AGRICULTURAL Finance Monitor

Selected Quotes from Banker Respondents Across the Eighth Federal Reserve District

"Cattle prices have declined which affects overall income. Poultry house construction continues to drive loan demand." (Arkansas)

"Crop and cattle prices are down, but input costs are rising at a slower pace. I expect capital expenditures to decrease along with a devaluation in farm real estate." (Kentucky)

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

The fifteenth quarterly survey of agricultural credit conditions was conducted by the Federal Reserve Bank of St. Louis from December 15, 2015, through December 31, 2015. The results presented here are based on the responses from 33 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 continued to weaken in the fourth quarter of 2015 compared with the same period a year earlier. Proportionately more bankers expect further declines in farm income in the first quarter of 2016 relative to a year earlier. Similar to our previous survey, large majorities of bankers reported that household spending and farm expenditures on capital goods continued to decline in the fourth quarter and will likely continue to do so in the first quarter of 2016. Eighth District land values declined in the fourth quarter from a year earlier. Quality farmland values declined for the third quarter in the past four quarters, while ranchland or pastureland values declined for the second quarter in the past four quarters. Cash rents were mixed in the fourth quarter, as rents rose sharply for ranchland or pastureland but declined sharply for quality farmland. 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. Slightly more bankers expect that the availability of funds in the first quarter of 2016 will be less than it was a year earlier and also that the rate of loan repayment is likely to be worse. On net, interest rates on most fixed- and variable-rate loan products were little changed in the fourth quarter of 2015 compared with the previous quarter. Our special questions focused on expected farmland returns in 2016 and recent and prospective farmland sales in 2015. The results of the survey indicate that 9 in 10 bankers expect farmland returns in 2016 to be positive, but less than 10 percent. Although nearly half of bankers surveyed expect no change in the volume of farmland sales in their area in 2016, slightly more farmers believe that sales volumes will increase rather than decrease.

Survey Results

Farm Income and Expenditures

For the tenth quarter in the past 11, a larger percentage of bankers reported that farm income had decreased rather than increased. In the fourth quarter of 2015, the index of farm income was 28, indicating a sizable difference between those reporting increases in farm incomes and those reporting decreases in farm incomes from a year earlier (see Table 1). Moreover, as seen in Figure 3, the index value was down sharply from the previous quarter's value of 55 and the smallest in the survey's relatively short history. Looking

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 fourth 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:Q4 (actual)	28
2016:Q1 (expected)	22
Household spending	
2015:Q4 (actual)	72
2016:Q1 (expected)	59
Capital spending	
2015:Q4 (actual)	38
2016:Q1 (expected)	28

NOTE: Actual and expected values for the indexes use all responses from the 2015:Q4 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	43
Ranchland or pastureland	–5.3%
Expected 3-month trend	67
Cash rents	
Quality farmland	–9.5%
Expected 3-month trend	52
Ranchland or pastureland	8.6%
Expected 3-month trend	58

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

ahead, proportionately more bankers expect that farm income in the first quarter of 2016 will remain below year-earlier levels (index value of 22).

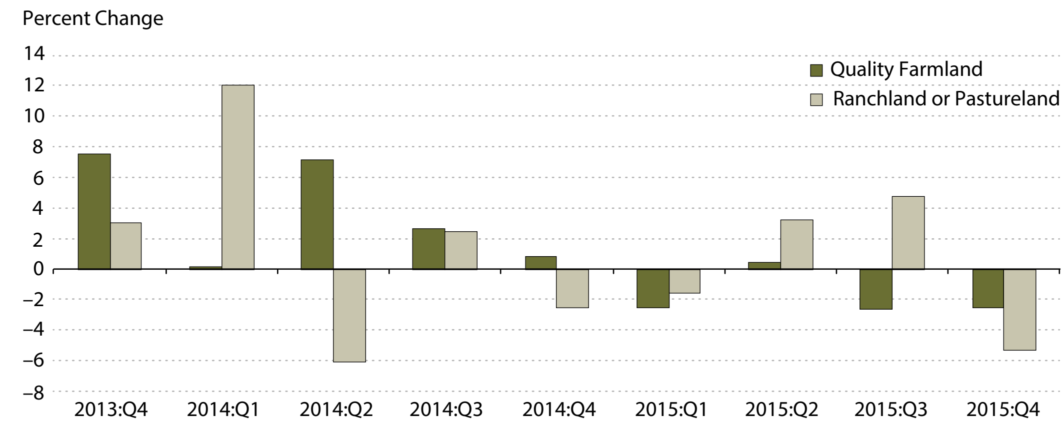
As reported in Table 1, the index of household spending (72) and capital equipment expenditures (38) in the fourth quarter of 2015 were significantly below 100. This indicates that, in the midst of the ongoing downturn in farm incomes, farmers and ranchers have continued to reduce household expenditures and capital spending from year-earlier levels. As with the index for farm income, Figures 4 and 5 show that the indexes of household spending and farm capital expenditures in the fourth quarter were at their lowest levels since our survey began. Agricultural bankers expect that farm income and capital expenditures in the first quarter of 2016 will also decline from year-earlier levels (see Table 1). 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

