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AgLetter

FARMLAND VALUES AND CREDIT CONDITIONS

Summary
Falling 3 percent from a year ago, agricultural land values for the Seventh Federal Reserve District remained on a downward trend in the third quarter of 2016. Year-over-year decreases in "good" agricultural land values for Illinois, Iowa, and Michigan outweighed increases in such values for Indiana and Wisconsin. Moreover, according to the 208 agricultural bankers who responded to the October 1 survey, District farmland values decreased 1 percent in the third quarter of 2016 from the second quarter. A majority of the survey respondents saw the downward trend for agricultural land values continuing into the fourth quarter of 2016: 58 percent of the responding bankers anticipated a decrease in farmland values in the final quarter of 2016, while less than 1 percent anticipated an increase.

In the third quarter of 2016, District agricultural credit conditions deteriorated once more, yet not all indicators were negative. In addition to repayment rates for non-real-estate farm loans being down in the third quarter of 2016 relative to the same quarter last year, loan renewals and extensions were up. While the availability of funds for lending by agricultural banks remained slightly above the level of a year ago for the third quarter of 2016, the demand for non-real-estate loans relative to a year ago was a bit more pronounced than in the prior quarter. The average loan-to-deposit ratio for the District jumped to 75.3 percent—just shy of its highest level in seven years. Average interest rates on farm loans in the third quarter were the lowest of 2016.

CONFERENCE REMINDER
The Downturn in Agriculture:
Implications for the Midwest and the Future of Farming

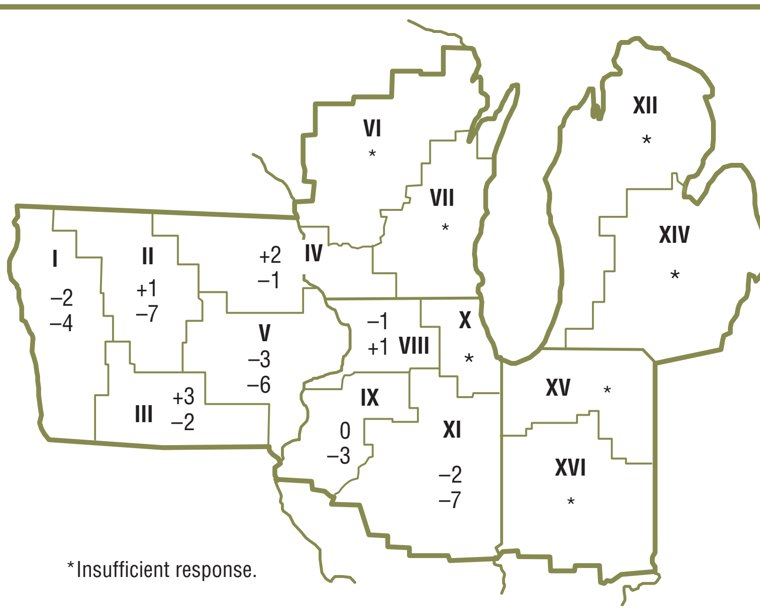
On November 29, 2016, a Chicago Fed conference will examine the agricultural downturn in the Midwest. To register, go to https://www.chicagofed.org/events/2016/ag-conference.

Farmland values
The third quarter of 2016 marked the fourth straight quarter of year-over-year declines for District farmland values—the first time for such a streak since 1986–87. The District's farmland values were down 3 percent from last year's third quarter, although Indiana's farmland values were up 1 percent from a year ago and Wisconsin's were up 2 percent (see map and table below). Farmland values for Illinois, Iowa, and Michigan decreased on a year-over-year basis (4 percent, 5 percent, and 11 percent, respectively). The District's agricultural land values decreased 1 percent from the second quarter of 2016, led by a 3 percent quarterly decrease for Michigan.

Percent change in dollar value of "good" farmland

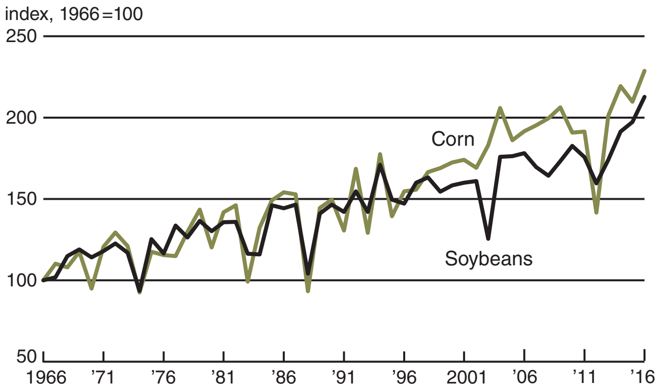
Top: July 1, 2016 to October 1, 2016
Bottom: October 1, 2015 to October 1, 2016

	July 1, 2016 to October 1, 2016	October 1, 2015 to October 1, 2016
Illinois	–1	–4
Indiana	0	+1
Iowa	–1	–5
Michigan	–3	–11
Wisconsin	0	+2
Seventh District	–1	–3



*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.

