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FARM FINANCE OUTLOOK

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The outlook for farm finances is one of guarded optimism. In late 1987 the agricultural economy is characterized by income recovery, a lower debt burden, and asset stabilization. Current returns to equity and assets are in the 3-5 percent range, higher than most years during the 1960's-70's. While cash income is projected to decline 6-10 percent in 1988, there is likely to be a continued consolidation of balance sheet gains. This assessment also requires a cautionary note. Persistent financial stress will continue in 1988, especially for highly leveraged grain farms with substantial interest and/or rent expense. There is also widespread concern regarding the financial health of a sector that is highly dependent upon Government supports. Nonetheless it is likely that careful cost management and the continuing alleviation of the farm debt crisis will permit agriculture to be more cost-competitive in 1988 than was the case in the early and mid-1980's.

Farm Income

Net farm income, an accrual-based measure of farm profits that includes inventory change and depreciation expense, is anticipated to achieve a level of $40 - $45 billion in 1988. This level is approximately 5 percent less than the 1987 record of $45 billion, and 8 percent lower after adjustment for the decline in purchasing power caused by inflation. The significance of the 1986-87 improvement in net farm income can be gauged by comparison with the 1970's. In real terms ($1982) net farm income has again achieved the $35 billion level prevalent in the 1975-79 period.

After achieving a record level of $57 billion in 1987, net cash income in 1988 will likely decline to the $50 - $55 billion range. In inflation-adjusted dollars, net cash income may be 7 percent less than in 1987, and in the same approximate range, $42 - $46 billion ($1982) as occurred in 1985-86.

The cash and accrual (net farm) incomes achieved in the 1985-88 period are, by any standard, significantly higher than income in the early 1980's. These income gains occurred in spite of substantial deterioration in grain prices. In a broad sense, these mid-1980 income gains are due to: three years of strong livestock profits, the combination of declining costs and record level yields for corn and soybeans enterprises in the Midwest, extraordinary levels of Government supports to crop farmers under the 1985 farm legislation, and a $60 billion decline in the debt burden of the agricultural sector.

Prices and Receipts

During 1985-87, farmers observed the prices of corn, wheat and soybeans decline sharply. These recent price declines can be viewed as the acceleration of a longer secular trend that began in the late 1970's. On the other hand, livestock prices increased sharply from mid-1985 to mid-1987. It is likely that both of these trends will have begun to reverse during late 1987 and 1988. Food grain prices are forecast to be 5-7 percent higher, feed grain prices from 8-12 percent higher, and livestock prices 4-6 percent lower in 1988.

Farm Sector Income

	Current Income			Deflated Income ($1982) 1/		
Year	Net cash	Net Farm	Off-farm	Net cash	Net farm	Off-farm
	Billion dollars			Billion dollars		
1975-79	30.8	23.6	28.0	45.4	34.9	41.2
1980-84	36.2	22.2	36.4	36.9	22.6	37.6
1985-86	49.7	34.9	43.6	44.1	31	38.7
1987F	57	45	47	49	39	42
1988F	50-55	40-45	48-50	41-45	34-38	41-44

F=Forecast 1/ Deflated by the GNP implicit price deflator (1982=100).

Current and Constant Dollar Commodity Prices

Price/year:	Corn (bu)	Wheat (bu)	Soybeans (bu)	Cotton (lb)	Cattle (lb)	Hogs (lb)
			Dollars per unit			
Current:						
Avg. price, 1973-76	2.57	3.55	6.01	.51	.36	.41
Avg. price, 1983-86	2.62	3.20	6.04	.58	.55	.48
Estimated price, 1987 1/	1.55	2.50	4.89	.60	.61	.52
			Ratio			
Ratio of average prices:						
1983-86/1973-76 (Constant dollars)	.52	.47	.52	.69	.79	.61
1987/1973-76 (Constant dollars)	.34	.39	.46	.67	.94	.72

1. Eleven month estimate (January-November).

These price trends suggest that the strong profit rebound in livestock enterprises since 1985 is about to be eclipsed by a more stable returns period in the livestock cycle, and by a period of moderately increasing returns in a recovering crop sector. Two key components of this livestock/crop cycle reversal are: higher crop prices that increase feed prices 4-7 percent, lowering profits of livestock producers; and, lower farm sector debt coupled with moderation in interest rates. Together these benefit the returns of crop producers with a capital structure dominated by land and machinery assets.

