2018 ■ Fourth Quarter

AGRICULTURAL Finance Monitor

Selected Quotes from Banker Respondents Across the Eighth Federal Reserve District

Tariffs are beginning to take a heavy toll on local farmers and agricultural businesses in our region. (Arkansas)

Due to our contract poultry and swine operations, our agriculture industry is more stable than other types of production agriculture. Income and returns are stable, and we have no row crops in the area. (Arkansas)

We do not offer variable-rate loan products at this time. (Arkansas)

There is uncertainty surrounding the grain and livestock markets. A lot of producers fear that our export markets will not return to normal. (Illinois)

We have heard rumors of large farms filing for bankruptcy. Farmers in our area still have crops in the field. (Missouri)

Income varies across the region, as part of our service area experienced extreme drought and yields as low as 30 percent below average. Other areas with above-average rainfall saw yields as much as 200 percent above average. (Missouri)

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

The twenty-seventh quarterly survey of agricultural credit conditions was conducted by the Federal Reserve Bank of St. Louis from December 15, 2018, through December 31, 2018. The results presented here are based on the responses from 22 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

This quarter's survey assessed the economic and financial conditions in the District's agricultural industry from the perspective of agricultural bankers. For the twentieth consecutive quarter, a majority of agricultural bankers in the Eighth Federal Reserve District reported that farm income had declined in the fourth quarter of 2018 compared with a year earlier. Proportionately more bankers also reported that farm household spending and capital expenditures remained below year-earlier levels in the fourth quarter. Bankers expect similar conditions to prevail for these three indicators in the first quarter of 2019. Despite expectations of falling land values over the past few surveys, bankers reported that the rate of increase in quality farmland and ranchland or pastureland values and cash rents accelerated in the fourth quarter compared with the previous quarter. Interest rates on all six of the fixed- and variable-rate loan categories rose in the fourth quarter. On average, interest rates on variable-rate loan products rose by more than those on fixed-rate loan products. There were three special questions in this quarter's survey. The first question asked agricultural bankers about the health of the rural economy in their region. About two-thirds of bankers reported that local economic conditions were fair, while about a third reported that conditions were good. In the second special question, bankers were asked about the economic outlook for 2019. Two-thirds believe that local economic conditions will remain the same, while a third expect them to worsen in 2019. The third special question asked bankers their expectations for farmland returns in 2019. Nine in ten bankers expect farmland returns to be positive but less than 5 percent.

Survey Results

Farm Income and Expenditures

A majority of agricultural bankers continue to report declines in farm income relative to a year earlier. As seen in Table 1, the diffusion index for farm income registered a value of 41 in the fourth quarter of 2018. The fourth-quarter index was slightly lower than the previous quarter's value (index value of 45) and marked the twentieth consecutive quarter with a value below 100. [NOTE: An index value below 100 indicates that a larger percentage of bankers reported decreases in farm income relative to a year earlier than increases in

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 2018. 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	
2018:Q4 (actual)	41
2019:Q1 (expected)	48
Household spending	
2018:Q4 (actual)	68
2019:Q1 (expected)	73
Capital spending	
2018:Q4 (actual)	29
2019:Q1 (expected)	48

NOTE: Actual and expected values for the indexes use all responses from the 2018:Q4 survey.

Table 2

Land Values and Cash Rents (year/year change)

	Percent or index value
Land values	
Quality farmland	3.4%
Expected 3-month trend	81
Ranchland or pastureland	6.5%
Expected 3-month trend	83
Cash rents	
Quality farmland	2.9%
Expected 3-month trend	76
Ranchland or pastureland	1.3%
Expected 3-month trend	88

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 2018:Q4 survey. Expected trends are presented as a diffusion index; see the note above for details about interpreting diffusion indexes.

