2018 ■ Third Quarter

AGRICULTURAL Finance Monitor

Selected Quotes from Banker Respondents Across the Eighth Federal Reserve District

It could be a disastrous 2019 if commodity prices don't rebound! (Arkansas)

Government payments are far too delayed to positively impact farmers in the current crop cycle. Current market prices do not allow producers to invest in efficiency improvements and preserve natural resources. Federal crop insurance deadlines do not allow agents to adequately inform customers of details and changes from the time of the announcement to the program deadline. In response, insured coverage is often too expensive to justify. (Arkansas)

We expect some expansion in the poultry industry going into 2019. Stocker cattle prices are holding firm, although breeding-age cattle prices have declined some. (Arkansas)

I expect no change in the marketing plans because they have bills to pay and will need to sell the crop to make those payments. Small farmers are hurting because of the low prices and are usually the ones who do not have on-farm storage to allow them to hold their harvested crops. (Missouri)

Drought is of great concern, as low yields will be compounded by less bushels to claim for the market-support program implemented to offset tariffs. (Missouri)

Low commodity prices looking forward; extremely higher equipment purchase prices and increasing repair expenses due to the necessity of hiring professional mechanics as a result of increased sophistication of equipment. (Tennessee)

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

The twenty-sixth quarterly survey of agricultural credit conditions was conducted by the Federal Reserve Bank of St. Louis from September 15, 2018, through September 30, 2018. The results presented here are based on the responses from 24 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 in the third quarter of 2018. For the nineteenth consecutive quarter, a majority of agricultural bankers in the Eighth Federal Reserve District reported that farm income had declined compared with a year earlier. Bankers also reported that farm household spending and capital expenditures remained below year-earlier levels in the third quarter. Moreover, the number of bankers reporting third-quarter declines in these key indicators was larger than three months earlier. A slightly larger percentage of respondents reported that they expect farm income and expenditures to decline again in the fourth quarter relative to a year earlier. Values of quality farmland and ranchland or pastureland rose modestly in the third quarter from a year earlier, as did cash rents. Interest rates on three of the six fixed- and variable-rate loan categories rose slightly in the third quarter. There were three special questions in this quarter's survey. In the first question, which asked bankers to choose their highest concern, a little more than three-quarters of respondents reported that continued low commodity prices is their largest concern. The second special question asked agricultural bankers about loan repayment problems over the second half of 2018. Nearly three-quarters of bankers responded that they expect operating lines of credit to have the largest repayment problems. Finally, the third special question asked bankers whether soybean producers in their area will delay selling all or part of this year's or next year's crops in response to the sharp decline in soybean prices. A little more than half of bankers responded in the affirmative, while a little less than half of bankers reported their belief that there will be no change in farmers' marketing plans for this year's soybean crop.

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 45 in the third quarter of 2018. The third-quarter index was the lowest in two years and marks the nineteenth consecutive quarter with a value below 100. [NOTE: An index value below 100 indi-

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 third 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:Q3 (actual)	45
2018:Q4 (expected)	41
Household spending	
2018:Q3 (actual)	68
2018:Q4 (expected)	50
Capital spending	
2018:Q3 (actual)	36
2018:Q4 (expected)	36

NOTE: Actual and expected values for the indexes use all responses from the 2018:Q3 survey.

Table 2

Land Values and Cash Rents (year/year change)

	Percent or index value
Land values	
Quality farmland	2.5%
Expected 3-month trend	95
Ranchland or pastureland	1.5%
Expected 3-month trend	89
Cash rents	
Quality farmland	2.0%
Expected 3-month trend	77
Ranchland or pastureland	0.8%
Expected 3-month trend	100

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:Q3 survey. Expected trends are presented as a diffusion index; see the note above for details about interpreting diffusion indexes.

