The Agricultural Newsletter
from the Federal Reserve Bank of Chicago
Number 1970 *November 2015*

AgLetter

FARMLAND VALUES AND CREDIT CONDITIONS

Summary
Farmland values for the Seventh Federal Reserve District were overall unchanged in the third quarter of 2015 from a year ago. Year-over-year increases in "good" agricultural land values for Michigan and Wisconsin were offset by decreases in such values for Illinois and Iowa (Indiana's farmland values were the same as a year ago). Additionally, according to the 210 agricultural bankers who responded to the October 1 survey, District farmland values saw an increase of 1 percent in the third quarter of 2015 from the second quarter. Although the District's farmland values were largely stable in the third quarter of 2015, a majority of the survey respondents projected a fourth-quarter drop in them: 52 percent of the survey respondents anticipated a decrease in farmland values in the final quarter of 2015, while only 1 percent anticipated an increase.

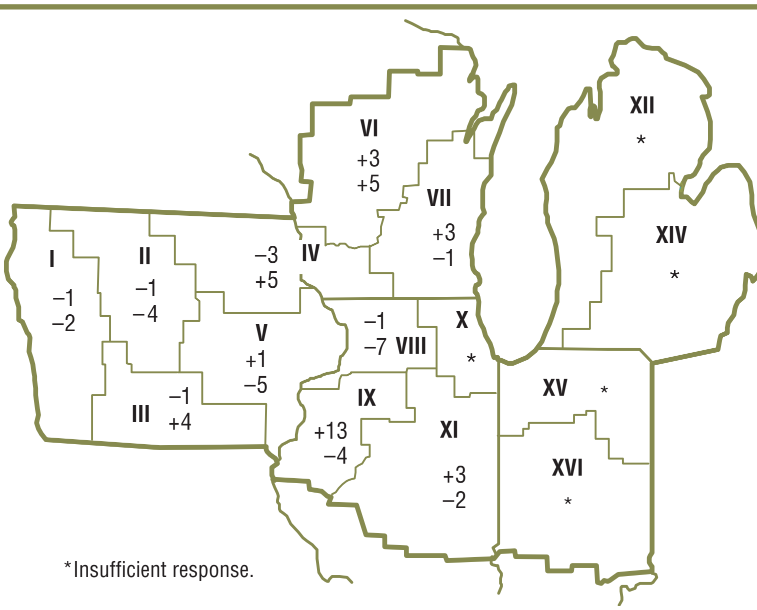
In the third quarter of 2015, District agricultural credit conditions deteriorated, as lower farm product prices contributed to reduced operating margins. In addition to repayment rates for non-real-estate farm loans being down in the third quarter of 2015 relative to the same quarter last year, loan renewals and extensions were up. While funds availability remained slightly above the level of a year ago for the third quarter of 2015, the demand for non-real-estate loans relative to a year ago was not quite as pronounced as in the two previous quarters. The average loan-to-deposit ratio for the District edged up to 72.3 percent, reaching its highest level in five years. Average interest rates on farm loans in the third quarter of 2015 were just above their record lows, set in the first quarter of this year.

Farmland values
In the third quarter of 2015, District states saw a mix of positive and negative changes in their agricultural land values (see map and table below)—which underscored the importance of local characteristics and uncertainty surrounding the direction of various farmland markets. Wisconsin's agricultural land values reversed course from the second quarter of 2015, gaining 4 percent on a year-over-year basis in the third quarter. Illinois's and Iowa's farmland values experienced declines from a year ago (4 percent and 1 percent, respectively) that were less severe than in the second quarter of this year, whereas Michigan's agricultural land values saw an increase from a year earlier (5 percent) that was nearly the same as in the previous quarter. Indiana's agricultural land values experienced no change on a year-over-year basis. The net effect was that the District's farmland values were unchanged from last year's third quarter, though they increased 1 percent from the second quarter of 2015.