In the fourth quarter of 2015, quality farmland values continued to decline from year-earlier levels. Although the fourth-quarter decline (2.5 percent) was about equal to the previous quarter's decline, it was the third decline in the past four quarters. One notable development in this quarter's survey concerned ranchland or pastureland values. After increasing in the second and third quarters of 2015, ranchland or pastureland values fell by 5.3 percent from year-earlier levels in the fourth quarter. This was the largest decline since the second quarter of 2014. Proportionately more bankers expect both quality farmland and ranchland or pastureland land values to decline in the first quarter of 2016 compared with a year ago. In fact, a slightly larger percentage of bankers expect quality farmland values to decline (index value of 43) in the first quarter of 2016 than those who expect ranchland or pastureland values to decline (index value of 67). The four-quarter percentage changes in Eighth District land values and cash rents are reported in Table 2 and the history is shown in Figures 1 and 2.[3]

Figure 1

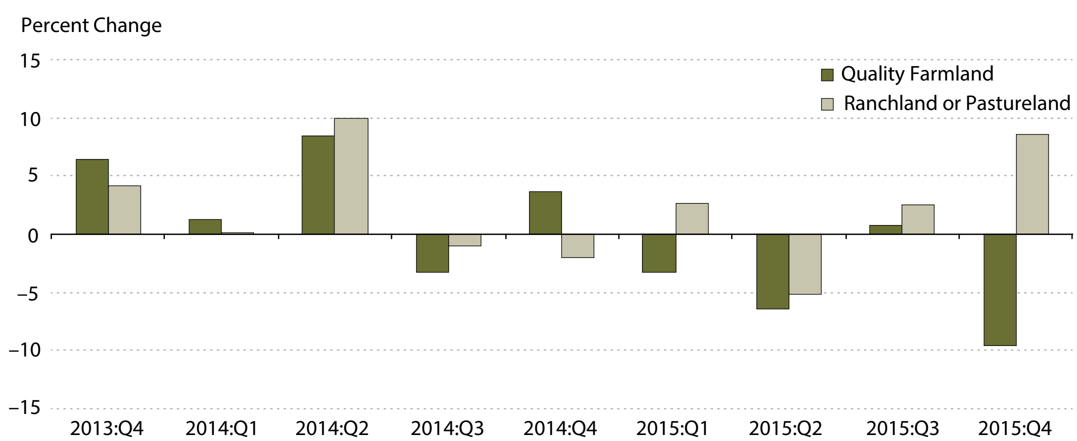
Year-Over-Year Change in Average Eighth District Land Values



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.

Cash rents for quality farmland fell by 9.5 percent in the fourth quarter of 2015 compared with a year earlier; this decline was the largest in the relatively short history of the survey. By contrast, cash rents for ranchland or pastureland rose by 8.6 percent in the fourth quarter after increasing by 2.5 percent in the third quarter. Bankers expect that cash rents for both quality farmland and ranchland or pastureland will decline in the first quarter of 2016, as indicated by their index values of 52 and 58, respectively. Figure 2 shows the year-to-year percentage changes in cash rents since the fourth quarter of 2013.

Outcomes Relative to Previous-Quarter Expectations

Table 3 reports farm income, farm household expenditures, and several other key variables in the fourth quarter relative to the expectations of agricultural bankers from the survey taken three months earlier (third quarter of 2015). In general, the results were mixed. For example, a smaller percentage of bankers had expected farm income to decline in the fourth quarter relative to previous expectations (an expected index value of 17 versus an actual value of 30). However, slightly more bankers reported that household spending declined, but the actual and expected index value

Table 3

2015:Q4 Variables (versus year-ago levels)

	Index value
Farm income	
Expected	17
Actual	30
Difference	13
Household spending	
Expected	65
Actual	61
Difference	–4
Capital spending	
Expected	26
Actual	26
Difference	0
Demand for loans	
Expected	104
Actual	100
Difference	–4
Availability of funds	
Expected	105
Actual	109
Difference	5
Rate of loan repayment	
Expected	74
Actual	78
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.