Higher levels of pessimism about farmland values in Michigan may partly stem from poorer weather this summer, compared with nearly ideal growing conditions in much of the rest of the District. District-wide corn and soybean yields set new records in 2016, according to U.S. Department of Agriculture (USDA) data (see chart 1). Illinois, Iowa, and Wisconsin were expected to set records for corn yields, while only Michigan was not expected to have record soybean yields. The USDA forecasted that the five District states' harvest of corn for grain in 2016 would rise by 11 percent from 2015, establishing a new record. Likewise, soybean production for the five District states in 2016 was projected to break the record, set just last year—this year's soybean harvest should exceed 2015's by 9.2 percent, according to USDA projections. Record harvests were under way in Iowa and Wisconsin for corn and in Illinois, Indiana, and Wisconsin for soybeans. Bumper harvests should provide some protection for farmers' revenues, but falling corn prices have pulled the rug out from beneath their feet.

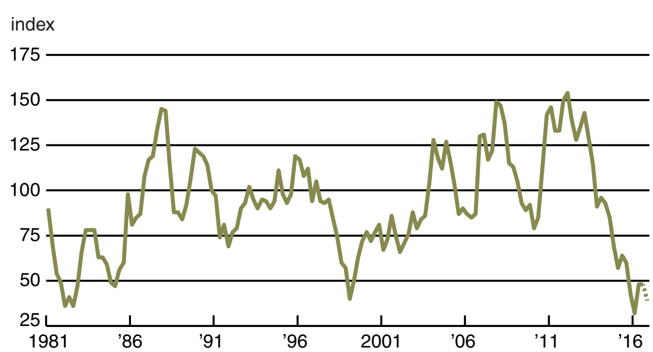
For the third quarter of 2016, prices for corn—the District's largest cash crop—were down relative to the third quarter of the prior year. According to the USDA, corn prices averaged $3.34 per bushel in the third quarter of 2016, down 9.3 percent from the previous quarter and down 10 percent from a year ago. However, soybean prices, with an average of $9.85 per bushel in the third quarter of 2016, were up 2.0 percent from the previous quarter and up 3.0 percent from a year ago. Additionally, livestock operators faced a tougher environment in the third quarter of 2016 relative to the same quarter of a year earlier, primarily on account of lower livestock product prices. Compared with a year ago, egg, cattle, hog, and milk prices were down 69 percent, 21 percent, 7.5 percent, and 0.8 percent in the third quarter of 2016, respectively, according to USDA data. Hence, as one reporting banker commented, "Commodity prices are far short of supporting the total costs of production." So, generally lower commodity prices, combined with input costs that have been slow to adjust, have stalled a recovery in farm returns for this year, despite record District harvests.

Credit conditions

For the third quarter of 2016, most of the indicators of the District's agricultural credit conditions were more negative than those of a year ago. That said, the District's average loan-to-deposit ratio moved closer to the average desired by the responding bankers. Demand for non-real-estate loans compared with a year ago was stronger in the third quarter of 2016. The index of loan demand rose to 132, with 47 percent of survey respondents observing higher demand for non-real-estate loans than a year earlier and 15 percent observing lower demand. Additional loan demand contributed to the large increase in the District's average loan-to-deposit ratio, to 75.3 percent—its highest level since the fourth quarter of 2009. However, this jump in the ratio still left it 5.5 percentage points below the average level desired by the responding bankers. The availability of funds for lending by agricultural banks relative to a year earlier also played a factor in this jump. At 103 for the third quarter of 2016, the index of funds availability continued to indicate that, on the whole, agricultural banks in the District had more funds for lending than a year ago; 13 percent of the survey respondents indicated their banks had more funds available to lend during the third quarter of 2016 than a year earlier, and 10 percent indicated their banks had less.

