

# AgLetter



## FARMLAND VALUES AND CREDIT CONDITIONS

### Summary

The largest annual increase in farmland values, 16 percent, in almost three decades highlighted an amazing year for agriculture in the Seventh Federal Reserve District. The values of both crop and livestock production set records in 2007 for the U.S. and, in all likelihood, the District. Based on 265 surveys returned by District agricultural bankers, the quarterly rise in the value of “good” agricultural land was 6 percent in the fourth quarter of 2007. Over half of the respondents expected farmland values to keep going up in the first quarter of 2008.

Agricultural credit conditions in the District strengthened in the fourth quarter of 2007. The index of non-real-estate farm loan repayment rates shot up to the highest value on record, while loan renewals and extensions dropped from a year ago. The index of funds availability was higher than at any point in the last four years. Loan demand softened in the fourth quarter of 2007, but was still higher than the previous year. Agricultural interest rates fell to their lowest levels in two years. Loan-to-deposit ratios averaged 77.2 percent for the fourth quarter of 2007, with 59 percent of banks below their desired ratio.

### Farmland values

With a 16 percent annual increase for 2007 in the value of “good” agricultural land in the District, annual gains averaged 12 percent from 2004 through 2007. Adjusted for inflation, annual farmland values still rose an average of 8 percent per year over the past four years, versus an average of 2 percent during the previous 15 years (see chart 1 on next page). Iowa led the District with an 18 percent annual increase (see table and map below). Indiana was next with a 16 percent annual gain, followed by Illinois and Michigan with 15 percent annual gains. Wisconsin trailed with an 11 percent annual increase in farmland values. All District states had similar gains in farmland values in the fourth quarter as they had experienced in the third quarter, though some were slightly stronger.

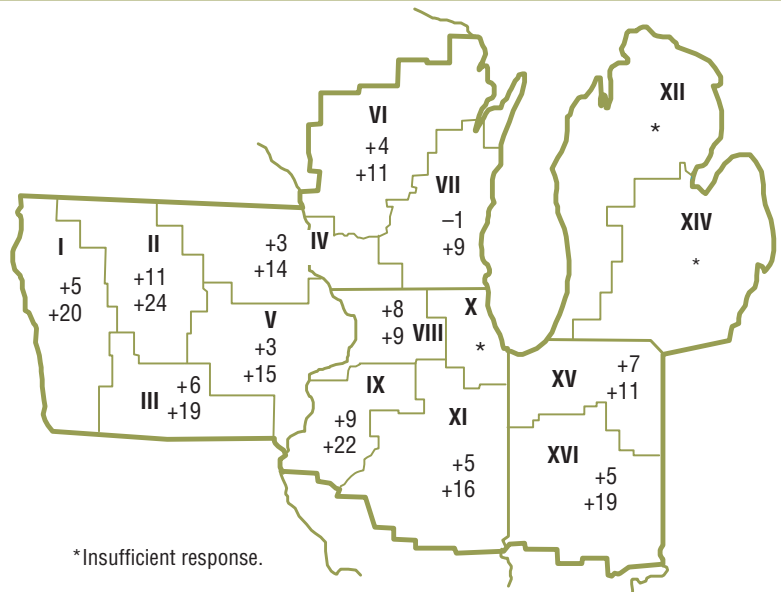
Higher net farm income boosted farmland values toward the end of 2007 as corn and soybean prices moved even higher than a year ago. December cash corn prices rose to \$3.76 per bushel, 25 percent above those in December 2006. Cash soybean prices jumped to \$10.00 per bushel in December, 62 percent higher than the previous year’s prices. National production estimates for 2007 from the U.S. Department of Agriculture (USDA) were a record 13.1 billion bushels for corn and 2.59 billion bushels for soybeans. The harvest was 24 percent above that of 2006 for corn and 19 percent below that of 2006 for soybeans.

### Percent change in dollar value of “good” farmland

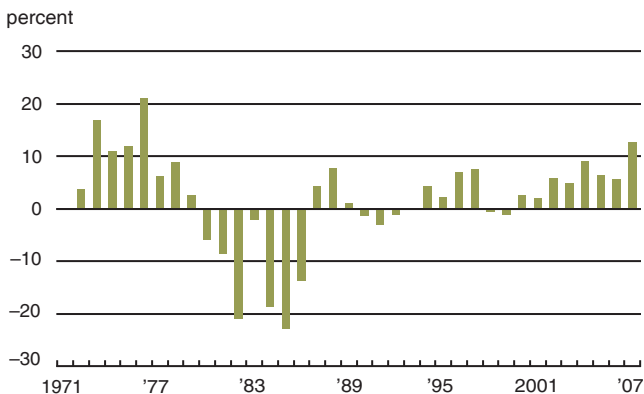
Top: October 1, 2007 to January 1, 2008

Bottom: January 1, 2007 to January 1, 2008

	October 1, 2007 to January 1, 2008	January 1, 2007 to January 1, 2008
Illinois	+6	+15
Indiana	+6	+16
Iowa	+6	+18
Michigan	+9	+15
Wisconsin	+2	+11
Seventh District	+6	+16



## 1. Annual percentage change in Seventh District farmland values adjusted by CPI-U



Sources: Author's calculations based on data from Federal Reserve Bank of Chicago farmland value surveys; and U.S. Bureau of Labor Statistics, Consumer Price Index for All Urban Consumers (CPI-U).