Prices Received and Paid by Farmers, 1984-88

Item	1984	1985	1986	1987F	1988F
	Percent change from previous year				
Prices Received:					
Crops	8.6	-13.7	-12	-2	2
Livestock	3.5	-6.8	1	6	-5
All commodities	5.2	-9.9	-5	3	-3
Prices Paid:					
Production items	1.3	-0.1	-4	2	1
Commod. & services, interest, taxes, and wages	1.9	-1.2	-2	2	3
Farm origin inputs	0.0	-7.6	-4	7	-1
Nonfarm origin	5.6	1.2	-4	-2	3
Addendum:					
CPI-U	4.0	3.8	1.8	3.0	4
PPI-finished goods	1.7	1.2	-1.3	2.5	5

F=Forecast
Source of historical data: USDA, NASS and Labor Dept., BLS.

Farm Output, Input, and Productivity, 1984-88

Item	1984	1985	1986	1987F	1988F
	Percent change from previous year				
Output:					
Crops	26.1	5.4	-7.7	-1.9	0
Livestock	-1.9	2.7	.9	0	2
Total	16.7	6.3	-7.6	-1	0-1
Input use	1.0	-4.3	5.6	-5	-1
Productivity	17.3	9.4	-3.3	4	2

F=Forecast

While increased poultry output offset declining beef output in 1987, higher hog, poultry and dairy production will result in a 2-percent increase in livestock output in 1988. However, total output is projected to increase from 0-1 percent in 1988, as crop production, assuming average weather conditions, remains flat. Total farm output in 1987 is the fifth highest on record in spite of large Government acreage reduction programs. Production in 1987 is 1-percent lower than in 1986 and 8-percent lower than the 1985 all-time high. Strong soybean yields and record-high corn and sorghum yields limited the production decline to 2 percent in 1987. An additional 1-percent decline in input use is expected in 1988 while production may rise 1 percent.

Cash receipts from the sale of crop commodities will increase \$2-\$4 billion under current price projections to a level of \$61-\$63 billion. This slight improvement will be led by a \$1 billion gain for wheat and rice (combined), and more than \$1 billion in gains for cotton and corn sales. A substantial decline in corn receipts, not fully offset by higher Government payments, resulted in lower returns in 1987 for many corn producers. The livestock sector is characterized by 2-4 percent declines for cattle, broilers, eggs and milk, and a large 10-15 percent decline in receipts for hogs following two years of \$.55-\$.65 per pound prices for pork producers. In addition to the long awaited improvement in crop receipts, a projected \$1 billion gain in overall sector receipts marks the first increase since 1985. However, 1988's cash receipts level of \$131-\$134 billion is only slightly higher than 1979, indicating the loss of inflation-adjusted purchasing power in the sector during the last 10 years.

Decline in farm expenses to end in 1988

After plummeting \$25 billion since 1984, total production expenses are projected to stabilize in the \$117-\$119 billion range in 1988. Stable expenses will largely be the net result of a 5 percent decline in interest expense a slight decline in fixed overhead expenses (depreciation and rent), and 3-4 percent increase in farm origin

Cash Receipts

	1985/86 average	1987F	1988F
Crops 1/	69.0	58	61-63
Food grains	7.5	5	6
Feed grains & hay	20.2	11	13
Oil crops	11.6	10	11
Fruit & vegetables	15.5	17	16
Other crops	14.2	15	16
Livestock	70.7	74	70-72
Meat animals	38.8	43	41
Poultry & eggs	12.0	12	11
Dairy products	18.0	18	17
Other livestock	1.9	2	2
Total	139.7	132	131-134

F=Forecast. 1/ Includes net CCC loans. Totals may not add due to rounding.

inputs (feed, seed, etc), manufactured inputs such as fertilizer and chemicals, and repair and labor expense. The $19 billion decline in cash expense during 1984-87 was 25 percent less than the fall in total expense. Cash expenses, which do not include the effects of falling capital consumption, are now projected to rise $2 billion in 1988 to the $98-$100 billion level.