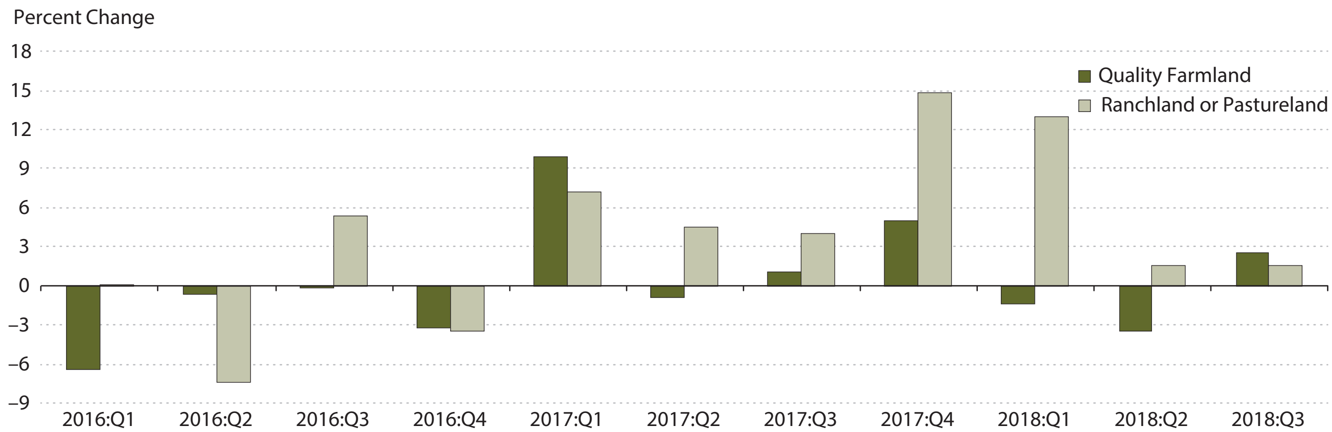
cates that a larger percentage of bankers reported decreases in farm income relative to a year earlier than increases in farm income.] Overall, bankers were slightly less optimistic when asked about the prospects for farm income in the fourth quarter of 2018 (a diffusion index value of 41). Proportionately more bankers also reported that household spending and capital expenditures in the third quarter were lower than a year earlier. As indicated by the diffusion index relative to its third quarter value, a majority of bankers expect household spending and capital expenditures to also decline in the fourth quarter from a year earlier. The diffusion indexes for farm income, household income, and capital expenditures are reported in 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 third-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 land values and cash rents over the fourth quarter. Quality farmland values rose 2.5 percent in the third quarter from a year earlier, after falling by a little more than 3 percent in the second quarter. Ranchland or pastureland values also increased in the third quarter, but by modestly less (1.5 percent). Proportionately more bankers expect quality farmland values and ranchland or pastureland values to decline over the next three months (index values of 95 and 89, respectively). Cash rents for quality farmland rose 2 percent in the third quarter, while cash rents for ranch-

Figure 1

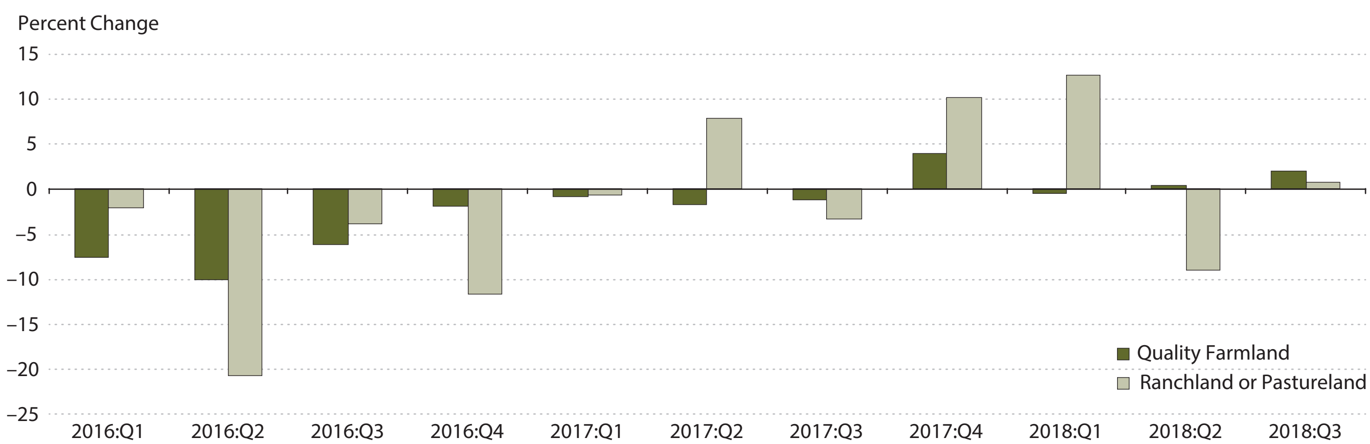
Year-Over-Year Change in Average Eighth District Land Values



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.

land or pastureland rose 0.8 percent. Proportionately more bankers expect that cash rents for quality farmland will decline over the next three months (index value of 77). However, bankers are split on whether cash rents for ranchland and pastureland will decrease or increase over the next three months, yielding a diffusion index value of 100. See Figures 1 and 2 for a historical perspective of land values and cash rents.