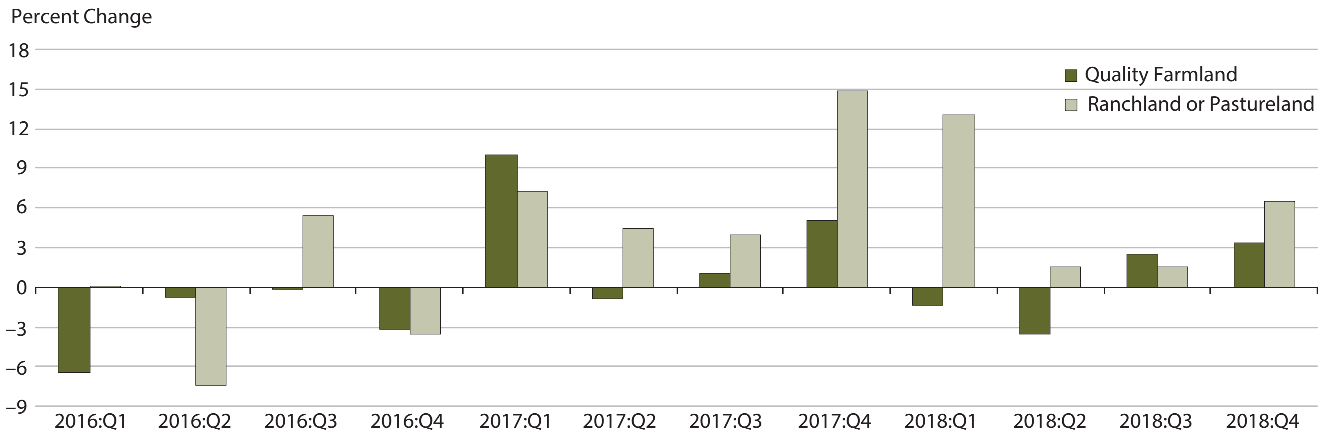
farm income.] Expectations for farm income in the first quarter of 2019 were only slightly better (index value of 48). Responses indicate that household spending and farm-related capital spending declined in the fourth quarter from a year earlier. However, the index values suggest fewer bankers reported declines in household spending (index value of 68) compared with farm-related capital expenditures (index value of 29). Bankers are slightly less pessimistic about the prospects for household spending and capital expenditures in the first quarter of 2019. The diffusion indexes for farm income, household spending, and capital expenditures are reported in Figures 3 to 5, respectively. 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 percent changes in current-quarter land values and cash rents, and banker expectations for land values and cash rents over the next three months (first quarter of 2019). Quality farmland values rose 3.4 percent in the fourth quarter from a year earlier, a modest acceleration from the 2.5 percent increase registered in the third quarter. Ranchland or pastureland values increased by 6.5 percent in the fourth quarter after increasing 1.5 percent in the third quarter. Similar to previous reports, proportionately more bankers expect quality farmland values and ranchland or pastureland values to decline over the next three months (index values of 81 and 83, respec-

Figure 1

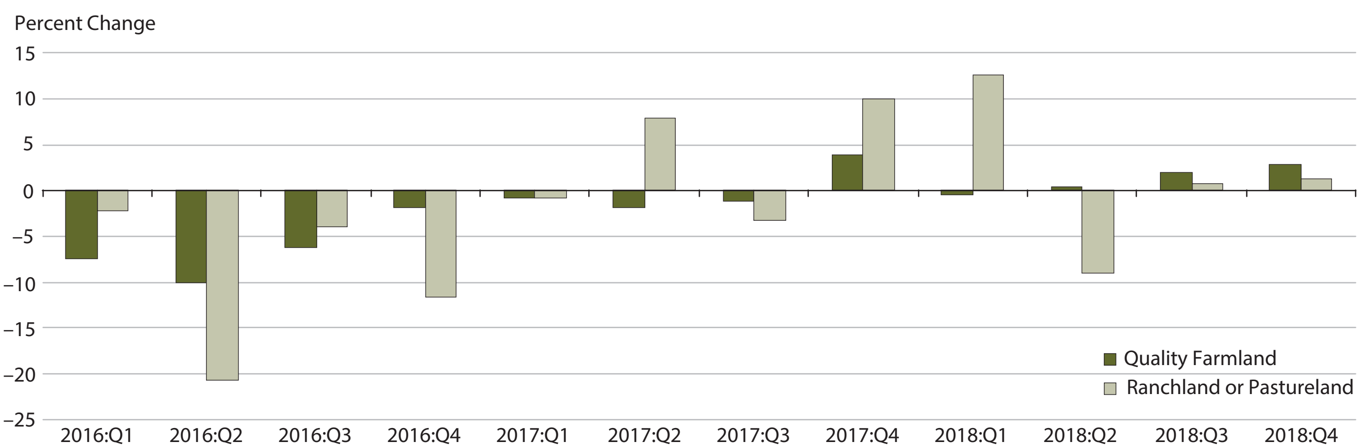
Year-Over-Year Change in Average Eighth District Land Values



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.

tively). Cash rents for quality farmland rose 2.9 percent in the fourth quarter, following a 2 percent gain in the third quarter. Cash rents for ranchland or pastureland rose by less, 1.3 percent, after increasing by 0.8 percent in the third quarter. Similar to farmland and ranchland or pastureland values, proportionately more bankers expect that cash rents for both types of land will decline over the next three months. See Figures 1 and 2 for a historical perspective of land values and cash rents, respectively.

