

AgLetter



FARMLAND VALUES AND CREDIT CONDITIONS

Summary

Farmland values for 2011 escalated 22 percent in the Seventh Federal Reserve District—the biggest annual increase since 1976. Compared with the third quarter of 2011, the value of “good” agricultural land rose 4 percent in the fourth quarter, based on 205 surveys of agricultural banks in the District. Although these increases in farmland values were smaller than the increases of the prior quarter, still over 40 percent of those surveyed expected continued farmland value gains during the January through March period of 2012.

Agricultural credit conditions were stronger in the fourth quarter of 2011 than in the preceding fourth quarter, although non-real-estate loan demand was weaker. Funds availability, farm loan repayment rates, and rates of loan renewals and extensions were in better shape for the October through December period of 2011 than in 2010. Agricultural interest rates inched down again, setting new lows for the District. At 68.7 percent, the District’s average loan-to-deposit ratio reached its lowest level since 1997.

Farmland values

With an annual increase of 22 percent in the value of “good” farmland for 2011, the District not only experienced dramatic land auctions but also saw the biggest boom of the past 35 years (see chart 1 on the next page). Since enhanced gains in agricultural land values had already begun a

year ago, the 22 percent annual increase was not quite as high as the past quarter’s 25 percent year-over-year increase. After adjusting for inflation, the 2011 annual increase in farmland values (19 percent) was still the largest since 1976. The run-up in Iowa’s and Indiana’s agricultural land values outpaced that in the rest of the District (see table and map below). Farmland values rose 4 percent from the third quarter to the fourth quarter of 2011 in the District, cooling some from a blistering pace.

Just like the annual index of nominal farmland values, the index of inflation-adjusted farmland values set a record for the District (see chart 2). The compound annual growth rate for agricultural land values (adjusted for inflation) has been 5.5 percent since farmland values hit bottom in 1986. Going back further, the real compound annual growth rate for District farmland values has been 2.9 percent since 1970, encompassing the boom of the 1970s followed by the bust of the 1980s.

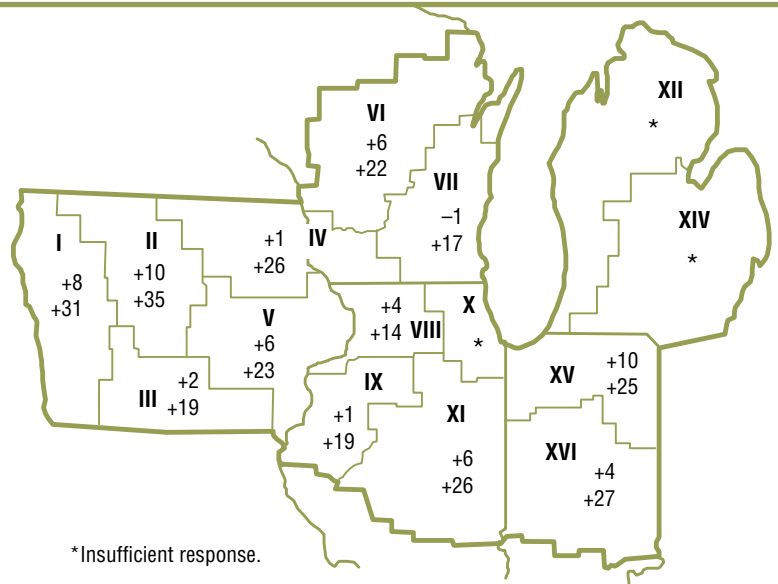
The year 2011 may go down in the annals of U.S. agriculture as a once-in-a-generation phenomenon. Undergirding the huge upward movement in farmland values was an unusual shift up in agricultural prices across the board. Not only did major crop prices move higher, but key livestock and dairy prices were higher as well. Corn, soybean, and wheat prices averaged 57 percent, 26 percent, and 45 percent, respectively, higher in 2011 than in 2010. Milk, hog, and beef cattle prices rose 23 percent, 21 percent,

