

AgLetter



FARMLAND VALUES AND CREDIT CONDITIONS

Summary

Farmland values in the Seventh Federal Reserve District experienced an annual decrease of 3 percent for 2015, matching the yearly decline for 2014. Furthermore, “good” farmland values in the fourth quarter of 2015 were down 1 percent from the third quarter, according to 199 survey respondents representing agricultural banks across the District. Nearly 60 percent of the survey respondents anticipated agricultural land values to decrease during the January through March period of 2016, while none expected agricultural land values to increase in the areas surrounding their respective banks.

In the fourth quarter of 2015, agricultural credit conditions regressed once again. Repayment rates on non-real-estate farm loans were much lower in the October through December period of 2015 versus the same period of 2014, and higher rates of loan renewals and extensions reflected a tightened credit environment. Moreover, for 2016, almost 2 percent of farm loan customers were not expected to qualify for additional operating credit at the banks of the survey respondents. Given that non-real-estate loan demand was well above the level of a year ago and funds available for lending were just above the level of a year earlier, the average loan-to-deposit ratio for the District (72.9 percent) reached its highest level since the third quarter of 2010. Average interest rates on agricultural loans moved up toward the end of 2015.

Farmland values

The District saw an annual decrease of 3 percent in “good” farmland values for 2015, equaling its yearly decrease for 2014 and marking the first consecutive annual decline since the 1980s (see chart 1 on next page). In addition, the final quarter of 2015 was the sixth straight quarter without the District as a whole seeing a year-over-year increase in agricultural land values. In the fourth quarter of 2015, Illinois, Indiana, Iowa, and Michigan experienced year-over-year declines in agricultural land values, whereas Wisconsin experienced a small rise (see table and map below). The District’s farmland values decreased 1 percent in the fourth quarter of 2015 relative to the third quarter.

When adjusted for inflation, the District’s decrease in farmland values for 2015 was actually smaller than the one for 2014 (because the inflation rate was lower in 2015). Put in real terms, the decrease in the District’s farmland values from their peak in 2013 to 2015 was 7.5 percent (see chart 2 on next page). However, in 2015 the index of inflation-adjusted farmland values for the District was still 331 percent higher than at its trough in 1986.

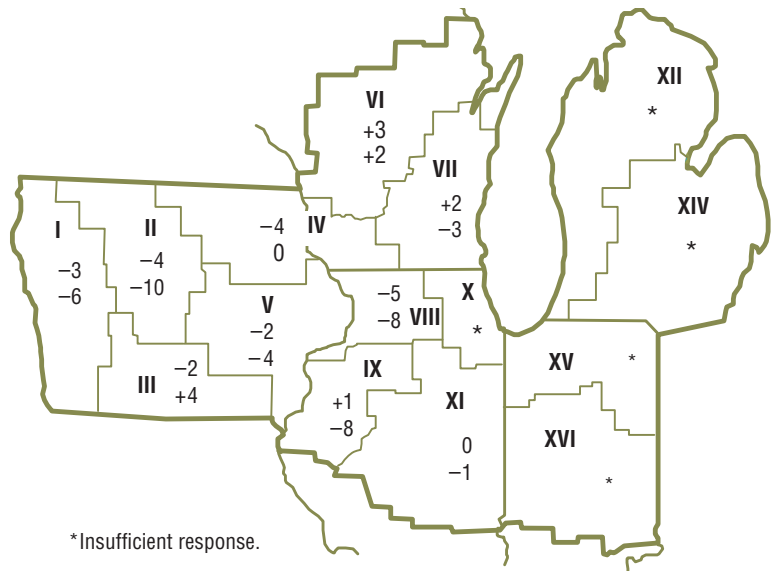
Although agricultural land values fell again in 2015, the five District states’ corn harvest was the third largest ever and their soybean harvest was the largest ever (surpassing the previous record level, set in 2014). According to U.S. Department of Agriculture (USDA) data, 2015 production

Percent change in dollar value of “good” farmland

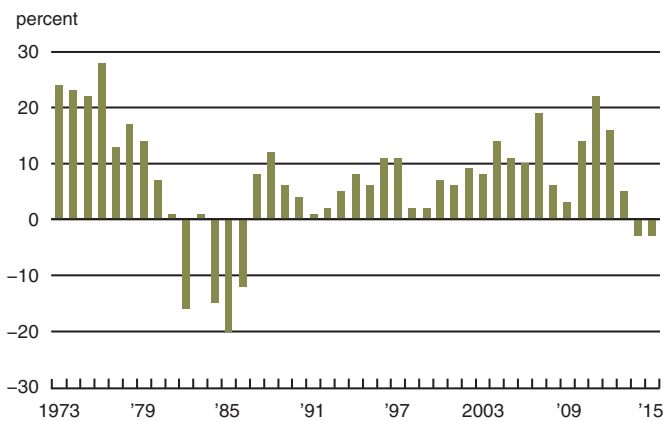
Top: October 1, 2015 to January 1, 2016

Bottom: January 1, 2015 to January 1, 2016

	October 1, 2015 to January 1, 2016	January 1, 2015 to January 1, 2016
Illinois	-1	-4
Indiana	-2	-4
Iowa	-3	-5
Michigan	+1	-2
Wisconsin	+2	+2
Seventh District	-1	-3



