2016 ■ Second Quarter

AGRICULTURAL Finance Monitor

Selected Quotes from Banker Respondents Across the Eighth Federal Reserve District

"While commodity prices were down, farmers held their grain in storage. Now that prices seem to have recovered somewhat, I would expect grain to begin to flow into the market and be shipped to the Gulf of Mexico. This should open up storage for the fall harvest. A shortage of storage capacity for this coming fall's harvest has been a concern, given that the 2015 crop was still being stored." (Illinois)

"In general, farmers in our region have only been able to survive declining commodity prices the past 24 months due to conservative spending, improved efficiency, and good crop yields. A reduction in the yield or quality of crops, increases in input costs, or continued low commodity prices could be the tipping point for many under-capitalized operations. No producer can out-yield low prices." (Arkansas)

"The income stream is more stable in our integrated poultry farms. The beef cattle operations have seen a decline in prices, although feeder prices remain at profitable levels for low-cost producers." (Arkansas)

"I don't know if farmers and ranchers have increased their borrowings from other lenders. With the low price of grain and beef cattle, it is going to be tough for the farmers this year." (Missouri)

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

The seventeenth quarterly survey of agricultural credit conditions was conducted by the Federal Reserve Bank of St. Louis from June 15, 2016, through June 30, 2016. The results presented here are based on the responses from 32 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

According to the latest survey of agricultural bankers in the Eighth Federal Reserve District, farm income declined in the second quarter of 2016 relative to a year ago. Respondents feel the decrease in farm income is causing reduced farm household and capital spending, as well as putting downward pressure on land values and cash rents. Hardest hit has been cash rents for ranch or pastureland. Bankers in the survey reported cash rents declined 20.7 percent compared with a year ago, which is a significant change from the decline of 2.2 percent in the previous survey. Ranch and pastureland values declined 7.4 percent. Quality farm land value declined less than 1 percent in this survey compared with 6.4 percent reported in the previous survey. However, this represents the fourth consecutive quarter of declining value in that category. Agricultural land values are expected to decline in the third quarter, compared with a year earlier, according to a majority of agricultural bankers. Proportionately more bankers reported a higher demand for loans in the second quarter relative to a year ago, but a majority of bankers reported fewer funds are available. A majority of bankers also reported slower loan repayments. Results from three special questions asked in the survey indicate that, according to lenders, the financial condition of borrowers has deteriorated during the last year and tenant farmers with cash-rental arrangements are most exposed to a prolonged downturn in income. Also, more lenders feel there has been an increase in borrowing in their area from federal guaranteed programs compared with other sources that were listed in the survey.

Survey Results

Farm Income and Expenditures

Survey results continue to reflect a sustained trend of more bankers reporting a decrease in farm income compared with a year earlier. This survey was the tenth consecutive quarter where income was reported below the breakeven level of 100. [NOTE: An index value of 100 would indicate that an equal percentage of bankers reported increases and decreases in farm income relative to a year earlier.] The reported index value of 24 this quarter is a small improvement from the previous survey value of 20. Both values indicate a sizable gap between bankers reporting decreases and those reporting increases relative to a year earlier (see Table 1). Expectations for next quarter are also for declining farm income (index value of 61); however, index values reflect

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 second quarter of 2016. 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	
2016:Q2 (actual)	24
2016:Q3 (expected)	61
Household spending	
2016:Q2 (actual)	66
2016:Q3 (expected)	50
Capital spending	
2016:Q2 (actual)	34
2016:Q3 (expected)	35

NOTE: Actual and expected values for the indexes use all responses from the 2016:Q2 survey.

