

# Financial Condition Of Agricultural Lenders In a Time of Farm Distress

By Dean W. Hughes

The U.S. farm economy has suffered three years of severe setbacks that have raised questions about the financial condition of agricultural lenders. This article examines the financial condition of the two largest private lenders to agriculture, commercial banks and the Farm Credit System, to see how they fared during the farm recession of 1980-82.<sup>1</sup> Changes in the profitability and solvency of these institutions are analyzed from 1970 through 1982, a span that includes two periods of financial stress in agriculture, 1976-77 and 1980-82, and allows current difficulties to be put in at least a limited historic perspective.

The first section of the article provides background on the financial situation in agriculture.

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<sup>1</sup> For two other recent papers on this subject, see E. Melichar, "Trends Affecting and Exhibited by Commercial Banks in Agricultural Areas," *Agricultural Communities: The Interrelationships of Agriculture, Business, Industry, and Government in the Rural Economy*, a symposium, Congressional Research Service, and P. J. Barry and W. F. Lee, "Financial Stress in Agriculture: Implications for Agricultural Lenders," an invited paper presented at the AAEA meetings August 1-3, 1983.

The second section examines changes in the financial condition of agricultural banks, and the third analyzes financial conditions in the Farm Credit System.

Based on the analysis presented here, the situation for agricultural lenders appeared worse at the end of 1982 than in the cyclical downturn in agriculture in 1967-77. Loan losses both at agricultural banks and within the Farm Credit System were higher than at any other time in recent history. Nevertheless, agricultural banks fared no worse than nonagricultural banks and seem likely to resolve their current problems. The Farm Credit System also seems capable of absorbing current losses without impairing its financial stability.

## Financial conditions in the farm sector

The extent of the financial deterioration of the farm sector since 1979 can be seen when contrasted against the sector's previous cyclical decline in 1976-77. The contrast must be interpreted carefully, however, because some of the differences in the two periods were due to changes in rural financial markets since the earlier agricultural recession.

Three financial statements are used to describe the financial condition of the farm sec-

tor—the farm income statement, the balance sheet of the farming sector, and the sectorial cash sources and uses of funds statement.<sup>2</sup> Together, these statements show that the financial condition of farmers has seriously deteriorated over the last three years. Farms are less profitable. Farmers' equities have been reduced. And farmers have faced reduced cash flows that caused them to reduce or postpone capital improvements.

### *Farm profitability*

Both agricultural recessions have been periods of declines in net farm income (Chart 1).<sup>3</sup> From 1980 through 1982, net farm income averaged 26 percent less than in 1978-79. By contrast, net farm income in 1976-77 averaged only 7 percent less than in 1974-75.

The difference, however, was not as significant as this nominal comparison suggests. After removal of the effects of inflation, by deflating net farm income by the GNP implicit price deflator, net farm income in 1980-82 averaged 7.5 percent less than in 1978-79.

The decline in inflation-adjusted net farm income between 1975-75 and 1976-77 was 7.7 percent. In terms of its effect on real income, then, the recent agricultural recessions have been similar. Differences that distinguish the recent

downturn in the farming sector lie in other indicators of financial condition.

### *Farm solvency*

Farm solvency is measured by the equity of the farm sector—the sector's total assets less its total debts (Chart 2). Two principal factors determine farm sector equity—farm real estate values and farm debt. Real estate accounted for almost three-quarters of the value of all farm assets at the end of 1982, and for the first time since records were started in 1940, farm debt amounted to over 20 percent.

Nominal farm real estate values declined 1 percent in 1981, after increasing for 27 consecutive years, and then declined 4 percent in 1982. This was the first time since 1931 and 1932 that nominal farm real estate values declined two years in succession. In constant dollars, yearend farmland values in 1982 were about 13 percent less than at their peak in 1980.

Farm debt, meanwhile, has continued to rise despite declining farm real estate values and incomes. Nominal farm debt has increased every year since 1970. Even adjusted for inflation, farm debt has continued to grow, though at a slower rate in recent years as incomes and equity have declined and real interest rates have risen.

As a result of the decline in real estate values and the rise in debt, farm equity declined in 1981 and 1982. By the end of 1982, equity was down 6 percent from two years earlier. Adjusted for inflation, equity levels began declining a year earlier, so that by the end of 1982 they were down about 15 percent from their peak in 1979. These declines stand in sharp contrast to 1976-77, when nominal farm equity grew 27 percent and real equity grew 14 percent. The current recession, therefore, has done much more damage to farmers' solvency and increased the riskiness of farm loans.