Percent change in dollar value of "good" farmland

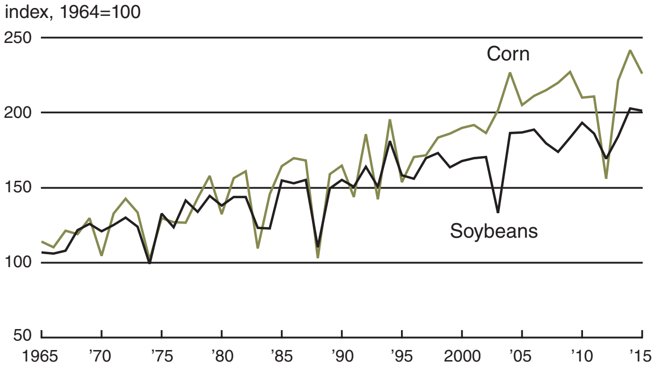
Top: July 1, 2015 to October 1, 2015
Bottom: October 1, 2014 to October 1, 2015

	July 1, 2015 to October 1, 2015	October 1, 2014 to October 1, 2015
Illinois	+4	–4
Indiana	–3	0
Iowa	–1	–1
Michigan	+3	+5
Wisconsin	+2	+4
Seventh District	+1	0



*Insufficient response.

1. Corn and soybean yield indexes for Seventh District states



Source: Author's calculations based on data from the U.S. Department of Agriculture, National Agricultural Statistics Service.

One key factor keeping District farmland values from sliding in the third quarter of 2015 was the stability of corn prices. According to the U.S. Department of Agriculture (USDA), corn prices averaged $3.72 per bushel in the third quarter of 2015, up 1.6 percent from the previous quarter and unchanged from a year ago. However, soybean prices, with an average of $9.57 per bushel in the third quarter of 2015, continued their fall; they were down 0.5 percent from the previous quarter and down 21 percent from a year ago.

In addition, agricultural land values have been abetted by long-term upward trends in corn and soybean yields (see chart 1), affirmed by excellent 2015 yields across much of the District. Although yields were down in some areas of the District in 2015 because of weather issues, Iowa, Michigan, and Wisconsin were expected by the USDA to match or surpass their respective record yields for corn and soybeans. The USDA estimated that the five District states' harvest of corn for grain in 2015 would be the fourth largest on record (it was forecasted to be 8.7 percent smaller than the record harvest, set in 2014). For the five District states, soybean production in 2015 was predicted to break the record, set in 2014; this year's soybean harvest should exceed last year's by 0.4 percent, according to USDA projections. Very good crop yields (in combination with at least stable corn prices relative to a year ago) were suggestive that crop revenues would not drop by as much as last year for the five District states as a whole, although such revenues for individual states might not fare as well.

Furthermore, livestock operators were in worse shape in the third quarter of 2015 relative to the same quarter of a year earlier, largely on account of lower livestock product prices. Compared with a year ago, milk, cattle, and hog prices were down 31 percent, 7.4 percent, and 31 percent in the third quarter of 2015, respectively, according to USDA data. In contrast, egg prices were up 84 percent from the third quarter of 2014 after production cutbacks due to the Asian avian flu. Although the livestock and crop sectors experienced these travails, overall District farmland values did not decrease on either a year-over-year or quarterly basis, demonstrating a remarkable resilience.

Credit conditions

The District's agricultural credit conditions deteriorated relative to a year ago, but agricultural bankers expected to work through the turbulence with most of their farm clients. Repayment rates on non-real-estate farm loans moved lower in the July through September period of 2015 compared with the same period of a year earlier. The index of loan repayment rates slipped to 60 in the third quarter of 2015, as no responding bankers reported higher rates of loan repayment relative to a year ago and 40 percent reported lower rates. The index of loan repayment rates was almost as low as in the first quarter of 2015 (see chart 2). Moreover, loan renewals and extensions on non-real-estate agricultural loans were up sharply in the third quarter of 2015 relative to the same quarter of 2014, with 34 percent of the responding bankers observing more of them and just 1 percent observing fewer. Additionally, at 105, the index of funds availability was only slightly above last quarter's value, which was the lowest in nine years; 14 percent of the survey respondents indicated their banks had more funds available to lend during the third quarter of 2015 than a year earlier and 9 percent indicated their banks had less. Collateral requirements for loans in the third quarter of 2015 tightened relative to the third quarter of 2014.