This incremental increase in cash expense likely signals the end of a period of dramatically improving cost structure. Large additional declines in fuel, chemical, pesticide and interest expense are unlikely to occur in the next few years. It is also unlikely that further large reductions in acreage planted will occur. Should input prices and/or quantities gradually increase in 1988 and in subsequent years, the major source of income growth during the 1980's (i.e., cost control) will no longer be available.

Government supports remain critical to producers

Total Government direct payments, are at record-high levels in 1987 for wheat, rice, corn, barley, oats and cotton. These payments include deficiency, marketing certificates, and diversion payments (except for cotton). In addition to the $13-$14 billion payments for the above programs, more than $3 billion in additional payments were made for reserve storage, dairy herd buyouts, conservation, disaster, wool and other programs.

In the second half of 1986 and the first half of 1987, the price of corn in parts of the Midwest declined to as low as $1.10-$1.20. These price levels compare with $2.50-$3.25 corn prices as recently as 1983-84. The financial impact of this 60 percent decline was cushioned by massive increases in Government CCC outlays and direct payments to farmers. For corn, wheat and cotton producers with sizable interest or rent expense obligations, Government supports became critical to maintaining a stable financial position. In promoting the continued economic viability of the non-stressed

Farm Production Expenses

Item	1985	1986	1987F	1988F
	Percent change from a year earlier			
Farm origin items	-7.4	-5.2	3	3
Manufactured inputs	-3.2	-18.2	-8	4
Interest charges	-11.5	-9.5	-14	-5
Repairs, labor, machine hire	0.2	-1.4	3	3
Other items 1/	-7.0	-9.3	-5	-1
Total expenses	-6.3	-8.7	-4	0-2
Cash expenses	-5.8	-8.7	-3	1-3

F=Forecast. 1/ includes depreciation, taxes, net rent, and others.

farms, which account for 80-85 percent of all commercial size farms, Government supports effectively lessened land price declines throughout the sector. In other words, had Government supports not been available to stable farmers, albeit acreage reduction requirements and maximum payment limits per farm, the subsequent deterioration of their fiscal health would have led to further land price weakening in the sector. Thus, commensurate with their large size, Government supports had a major stabilizing impact in the heightened stress years of the early and mid-1980's.

Total Government direct payment and CCC outlays received by producers are likely to stabilize in 1988; however, the 1987-88 average of about $18 billion is 18 percent less than the 1985-86 average of $21.7 billion. In 1988 there is likely to be a $2-$3 billion increase in CCC net disbursements. The Government will stand to recover a major portion of the CCC buildup, because commodities are pledged as collateral to the CCC. Direct payments, which are largely not recoverable, are forecast to decline $2-$4 billion. The 1988 reversal of a 3-year trend of increasing direct payments is a second indication (in addition to the overall 1987-88 decline in outlays) that the role of Government supports in agriculture has begun to diminish.

Greater export, cost structure and finance gains have been achieved than most economists viewed to be likely to occur in 1986-87. A financial relationship that permits us to observe the progress associated with gains in net income is the ratio of interest expense to cash income before interest expense. In 1980-84, interest obligations required 37 percent of available cash income, by 1988 the interest burden is likely to require only 20 percent of available cash flow.

A fundamental weakness in farm income is shown by another financial relationship, Government direct payments divided by cash income before interest. This ratio depicts the importance of Government payments to farm income. This relationship increased from 4 percent in 1975-79 to 21 percent in 1987. Until the Government payments to income ratio declines substantially, recovery in the agricultural sector will be only partial. The presence of large Government supports to agriculture, in an epoch of large Government budget deficits, must be recognized as an indication that the competitiveness of U.S agriculture has not been fully achieved.

Strengthening Farm Finances

The financial shape of large numbers of farmers strengthened in 1987, and will continue to improve moderately in 1988. The most important signal in the financial turnaround process was sent by participants in the market for farm real estate. Farm investors have regained sufficient confidence to bid up land prices from 8-10 percent during 1987 in states such as Illinois, Iowa, Kansas, and Nebraska. Our estimate, which may prove conservative, is that farm real estate asset values will have risen $15-$25 billion nation-wide in 1987, and could rise an additional $5-$10 billion in 1988. This turnabout, from the average $80 billion declines in real estate values during 1984-86, significantly improves returns to investment. Land value gains also strengthen the component of debt carrying capacity that is based upon the stability of real estate loan collateral.