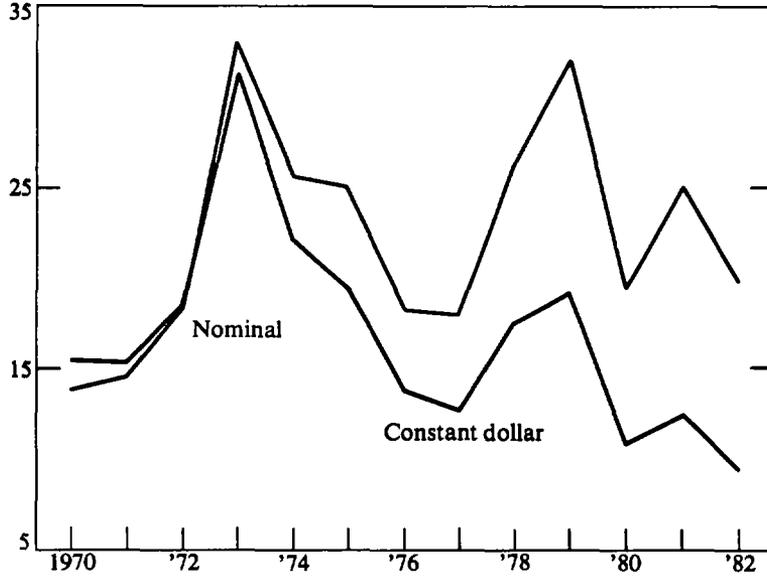
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<sup>2</sup> Data for the analysis of the income statement and balance sheet of the farming sector are available in *Economic Indicators of the Farm Sector: Income and Balance Sheet Statistics, 1981*, U.S.D.A., Economic Research Service, ECIFS1-1, August 1982, and cash flow data are available in *Agricultural Finance Outlook and Situation*, U.S.D.A., Economic Research Service, AFO-23, December 1982.

<sup>3</sup> The Farm Credit Administration has reported that the Department of Agriculture will revise farm income statistics back through 1981. See FCA Agricultural Situation Report published July 8, 1983. This article was completed before these revisions were released.