Table 4

Lending Conditions (versus year-ago levels)

	Index value
Demand for loans	
2015:Q4 (actual)	113
2016:Q1 (expected)	121
Availability of funds	
2015:Q4 (actual)	103
2016:Q1 (expected)	96
Rate of loan repayment	
2015:Q4 (actual)	78
2016:Q1 (expected)	64

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:Q4 survey.

for capital spending was the same. The demand for loans was slightly less than bankers had expected, but the availability of funds in the fourth quarter slightly exceeded the expectations of bankers from the previous survey. Figures 6 through 8 show the indexes of actual and expected loan demand, availability of funds, and loan repayment rates since the first quarter of 2013.

Financial Conditions

Table 4 reports our survey respondents' assessment of current and prospective bank lending conditions in the Eighth District in the fourth quarter of 2015 and the first quarter of 2016, respectively. [NOTE: Each assessment is relative to 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:Q4 survey, instead of a common sample between the current and previous surveys. The results from Table 4 suggest that a modestly larger percentage of bankers expect an increase in loan demand in the first quarter of 2016 than in the previous quarter (index value of 121 versus 113). Similar to the previous survey, slightly more bankers expect the availability of funds in the first quarter to be less than a year earlier, while the reverse occurred in the fourth quarter of 2015. Bankers reported that the rate of loan repayment is likely to be worse in the first quarter of 2016 compared with the previous quarter (index value of 64 versus 78).

Table 5 presents average interest rates on fixed- and variable-rate loan products in the third and fourth quarters of 2015. In general, interest rates across the three fixed- and variable-rate loan categories were little changed during the fourth quarter (compared with the previous quarter). The two notable exceptions were fixed-rate loans to purchase machinery or other intermediate-term loans, which rose by 13 basis points, and fixed-rate loans secured by real estate, which fell by 6 basis points.

Special Questions

Table 6 reports the results of three special questions about farmland returns and farmland sales we posed to our bankers for this survey. The first question asked about

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:Q1 are calculated using only the responses from the 2015:Q4 survey.

