FRB CHICAGO

AGRICULTURAL LETTER

FEDERAL RESERVE BANK OF CHICAGO
February 26, 1988 Number 1728

Farm equipment sales

A pickup in sales during the latter part of 1987 raises hopes that the long and steep decline in farm equipment sales may be ending. Monthly reports provided by the Farm and Industrial Equipment Institute (FIEI) show that January marked the seventh consecutive month of year-over-year gains in unit retail sales of farm tractors and the fifth consecutive month of gains in combine sales. The pickup in sales during the latter part of 1987, particularly for tractors, was strongly influenced by steep price discounts and other sales incentives offered by some manufacturers who were seeking to pare inventories. And with year-end dealer and manufacturer inventories down sharply, it is likely that such promotional sales campaigns will abate in the months ahead. Yet industry analysts believe that 1988 will bring a modest upturn in sales for most items of farm equipment.

Aided by the extraordinary sales promotions, unit retail sales of farm tractors with 40 or more horsepower during the second-half of 1987 exceeded the low year-earlier pace by 35 percent and were the highest for that period in three years. Preliminary figures show a comparable year-to-year gain in tractor sales for January of this year. The second-half surge offset a steep first-half decline and led to a modest (2.4 percent) rise in unit retail sales of farm tractors for all of 1987. That marked the first year-to-year gain since 1978 but still left tractor sales at only about a third of the banner levels that prevailed in the late 1970s.

The upturn in combine sales started in September and, according to preliminary figures, continued strong through January. Unit retail combine sales during the final four months of 1987 exceeded the year-earlier level by 35 percent, countering most of the 41 percent drop in sales during the first 8 months of the year. Nevertheless, combine sales for all last year were down 6.4 percent from the year before and off more than 75 percent from annual totals during the late 1970s.

Sales of tractors and combines in the five states of the Seventh Federal Reserve District also strengthened considerably during the latter part of 1987, but not as much as in other states. For all of 1987, unit retail sales of farm tractors in District states were off 5 percent from the year before while combine sales were off 10 percent. Trends varied widely among District states, however. Tractor sales in Iowa last year were up 20 percent from the year before while combine sales were up 3 percent. In other District states last year, tractor sales trends ranged from no change in Illinois to down about 20 percent in Michigan and Wisconsin and combine sales trends ranged from down 10 percent in Indiana and Michigan to down 31 percent in Wisconsin.

Inventories of new equipment among dealers and manufacturers declined further in 1987 as the late-year pickup in sales offset a slight rise in production by manufacturers. As of the end of 1987, the unsold inventory of new farm tractors with 40 or more horsepower was down 30 percent from a year earlier and equivalent to about 56 percent of all tractors sold during 1987. The year-end inventory of new combines was down 16 percent from a year-earlier and equivalent to half (50 percent) of all combines sold during 1987. In absolute numbers, the unsold inventories of new tractors and combines are the lowest since at least the early 1970s and perhaps the lowest in decades. And the 1987 year-end inventory-to-sales ratios

U.S. retail sales of farm tractors and selected equipment

	1979	1985	1986	1987
	(---------number of units---------)			
Farm tractors, total	138,990	58,454	47,147	48,282
2-wheel drive	127,535	55,542	45,110	46,629
40 to 99 HP	65,000	37,842	30,848	30,718
100 to 139 HP	40,932	7,300	5,149	5,089
140 HP plus	21,603	10,400	9,113	10,822
4-wheel drive	11,455	2,912	2,037	1,653
Combines (self-propelled)	32,246	8,411	7,660	7,172
Cornheads	22,374	5,016	4,716	3,924
Balers (under 200 lbs.)	18,750	7,038	5,734	5,352
Forage harvestors	12,451	2,460	2,164	2,280
Mower conditioners	25,600	11,243	10,898	11,239
Windrowers	8,615	2,026	1,461	1,570
Grinder-mixers	11,673	1,914	1,797	2,478

