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AgLetter

FARMLAND VALUES AND CREDIT CONDITIONS

Summary

Agricultural land values in the Seventh Federal Reserve District fell 4 percent from a year ago in the first quarter of 2016—their largest year-over-year decline since the third quarter of 2009. There was a decrease of 1 percent in "good" farmland values in the first quarter of 2016 relative to the fourth quarter of 2015, based on the survey responses of 200 District agricultural bankers. Cash rental rates for District farmland experienced a significant drop of 10 percent for 2016 compared with 2015—even larger than the decrease of last year relative to 2014. Demand to purchase agricultural land was markedly lower in the three- to six-month period ending with March 2016 compared with the same period ending with March 2015. Moreover, the amount of farmland for sale, the number of farms sold, and the amount of acreage sold were all down during the winter and early spring of 2016 compared with a year ago. Nearly two-thirds of the responding bankers expected farmland values to decrease during the second quarter of 2016, with the rest expecting farmland values to remain stable.

Agricultural credit conditions in the District deteriorated further during the first quarter of 2016. Repayment rates for non-real-estate farm loans were much weaker than a year ago, and renewals and extensions of these loans were much higher than a year earlier. In the first quarter of 2016, demand for non-real-estate loans was significantly higher than a year ago (continuing the pattern of recent quarters). The availability of funds to lend was slightly higher than a year earlier. The average loan-to-deposit ratio edged up to 73.3 percent. Meanwhile, average interest rates on farm loans declined a bit in the first quarter of 2016.

SAVE THE DATE

On November 29, 2016, the Federal Reserve Bank of Chicago will hold a conference to examine the agricultural downturn in the Midwest and discuss future directions for farming. Additional information about the conference will be released in the coming months on https://www.chicagofed.org.

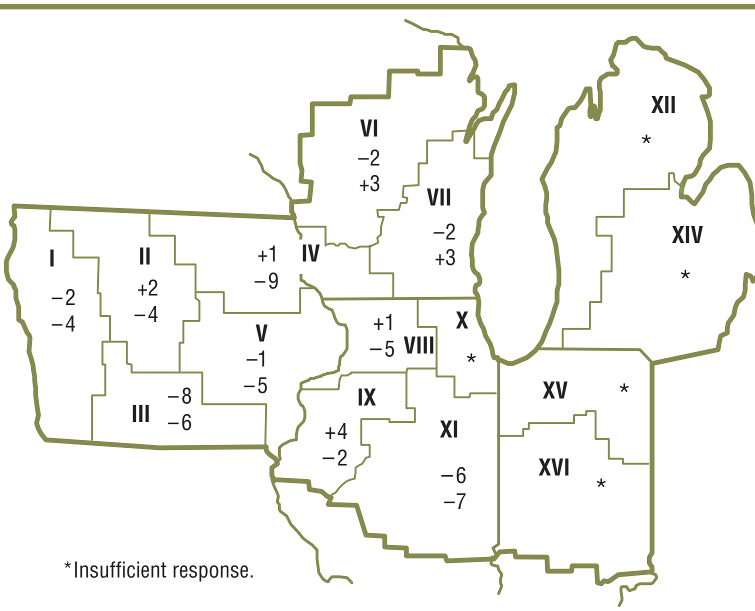
Farmland values

District farmland values moved down 1 percent in the first quarter of 2016 relative to the fourth quarter of 2015. Moreover, they fell 4 percent in the first quarter of 2016 relative to the first quarter of 2015. This year-over-year decline in the values of District agricultural land extended the string of quarters without a gain to seven (half of the longest such string, which occurred during the 1980s). Similarly, the string of year-over-year declines in Iowa's farmland values stretched to ten quarters. All of the District states experienced some deterioration in their agricultural land values in the first quarter of this year: Illinois, Indiana, Iowa, and Michigan saw year-over-year declines of 5 percent, 2 percent, 5 percent, and 7 percent, respectively; and Wisconsin saw

Percent change in dollar value of "good" farmland

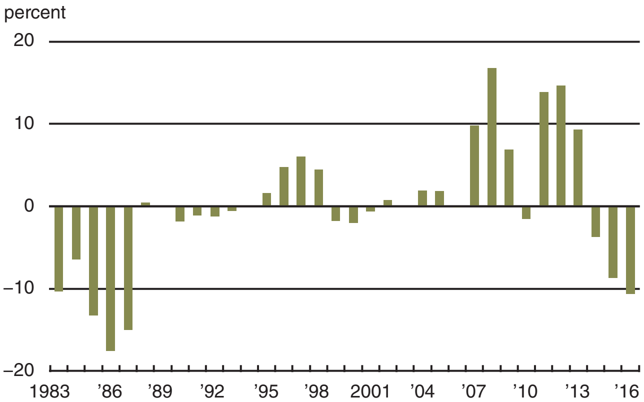
Top: January 1, 2016 to April 1, 2016
Bottom: April 1, 2015 to April 1, 2016

	January 1, 2016 to April 1, 2016	April 1, 2015 to April 1, 2016
Illinois	−2	−5
Indiana	+4	−2
Iowa	−1	−5
Michigan	−1	−7
Wisconsin	−2	+1
Seventh District	−1	−4



*Insufficient response.