The pickup in demand for non-real-estate loans compared with a year ago had lasted for two years as of the third quarter of 2015. However, this quarter's reading wasn't as strong as those earlier this year. The index of loan demand dropped to 125, with 42 percent of survey respondents observing higher demand for non-real-estate loans than a year earlier and 17 percent observing lower demand. Even so, additional loan demand contributed to the increase in the District's average loan-to-deposit ratio, to 72.3 percent—its highest level since the third quarter

2. Repayment rates for Seventh District non-real-estate farm loans

Notes: The dashed line including the final data point on this chart is a projection based on survey results. All other data are historical survey data.
Source: Author's calculations based on data from Federal Reserve Bank of Chicago farmland value surveys.

Credit conditions at Seventh District agricultural banks

	Loan demand	Funds availability	Loan repayment rates	Average loan-to-deposit ratio	Interest rates on farm loans: Operating loans[a]	Feeder cattle[a]	Real estate[a]
	(index)[b]	*(index)*[b]	*(index)*[b]	*(percent)*	*(percent)*	*(percent)*	*(percent)*
2014							
Jan–Mar	114	128	96	67.0	4.93	5.07	4.66
Apr–June	110	123	93	67.3	4.86	4.98	4.67
July–Sept	123	106	85	69.5	4.89	5.01	4.62
Oct–Dec	137	109	69	70.6	4.87	5.03	4.61
2015							
Jan–Mar	141	105	57	69.0	4.80	4.95	4.57
Apr–June	140	102	64	72.1	4.81	4.97	4.64
July–Sept	125	105	60	72.3	4.82	4.96	4.58

[a]At end of period.
[b]Bankers responded to each item by indicating whether conditions in the current quarter were higher or lower than (or the same as) in the year-earlier quarter. The index numbers are computed by subtracting the percentage of bankers who responded "lower" from the percentage who responded "higher" and adding 100.
Note: Historical data on Seventh District agricultural credit conditions are available for download from the *AgLetter* webpage, https://www.chicagofed.org/publications/agletter/index.

of 2010. As of October 1, 2015, the average interest rates on agricultural loans were 4.82 percent for operating loans, 4.96 percent for feeder cattle loans, and 4.58 percent for farm real estate loans—just shy of their all-time lows, set in the first quarter of 2015.

Looking forward

A majority of the survey respondents expected a decline in farmland values for the fourth quarter of 2015, hinting that the absence of a decline in the third quarter was merely a pause in a longer-term correction. Fifty-two percent of responding bankers anticipated farmland values to decrease in the October through December period of 2015, while just 1 percent anticipated farmland values to increase. Additionally, respondents forecasted weaker demand to acquire farmland this fall and winter compared with a year ago. Also, a lack of available properties for sale may be playing a role in supporting farmland values, since only 12 percent of the responding bankers predicted an increase in the volume of farmland transfers relative to the fall and winter of a year ago and 47 percent predicted a decrease.

According to survey respondents, both crop and livestock operations were expected to struggle in terms of net cash farm earnings this fall and winter. For crop farms, only 2 percent of survey respondents anticipated net earnings to rise over the next three to six months compared with a year ago, while 88 percent anticipated these earnings to fall. According to responding bankers, hog, cattle, and dairy farmers should expect to face lower prospects for net earnings this fall and winter relative to a year ago—quite a reversal in outlook from this time of year in 2014. Just 7 percent of the survey respondents predicted higher net earnings for hog and cattle operations over the next three to six months relative to a year ago, while 66 percent predicted lower net earnings. Likewise, only 3 percent of respondents anticipated higher net earnings for dairy operations over the fall and winter compared with a year ago, while 51 percent anticipated lower net earnings.