Percent change in dollar value of “good” farmland

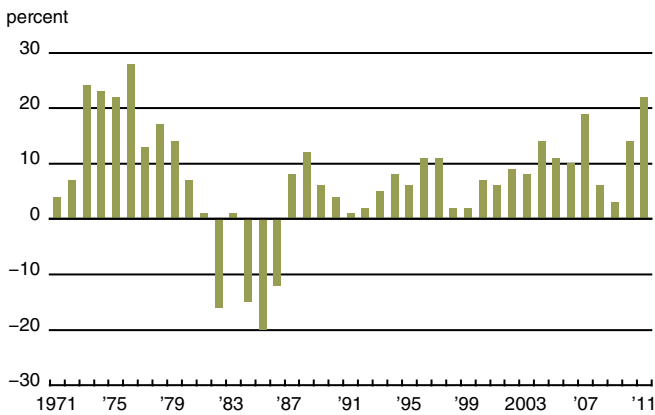
Top: October 1, 2011 to January 1, 2012

Bottom: January 1, 2011 to January 1, 2012

	October 1, 2011 to January 1, 2012	January 1, 2011 to January 1, 2012
Illinois	+5	+21
Indiana	+6	+27
Iowa	+6	+28
Michigan	*	*
Wisconsin	+3	+18
Seventh District	+4	+22



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.

and 21 percent, respectively, although producers faced costlier feed as well. (These figures were computed from U.S. Department of Agriculture [USDA] price data.) According to the most recent USDA estimates, these agricultural price increases helped set a nominal record for net farm income of \$98.1 billion in 2011, a 24 percent jump above 2010 levels.

Both in the nation and the District, corn and soybean operations were key drivers of agriculture's profitability. Nationally, corn production was 12.36 billion bushels for 2011—0.7 percent less than in 2010. U.S. soybean production was estimated at 3.06 billion bushels, 8.2 percent below the level of 2010. The USDA estimated the national corn yield at 147 bushels per acre, down 3.7 percent from 2010, and the national soybean yield at 41.5 bushels per acre, 4.6 percent below that of a year ago. District production of corn was estimated at 6.0 billion bushels, 3.1 percent above the level of 2010. District production of soybeans was estimated at 1.28 billion bushels, 8.1 percent below the level of 2010. For the District, corn yields averaged 160 bushels per acre, 0.4 percent higher than 2010, and soybean yields averaged 47.5 bushels per acre, down 5.1 percent from last year. So, the District benefited from higher corn and soybean prices even more than the U.S. as a whole.

Yet, price volatility warrants caution by agricultural decision makers. During the past two years, average corn prices ranged between \$3.41 per bushel in June 2010 and \$6.88 per bushel in August 2011. Similarly, monthly soybean prices averaged \$9.39 per bushel in March 2010 and peaked at \$13.40 per bushel in August 2011. These wide swings in prices make risk-management strategies even more vital for agricultural enterprises, whether or not there is a higher level for agricultural prices in the era ahead.

Credit conditions

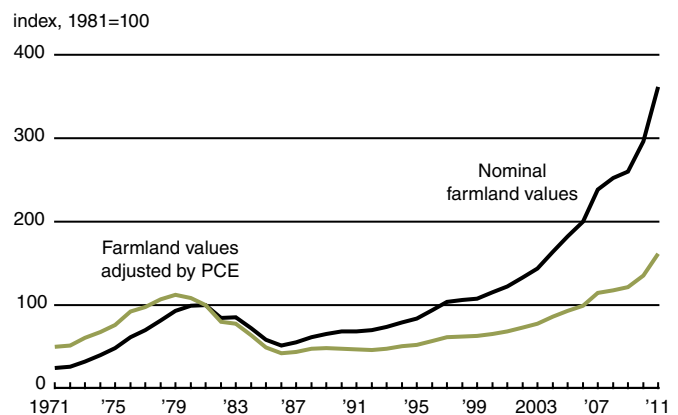
Credit conditions for District agriculture improved from the fourth quarter of 2010 to the fourth quarter of 2011. The index of non-real-estate farm loan repayment rates surged in the fourth quarter of 2011 and surpassed the survey's