The Balance Sheet: Financial Position Begins to Improve

The balance sheet provides a year-end "snapshot" of the farm sector's financial shape, the relationship of farm assets to debt. Financial health is likely to improve in 1988 due to trends in both farm assets values and debt.

Balance Sheet of the Farming Sector 1/

Year	Current dollars Assets	Current dollars Liabilities	Deflated dollars ($1982) 2/ Assets	Deflated dollars ($1982) 2/ Liabilities	Deflated dollars ($1982) 2/ Equity
	Billion dollars		Billion dollars		
1975-79	691.8	116.8	1005.0	169.7	835.3
1980-84	959.7	192.8	973.1	195.5	777.6
1985-86	720.7	165.1	638.9	146.4	492.6
1987F	712	141	607	120	487
1988F	705-720	125-135	585-600	100-115	480-495

F=Forecast. 1/ Excludes operator households and CCC activity. 2/ Deflated by the GNP implicit price deflator, 1982

Asset Growth

Nonreal estate assets are projected to decline 2-3 percent in 1988 due entirely to a $5 billion decline in the inventory of farm machinery and equipment. Increases in inventories of hogs and poultry will offset lower prices, permitting the value of livestock inventories to remain essentially stable. The value of crop inventories is also projected to be flat in 1988, as a 12-15 percent increase in the price of corn, and lesser increases for most other major crops are offset by lower ending stocks. One billion dollar increases in financial assets held by farmers in both 1987 and 1988, are in addition to large paydowns in farm debt.

Farm asset growth was primarily generated by a $15-25 billion increase in real estate value in 1987, a trend that is likely to continue to a reduced extent in 1988. Considerable variation underlies the 3-5 percent growth in land values in 1987: sharp increases in the Corn Belt and Northern Plains, which in areas of states such as Iowa, Minnesota and Illinois may reach 10-20 percent for Class A farm land; declines in the 5 percent range in parts of the oil-depressed Southern Plains; substantial 5-10 percent increases in Mid and North Atlantic states that are experiencing urban growth pressure; and moderate gains in the 2-4 percent range in much of the Mountain States region and West Coast.

Stabilization of land values is viewed to be essential for farm financial progress of a longrun nature. The nearly $280 billion decline in land values between 1981-86, and the 48-64 percent decline in 10 Corn Belt and Northern Plain states stretching from Ohio to Nebraska, transformed countless "healthy" farm balance sheets into the status of insolvency.

Land deflation made collateral supporting many farm loans, inadequate to protect the lender. Farms with postive cash flow suddenly were perceived as not credit worthy because of low or negative equity postions. While the return of rapid land value inflation is not foreseen, a stable or moderately strengthening land market in the remainder of the 1980's represents the single most critical indicator that the agricultural economy has "turned the corner" of its financial crisis. The stabilization of the real estate asset base is an indicator that investors have renewed confidence in the longrun profitability of agriculture.

Federal Reserve Bank Surveys of Land Values

	1986 3rd quarter	1986 4th quarter	1987 1st quarter	1987 2nd quarter	1987 3rd quarter
	Percent				
Chicago	-4.0	-1.4	.4	1.8	3.3
Dallas 1/	-4.5	-2.1	-1.9	-1.0	-2.3
Kansas City	-2.9	-4.1	.5	2.2	2.0
Richmond	.3	-2.3	.9	1.6	9.4
Minneapolis	-4.4	-4.7	2.7	1.7	-2.8

Percent change from previous quarter. 1/ Three-quarter moving average.

Returns to Assets and Equity

Year	Returns to assets: Income	Returns to assets: Real capital gains	Returns to assets: Total	Returns to equity: Income	Returns to equity: Real capital gains	Returns to equity: Total
	Percent			Percent		
1975-79	2.5	8.1	10.6	1.4	8.1	9.5
1980-84	2.0	-5.2	-3.2	-.1	-5.1	-5.2
1985-86	4.4	-10.4	-6.0	2.8	-10.4	-7.6
1987F	5.4	0.0	5.5	4.4	0.0	4.4
1988F	4.9	-3.0	1.9	3.6	-3.0	.6

F=Forecast. Excludes operator households. Totals may not add due to rounding. Returns to assets and returns to equity are calculated using the average of the current and previous year's assets and equity, respectively.