Figure 3

Farm Income: Expected and Actual Values

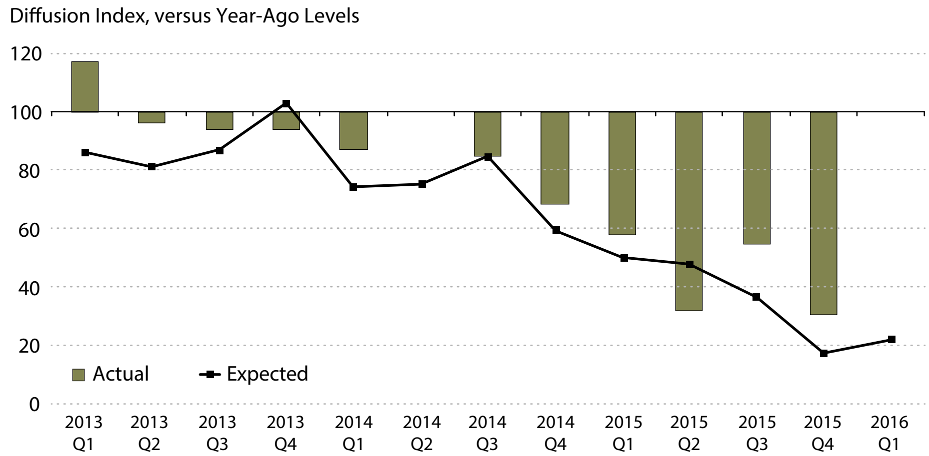


Figure 4

Household Spending: Expected and Actual Values

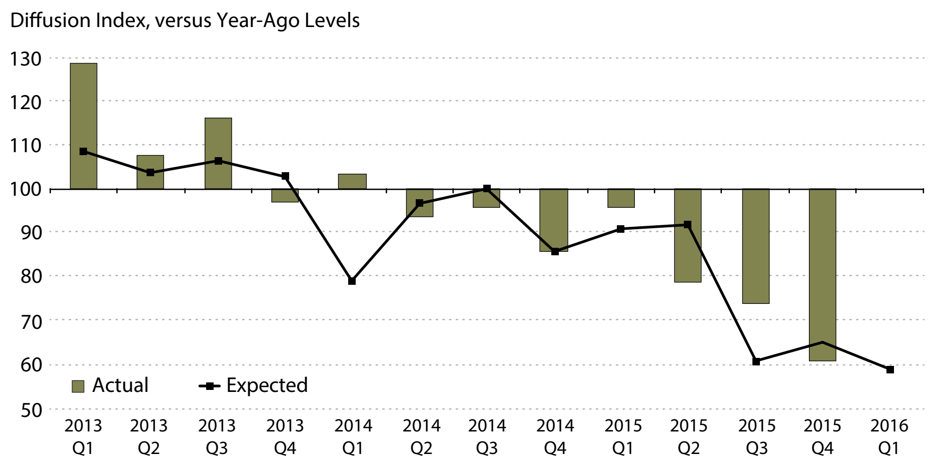
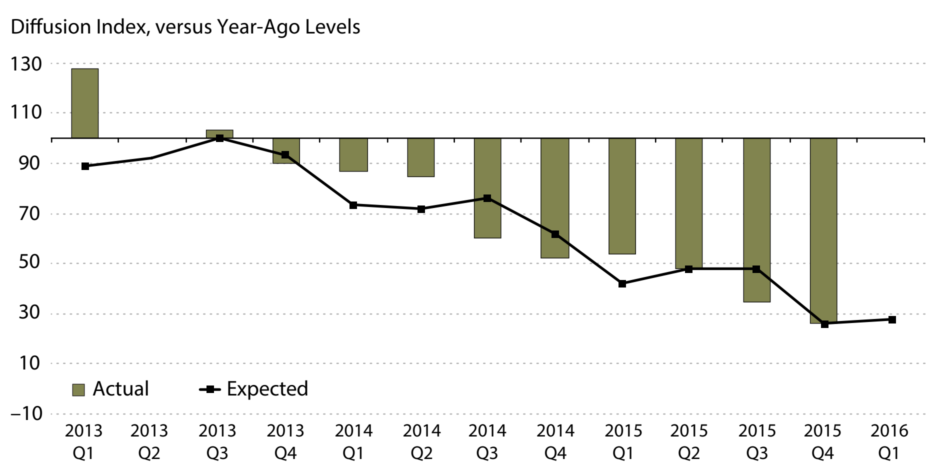


Figure 5

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:Q1 are calculated using only the responses from the 2015:Q4 survey.