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 third 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 second- and third-quarter surveys.] Overall, compared with their expectations from three months earlier, proportionately more bankers

Table 3

2018:Q3 Variables (versus year-ago levels)

	Index value
Farm income	
Expected	67
Actual	39
Difference	–28
Household spending	
Expected	83
Actual	67
Difference	–17
Capital spending	
Expected	72
Actual	33
Difference	–39
Demand for loans	
Expected	93
Actual	107
Difference	13
Availability of funds	
Expected	94
Actual	81
Difference	–13
Rate of loan repayment	
Expected	75
Actual	88
Difference	13

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:Q3 (actual)	117
2018:Q4 (expected)	114
Availability of funds	
2018:Q3 (actual)	87
2018:Q4 (expected)	82
Rate of loan repayment	
2018:Q3 (actual)	96
2018:Q4 (expected)	105

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:Q3 survey.

Table 5

Interest Rates (%)

	2018:Q3	2018:Q2	Change
Operating			
Fixed	6.02	5.91	0.11
Variable	5.76	5.66	0.09
Machinery/ intermediate-term			
Fixed	6.17	6.21	–0.04
Variable	5.87	5.84	0.03
Farm real estate			
Fixed	5.98	5.98	0.00
Variable	5.67	5.70	–0.03

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.

reported that farm income, household spending, and capital spending declined in the third quarter from a year earlier (as noted by the negative difference between the expected and actual values). In terms of financial indicators, proportionately more bankers reported that the demand for loans in the third quarter rose more than had been expected three months earlier, as did the rate of repayment. However, a smaller percentage of bankers reported increases in the availability of funds from a year earlier than had been expected three months earlier. On balance, these findings are consistent with the view that economic conditions in the agricultural sector deteriorated in the third quarter by more than initially expected.

Financial Conditions

Table 4 reports the District bankers' assessment of current and prospective lending conditions in the third quarter of 2018 compared with four quarters earlier. Proportionately more bankers reported an increase in loan demand from a year earlier (diffusion index of 117), which, consistent with previous surveys, may reflect increased funding needs stemming from the multi-year strains on