SOURCE: Farm and Industrial Equipment Institute.

for tractors and combines were the lowest since the late 1970s and early 1980s. For farmers seeking to buy new equipment, the relative tightness in inventories implies that price discounts and other promotional sales incentives offered by manufacturers and/or dealers may not be as enticing as those offered in recent years and certainly not as strong as those offered during the latter half of 1987. Alternatively, the relatively low inventories could result in stepped-up manufacturing schedules this year if the demand for new farm equipment strengthens as many analysts expect. If that occurs, it would bring some welcome relief to a major segment of the Midwest's manufacturing complex that was perhaps hit harder than any other by the developments of the 1980s.

Whether the demand for farm machinery and equipment will increase this year is still uncertain. At best, traditional barometers for prejudging sales present a mixed picture. Cash receipts from farm commodity marketings may rise modestly this year as somewhat higher crop prices offset lower livestock prices. But net cash farm income, while likely to hold at a high level, may decline somewhat from last year's record. Steady to somewhat lower interest rates, as projected by some observers, could help to firm-up farm equipment sales. But farmers remain cautious about taking on new debt, with many preferring to use their improved cash earnings to payoff existing indebtedness rather than expand capital expenditures. Moreover, total crop plantings in 1988 may not rise much, if any, above the curtailed level of last year.

On a more positive note, prices of used farm equipment firmed considerably last year. This may continue in the year ahead as the improving conditions in the farm sector ease the financial stress on farmers and lowers the incidence of forced-sales of farm assets. These developments, coupled with the aging on-farm inventories of machinery and equipment may support at least a modest upturn in farm equipment sales in the months ahead.

Farm Credit System cuts losses

A recent report by the Federal Farm Credit Banks Funding Corporation shows the Farm Credit System (FCS) cut its losses sharply in 1987. On a consolidated basis that combines the results of the various system components*, the net loss for the FCS dwindled to $17 million in 1987, down from $1.9 billion in 1986 and $2.7 billion in 1985. The smaller loss in 1987 stems from a significant improvement in the quality of farm loans and related assets held by system institutions. At the same time, however, the small loss reported for 1987 somewhat masks the FCS's continuing problems of a declining net interest margin and an inability to trim overhead expenses. Even so, the bigger-than-expected cut in its net loss sharply slowed the erosion in FCS capital and increased the likelihood that the FCS may need only a portion of the $4 billion in federal government financial assistance that was authorized in recent legislation.

The improving quality of the FCS's portfolio of loans and related assets was evident in the smaller balances shown for both problem loans and acquired properties. As of the end of 1987, the FCS held $5.2 billion in nonaccrual loans (problem loans no longer accruing interest) and $4.3 billion in "other high-risk" loans. The combined total of $9.5 billion, while still large, was down 26 percent from the year-ago peak and the lowest in two years. Similarly, the portfolio of other property (typically farmland acquired through foreclosure) held by FCS institutions as of the end of 1987 had declined to $876 million, down 20 percent from the near peak of a year ago. The declines in both problem loans and other property occurred along with a marked reduction in the amount of loans written off and in the losses taken on other property. Net write-offs on loans taken by FCS institutions in 1987, plus the losses taken on other properties, dropped to $500 million, down from $1.6 billion in 1986 and $1.4 billion in 1985. This implies that the improving quality of the FCS's loan-related assets was due to a combination of stepped-up loan repayments (especially on problem loans), the firming in farmland values (that trimmed liquidation losses on land sales and raised loan collateral values), and increased loan restructuring efforts.