Repayment rates on non-real-estate farm loans relative to a year ago continued to be lower in the July through September period of 2016. The index of loan repayment rates stayed at 48 in the third quarter of 2016 (see chart 2), as 1 percent of responding bankers reported higher rates of loan repayment relative to a year ago and 53 percent reported lower rates. Furthermore, loan renewals and extensions on non-real-estate agricultural loans were much higher in the third quarter of 2016 relative to the same quarter of 2015, with 49 percent of the responding bankers observing more of them and just 1 percent observing fewer. Collateral requirements for loans in the third quarter of 2016 tightened relative to the third quarter of the previous year, as 25 percent of the respondents reported that their banks required

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)*
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
Oct–Dec	134	104	43	72.9	4.96	5.07	4.67
2016							
Jan–Mar	156	105	32	73.3	4.91	5.01	4.65
Apr–June	126	108	48	72.6	4.89	5.05	4.57
July–Sept	132	103	48	75.3	4.87	4.95	4.57

[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.

more collateral and none reported that their banks required less. As of October 1, 2016, the average interest rates on agricultural loans were 4.87 percent for operating loans, 4.95 percent for feeder cattle loans, and 4.57 percent for farm real estate loans—their lowest values of the year thus far.

Looking forward

According to the October 1 survey results, a majority of the respondents expected farmland values to fall in the fourth quarter of 2016. Fifty-eight percent of responding bankers anticipated farmland values to decrease in the October through December period of 2016, while less than 1 percent anticipated farmland values to increase. Additionally, respondents forecasted weaker demand to acquire farmland this fall and winter compared with a year ago, particularly among farmers but also among nonfarm investors. Yet, a lack of available properties for sale may be playing a role in keeping farmland values from dropping faster, since only 16 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 42 percent predicted a decrease.

Survey respondents expected both crop and livestock operations to struggle in terms of net cash farm earnings this fall and winter relative to a year ago. For crops, only 3 percent of survey respondents anticipated net cash earnings to rise over the next three to six months, while 85 percent anticipated these earnings to fall. The USDA predicted price intervals of $2.95 to $3.55 per bushel for corn and $8.30 to $9.80 per bushel for soybeans in the 2016–17 crop year (this year's third quarter average of cash prices for soybeans was slightly above this range). According to responding bankers, hog, cattle, and dairy farmers should also expect to face lower prospects for net cash earnings this fall and winter, which would make this the second year in a row with a negative outlook for all of them.

According to survey respondents, loan repayment rates were predicted to decline further this fall and winter; just 3 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 64 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 second-lowest level (39) since the third quarter of 1982 (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 63 percent of the responding bankers (none foresaw a decrease in these measures). The District's non-real-estate loan volume in the October through December period of 2016 compared with the same period of 2015 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 (plus dairy loans in Wisconsin).

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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	87	–3.3	–9	–19
Crops *(index, 2011=100)*	September	84	–1.2	–2	–3
Corn *($ per bu.)*	September	3.22	0.3	–13	–8
Hay *($ per ton)*	September	129	–1.5	–9	–25
Soybeans *($ per bu.)*	September	9.43	–5.0	4	–13
Wheat *($ per bu.)*	September	3.49	–4.9	–26	–39
Livestock and products *(index, 2011=100)*	September	89	–5.3	–18	–33
Barrows & gilts *($ per cwt.)*	September	47.90	–8.9	–13	–37
Steers & heifers *($ per cwt.)*	September	109.00	–7.6	–22	–31
Milk *($ per cwt.)*	September	17.30	1.2	–1	–33
Eggs *($ per doz.)*	September	0.60	–7.7	–68	–42
Consumer prices *(index, 1982–84=100)*	September	241	0.3	1	1
Food	September	248	0.0	0	1
Production or stocks					
Corn stocks *(mil. bu.)*	September 1	1,738	N.A.	0	41
Soybean stocks *(mil. bu.)*	September 1	197	N.A.	3	114
Wheat stocks *(mil. bu.)*	September 1	2,527	N.A.	21	33
Beef production *(bil. lb.)*	September	2.18	–3.7	4	5
Pork production *(bil. lb.)*	September	2.13	–1.1	4	14
Milk production *(bil. lb.)**	September	16.0	–4.1	3	3
Agricultural exports *($ mil.)*	August	11,254	5.8	18	9
Corn *(mil. bu.)*	August	223	–4.0	42	33
Soybeans *(mil. bu.)*	August	153	55.0	258	830
Wheat *(mil. bu.)*	August	100	33.4	34	1
Farm machinery *(units)*					
Tractors, 40 HP or more	September	6,665	11.2	1	–24
40 to 100 HP	September	5,016	5.2	4	–11
100 HP or more	September	1,649	34.7	–9	–48
Combines	September	451	16.2	–35	–48

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.