Figure 6

Demand for Loans: Expected and Actual Values

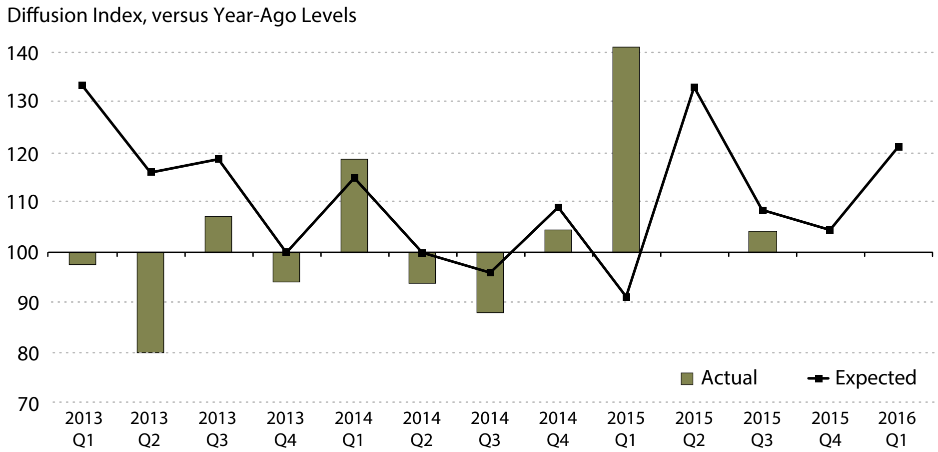


Figure 7

Availability of Funds: Expected and Actual Values

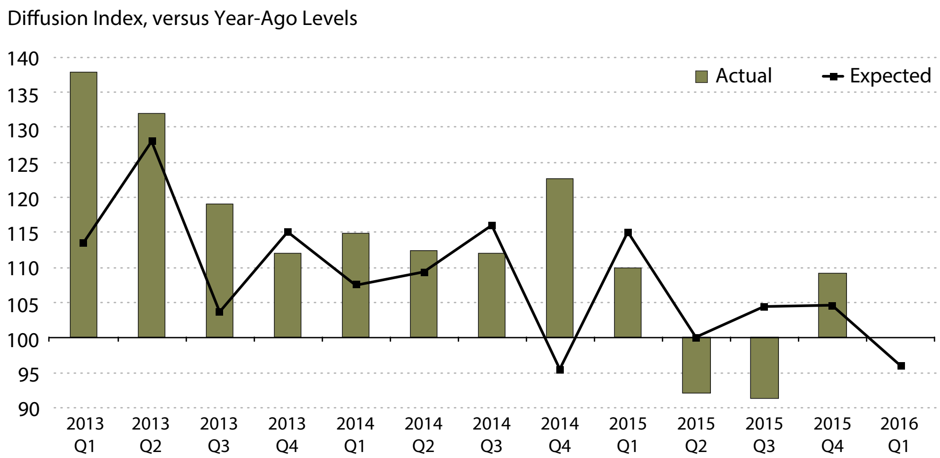


Figure 8

Rate of Loan Repayment: Expected and Actual Values

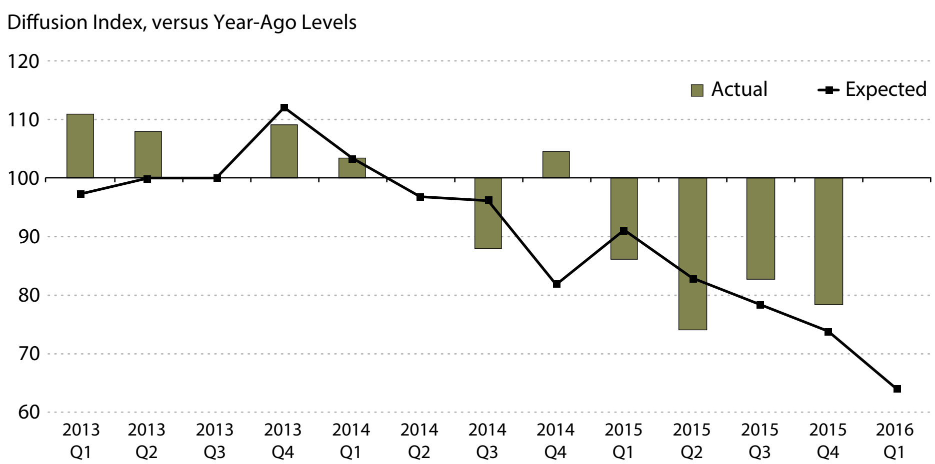


Table 5

Interest Rates (%)

	2015:Q4	2015:Q3	Change
Operating			
Fixed	5.37	5.39	–0.02
Variable	5.08	5.07	0.01
Machinery/ intermediate-term			
Fixed	5.62	5.49	0.13
Variable	5.24	5.22	0.02
Farm real estate			
Fixed	5.12	5.18	–0.06
Variable	4.93	4.97	–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.

returns to owners of farmland in the banker's area in 2016. Farmland returns are defined as rents less expenses divided by the market value of the land. Although farmland returns are thus dependent on many factors, a little more than three-quarters (77 percent) of bankers reported that they expect returns in 2016 to be positive, but less than 5 percent. Thirteen percent expect returns greater than 5 percent but less than 10 percent, while 10 percent expect farmland returns to be negative in 2016.

The second question asked bankers about their expectation for the volume of land sales in 2016 relative to 2015. A little less than half of respondents (47 percent) expected no change, but a little less than a third (31 percent) expected an increase in the volume of land sales. A little less than a quarter of bankers (22 percent) expect to see a lower volume of land sales. The third question asked agricultural bankers to assess what percentage of the farmland sold in 2015 was purchased by farmers. A clear majority (72 percent) reported that more than half of the farmland sold in their area was purchased by farmers. ■

Table 6

Special Questions

Do you expect the return on farmland in your area for landowners in 2016 (rents less expenses divided by market value of land) will be:

Share of total respondents	
Greater than 10%	0
Greater than 5% but less than 10%	13
Greater than 0% but less than 5%	77
Negative (less than 0%)	10

Compared with 2015, the volume of farmland sales in your area in 2016 will be:

Share of total respondents	
Higher	31
No change	47
Lower	22

Of the farmland sold in your area in 2015, approximately what percent was purchased by farmers?

Share of total respondents	
Less than 50%	28
Greater than 50%	72

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 changes in land values and cash rents are based on common responses. That is, a respondent must have been in both the 2015:Q4 and 2014:Q4 samples.

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

Posted on February 11, 2016


ILLINOIS
INDIANA
Columbia
St. Louis
Jefferson City
Evansville
Louisville-Jefferson County
MISSOURI
Owensboro
Elizabethtown
KENTUCKY
Springfield
Bowling Green
Fayetteville-Springdale-Rogers
Jonesboro
TENNESSEE
Jackson
Fort Smith
ARKANSAS
Memphis
Little Rock-North Little Rock
Hot Springs
Pine Bluff
MISSISSIPPI
Texarkana