Table 2

Land Values and Cash Rents (year/year change)

	Percent or index value
Land values	
Quality farmland	–0.7%
Expected 3-month trend	84
Ranchland or pastureland	–7.4%
Expected 3-month trend	86
Cash rents	
Quality farmland	–10.0%
Expected 3-month trend	77
Ranchland or pastureland	–20.7%
Expected 3-month trend	83

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 2016:Q2 survey. Expected trends are presented as a diffusion index; see note above for details about interpreting diffusion indexes.

the second straight quarter that expectations are less severe than expectations from the previous quarter. Household spending and capital expenditures are anticipated to weaken further during the upcoming quarter. The second quarter index value of 66 indicates more bankers reported a decrease in household spending with a further decline expected by even more respondents for the third quarter. The capital spending index of 34 for the second quarter also indicates a majority of bankers reporting a decline in spending compared with a year earlier, with a similar outlook for the third quarter. Readers are cautioned that farm income is highly volatile and subject to seasonal fluctuations.

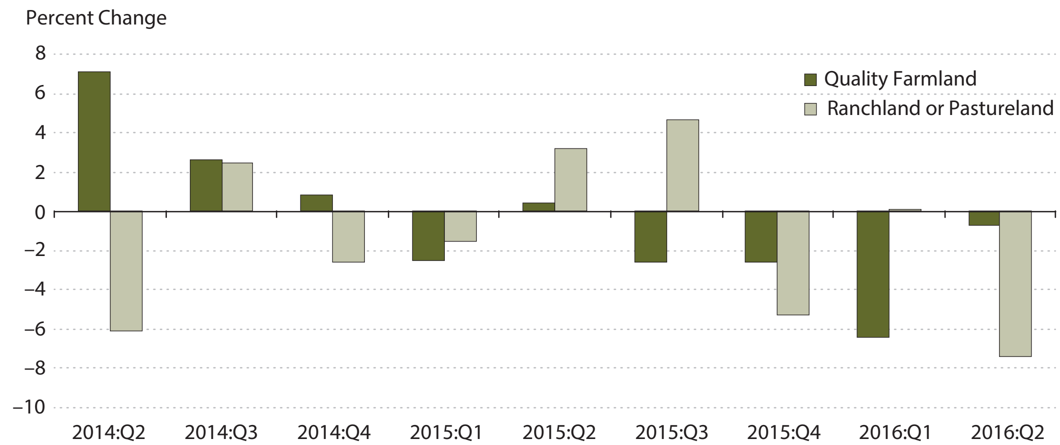
Current and Expected Land Values and Cash Rents

Table 2 shows that lower farm incomes continue to place downward pressure on land values and cash rents. During the second quarter of 2016, cash rents for ranch and pastureland experienced significant deterioration as reported by survey respondents. Cash rents for ranch and pastureland declined 20.7 percent from last year compared with a relatively small decline of 2.2 percent reported for the first quarter of 2016. Ranch and pastureland value also sharply fell by 7.4 percent compared with a year-over-year change in the first quarter of almost zero. Cash rent for quality farmland decreased 10 percent, and this was the third consecutive quarter, and fifth in the past six quarters, of a reported decline. Quality farmland value, however, demonstrated something that could be interpreted as a rebound by reflecting a decline of less than 1 percent compared with a 6.4 percent year-over-year decline reported the past quarter. However, a majority of bankers expect values to continue to trend downward for the next 3 months for both quality farmland and ranch and pastureland.