From a year earlier, District production increased 18 percent for corn and decreased 22 percent for soybeans. District states produced 49 percent of U.S. corn output and 43 percent of U.S. soybean output (both slightly down from a year ago).

Increasing demand for corn to produce ethanol (3.2 billion bushels) and for export (2.45 billion bushels) contributed to the record projected total corn usage of 13.0 billion bushels in the 2007–08 marketing year. This pace of demand would leave U.S. ending corn stocks at 1.44 billion bushels, corresponding to a stocks-to-use ratio of 11 percent. In addition, soybean usage of 3.01 billion bushels would result in a stocks-to-use ratio of 5.3 percent. These relatively low supplies of corn and soybeans, along with low wheat stocks, urged cash and futures prices upward.

The value of crop production in the U.S. surged to \$150 billion in 2007; the value of livestock production jumped to \$142 billion. After accounting for input costs and payments to laborers, creditors, and landlords, net farm income grew to \$88.7 billion in 2007 from \$59.0 billion in 2006, according to the USDA.

Especially given record cash receipts for corn and soybeans, 56 percent of respondents expected farmland values to continue increasing in the first quarter of 2008. Just 2 percent of the bankers expected land values to decrease, and 42 percent expected values to remain the same from January through March.

An index of nominal farmland values showed that by 2007 there had been almost a doubling since the previous peak in 1981 (see chart 2). Yet, when adjusted for inflation, farmland values remained 25 percent below their 1979 peak. Real farmland values have more than doubled from their low in 1986, however. So, even with

the strong run of increases in farmland values from 2004 to 2007, there was room for continued increases, as expected by District bankers, before approaching new records in real terms.

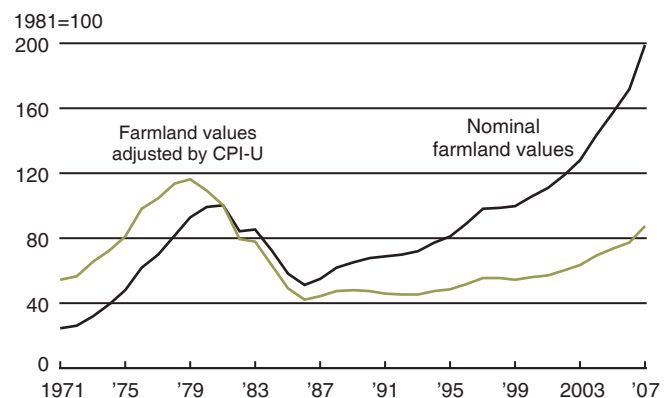
## Credit conditions

Record net farm income also boosted credit conditions in the District. The index of non-real-estate farm loan repayment rates surged to 148 in the fourth quarter of 2007, the highest level ever for the survey, with 52 percent of the bankers reporting higher rates of loan repayment and 4 percent reporting lower rates. Less than 3 percent of the volume of the banks' agricultural loan portfolios was classified as having major or severe repayment problems—a percentage point lower than a year ago. The volume of farm loans with minor repayment problems dipped also, as 92 percent of loan volume had no significant repayment problems. Even so, bankers expressed concerns that livestock producers faced greater stress from increased feed costs and decreased livestock prices. All District states experienced more favorable repayment conditions.

Demand for non-real-estate loans during October, November, and December of 2007 increased from the level of the previous year's fourth quarter, although more weakly than the other quarters in 2007. The index of loan demand decreased to 110, as 32 percent of respondents saw a rise in the demand for non-real-estate loans and 22 percent saw a fall. Wisconsin was the only District state with lower non-real-estate loan demand for the fourth quarter of 2007 compared with a year earlier. The rate of renewals and extensions of loans in the fourth quarter of 2007 was lower than in the fourth quarter of 2006, as 37 percent of District bankers indicated lower renewals and extensions than a year ago and just 6 percent indicated higher levels.

The year-over-year improvement in funds availability was the largest in almost four years. The index of funds availability was 125, with 30 percent of the 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 Labor Statistics, Consumer Price Index for All Urban Consumers (CPI-U).

## Credit conditions at Seventh District agricultural banks

	Loan demand (index) <sup>b</sup>	Funds availability (index) <sup>b</sup>	Loan repayment rates (index) <sup>b</sup>	Average loan-to-deposit ratio (percent)	Interest rates on farm loans		
					Operating loans <sup>a</sup> (percent)	Feeder cattle <sup>a</sup> (percent)	Real estate <sup>a</sup> (percent)
<b>2005</b>							
Jan–Mar	117	112	116	74.4	7.07	7.08	6.63
Apr–June	119	101	103	76.3	7.33	7.30	6.74
July–Sept	115	97	87	76.9	7.68	7.65	7.02
Oct–Dec	120	110	90	75.8	8.02	7.95	7.25
<b>2006</b>							
Jan–Mar	131	102	87	76.7	8.30	8.27	7.48
Apr–June	115	101	85	78.0	8.76	8.66	7.85
July–Sept	124	95	87	79.1	8.73	8.70	7.82
Oct–Dec	109	116	130	76.6	8.71	8.70	7.74
<b>2007</b>							
Jan–Mar	128	113	131	78.4	8.61	8.60	7.67
Apr–June	121	115	117	77.8	8.65	8.63	7.70
July–Sept	118	118	122	78.1	8.42	8.40	7.53
Oct–Dec	110	125	148	77.2	7.82	7.89	7.09