With the improving quality of loans and declines in actual write-offs, FCS institutions decided their allowance for loan losses was larger than necessary and could be reduced accordingly. In financial institution accounting, the allowance is built up (or added to) by a charge against current earnings (in the form of a provision for loan losses) and pulled down when actual loan write-offs are charged against the allowance rather than current earnings. With provisions for loan losses exceeding actual loan write-offs by $2.3 billion during 1985 and 1986, the FCS had built up an allowance for loan losses of $3.64 billion as of the end of 1986. To lower the allowance, FCS institutions in 1987 took a *negative* provision for loan losses (an earnings credit) in the amount of $196 million. The unusual negative provision, coupled with only $488 million in net loan write-offs, pulled the allowance for loan losses down to $2.95 billion as of the end of 1987. Despite the reduction, the allowance as of the end of 1987 was equivalent to 31 percent of the remaining nonaccrual and other high risk loans, up 3 percentage points from a year earlier.

The shift from a large ($1.8 billion) provision for loan losses in 1986 to a negative provision in 1987, combined with a drop from $233 million in losses taken against earnings on other property in 1986 to only $12 million in 1987, all else equal, would translate into a $2.2 billion favorable swing in net earnings. Yet the FCS in 1987 was not able to offset all of the $1.9 billion in net loss from the year before because of a further decline in net interest margin and continuing high overhead expenses. The net interest margin (interest earnings less interest expenses) for the FCS in 1987 shrank to about $510 million, down from $780 million a year earlier and $1.30 billion two years earlier. Simultaneously, all other expenses (mostly overhead expenses) net of non-interest earnings rose slightly to $710 million. Consequently, the FCS in 1987 suffered a net loss of about $200 million from normal operations (excluding losses taken on acquired properties and, for last year, the unique credit for a negative provision for loan loss). That contrasts markedly with the previous two years when the system recorded net positive returns of $118 million (in 1986) and $565 million (in 1985) on normal operations.

The FCS will likely be burdened with low or negative returns on normal operations for some time. A large portion of the system's outstanding bonds were issued during the high interest rate era of the early 1980s and will not mature until the early 1990s. And despite the recent improvement in quality, a sizeable chunk of the FCS's gross loans (10 percent versus 12 percent a year ago) still represent non-earning (nonaccrual) loans. To overcome these adverse pressures on net returns from normal operations, the FCS must cut overhead expenses, strive to rekindle loan growth (which would lower the FCS's average cost for funding loans), or hope that the recovery in the farm sector will continue to reduce the amount of nonaccrual loans. Recent legislation that provides financial assistance to the FCS will help support these needed changes, but any recovery in net returns on normal operations will be slow.

Other significant developments in the FCS last year included a slowing in the erosion of earned surplus capital and a slower rate of decline in gross loans. Gross loans in the FCS peaked at $81.9 billion in 1983 and have trended downward since, strongly influenced in recent years by a weak loan demand and efforts by many borrowers to refinance their debts with other lenders. As of the end of 1987, gross loans had declined to $52.5 billion, down 36 percent from the 1983 peak. Last year's rate of decline, however, slowed to less than 10 percent, down from 17 percent the year before and nearly 13 percent in 1985. Likewise, the rate of decline in total FCS capital moderated to 11 percent last year, well below the roughly 30 percent decline recorded in both 1985 and 1986. And with $5.03 billion in total capital at the end of 1987, the capital-to-asset ratio for the FCS was nominally above the year-earlier level of 8.05 percent. The most significant slowing occurred in the earned surplus component of the FCS's capital base. In both 1985 and 1986, the earned surplus capital of the FCS declined approximately 50 percent, mostly because of the huge net losses suffered in those two years. With last year's smaller loss, earned surplus capital for the FCS declined only 7 percent to a year-ending level of $1.35 billion. The earned surplus capital is particularly critical since it represents the remaining capital buffer keeping the consolidated value of stock held by borrower-stockholders from dipping below face value.

In several respects the 1987 performance for the FCS differed considerably from what had been expected to be the case. This is particularly apparent in a comparison of the actual 1987 results with the projections made by FCS officials last spring when presenting testimony before Congress for needed federal assistance (see Agricultural Letter #1708). At that time, FCS officials were projecting a net loss of $1.3 billion for 1987 that would virtually deplete the earned surplus capital. That the 1987 results were considerably better than expected is not so much a criticism of those projections as it is an indication of how quickly conditions can turn for the better. Without doubt, some institutions within the FCS are in immediate need of financial assistance. Yet the better-than-expected overall performance in 1987 strengthens the likelihood that, as one system official recently suggested, the FCS may need only $1 billion of the $4 billion in federal assistance offered in recent legislation.