previous high recorded in 2007. With 51 percent of respondents reporting higher rates of loan repayment compared with the fourth quarter of 2010 and only 1 percent reporting lower rates, the index of repayment rates was 150 in the final quarter of 2011. For all District states, renewals and extensions of non-real-estate agricultural loans were lower during the period from October through December of 2011 versus the same period of the prior year. Fewer respondents noted higher rates of renewals and extensions (3 percent) than those that noted lower rates (37 percent) for the fourth quarter of 2011, compared with the same quarter of 2010. Moreover, the percentage of problem loans shrank in all District states from a year ago. Less than 2 percent of the volume of the farm loan portfolio held by reporting banks was considered as having major or severe repayment problems. Iowa and Wisconsin banks had larger shares of problem loans than the other states, possibly reflecting higher concentrations of animal agriculture (hogs and dairy, respectively).

Lower demand for non-real-estate farm loans reflected the strong levels of income derived from crop farming during 2011. In the fourth quarter of 2011, the index of loan demand was 87, with 19 percent of responding bankers indicating an increase in the demand for non-real-estate loans and 32 percent indicating a decrease. This trend was dominant in Illinois and Iowa, whereas in Wisconsin there was higher demand for non-real-estate loans than a year ago. More funds were available to lend during the October through December period of 2011 relative to the same period of 2010, with weak loan demand a contributing factor. Reaching its highest level since 1983, the index of funds availability rose to 153, as funds availability was higher at 56 percent of the reporting banks and lower at 3 percent.

Interest rates on agricultural loans declined once more in the fourth quarter of 2011. As of January 1, 2012, the average interest rate was 5.47 percent for farm operating loans. Interest rates on farm real estate loans dropped for the fifth straight year, averaging 5.20 percent.

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 (PCE) Price Index, 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)
2009							
Jan–Mar	116	112	105	76.2	6.20	6.31	6.14
Apr–June	88	118	93	77.3	6.18	6.36	6.16
July–Sept	95	121	89	75.3	6.17	6.35	6.13
Oct–Dec	102	125	92	75.4	6.23	6.40	6.13
2010							
Jan–Mar	109	127	79	73.7	6.13	6.25	6.04
Apr–June	98	122	85	74.5	6.12	6.25	5.99
July–Sept	90	138	114	73.2	6.05	6.14	5.81
Oct–Dec	101	142	142	71.8	5.85	6.02	5.70
2011							
Jan–Mar	81	149	146	69.8	6.01	5.93	5.80
Apr–June	79	145	133	70.3	5.75	5.91	5.62
July–Sept	81	149	133	69.0	5.66	5.79	5.36
Oct–Dec	87	153	150	68.7	5.47	5.65	5.20

^aAt end of period.

^bBankers responded to each item by indicating whether conditions during the current quarter were higher, lower, or the same as in the year-earlier period. The index numbers are computed by subtracting the percentage of bankers that responded “lower” from the percentage that responded “higher” and adding 100.

Note: Historical data on Seventh District agricultural credit conditions are available for download from the *AgLetter* webpage, www.chicagofed.org/webpages/publications/agletter/index.cfm.

With 8 percent of reporting banks requiring larger amounts of collateral during the October through December period of 2011 and 0.5 percent requiring less, it was still slightly harder to qualify for farm loans than a year ago. Moreover, 24 percent of the banks tightened credit standards for farm loans in the fourth quarter of 2011 relative to the fourth quarter of 2010 (just 2 percent eased credit standards). Even so, respondents thought that fewer than 1 percent of their farm customers with operating credit in 2011 would not qualify for new operating credit in 2012, which was about half the level reported a year ago.

Looking forward

Volumes for agricultural loans were anticipated by respondents to grow in the first quarter of 2012, relatively more for real estate than non-real-estate farm loans. For the January through March period, responding bankers expected expanded volumes of operating, farm machinery, and grain storage construction loans in 2012 relative to 2011, but contractions in loan volumes guaranteed by the Farm Service Agency and for farms with cattle.

