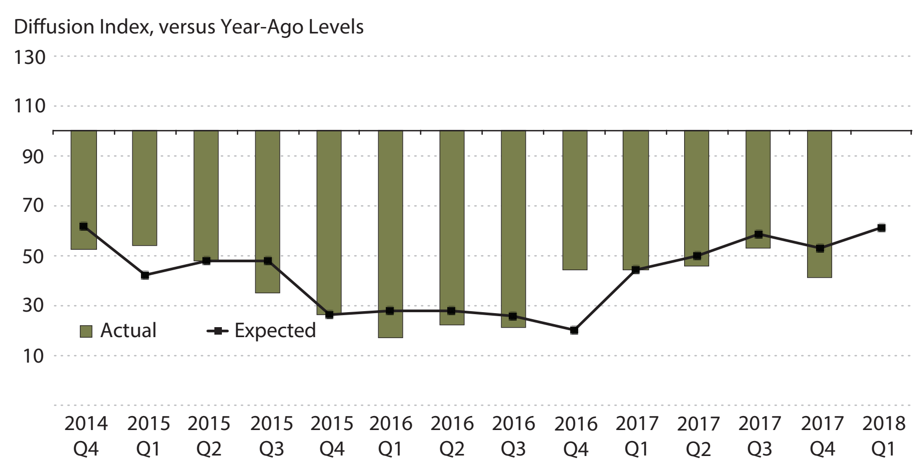


Figure 5

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 2018:Q1 are calculated using only the responses from the 2017:Q4 survey. There is no actual value (and hence no bar) for the final quarter shown in each figure. For all previous quarters, if no bar is shown, the actual value is 100.