Outcomes Relative to Previous-Quarter Expectations

Table 3 reports diffusion indexes for farm income, household expenditures, farm-related capital expenditures, and three bank-related financial metrics for the fourth quarter of 2018 compared with the values that were expected in the previous survey three months earlier. [NOTE: For Table 3, we compute diffusion indexes using only those banks that responded to both the 2018 third-quarter and 2018 fourth-quarter surveys.] Overall, compared with their expectations from three months earlier, proportionately

Table 3

2018:Q4 Variables (versus year-ago levels)

	Index value
Farm income	
Expected	42
Actual	42
Difference	0
Household spending	
Expected	53
Actual	68
Difference	16
Capital spending	
Expected	44
Actual	22
Difference	–22
Demand for loans	
Expected	116
Actual	126
Difference	11
Availability of funds	
Expected	79
Actual	84
Difference	5
Rate of loan repayment	
Expected	105
Actual	58
Difference	–47

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	
2018:Q4 (actual)	123
2019:Q1 (expected)	127
Availability of funds	
2018:Q4 (actual)	82
2019:Q1 (expected)	86
Rate of loan repayment	
2018:Q4 (actual)	59
2019:Q1 (expected)	76

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 indexes use all responses from the 2018:Q4 survey.

Table 5

Interest Rates (%)

	2018:Q4	2018:Q3	Change
Operating			
Fixed	6.08	5.86	0.22
Variable	5.91	5.60	0.31
Machinery/ intermediate-term			
Fixed	6.23	6.03	0.19
Variable	6.06	5.70	0.36
Farm real estate			
Fixed	6.13	5.92	0.20
Variable	5.91	5.65	0.26

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.

fewer bankers reported that household spending, the demand for loans, and the availability of funds declined in the fourth quarter from a year earlier (as noted by the larger actual value compared with the expected value). By contrast, proportionately more bankers reported declines in capital spending and loan repayment rates in the fourth quarter than they had expected three months earlier.

Financial Conditions

Table 4 reports the District bankers' assessment of current and prospective lending conditions in the fourth quarter of 2018 compared with four quarters earlier. Proportionately more bankers reported an increase in loan demand from a year earlier in the fourth quarter (diffusion index of 123). A similar percentage of bankers expect loan demand to increase in the first quarter of 2019 as farmers gear-up for the spring planting season. By contrast, proportionately more bankers reported declines in the availability of funds and in the rate of loan repayment in the fourth quarter. A slightly larger percentage of bankers—though still a minority—expect repayment rates to increase in the first quarter of 2019. By and large, banker expectations for the availability of funds in the first quarter are