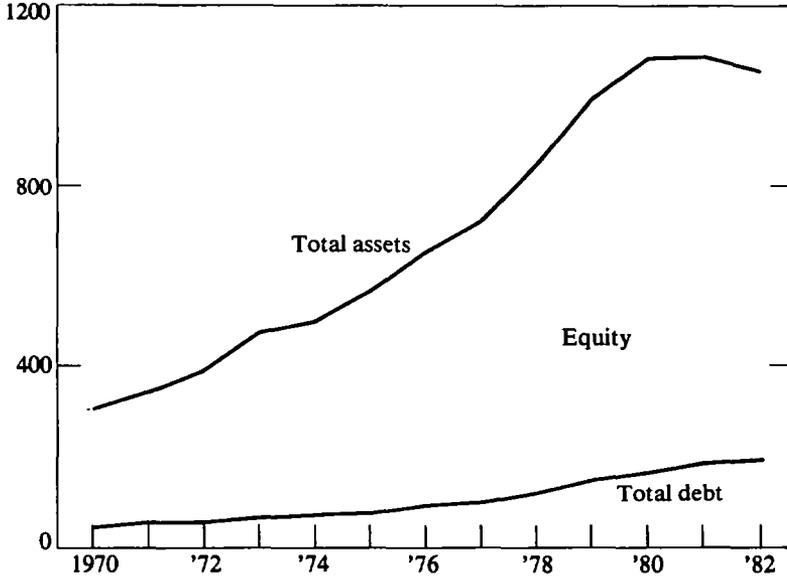
**CHART 1**  
**U.S. Net Farm Income**

Billions of dollars

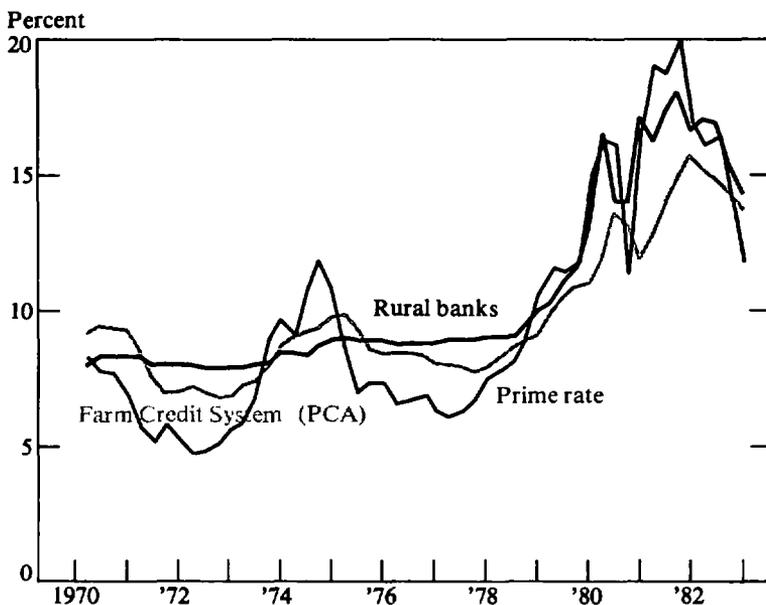


**CHART 2**  
**U.S. Balance Sheet of the Farming Sector**  
(December 31)

Billions of dollars



**CHART 3**  
**Quarterly Interest Rates of Farm Loans**



### *Farm liquidity*

Cash sources of funds in the farming sector—the dollars that flow through farmers' bank accounts—declined nearly 10 percent between 1979 and 1982. The decline in nominal net farm income since 1979 was reflected in the reduced availability of funds, but most of the decline was offset by increases in nonfarm income. More significant in the reduction of cash inflow was a decline in net borrowing. While farm debt increased almost \$27 billion in 1979, it increased less than \$8 billion in 1982.

The most recent recession has created changes in farm cash inflows significantly different from those of the recession in 1976-77. Although incomes cannot be compared directly because of a change in the Census definition of farms, changes in farm debt are available. Net borrowing increased from 1975 to 1977 as rising farm real estate values provided a growing

source of collateral. Total cash inflows also grew in 1976-77, in contrast to their decline during the 1980-82 farm recession.

The recent decline in cash availability has caused farmers to reduce their nonfarm investments and cut back on spending for personal consumption. Decreases in the purchases of farm capital items have accounted for the remainder of the reduction in cash sources of funds.

This combination of the loss of profitability, the decline in equity, and the reduction in cash flow have caused the worst deterioration in the financial condition of farmers in the last decade, if not the last half-century.

### *Special factors in the current agricultural recession*

Many factors have made the agricultural recession of 1980-82 worse than others of recent

years. Although percentage declines in constant dollar farm income were similar in the recessions of 1976-77 and 1980-82, the decline in the recent recession has been from a lower base. The recent downturn has lasted three years instead of two years. Also farmers have been less insulated from the nation's financial turmoil since 1979 than in any other recent period.

In the 1976-77 agricultural recession, farmers had just been through a period of extraordinary profitability and, therefore, were more able to deal with financial adversity. Large increases in farm income in 1973 and 1974 caused by a surge in export demand and the rapid growth in farm real estate values left many farmers with substantial financial reserves. Farm income never returned to its 1973 peak, however. In contrast, 1978 and 1979 can be viewed as years of almost normal profitability when measured in constant dollar terms. They were not years for building the liquid reserves needed to see farmers through the adversities of 1980-82.

The length as well as the depth of the current recession has been a cause of concern to farmers and their lenders. Three consecutive years of low farm incomes is unusual, and even with the government's Payment-In-Kind program, estimates of net farm income for 1983 are little improved over 1982. Recent surveys by Federal Reserve Banks and others suggest that between two and three times the normal number of farmers left the sector in 1982 and more exits are to be expected in 1983.<sup>4</sup>

Interest rates charged by agricultural banks have followed the prime rate more closely since 1979 (Chart 3). As a result, farm interest rates have shown greater volatility, causing large swings in the cost of carrying debt that have contributed to the decline in farm real estate

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<sup>4</sup> See, for example, *Financial Letter*, Federal Reserve Bank of Kansas City, Vol. 9, No. 5, May 25, 1983.

values. Interest rates rose rapidly to more than 15 percent in the spring of 1980 and again through most of 1981. While interest rates have since declined substantially, inflation has declined even more, leaving the real cost of borrowing still high by historic standards. These developments have caused highly leveraged farmers more difficulties than they might have expected. Many of these difficulties have translated into problem loans that could well be affecting the stability of agricultural lenders.