Figure 6
Demand for Loans: Expected and Actual Values

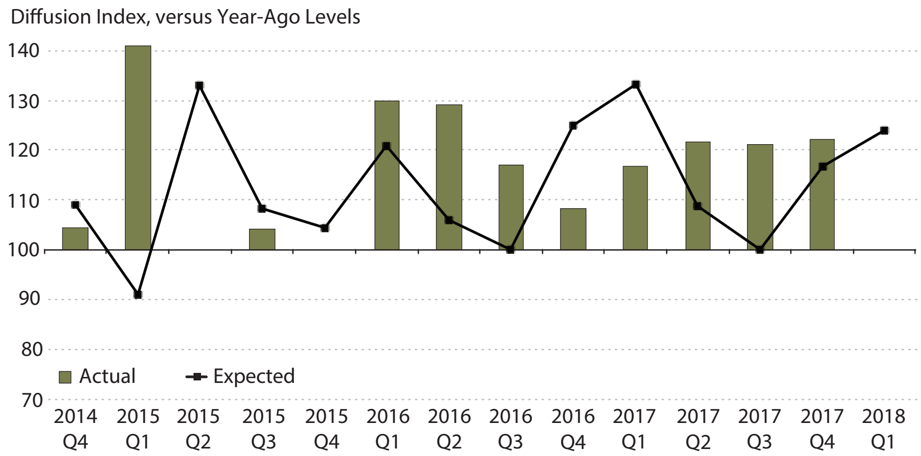


Figure 7
Availability of Funds: Expected and Actual Values

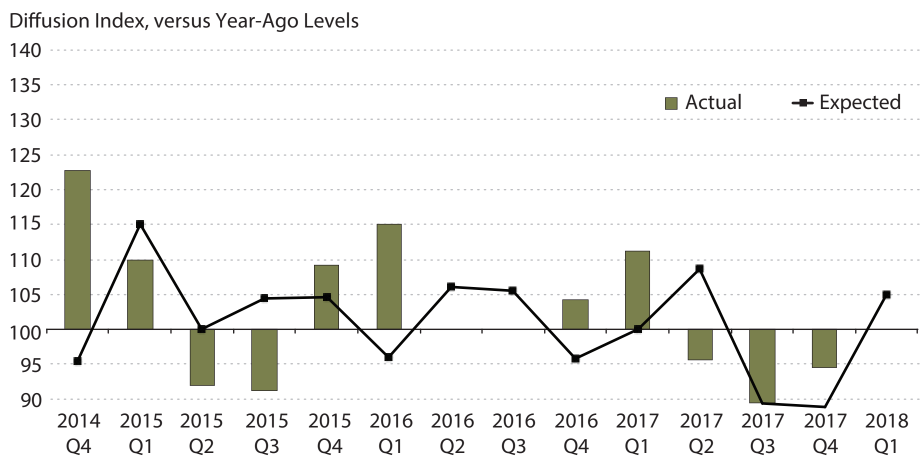
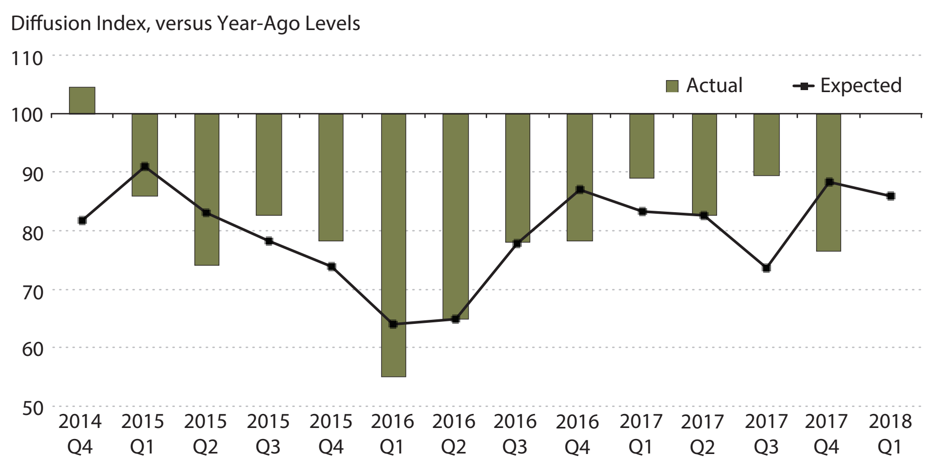


Figure 8
Rate of Loan Repayment: Expected and Actual Values



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 2018:Q1 are calculated using only the responses from the 2017:Q4 survey. There is no actual value (and hence no bar) for the final quarter shown in each figure. For all previous quarters, if no bar is shown, the actual value is 100.

fourth quarter of 2017, loan demand (diffusion index of 122) was modestly stronger than in the previous quarter (index of 115). Proportionately more bankers expected a slight firming in the demand for loans in the first quarter of 2018 (index value of 124). Slightly more bankers also reported a decline in the availability of funds than an increase in the availability of funds in the fourth quarter (index value of 96). However, the availability of funds in the fourth quarter was modestly stronger than in the third quarter, and a further increase is expected in the first quarter (index value of 105). A larger percentage of bankers reported declines in the rate of loan repayment in the fourth quarter (index value of 77) compared with a quarter earlier (index value of 93). However, some modest improvement is likely in the first quarter according to survey responses (index value of 86). [As noted in previous surveys, the actual index values for fourth-quarter values reported in Table 4 may differ from those reported in Table 3. The reason is that Table 4 uses all responses from the fourth-quarter 2017 survey, instead of a common sample between the current and previous surveys.]

Table 5 shows average interest rates on fixed- and variable-rate loan products in the third and fourth quarters of 2017. Compared with the third-quarter averages, interest rates were generally unchanged for fixed- or variable-rate operating and machinery/intermediate-term loans. However, changes in interest rates on loans secured by farm real estate were markedly different. Fixed-rate farm real estate loans increased by 19 basis points to 5.6 percent, while variable-rate farm real estate loans fell by 23 basis points to 5.08 percent.

Table 6

Special Questions

How would you characterize the health of the rural economy (i.e., "Main Street") in your region?