Figure 3

Farm Income: Expected and Actual Values

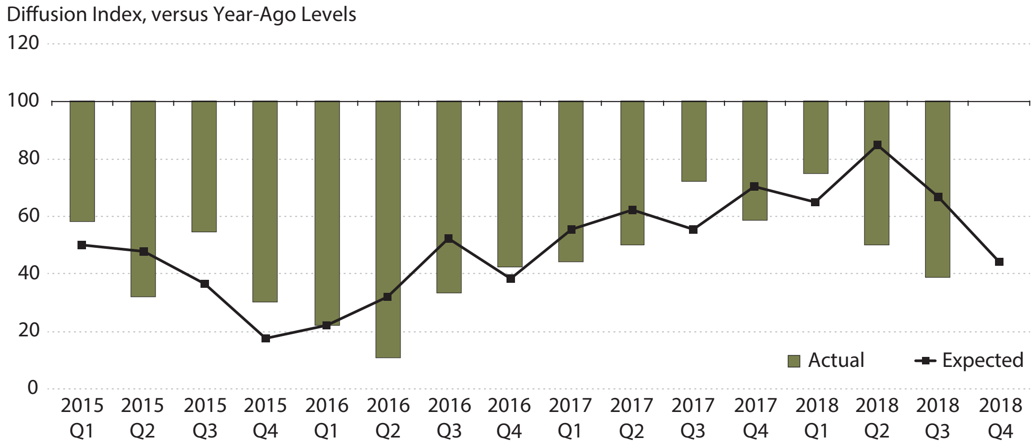


Figure 4

Household Spending: Expected and Actual Values

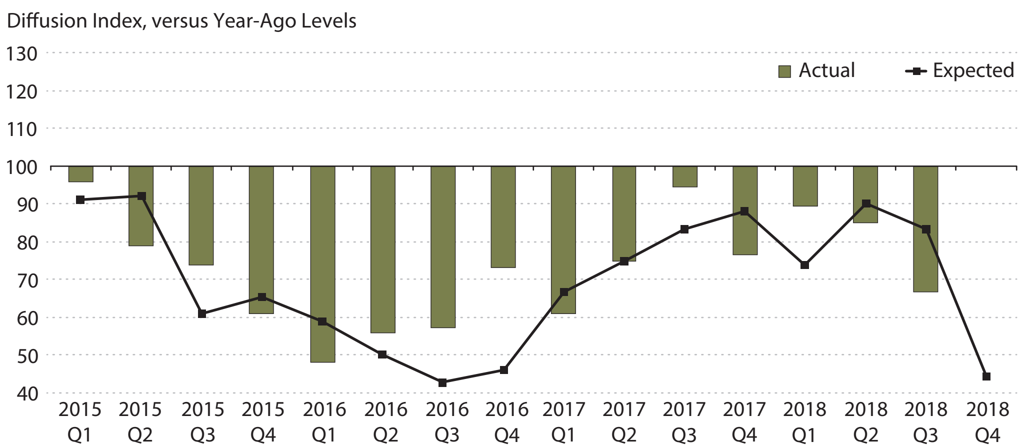
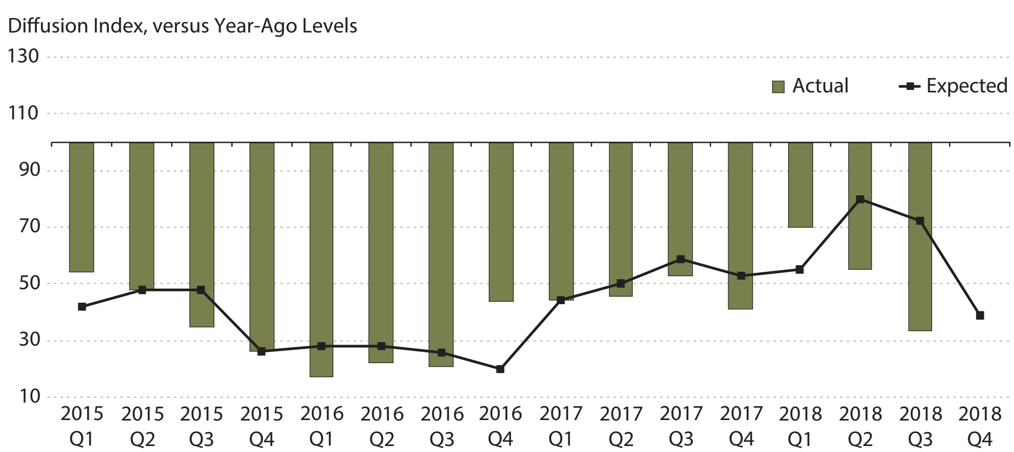


Figure 5

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 2018:Q4 are calculated using only the responses from the 2018:Q3 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