Figure 3
Farm Income: Expected and Actual Values

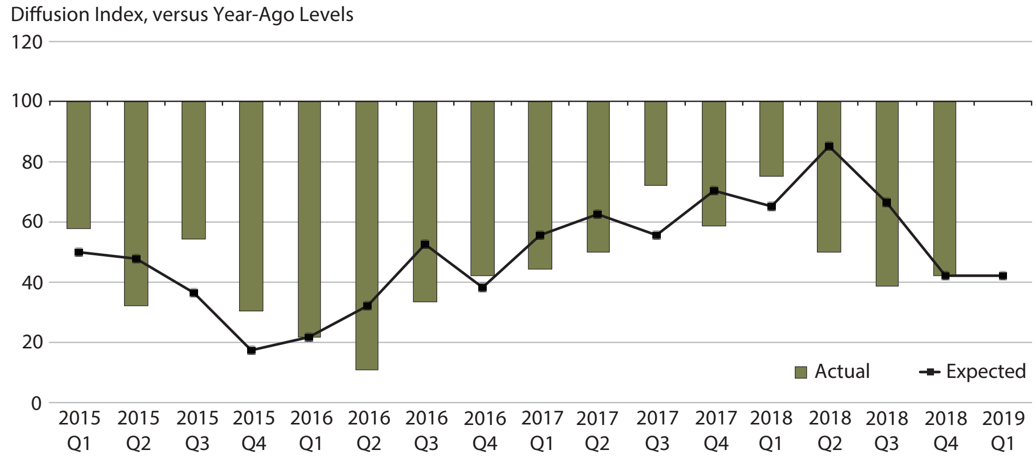


Figure 4
Household Spending: Expected and Actual Values

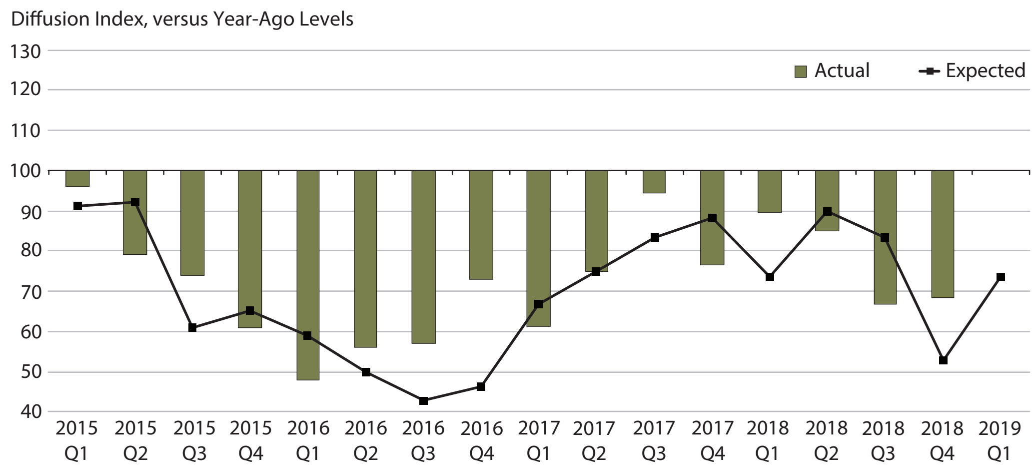
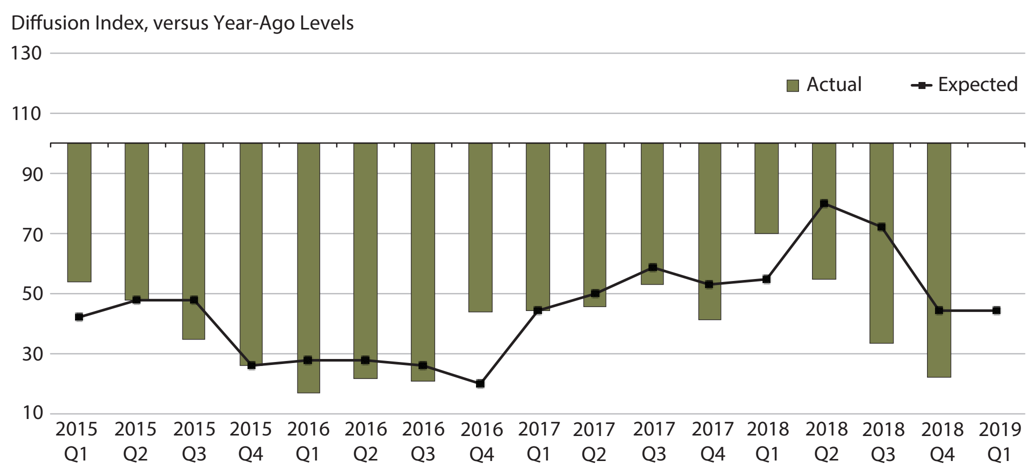


Figure 5
Capital Spending: Expected and Actual Values



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 indexes in 2019:Q1 are calculated using only the responses from the 2018: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