Outcomes Relative to Previous-Quarter Expectations

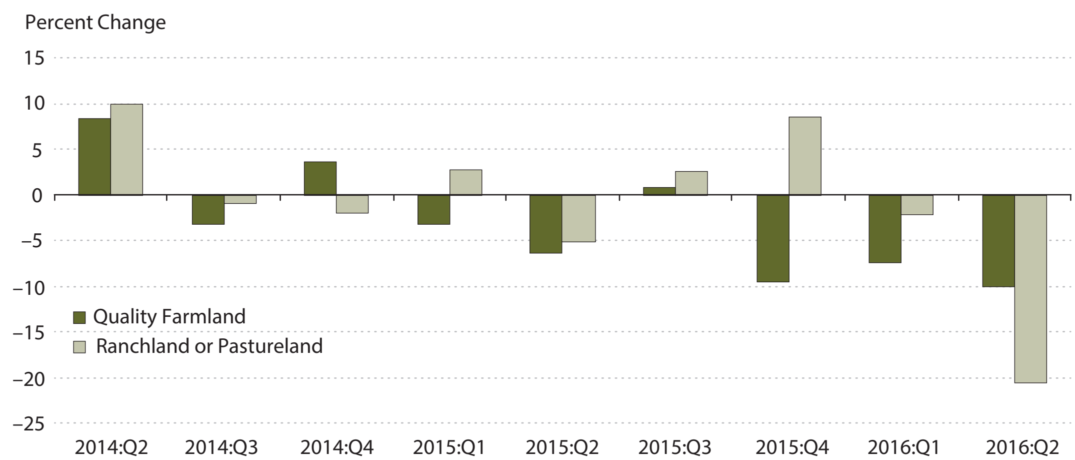
Table 3 reports farm income, household expenditures, and several other variables in the second quarter relative

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.

to the expectations of agricultural bankers from the survey taken three months earlier (first quarter of 2016). [NOTE: For Table 3, we compute diffusion indexes using only those banks that responded to the first- and second-quarter surveys.] The results suggest that proportionately more bankers reported that farm incomes declined in the second quarter compared with expectations at the time of the previous survey. Actual responses for household spending and capital spending, as reported in the survey, were both more in line with expectations. Proportionately more bankers reported an increase in demand for loans compared with what expectations were when the first-quarter survey occurred. The reported actual rate of loan repayment did not change from expectations, and actual availability of funds was very close to expectations. Components may not sum to totals due to rounding.

Financial Conditions

Table 4 reports our survey respondents' assessment of current and prospective bank lending conditions in the Eight District in the second and third quarters of 2016, respectively. [NOTE: Each assessment is relative to a year

Table 3

2016:Q2 Variables (versus year-ago levels)

	Index value
Farm income	
Expected	32
Actual	11
Difference	–21
Household spending	
Expected	50
Actual	56
Difference	6
Capital spending	
Expected	28
Actual	22
Difference	–6
Demand for loans	
Expected	106
Actual	129
Difference	24
Availability of funds	
Expected	106
Actual	100
Difference	–6
Rate of loan repayment	
Expected	65
Actual	65
Difference	0

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	
2016:Q2 (actual)	130
2016:Q3 (expected)	108
Availability of funds	
2016:Q2 (actual)	97
2016:Q3 (expected)	104
Rate of loan repayment	
2016:Q2 (actual)	70
2016:Q3 (expected)	83

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 2016:Q2 survey.

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 second quarter 2016 survey, instead of a common sample between the current and previous surveys. The results from Table 4 suggest that proportionately fewer bankers—though still a majority—expect an increase in loan demand in the third quarter of 2016 compared with the previous quarter (index value of 108 versus 130). However, proportionately more bankers expect the availability of funds to increase in the third quarter of 2016 compared with the second quarter. Responses regarding the rate of loan repayments indicate more bankers believe that the rate was lower in the second quarter compared with a year earlier. A majority, though a somewhat smaller percentage of bankers, expect the same for the third quarter (index value of 70 versus 83).

Table 5 presents average interest rates on fixed- and variable-rate loan products in the first and second quarters of 2016. Similar to the previous two surveys, interest rates across all categories changed modestly during the second quarter of 2016 (compared with the previous quarter). Interest rates on fixed- and variable-rate operating loans basically did not change. Interest rates on fixed-rate loans for machinery and other intermediate-term investments and fixed-rate land loans fell 4 basis points while variable-rate loans for machinery and other intermediate-term investments rose by an average of 6 basis points. Variable-rate loans to purchase land showed the most movement among all categories, increasing 17 basis points.