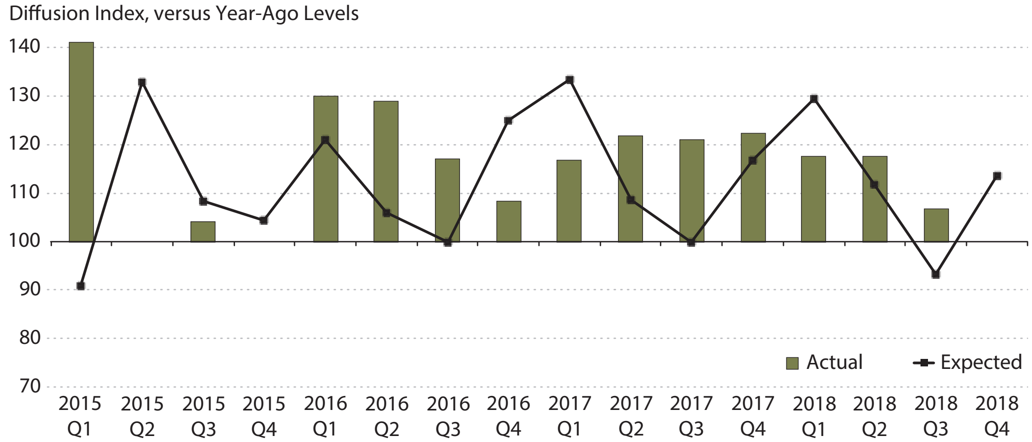


Figure 7

Availability of Funds: Expected and Actual Values

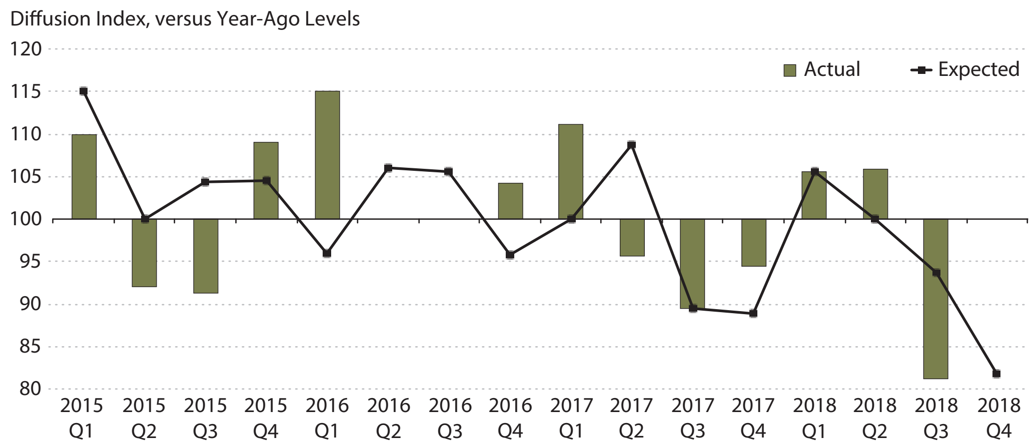
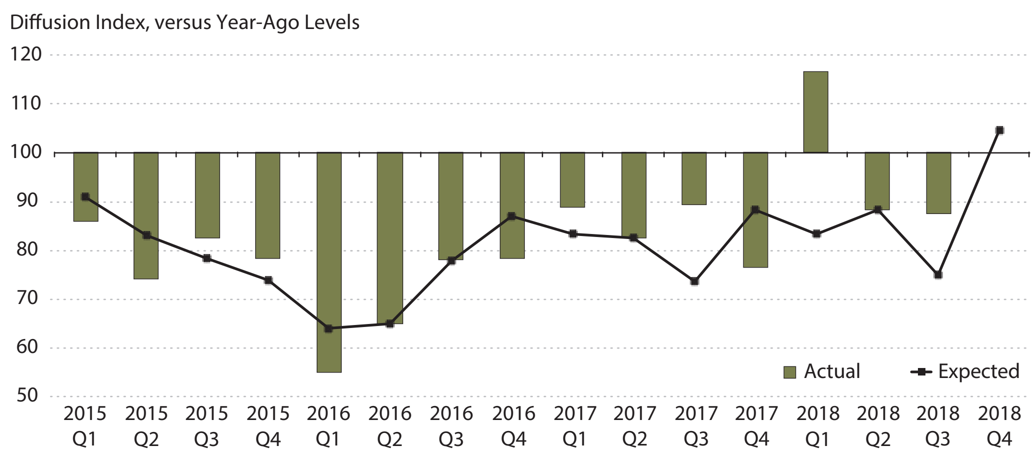


Figure 8

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 2018:Q4 are calculated using only the responses from the 2018:Q3 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.

farm incomes. Looking forward, slightly fewer bankers—but still a majority—expect an increase in the demand for loans in the fourth quarter of 2018 (index value of 114). Proportionately more bankers reported declines in the availability of funds in the third quarter, with similar conditions expected to prevail in the fourth quarter. In the third quarter, slightly more bankers reported a decline in the rate of loan repayment in the third quarter, but proportionately more bankers expect repayment rates to increase in the fourth quarter. [As noted in previous surveys, the actual index values for the third quarter reported in Table 4 may differ from those reported in Table 3. The reason is that Table 4 uses all responses from the third-quarter 2018 survey, instead of a common sample between the current and previous surveys.]

Table 5 shows average interest rates on fixed- and variable-rate loans in the third and the second quarters of 2018. Compared with the second-quarter averages, of six loan products, the interest rates of three increased, two decreased, and one remained unchanged. Interest rate changes ranged from a decline of 4 basis points for fixed-rate intermediate loans or loans to finance machinery purchases, to an increase of 11 basis points for fixed-rate operating loans.

Special Questions

Table 6 reports the results of three special questions posed to our agricultural bankers. The first question asked agricultural bankers which of the following four developments concerns them the most at the present time: (i) continued low commodity prices; (ii) the potential impact of tariffs on agricultural products; (iii) rising interest rates; or (iv) increasing material input costs. A sizable majority, 77.3 percent, reported that continued low commodity prices is their largest concern. The potential impact of tariffs received the second-most responses, but it was relatively small (about 14 percent).