Percent of respondents	
Extremely poor	0
Poor	26
Fair	39
Good	35
Exceptional	0

In 2018, I expect economic conditions in my area to:

Percent of respondents	
Worsen	22
Remain the same	70
Improve	9

Do you expect the return on farmland in your area for landowners in 2018 (rents less expenses divided by market value of land) will be:

Percent of respondents	
Greater than 10%	0
Greater than 5% but less than 10%	9
Greater than 0% but less than 5%	91
Negative (less than 0%)	0

Special Questions

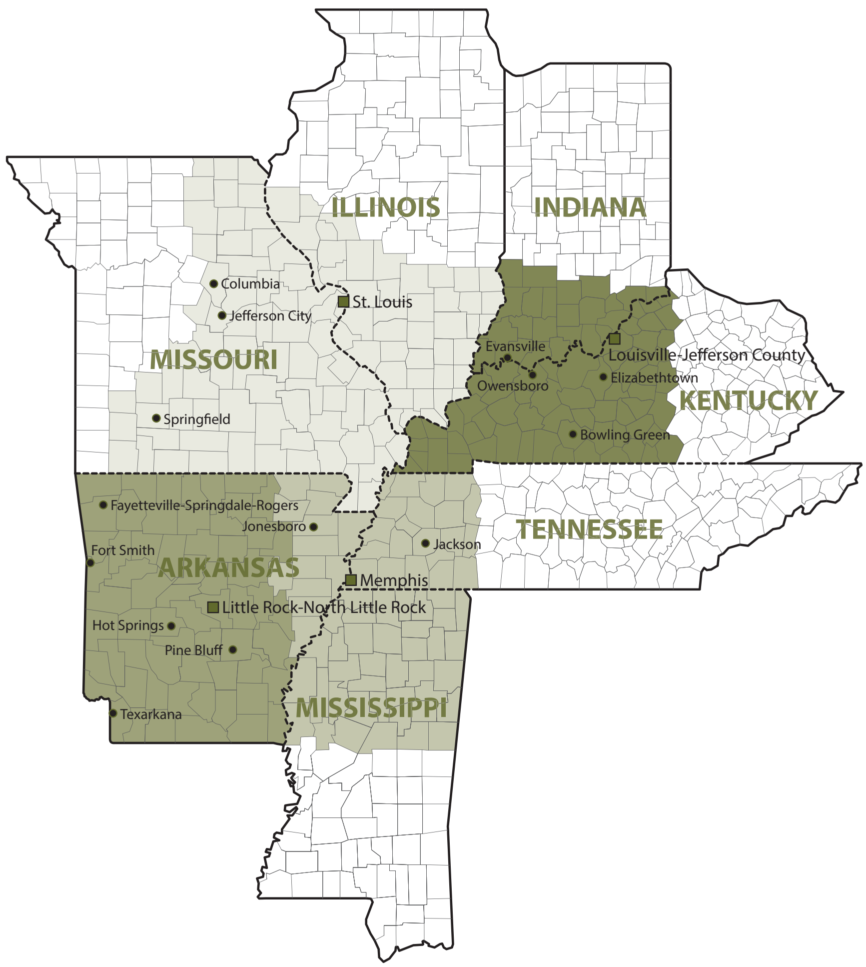
Table 6 reports the results of three special questions posed to our agricultural bankers. The first question asked the bankers to assess the health of the rural economy in their region. Roughly two-thirds of bankers (65 percent) believe that the economy in their region could be characterized as fair to poor. About a third of respondents (35 percent) reported that the economy in their region could be characterized as good. The second special question asked the bankers about their region's economic outlook in 2018. A little less than a quarter of the respondents (22 percent) expect economic conditions in their area to worsen this year, while 70 percent expect little change. A little less than one-in-ten respondents (9 percent) expect economic conditions in their area to improve in 2018.

The third special question asked our agricultural bankers their expectation for farmland returns in 2018. Nearly all of the respondents (91 percent) expect the return on farmland to landowners in their area to be greater than 0 percent but less than 5 percent. The remaining 9 percent expect farmland returns in their area to be greater than 5 percent but less than 10 percent in 2018. This same question was posed to bankers in the fourth quarter of 2015. At that time, 13 percent expected farmland returns in 2016 to be greater than 5 percent but less than 10 percent; 77 percent expected farmland returns to be greater than 0 percent but less than 5 percent; and 10 percent of respondents expected farmland values to decline in 2016. On balance, then, expectations for farmland returns have improved modestly over the past two years. ■

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 December 31, 2017, there were 236 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.



The survey is produced by staff at the Federal Reserve Bank of St. Louis: Larry D. Sherrer, Senior Examiner, Banking Supervision and Regulation Division; Jonas Crews and Brian Levine, Research Associates; 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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