Special Questions

Table 6 reports the results of three special questions about the financial condition of agricultural borrowers and sources of agricultural financing. The first question asked bankers to assess the overall change in the financial condition of borrowers in their area from a year earlier. Eighty percent of respondents indicated that borrowers had experienced either a modest or significant financial deterioration. The second question was in regard to which category of borrowers would be most exposed to a prolonged downturn in farm income. Nearly half of respondents (48 percent) believe that tenant farmers with cash-rental arrangements are the most at risk to a prolonged

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 2016:Q3 are calculated using only the responses from the 2016:Q2 survey.

Figure 3

Farm Income: Expected and Actual Values

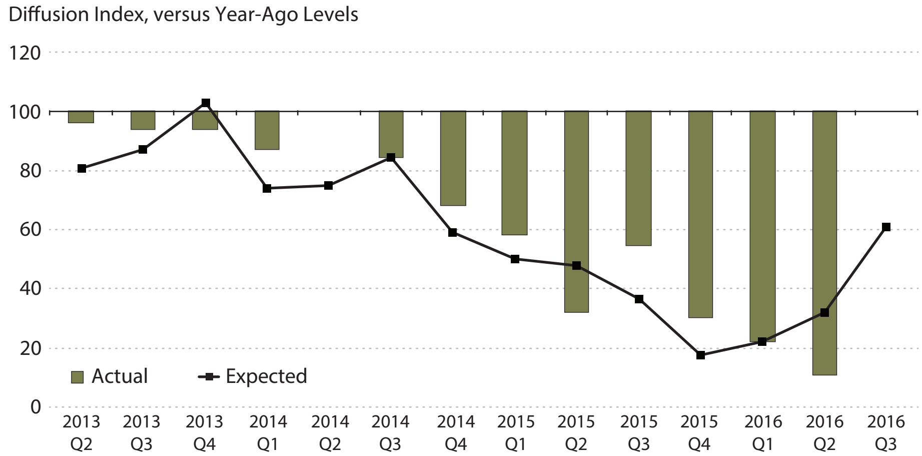


Figure 4

Household Spending: Expected and Actual Values

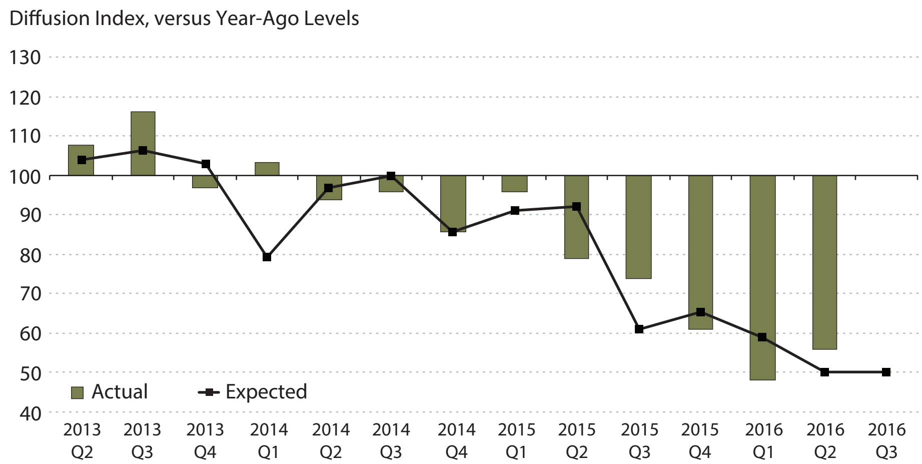
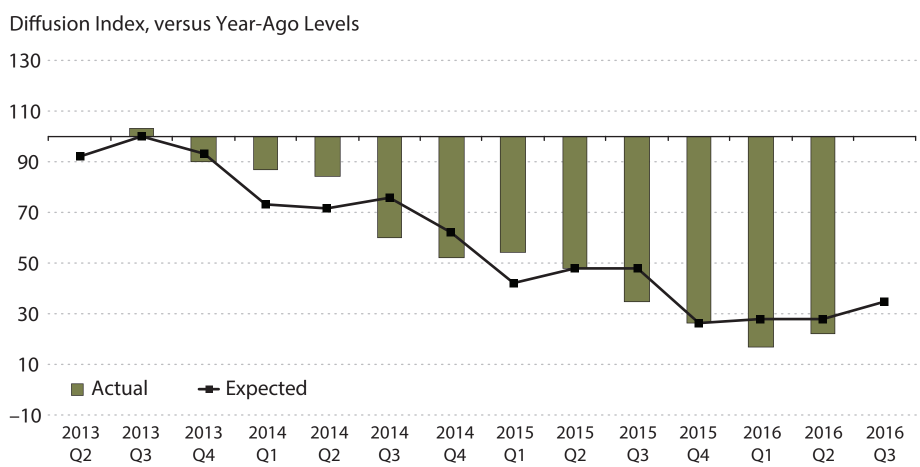