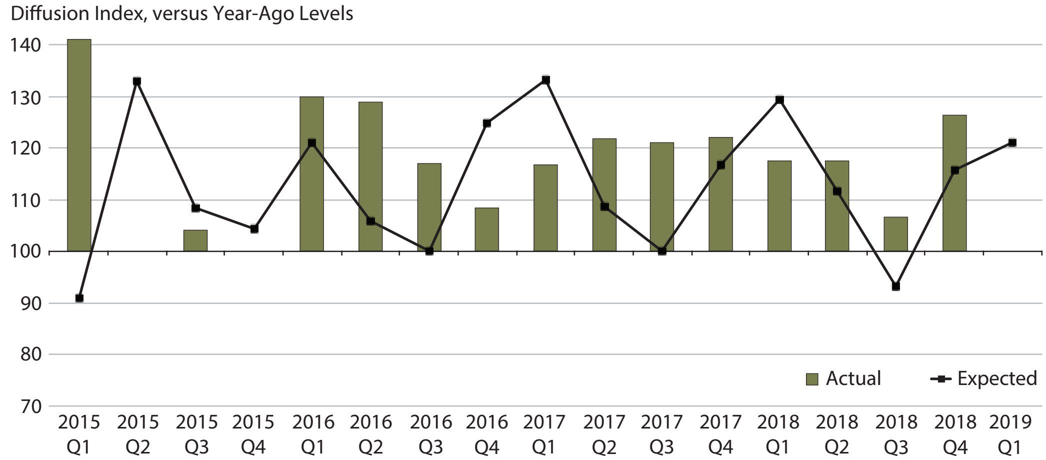


Figure 7

Availability of Funds: Expected and Actual Values

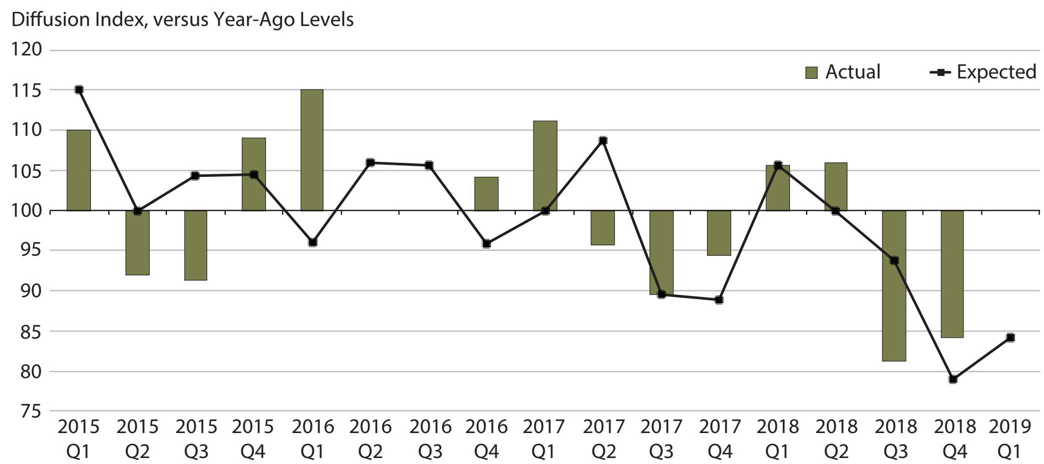
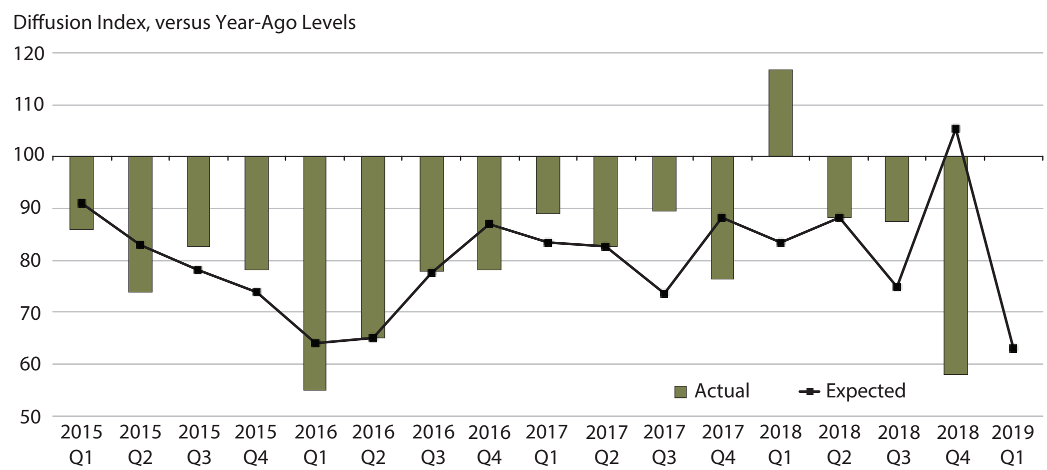


Figure 8

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 indexes in 2019:Q1 are calculated using only the responses from the 2018: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.

not much different from those that prevailed in the fourth quarter. [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 2018 survey, instead of a common sample between the current and previous surveys.]