Note: Historical data on Seventh District agricultural credit conditions is available for download from the *AgLetter* homepage, [www.chicagofed.org/economic\\_research\\_and\\_data/ag\\_letter.cfm](http://www.chicagofed.org/economic_research_and_data/ag_letter.cfm).

<sup>a</sup>At end of period.

<sup>b</sup>Bankers 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 percent of bankers that responded "lower" from the percent that responded "higher" and adding 100.

reporting higher funds availability and 5 percent lower. Collateral requirements were slightly tighter at District banks, as 11 percent raised the amount of collateral required during the October–December period in 2007. More bankers than a year ago indicated a tightening of credit standards for agricultural loans in the fourth quarter versus the previous year, but there also were more bankers who reported easing standards. As was the case the previous year, only 1 percent of District customers with operating credit were not likely to qualify for new credit in 2008, according to respondents.

Interest rates for agricultural loans declined to the lowest levels in two years. As of January 1, 2008, the District averages for interest rates were 7.82 percent on new operating loans and 7.09 percent on farm real estate loans. Interest rates on agricultural loans were lowest in Illinois (7.49 percent on operating loans and 6.93 percent on farm mortgages). Interest rates on agricultural loans were highest in Michigan (8.10 percent on operating loans and 7.44 percent on farm mortgages).

### Looking forward

For January, February, and March of 2008, 41 percent of the respondents expected higher non-real-estate loan volumes, while 16 percent expected lower volumes. Higher loan volumes were anticipated for operating, farm machinery, and grain storage construction loans. With little change in dairy loans, lower volumes were anticipated for feeder cattle loans and loans guaranteed by the Farm Service Agency. The volume of mortgages on agricultural real estate will continue to grow, with 32 percent of the

bankers expecting higher real estate loan volumes in the first quarter of 2008 and 9 percent expecting lower volumes.

Even more strongly than last year, respondents forecast this year's capital expenditures by farmers to increase from the previous year's levels. With 55 percent expecting higher spending on land purchases, improvements, buildings, and facilities in 2008 than in 2007, the agricultural sector contrasted sharply with the downturn in residential real estate and construction. And with only 2 percent of respondents expecting lower purchases, 83 percent of the bankers thought purchases of machinery and equipment would climb in 2008, and 67 percent thought that truck and auto purchases by farmers would rise.

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## SELECTED AGRICULTURAL ECONOMIC INDICATORS

	Latest period	Value	Percent change from		
			Prior period	Year ago	Two years ago
<b>Prices received by farmers</b> (index, 1990–92=100)	January	150	4.2	22	34
<b>Crops</b> (index, 1990–92=100)	January	167	10.6	27	56
Corn (\$ per bu.)	January	4.28	13.8	40	114
Hay (\$ per ton)	January	129.00	-3.0	18	39
Soybeans (\$ per bu.)	January	11.00	10.0	73	87
Wheat (\$ per bu.)	January	8.55	10.5	89	143
<b>Livestock and products</b> (index, 1990–92=100)	January	132	-2.9	14	13
Barrow and gilts (\$ per cwt.)	January	37.30	-7.7	-14	-9
Steers and heifers (\$ per cwt.)	January	95.2	0.1	6	-6
Milk (\$ per cwt.)	January	20.7	-3.7	43	44
Eggs (¢ per doz.)	January	1.290	-5.1	41	44
<b>Consumer prices</b> (index, 1982–84=100)	January	211	0.5	4	6
Food	January	209	0.9	5	7
<b>Production or stocks</b>					
Corn stocks (mil. bu.)	December 1	10,269	N.A.	15	5
Soybean stocks (mil. bu.)	December 1	2,329	N.A.	-14	-7
Wheat stocks (mil. bu.)	December 1	1,128	N.A.	-14	-21
Beef production (bil. lb.)	January	2.23	8.3	3	9
Pork production (bil. lb.)	January	2.16	9.4	14	19
Milk production (bil. lb.)*	January	14.6	1.6	2	5
<b>Agricultural exports</b> (mil. dol.)	December	9,129	-5.2	37	60
Corn (mil. bu.)	December	198	-22.5	7	12
Soybeans (mil. bu.)	November	127	-8.5	1	-10
Wheat (mil. bu.)	November	121	-25.1	94	49
<b>Farm machinery</b> (units)					
Tractors, over 40 HP	January	5,670	-40.8	-8	-14
40 to 100 HP	January	3,727	-43.0	-20	-20
100 HP or more	January	1,943	-36.2	25	1
Combines	January	451	-50.8	12	35

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.