Figure 5

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 2016:Q3 are calculated using only the responses from the 2016:Q2 survey.

Figure 6

Demand for Loans: Expected and Actual Values

Diffusion Index, versus Year-Ago Levels

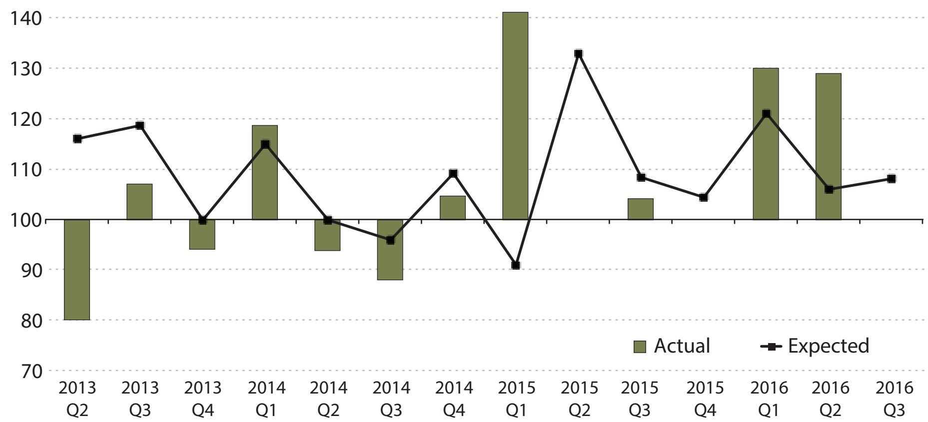


Figure 7

Availability of Funds: Expected and Actual Values

Diffusion Index, versus Year-Ago Levels

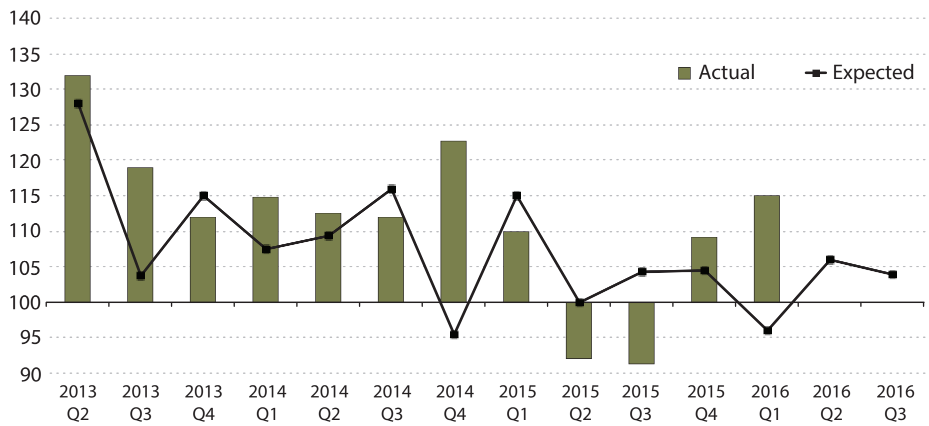


Figure 8

Rate of Loan Repayment: Expected and Actual Values

Diffusion Index, versus Year-Ago Levels

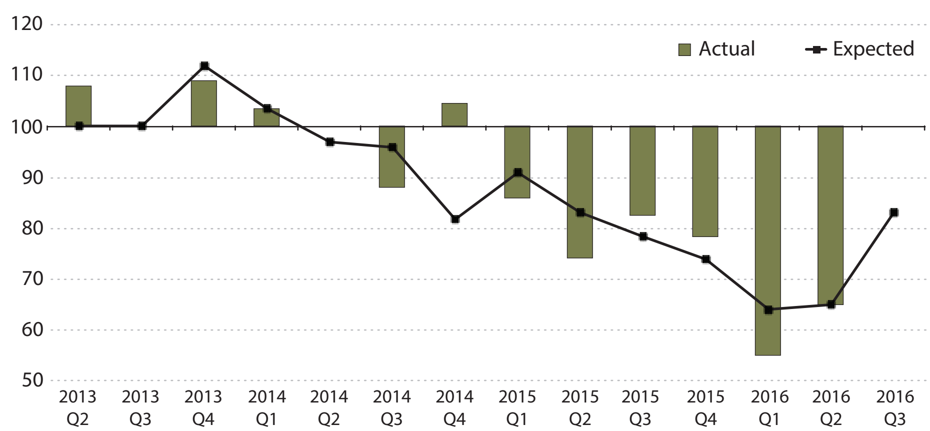


Table 5

Interest Rates (%)

	2016:Q2	2016:Q1	Change
Operating			
Fixed	5.57	5.57	0.00
Variable	5.35	5.34	0.01
Machinery/ intermediate-term			
Fixed	5.74	5.78	–0.04
Variable	5.56	5.49	0.06
Farm real estate			
Fixed	5.18	5.23	–0.04
Variable	5.19	5.02	0.17

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.

downturn in farm incomes. A little more than a third (38 percent) of farm bankers believe that highly leveraged land owners with little equity are most exposed to a prolonged downturn in farm incomes. Bankers believe that farmers or ranchers with livestock operations are the least exposed to a prolonged downturn. The third question asked bankers to identify other lending sources or programs of agricultural funds that are increasingly being used by borrowers compared with last year. Federal guaranteed programs were the only group in which the majority of bankers (61 percent) noted