1. **Annual percentage change in Seventh District farmland cash rental rates adjusted by PCEPI**



Sources: Author's calculations based on data from Federal Reserve Bank of Chicago farmland value surveys; and U.S. Bureau of Economic Analysis, Personal Consumption Expenditures Price Index (PCEPI), from Haver Analytics.

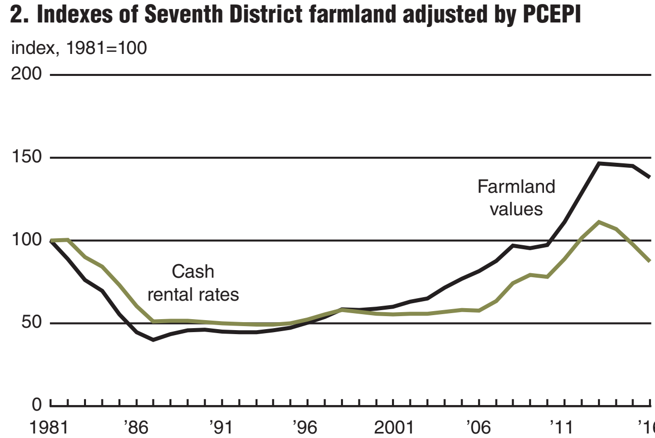
a quarterly decrease of 2 percent (though it did experience a modest year-over-year gain of 1 percent in its farmland values) (see table and map on front). After being adjusted for inflation with the Personal Consumption Expenditures Price Index (PCEPI), the year-over-year decrease in District farmland values was 5 percent for the first quarter of 2016, which represented the largest decline since 1987.

Farmland markets were less active in the three- to six-month period ending with March 2016 compared with the same period ending with March 2015. Only 5 percent of the survey respondents reported higher demand to purchase farmland, while 51 percent reported lower demand. The supply of farmland for sale was a bit lower than a year earlier: There was a decrease in the amount of farmland for sale during the most recent winter and early spring relative to a year ago, as 20 percent of the responding bankers reported more farmland was up for sale in their areas and 34 percent reported less. Likewise, the number of farms sold was down in the winter and early spring relative to a year ago, though the amount of acreage sold dipped to a lesser extent. In a reversal from last year, survey participants observed farmers having slightly decreased their share of farmland acres purchased (relative to investors) in the three- to six-month period ending in March 2016 versus the same period ending in March 2015 (10 percent noted farmers increased their share and 15 percent noted farmers decreased their share).

In regard to arrangements for District farmland operated by someone other than the owner, about 81 percent of acres were rented out on a cash basis, 15 percent on a crop-share basis, 1 percent on a bushel basis, and 3 percent on other terms. Cash rental rates for farmland in the District fell a substantial 10 percent for 2016 relative to 2015, eclipsing last year's decrease (relative to 2014) as the largest one since 1987. For 2016, average annual cash rates to lease farmland were down 9 percent in Illinois, 10 percent in Indiana, 10 percent in Iowa, 2 percent in Michigan, and 7 percent in Wisconsin. After being adjusted for inflation using the PCEPI, District cash rental rates were down 11 percent from 2015 (see chart 1)—the third consecutive negative result according to this measure (the last time this occurred was in 1999–2001).

In 2016, the index of inflation-adjusted farmland cash rental rates was down more than the index of inflation-adjusted agricultural land values (see chart 2). Indeed, 2016's real cash rental rates were 13 percent below their level in 1981, whereas real farmland values were still 38 percent above their 1981 level. Given the decrease in cash rental rates was larger than that in farmland values, the spread between their respective indexes widened for the seventh year in a row. This widening gap reflected relatively stronger demand to own farmland than to lease it, as land values did not fall as much as the earnings potential of farmland (represented by cash rental rates). Greater uncertainty about the profitability of crop production likely held down bids by farmers to rent farmland on a cash basis; there were reports of some farms coming up for lease again this year after initial rental arrangements fell through. Not surprisingly, the declines in crop prices of recent years seemed to lower farmers' expectations for turning a profit on leased acres in 2016. Compared with two years earlier, corn prices were down 21 percent and soybean prices were down 38 percent in March 2016, according to data from the U.S. Department of Agriculture (USDA) (see table on back page). Moreover, real March corn prices have not been lower since 2006; similarly, real March soybean prices have not been lower since 2007. (Notably, these data were compiled prior to an April rally in corn and soybean prices.) Farmland values have not fallen as much as cash rents, in part because interest rates have stayed quite low, diminishing the lure of alternative investments. Moreover, some respondents reported there were still potential farmland buyers with resources to make purchases (especially for

2. **Indexes of Seventh District farmland adjusted by PCEPI**



Note: Both series are adjusted by PCEPI for the first quarter of each year.
Sources: Author's calculations based on data from Federal Reserve Bank of Chicago farmland value surveys; and U.S. Bureau of Economic Analysis, Personal Consumption Expenditures Price Index (PCEPI), from Haver Analytics.