Reflecting land value stabilization, the total return to equity from income and real capital gains, became positive in 1987 for the first time since 1980. The 4.4 percent estimated return to equity in 1987 is close to the average 4.9 percent return during 1959-70. Whether this bellweather guide to financial performance falls to near zero or remains at the 2-5 percent level typical of most years in the slow-growth 1960's, will again depend upon producers' confidence in the stability (after inflation) of land investments. With regard to 1988, it is useful to keep in mind:

- o The USDA projection of 3-4 percent return to equity from current income in 1988 is higher than all but 3 years of the 1970-86 period.

- o The high total returns to equity ranging from 3-20 percent during 1971-79, were in large part due to enormous increases in land inflation rather than continued high current returns. In this respect a projected total return of 0-2 percent in 1988 is indicative of stable (real) prices for land. This is a steadying phase compared to double-digit positive total returns in the 1970's and a brief period of double-digit negative total returns in the 1980's.

Continuing Debt Decline

Ninteen eighty-eight will likely be the fourth consecutive year of large decreases in farm debt. The total debt reduction of $60 billion in the 1984-88 period illustrates a phenomenal ability in the agricultural sector to adjust to current business conditions. The large debt reduction has come at great sacrifice on the part of producers and also on the part of lenders that have restructured and written-off debt. However, the $6-7 billion annual savings in interest associated with debt reduction that has been completed since 1984 has become a critically important factor to continued income stabilization.

Real estate debt of $75-$78 billion in 1988 will be 25 percent lower than in 1984; nonreal estate debt of $52-$55 billion will be nearly 40 percent less. Producers have been particularly effective in lowering their credit needs for planting, applications of fertilizers and chemicals and havesting. Advance payments for participation in Government programs and increased usage of CCC loans have facilitated the nonreal estate debt reduction. Lower input prices for fuel, chemicals and feed, reductions in planted acreages of commodity program crops, and an enormous decline in machinery investment have also reduced the need for operating and intermediate-term loans.

Federal Land Banks, Production Credit Associations, and Federal Intermediate Credit Banks have borne the brunt of the massive loan reduction since 1984, with loan portfolio declines of respectively 41, 58, and 81 percent. The Farm Credit System, which is comprised of these three lending institutions, will likely hold $27-$30 billion less farm debt in 1988 than in 1984 (end of year). Debt held by individuals, merchants and others will also experience a substantial decline of $21-$24 billion in 1984-88, a larger decline than the projected $13-$15 billion decrease for nonreal estate lending of commercial banks. Commercial banks are, however, making inroads into real-estate lending with a 42-45 percent increase during 1984-88. The recent passage of Federal legislation strengthening the finances of the Farm Credit System, and the reduction in Federal Land Bank average interest rates from 12 to 11 percent between 1986 and 1987, could begin to stabilize FLB lending levels by late 1988 or early 1989.

Should it result in increased interest rate and loan terms competition, a more broadly based distribution of the farm sector loan portfolio, may be an unheralded benefit of the 1980's farm debt reduction process.

In real terms ($1982) equity has fallen 55 percent between 1979-80 and 1987. However, inflation adjusted farm equity is projected to rise $15 billion in 1987 and then stabilize at the $480-$495 billion level ($1982) in 1988. Again, the firming of the equity "bottom line" to the financial position of the sector is essential for longterm business recovery. Reflecting the new realignment between debt and assets, the closely monitored debt to asset ratio is projected at 18 percent in 1988. This also constitutes a remarkable recovery from the 22-23 percent levels of 1984-86. Corresponding to a lower debt burden, the ratio of income available to cover interest expense has increased from the 2.0-3.0 level of 1980-84, to a more robust 5.0 in 1987-88. In view of these improving trends, the stabilization of the farm economy's balance sheet is as impressive as income recovery since the early 1980's.