The second special question asked agricultural bankers which types of loans they expect to experience repayment problems over the second half of 2018. Nearly three-quarters of respondents (71.4 percent) expect that the largest increase in repayment problems will be for operating lines of credit. A little less than a quarter of respondents (23.8 percent) expect no repayment problems.

U.S. soybean prices have fallen sharply since the Chinese government imposed tariffs on imports of U.S. soybeans in late July. Some industry analysts have since speculated that U.S. soybean producers would delay the marketing (selling) of all or part of their crop in the hope of a rebound in prices. Thus, the third special question asked bankers to assess the validity of this speculation. A little more than half of respondents (54.5 percent) reported that soybean producers in their area plan to delay selling all or part of this year's or next year's crops, while a little less than half of bankers (40.9 percent) believe that there will be no change in farmers' marketing plans for this year's crop. ■

Table 6

Special Questions

Regarding the agricultural sector, which of the following issues are of highest concern to you at the present time? (Please select only one.)

	Percent of respondents
Continued low commodity prices	77.3
Potential impact of tariffs	13.6
Rising interest rates for borrowing	4.5
Increasing material input costs (e.g., fertilizer, fuel, etc.)	4.5

Which of the following loan categories do you expect will have the largest increase in repayment problems over the second half of 2018?

	Percent of respondents
Operating lines of credit	71.4
Machinery and equipment	4.8
Real estate loans	0.0
No increase is expected	23.8

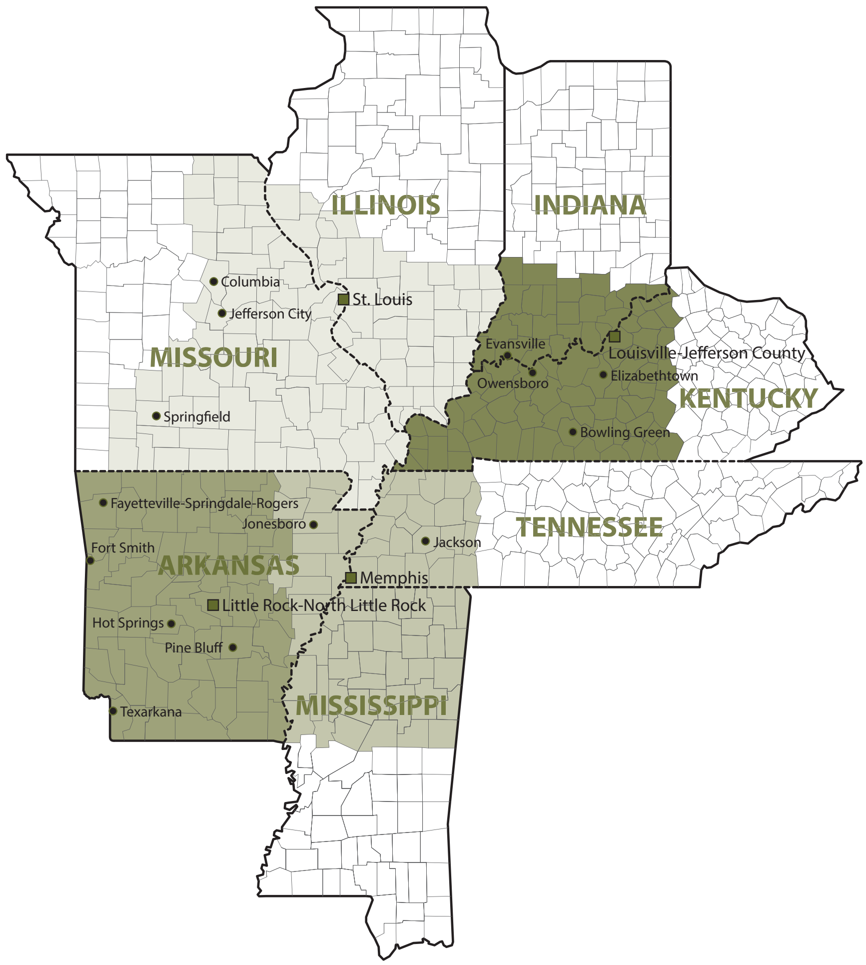
In response to foreign tariffs on U.S. agricultural products, do you expect farmers in your area to alter their marketing plans for this year's or next year's crops (i.e., altering the timing of crop sales)?

	Percent of respondents
Yes, sell earlier	4.5
Yes, sell later	54.5
No, I anticipate no change in farmers' marketing plans	40.9

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, 2018, there were 235 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; Matthew Famiglietti, 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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