increasing usage. The remaining funding sources in the survey, Farm Credit, finance companies, and other commercial banks, each had between 36 and 39 percent of bankers respond that borrowing from the group had increased. ■

Table 6

Special Questions

Assess the overall change in the financial condition of agricultural borrowers (farmers and/or ranchers) in your area from a year earlier.

Percent of respondents	
Significant deterioration	14
Modest deterioration	66
No change	17
Modest improvement	0
Significant improvement	3
	100

Regarding the financial condition of agricultural borrowers in your area who are most exposed to a prolonged downturn in farm incomes, how would you generally characterize them?

Percent of respondents	
Land-owning farmers with a relatively small amount of equity	38
Tenant farmers with cash-rental arrangements	48
Farmers or ranchers with livestock operations	14
	100

Compared to a year ago, do you believe farmers and/or ranchers in your area have increased their borrowing from the following lenders to meet their agricultural credit needs? Please answer Yes or No.

Percent of respondents		
Federal guaranteed programs	**Yes:** 61	**No:** 39
Farm Credit System	**Yes:** 36	**No:** 64
Captured finance companies	**Yes:** 36	**No:** 64
Other commercial banks	**Yes:** 39	**No:** 61

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 June 30, 2016, there were 250 banks in the Eighth Federal Reserve District that met the criteria.