Table 5 shows average interest rates on a variety of fixed- and variable-rate loan types in the third and fourth quarters of 2018. Compared with the previous quarter, interest rates increased across all listed loan types in the fourth quarter. Interest rates increased the most for variable-rate machinery/intermediate-term loans (36 basis points), while rates increased the least for fixed-rate machinery/intermediate-term loans (19 basis points). Across all categories, fixed-rate loans increased by an average of about 20 basis points in the fourth quarter, while variable-rate loans increased by an average of 31 basis points.

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 (64 percent) believe that the economy in their region could be characterized as fair, with another 32 percent rating the local economy as good. No banker reported exceptional economic conditions in his area, and only 5 percent characterized economic conditions as extremely poor. This question was asked of bankers in late 2017 (four quarters earlier). In that survey, 35 percent reported that the local economy was in good shape, 39 percent reported that it was in fair shape, and about a quarter (26 percent) reported that it was in poor shape. On net, then, the health of the rural economy has improved modestly over the past year according to agricultural bankers.

The second special question asked the bankers about their region's economic outlook for 2019. Two-thirds of the respondents expect economic conditions in their area to stay the same, while one-third expect economic conditions to worsen this year. No banker expected improving economic conditions in 2019 in his region.

The third special question asked our agricultural bankers their expectations for farmland returns in 2019. Nearly all of the respondents (91 percent) expect farmland returns 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 2019. This same question was posed to bankers in the fourth quarters of 2017 and 2015. The current quarter's results are exactly the same as a year earlier. However, three years earlier, in 2015, 13 percent expected farmland returns 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 expected farmland returns to be negative in 2016. On balance, then, bankers have increasingly come to expect low, single-digit farmland returns. ■

[Editor's Note: Due to low and declining response rates, the Federal Reserve Bank of St. Louis is evaluating the viability of the *Agricultural Finance Monitor*.]

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	5
Fair	64
Good	32
Exceptional	0

In 2019, I expect economic conditions in my area to

	Percent of respondents
Worsen	33
Remain the same	67
Improve	0

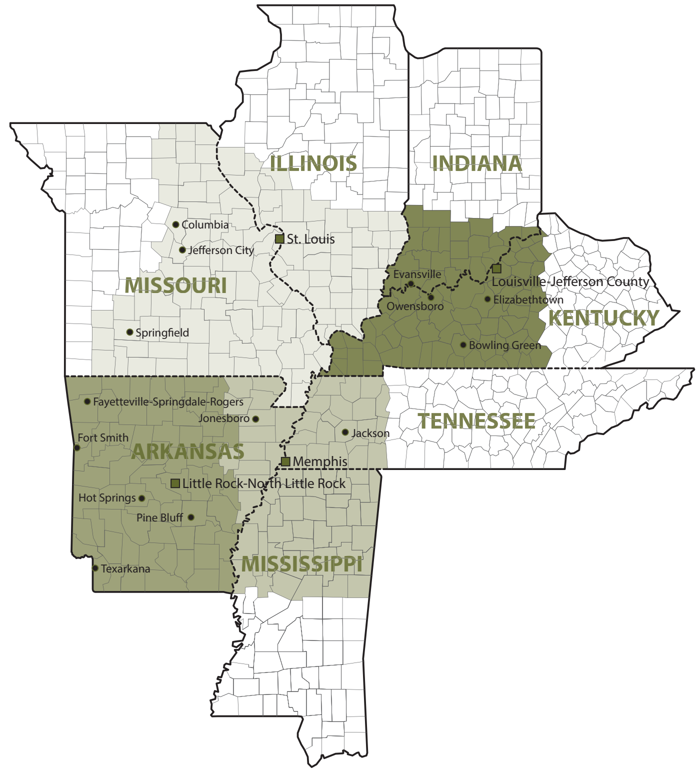
Do you expect the return on farmland in your area for landowners in 2019 (rents less expenses divided by market value of land) will be

	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

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, 2018, there were 225 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; Kathryn Bokun, 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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