1. Annual percentage change in Seventh District farmland values



Source: Author's calculations based on data from Federal Reserve Bank of Chicago farmland value surveys.

in the five District states decreased 7.2 percent for corn and increased 3.4 percent for soybeans from 2014 levels. The District states' corn yield declined 4.4 percent in 2015 from 2014—to 176 bushels per acre. But the District states' soybean yield rose 3.1 percent in 2015 from 2014—to a record-setting 54.1 bushels per acre. Iowa, Michigan, and Wisconsin had record corn and soybean yields in 2015, while Illinois tied its record yield for soybeans (set in 2014). Even though lower corn yields in Illinois and Indiana kept the five District states as a whole from approaching 2014's level, the District still had a bountiful harvest by historical standards.

Similarly, the national corn harvest for 2015 was the third highest ever: 13.6 billion bushels of corn were produced last year (down 4.3 percent from 2014). U.S. soybean output for 2015 surpassed the record high, set in 2014, by just 0.1 percent (coming in at 3.93 billion bushels). Ample supplies of corn and soybeans continued to put downward pressure on corn and soybean prices in 2015. Moreover, the drop in corn and soybean demand from abroad (largely due to the relative strength of the U.S. dollar against foreign currencies) also hurt the prices of corn and soybeans. Corn prices in December 2015 were, on average, 4 percent lower than a year ago and 17 percent lower than two years ago (see table on the back page). Soybean prices in December 2015 were, on average, 15 percent lower than a year ago and 33 percent lower than two years ago. Total corn usage of 13.5 billion bushels in the 2015–16 crop year would result in U.S. ending stocks of 1.84 billion bushels. At 13.6 percent, the stocks-to-use ratio for corn for the 2015–16 crop year would be a bit higher than that for the 2014–15 crop year (revised to 12.6 percent). Total soybean usage of 3.70 billion bushels would leave national ending stocks at 450 million bushels. Thus, the stocks-to-use ratio for soybeans would climb to 12.2 percent for the 2015–16 crop year from a revised 4.9 percent for the 2014–15 crop year. (All of the preceding figures in this paragraph were computed from USDA data.)

Like prices for crops, prices for livestock moved lower in 2015 relative to the previous year. The index of

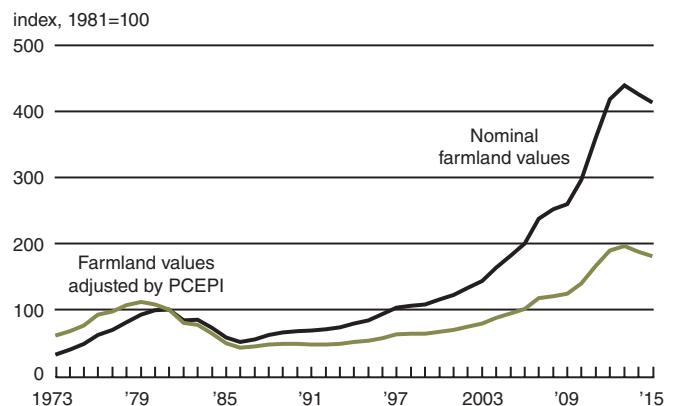
prices for livestock and associated products (featured in the table on the back page) in December 2015 was 24 percent lower than a year ago and 13 percent lower than two years ago. In particular, the average price of cattle plunged in 2015 from its all-time high, set at the end of 2014 (down 26 percent in December 2015 from a year earlier). After recoveries from supply disruptions of eggs and hogs, their respective average prices in December 2015 were down 30 percent and 33 percent from a year ago. The somewhat better performance of the average price of milk (down only 16 percent in December 2015 from the level of a year ago) may have contributed to Wisconsin's increase in farmland values toward the end of 2015. For the District, however, the downturn in crop and livestock prices helped stretch the slide in agricultural land values for at least another year.

Credit conditions

Along with slumping agricultural prices, the deterioration of agricultural credit conditions extended into the fourth quarter of 2015. Repayment rates on non-real-estate farm loans were much lower in the October through December period of 2015 than in the same period of the previous year. With 1 percent of survey respondents reporting higher rates of loan repayment and 58 percent reporting lower rates, the index of repayment rates was 43 in the final quarter of 2015—its lowest level since the first quarter of 1999. In addition, 45 percent of respondents reported higher rates of loan renewals and extensions in the fourth quarter of 2015 compared with the fourth quarter of 2014, while only 3 percent reported lower rates. Furthermore, the volume of the farm loan portfolio reported as having "major" or "severe" repayment problems rose to 5.0 percent in the fourth quarter of 2015 (up 2.1 percentage points from a year earlier).