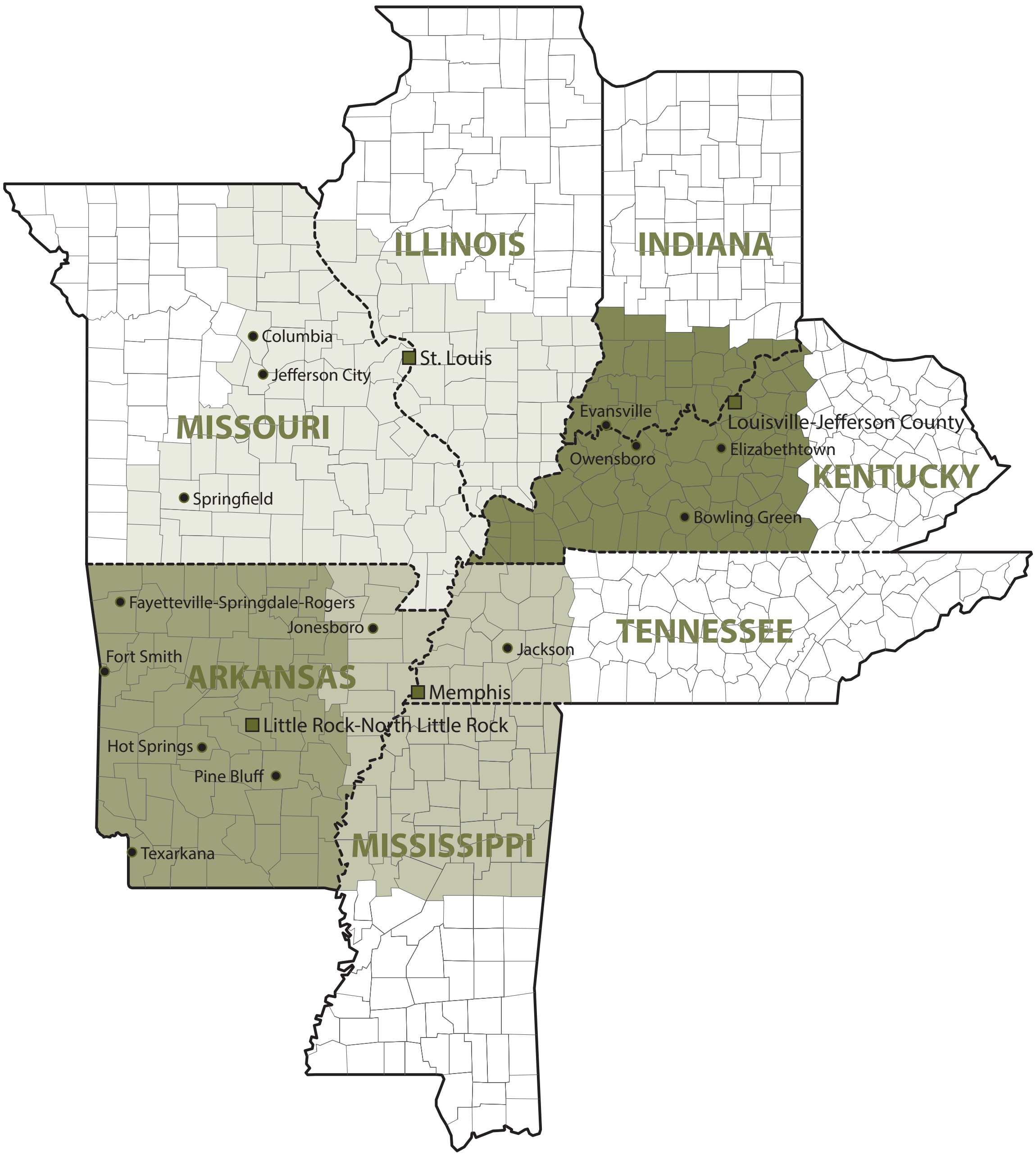
[2] Readers are also cautioned that the number of responses in each zone is relatively small. Statistically, this tends to suggest that the responses in each zone have a larger plus-or-minus margin of error than for the District as a whole. We have eliminated the zone-by-zone responses until the response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

Posted on August 11, 2016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