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

[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.

higher-quality ground and acres in certain locations); such buyers lend relatively more support to agricultural land values than to cash rental rates.

Credit conditions

Agricultural credit conditions were weaker in the first quarter of 2016 compared with the first quarter of 2015. The index of repayment rates for non-real-estate farm loans was 32 for the first quarter of 2016, with no responding bankers noting higher rates of repayment than a year ago and 68 percent noting lower rates. This result was a new low for the survey (the previous record had been set in 1982). Additionally, 56 percent of the survey respondents reported higher levels of loan renewals and extensions for the January through March period of 2016 compared with the same period last year, while 2 percent reported lower levels of them. Credit tightening in the first quarter of 2016 was also evident: 28 percent of survey respondents indicated that their banks required larger amounts of collateral for loans during the January through March period of 2016 relative to the same period last year, while none indicated that their banks required smaller amounts.

Rising to its highest point since 1979, the index of demand for non-real-estate farm loans was 156 for the first quarter of 2016. Sixty-four percent of the responding bankers observed higher loan demand in the January through March period of 2016 compared with the same period of a year ago, and only 8 percent observed lower demand. At 105, the index of funds availability ticked up from the previous quarter; 13 percent of the survey respondents reported their banks had more funds available to lend in the first quarter of 2016 than a year earlier and 8 percent reported their banks had less. The average loan-to-deposit ratio for the District rose to 73.3 percent, reaching its highest value since the second quarter of 2010. As of April 1, 2016, average interest rates on operating loans (4.91 percent), agricultural real estate loans (4.65 percent), and feeder cattle loans (5.01 percent) were all down slightly from the end of the previous quarter.

Looking forward

Agricultural land values were expected to continue falling, as nearly two-thirds of the survey respondents predicted farmland values to decrease in the second quarter of 2016 and none predicted farmland values to increase. Furthermore, farm real estate loan volumes were projected to be down in the second quarter of 2016 compared with the second quarter of 2015.

Survey respondents forecasted higher volumes of non-real-estate farm loans for the April through June period of 2016 compared with the same period of 2015. Specifically, they expected higher volumes for operating loans, dairy loans, and loans guaranteed by the Farm Service Agency of the USDA. In contrast, they expected lower volumes for grain storage loans, farm machinery loans, and feeder cattle loans. These patterns reflected the challenging circumstances facing farmers, as they attempt to weather a downturn in agricultural prices by shoring up their cash flows and holding back on capital spending.

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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)*	March	93	0.0	–9	–17
Crops *(index, 2011=100)*	March	83	–1.2	–3	–14
Corn *($ per bu.)*	March	3.57	0.0	–6	–21
Hay *($ per ton)*	March	138	1.5	–12	–19
Soybeans *($ per bu.)*	March	8.56	0.6	–13	–38
Wheat *($ per bu.)*	March	4.40	–4.6	–23	–35
Livestock and products *(index, 2011=100)*	March	100	1.0	–15	–22
Barrows & gilts *($ per cwt.)*	March	50.50	1.4	0	–38
Steers & heifers *($ per cwt.)*	March	137.00	2.2	–15	–9
Milk *($ per cwt.)*	March	15.30	–2.5	–8	–39
Eggs *($ per doz.)*	March	0.97	–10.4	–37	–21
Consumer prices *(index, 1982–84=100)*	March	238	0.1	1	1
Food	March	248	–0.2	1	3
Production or stocks					
Corn stocks *(mil. bu.)*	March 1	7,808	N.A.	1	11
Soybean stocks *(mil. bu.)*	March 1	1,531	N.A.	15	54
Wheat stocks *(mil. bu.)*	March 1	1,372	N.A.	20	30
Beef production *(bil. lb.)*	March	2.10	11.2	8	8
Pork production *(bil. lb.)*	March	2.15	7.2	2	16
Milk production *(bil. lb.)**	March	17.2	8.9	2	3
Agricultural exports *($ mil.)*	March	10,314	–3.2	–15	–24
Corn *(mil. bu.)*	March	171	31.3	11	–17
Soybeans *(mil. bu.)*	March	96	–53.8	5	–18
Wheat *(mil. bu.)*	March	63	–3.6	–12	–20
Farm machinery *(units)*					
Tractors, 40 HP or more	March	6,712	N.A.	–2	–16
40 to 100 HP	March	4,810	N.A.	10	2
100 HP or more	March	1,902	N.A.	–23	–42
Combines	March	274	N.A.	–17	–64

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.