Farm Financial Stress: The Worst Is Over

Income stress in the early 1980's, coupled with a nearly $280 billion loss in real estate (current dollars) in the mid 1980's, resulted in widespread farm financial stress. Statistics of farm foreclosure and voluntary exits due to financial difficulties are not readily available. However, farm numbers have declined by about 300,000 in the 1980's, and a substantial proportion of this decline was no doubt due to stress.

Several alternative measures of stress suggest that from 9-16 percent of commercial farms were experiencing some degree of financial stress at the end of 1986. These farms held from 20-35 percent of commercial farm debt. It is also apparent that recent financial progress has occurred, since both the percent of farms and farm debt in stress declined between 1984-86.

Share of Commercial Farms and Commercial Farm Debt
that is Financially Stressed 1/

Approach	Commercial farms 1984	1985	1986	Commercial farm debt 1984	1985	1986
			Percent			
Net cash household income/Solvency	19	17	16	42	37	35
Net cash farm income/Solvency	11	10	9	27	23	20
Net farm income/Solvency	NA	NA	13	NA	NA	30
Returns, equity, and solvency	17	14	12	33	26	21
Debt service and solvency	17	16	16	39	35	33

1/ Identified by alternative approaches.

The Midwest has experienced the most farms in stress due to the large number of commercial size farms in the Corn Belt and Plains states, and due to the large price declines in crops such as corn, soybeans, and wheat. Also land price declines were largest in size and percentage terms in the Midwest. In early 1987, it was evident that improved livestock returns, Government supports for food and feed grains, and cost-cutting management on the part of farmers had resulted in lower stress than a year earlier.

The percent of stressed commercial farms declined overall from 15-16 percent in early 1985 to 12-13 percent in early 1987, in the Pacific, Mountain, and Northern Plain states; in the Northeast states of New Jersey, New York and Pennsylvania, and in the Eastern Corn Belt states of Illinois, Indiana, Michigan and Ohio. More than one third of all stressed commercial size farms are in the Western Corn Belt states of Iowa, Minnesota, Wisconsin and Missouri. This 4 state region stabilized between early 1985 and 1987. There also was an evident shift of financial stress into the Southern Plains, Delta and Southeast in this period, where the incidence of stress increased from about 17 to 21 percent.

Gains in financial health will continue to be experienced in the Midwest in 1987 and early 1988. Solid profits in livestock enterprises and outstanding per acre yields of corn and soybeans in 1986-87 tended to partially compensate for declining crop prices. There are also excellent current prospects for income recovery among large numbers of farmers in most Southern states in 1987, due to improved rice and cotton yields, higher cattle profits and generally better growing and harvest conditions.

Potential Loan Losses for Selected State Groups

	Farms with potential loan losses		Incidence of stress 1/	
	1985	1987	1985	1987
Improvement				
Mountain States	7,800	5,900	16	14
CA, OR, WA	6,000	4,200	16	10
NJ, NY, PA	4,600	2,900	11	8
KS, NE, ND, SD	21,100	15,400	19	16
IL, IN, MI, OH	17,400	12,500	16	13
Stabilization				
IA, MN, WI, MO	37,000	36,000	21	22
Deterioration				
AR, LA, OK, TX	12,600	14,400	16	22
AL, GA, MS, NC	8,000	7,600	18	21
Above regions	108,200	93,600	18.4	17
United States	122,500	104,100	17.0	16

1/ Share of farms with potential loan losses.

The stabilization process also is visible in an overview of farm loan difficulties. Using a debt service model that provides a lender-oriented perspective of financial stress, analysis suggests that by the end of 1987, 75-85 percent of total 1980's loan losses will have been worked through by lenders. Maximum losses during 1985-89 will likely range between $15 to $19 billion, about 10 percent of farm debt outstanding at the beginning of the decade (excluding CCC loans).

While future changes in prices remain difficult to project, a broad process of financial stabilization and recovery is clearly in evidence in 1987 and is likely to continue in early 1988. There are notable weaknesses yet visible in the financial fabric of agriculture, especially in export based commodities such as corn, soybeans and wheat. However, institutional changes embodied in 1985 farm legislation and the 1986 Tax Reform Act are likely to result in a stronger agricultural production sector in the future: a sector that is increasingly competitive in world grain markets and one in which cost structure and investment plans are increasingly based on market signals, rather than distorted price or tax benefit signals.