Demand for non-real-estate farm loans in the October through December period of 2015 was up from the same period of 2014. With 50 percent of survey respondents

2. Indexes of Seventh District farmland values



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 (index) ^b	Funds availability (index) ^b	Loan repayment rates (index) ^b	Average loan-to-deposit ratio (percent)	Interest rates on farm loans		
					Operating loans ^a (percent)	Feeder cattle ^a (percent)	Real estate ^a (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
Oct–Dec	134	104	43	72.9	4.96	5.07	4.67

^aAt end of period.

^bBankers 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>.

observing an increase in the demand for non-real-estate loans and 16 percent observing a decrease, the index of loan demand was 134 in the fourth quarter of 2015—the ninth quarter in a row above 100. Funds availability during the fourth quarter of 2015 was above the level of a year ago, as it has been in every period since the third quarter of 2006. The index of funds availability edged down to 104, with funds availability higher at 9 percent of the survey respondents' banks and lower at 5 percent of them. The District's average loan-to-deposit ratio rose to 72.9 percent—8.1 percentage points below the average level desired by the responding bankers.

Tighter credit standards compared with a year ago reinforced a pattern of agricultural credit deterioration. Forty-three percent of the survey respondents noted their banks had tightened credit standards for agricultural loans in the fourth quarter of 2015 relative to the fourth quarter of 2014, 57 percent noted their banks had left credit standards essentially unchanged, and none noted their banks had eased credit standards. Credit tightening was evident from the survey responses: 20 percent of responding bankers reported that their banks required larger amounts of collateral for customers to qualify for non-real-estate farm loans during the October through December period of 2015 relative to the same period of a year ago, and none required smaller amounts. Finally, as of January 1, 2016, the average interest rates for farm operating loans (4.96 percent), feeder cattle loans (5.07 percent), and agricultural real estate loans (4.67 percent) had all moved up from their all-time lows (established early in 2015).

Looking forward

Given reports of subpar cash flows and too much spending by farm operations, survey respondents projected 1.9 percent of their farm customers with operating credit in 2015 were not likely to qualify for new operating credit in 2016 (half of a percentage point above the level reported a year ago). Responding bankers expected volumes for

non-real-estate agricultural loans (in particular, those for operating loans and loans guaranteed by the Farm Service Agency) to be higher during the January through March period of 2016 relative to the same period of 2015. Volumes for grain storage loans, farm machinery loans, feeder cattle loans, dairy loans, and farm real estate loans were forecasted to be down in the first quarter of 2016 relative to the same quarter of a year earlier.

There was a strong sentiment among survey respondents that the downward trend for capital spending on farmland or land improvements, buildings and facilities, machinery and equipment, and trucks and autos would continue into 2016. Moreover, 59 percent of the responding bankers anticipated farmland values to decline further in the first quarter of 2016, and none anticipated them to rise. So, no improvements in the short-term prospects of the farm sector were anticipated by the survey respondents; they noted that controlling costs and utilizing risk-management tools would be critical to the health of farms in the coming year.

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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 (<i>index, 2011=100</i>)	December	90	-2.2	-11	-11
Crops (<i>index, 2011=100</i>)	December	84	2.4	1	-9
Corn (\$ per bu.)	December	3.65	1.4	-4	-17
Hay (\$ per ton)	December	142	0.0	-9	-13
Soybeans (\$ per bu.)	December	8.76	0.9	-15	-33
Wheat (\$ per bu.)	December	4.71	-3.1	-23	-30
Livestock and products (<i>index, 2011=100</i>)	December	97	-7.6	-24	-13
Barrows & gilts (\$ per cwt.)	December	43.30	-5.5	-33	-29
Steers & heifers (\$ per cwt.)	December	123.00	-6.1	-26	-7
Milk (\$ per cwt.)	December	17.20	-5.5	-16	-22
Eggs (\$ per doz.)	December	1.24	-38.0	-30	-10
Consumer prices (<i>index, 1982-84=100</i>)	December	238	-0.1	1	1
Food	December	248	-0.2	1	4
Production or stocks					
Corn stocks (<i>mil. bu.</i>)	December 1	11,212	N.A.	0	7
Soybean stocks (<i>mil. bu.</i>)	December 1	2,715	N.A.	7	26
Wheat stocks (<i>mil. bu.</i>)	December 1	1,738	N.A.	14	18
Beef production (<i>bil. lb.</i>)	December	2.05	5.8	2	0
Pork production (<i>bil. lb.</i>)	December	2.21	6.1	4	7
Milk production (<i>bil. lb.</i>)*	December	16.4	5.1	1	4
Agricultural exports (\$ mil.)	November	12,455	-1.0	-16	-21
Corn (<i>mil. bu.</i>)	November	78	-16.4	-25	-44
Soybeans (<i>mil. bu.</i>)	November	342	-5.6	-17	3
Wheat (<i>mil. bu.</i>)	November	51	14.1	9	-20
Farm machinery (<i>units</i>)					
Tractors, 40 HP or more	December	8,280	N.A.	-21	-27
40 to 100 HP	December	5,685	N.A.	-16	-8
100 HP or more	December	2,595	N.A.	-31	-50
Combines	December	689	N.A.	-8	-46

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.