Farmers’ capital expenditures in 2012 were anticipated by respondents to rise above those of 2011. While 51 percent of the responding bankers forecasted higher levels of land purchases or improvements in 2012, only 3 percent forecasted lower levels than in 2011. Capital expenditures on buildings and facilities were expected to increase by 55 percent of the respondents and to decrease by 9 percent. For sales of machinery and equipment, 68 percent of responding bankers predicted more spending by farmers, while 4 percent predicted less spending in 2012. Similarly, truck and auto sales for farms were anticipated to be higher according to 57 percent of the respondents, with just 2 percent anticipating lower sales of trucks and autos for farms in 2012.

The optimism implicit in these predictions for increased capital expenditures by farmers in 2012 suggested that agriculture could experience another phenomenal year. However, the USDA predicted net farm income to fall to \$91.7 billion in 2012—a decline of 8.2 percent from 2011. Even with this drop off, the five-year average of net farm income, after accounting for inflation, would be the highest since 1977, during the previous surge in farmland values. This kind of momentum may carry the current upward trend in farmland values into 2012. With 43 percent of the responding bankers expecting agricultural land values to increase from January through March of 2012 and only 2 percent expecting a decrease, the survey responses provided support for the notion that farmland values will continue to rise in early 2012.

David B. Oppedahl, *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, 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.

© 2012 Federal Reserve Bank of Chicago
AgLetter articles may be reproduced in whole or in part, provided the articles are not reproduced or distributed for commercial gain and provided the source is appropriately credited. Prior written permission must be obtained for any other reproduction, distribution, republication, or creation of derivative works of *AgLetter* articles. To request permission, please contact Helen Koshy, senior editor, at 312-322-5830 or email Helen.Koshy@chi.frb.org. *AgLetter* and other Bank publications are available at www.chicagofed.org.

SELECTED AGRICULTURAL ECONOMIC INDICATORS

	Latest period	Value	Percent change from		
			Prior period	Year ago	Two years ago
Prices received by farmers (<i>index, 1990–92=100</i>)	January	186	3.9	12	37
Crops (<i>index, 1990–92=100</i>)	January	208	5.1	10	40
Corn (\$ per bu.)	January	5.90	0.7	19	61
Hay (\$ per ton)	January	172	-2.8	54	62
Soybeans (\$ per bu.)	January	11.70	1.7	1	20
Wheat (\$ per bu.)	January	6.86	-4.6	3	40
Livestock and products (<i>index, 1990–92=100</i>)	January	156	-0.6	14	29
Barrows & gilts (\$ per cwt.)	January	62.60	-1.7	10	28
Steers & heifers (\$ per cwt.)	January	129	2.4	17	47
Milk (\$ per cwt.)	January	19.20	-3.0	15	19
Eggs (\$ per doz.)	January	0.85	-30.3	0	-17
Consumer prices (<i>index, 1982–84=100</i>)	December	227	0.0	3	4
Food	December	232	0.2	5	6
Production or stocks					
Corn stocks (<i>mil. bu.</i>)	December 1	9,642	N.A.	-4	-12
Soybean stocks (<i>mil. bu.</i>)	December 1	2,366	N.A.	4	1
Wheat stocks (<i>mil. bu.</i>)	December 1	1,656	N.A.	-14	-7
Beef production (<i>bil. lb.</i>)	December	2.13	-1.0	-6	0
Pork production (<i>bil. lb.</i>)	December	2.07	-1.0	0	4
Milk production (<i>bil. lb.</i>)*	December	15.4	4.8	3	5
Agricultural exports (\$ mil.)	December	11,770	-6.2	-6	18
Corn (<i>mil. bu.</i>)	December	174	9.4	9	30
Soybeans (<i>mil. bu.</i>)	December	148	-19.4	-24	-35
Wheat (<i>mil. bu.</i>)	December	73	18.4	-15	33
Farm machinery (<i>units</i>)					
Tractors, over 40 HP	January	5,788	N.A.	1	7
40 to 100 HP	January	3,354	N.A.	5	20
100 HP or more	January	2,434	N.A.	-5	-7
Combines	January	445	N.A.	-50	-23

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.