Survey respondents predicted loan repayment rates to decline further this fall and winter; just 1 percent of the responding bankers expected the volume of farm loan repayments to rise over the next three to six months compared with a year ago, while 53 percent expected this volume to fall. If this prediction turns out to be accurate, next quarter the index of non-real-estate loan repayment rates would reach its lowest level since the first quarter of 1999 (see chart 2). In addition, forced sales or liquidations of farm assets among financially distressed farmers were anticipated to increase in the next three to six months relative to a year earlier, according to the responding bankers. Finally, the District's overall non-real-estate loan volume in the October through December period of 2015 compared with the same period of 2014 was expected to be higher, but the overall increase would be solely due to year-over-year increases in the volumes of operating loans and loans guaranteed by the Farm Service Agency of the USDA (and dairy loans in Wisconsin).

David B. Oppedahl, *senior business economist*

AgLetter (ISSN 1080-8639) is published quarterly by the Economic Research Department of the Federal Reserve Bank of Chicago. It is prepared by David B. Oppedahl, senior business economist, and members of the Bank's Economic Research Department. The information used in the preparation of this publication is obtained from sources considered reliable, but its use does not constitute an endorsement of its accuracy or intent by the Federal Reserve Bank of Chicago or the Federal Reserve System.

SELECTED AGRICULTURAL ECONOMIC INDICATORS

	Latest period	Value	Percent change from: Prior period	Year ago	Two years ago
Prices received by farmers *(index, 2011=100)*	September	98	–3.9	–8	–5
Crops *(index, 2011=100)*	September	87	–1.1	0	–13
Corn *($ per bu.)*	September	3.68	0.0	5	–32
Hay *($ per ton)*	September	145	0.0	–16	–17
Soybeans *($ per bu.)*	September	9.05	–6.8	–17	–32
Wheat *($ per bu.)*	September	4.72	–2.7	–17	–31
Livestock and products *(index, 2011=100)*	September	109	–6.8	–17	2
Barrows & gilts *($ per cwt.)*	September	54.90	–7.4	–28	–22
Steers & heifers *($ per cwt.)*	September	140.00	–6.0	–11	13
Milk *($ per cwt.)*	September	17.50	4.8	–32	–13
Eggs *($ per doz.)*	September	1.90	–20.5	81	84
Consumer prices *(index, 1982–84=100)*	September	238	–0.1	0	2
Food	September	249	0.4	2	5
Production or stocks					
Corn stocks *(mil. bu.)*	September 1	1,731	N.A.	41	111
Soybean stocks *(mil. bu.)*	September 1	191	N.A.	108	35
Wheat stocks *(mil. bu.)*	September 1	2,089	N.A.	10	12
Beef production *(bil. lb.)*	September	2.09	7.0	1	1
Pork production *(bil. lb.)*	September	2.04	4.5	9	10
Milk production *(bil. lb.)**	September	15.6	–4.6	0	5
Agricultural exports *($ mil.)*	September	9,677	1.2	–8	–9
Corn *(mil. bu.)*	September	133	–15.2	–17	64
Soybeans *(mil. bu.)*	September	86	102.8	11	56
Wheat *(mil. bu.)*	September	92	23.7	–2	–39
Farm machinery *(units)*					
Tractors, 40 HP or more	September	6,679	N.A.	–24	–15
40 to 100 HP	September	4,869	N.A.	–13	11
100 HP or more	September	1,810	N.A.	–43	–48
Combines	September	694	N.A.	–20	–32

N.A. Not applicable.
*23 selected states.
Sources: Author's calculations based on data from the U.S. Department of Agriculture, U.S. Bureau of Labor Statistics, and the Association of Equipment Manufacturers.