Gary L. Benjamin

* The Farm Credit System is a nationwide system consisting of borrower-owned financial institutions and related service corporations. The financial institutions consist of 12 Federal Land Banks which mostly make long-term farm mortgage loans through Federal Land Bank Associations; 12 Federal Intermediate Credit Banks, which provide short- and intermediate-term credit to Production Credit Associations and other institutions serving agricultural producers; and 13 Banks for Cooperatives which make loans to rural cooperatives.

AGRICULTURAL LETTER (ISSN 0002-1512) is published bi-weekly by the Research Department of the Federal Reserve Bank of Chicago. It is prepared by Gary L. Benjamin, economic adviser and vice-president, Peter J. Heffernan, economist, and members of the Bank's Research Department, and is distributed free of charge by the Bank's Public Information Center. 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.

To subscribe, please write or telephone:
Public Information Center
Federal Reserve Bank of Chicago
P.O. Box 834
Chicago,IL 60690
Tel.no. (312) 322-5111

Selected Agricultural Economic Indicators

	Latest period	Value	Percent change from: Prior period	Year ago	Two years ago
Prices received by farmers *(1977=100)*	February	130	-0.8	7	7
Crops *(1977=100)*	February	110	-4.3	11	0
Corn *($ per bu.)*	February	1.83	3.4	29	-21
Oats *($ per bu.)*	February	1.81	1.7	23	-10
Soybeans *($ per bu.)*	February	5.90	3.0	26	14
Wheat *($ per bu.)*	February	2.83	2.9	10	-10
Livestock and products *(1977=100)*	February	150	2.0	4	13
Barrows and gilts *($ per cwt.)*	February	47.50	8.2	-3	10
Steers and heifers *($ per cwt.)*	February	72.00	4.2	15	28
Milk *($ per cwt.)*	February	12.30	-1.6	-5	-1
Eggs *(¢ per doz.)*	February	46.9	-4.9	-20	-24
Prices paid by farmers *(1977=100)*	January	165	0.0†	4	4
Production items	January	152	1.3†	7	2
Feed	January	112	6.7†	13	-2
Feeder livestock	January	193	1.6†	18	31
Fuels and energy	January	161	-4.2†	5	-19
Producer Prices *(1982=100)*	January	106	0.5	2	1
Agricultural machinery and equipment	January	109	0.3	1	1
Fertilizer materials	January	95	3.8	17	6
Agricultural chemicals	January	106	0.6	3	6
Consumer prices *(1982-84=100)*	January	116	0.3	4	6
Food	January	116	0.9	3	8
Production or stocks					
Corn stocks *(mil. bu.)*	December 1	9,767	N.A.	-5	13
Soybean stocks *(mil. bu.)*	December 1	1,755	N.A.	-10	-10
Beef production *(bil. lbs.)*	January	1.94	0.9	-8	-9
Pork production *(bil. lbs.)*	January	1.24	-10.5	0	-2
Milk production *(bil. lbs.)*††	January	10.2	1.6	3	-1

N.A. Not applicable
†Prior period is three months earlier.
††21 selected states.

AGRICULTURAL LETTER
FEDERAL RESERVE BANK OF CHICAGO
Public Information Center
P.O. Box 834
Chicago, Illinois 60690

(312) 322-5111

PRESORTED FIRST CLASS
CHICAGO ILL. MAR 15 '88
U.S. POSTAGE .18
PB METER 3319848

AG001
LOUISE LETNES LIBRARIAN
DEPT OF AGRIC & APPLIED ECON
231 CLASSROOM OFFICE BUILDING
1994 BUFORD AVENUE
ST PAUL MN 55108-1012