### **The financial condition of agricultural banks**

In light of the deterioration in farm financial conditions, this section provides an historical analysis of the financial condition of agricultural banks. For purposes here, agricultural banks are defined as banks with at least 25 percent of their yearend loans made to farmers. These loans include both operating loans and loans backed by farm real estate. Income statement information is used in analyzing the profitability of banks, and balance sheet data is used in describing changes in their solvency. Because of the many regulatory changes and other factors besides the farm recession that have affected banks since 1979, changes in agricultural and nonagricultural banks are compared to highlight the effects of agricultural problems.<sup>5</sup>

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<sup>5</sup> Average income statements and balance sheets for each bank type were developed from Federal Reserve System Call Reports. The data were averaged to reduce the influence of changes in the number of banks in each category over the years. The data were also adjusted within years to account for bank mergers. Balance sheet information is for the last day of each year and income statements are for stated calendar years. See the Federal Reserve Board of Governors' documentation of the Huge Files as part of their Micro Data Base Documentation for a full description of these data. Comparable data were also developed for

**TABLE 1**  
**Average Gross Loan Loss Experience at U.S. Commercial Banks\***

Year	Agricultural Banks		Nonagricultural Banks	
	Million Dollars	Percent Increase	Million Dollars	Percent Increase
1970	\$12.5	—	\$142.2	—
1971	13.2	5.6%	159.3	12.0%
1972	12.8	-3.0	137.1	-13.9
1973	14.2	10.9	166.1	21.2
1974	19.2	35.2	253.4	52.6
1975	21.0	9.4	394.2	55.6
1976	24.9	18.6	428.9	8.8
1977	25.8	3.6	356.5	-16.9
1978	29.3	13.6	345.9	-3.0
1979	31.3	6.8	360.0	4.1
1980	47.4	51.4	460.9	28.0
1981	61.5	29.7	495.6	7.5
1982	103.6	68.5	746.7	50.7

\*Data developed from call report data adjusted by the staff of the Board of Governors to reflect mergers and acquisitions. Averages are used to reduce the effect of different numbers of banks in each category over time.

*Trends in  
commercial bank profitability*

The most striking indication of the financial difficulties at banks is the rapid rise in loan losses since 1979 (Table 1). Loan losses at agricultural banks tripled between 1979 and 1982, while losses at nonagricultural banks doubled. Until the recent farm recession, loan losses at agricultural banks had increased generally with inflation. Losses at nonagricultural banks were more cyclical, expanding with the 1974-75

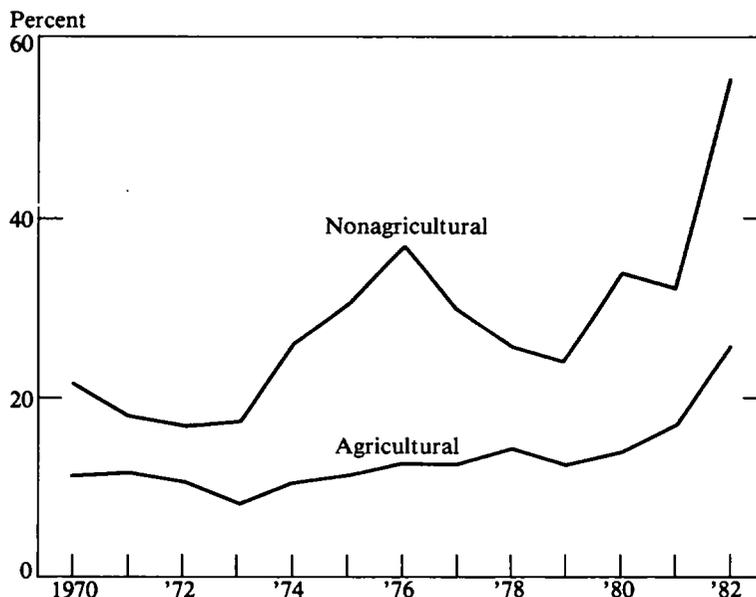
small nonagricultural banks, those with less than \$100 million in assets. For purposes of this research, no substantive differences were found in the financial conditions of small nonagricultural banks and all nonagricultural banks. The results of this work are, therefore, not included in the following discussions. The data are available, however, in the tabular appendix.

recession and growing rapidly again after 1979.

Banks do not charge current loan losses against income but instead make provisions for losses. If provisions for losses exceed actual losses, banks accumulate a balance sheet reserve for future losses called an allowance for loan losses. If losses exceed the provision for losses in a given year, balance sheet reserves are used to cover the difference, first reducing the allowance for loan losses and eventually decreasing the bank's net worth. Provisions for loan losses tend to be about equal to current losses except in years of surprisingly large actual losses. Gross losses in 1981, for example, exceeded provisions for losses by 13 percent at agricultural banks and 4 percent at nonagricultural banks.

The percentage of income set aside to provide for losses has been smaller and less cyclical at agricultural banks than at nonagricultural banks (Chart 4). Through the 1970s, agricul-

**CHART 4**  
**Ratio of Provision for Loan Losses to Net Income**  
**Before Provision for Loan Losses at Commercial Banks**



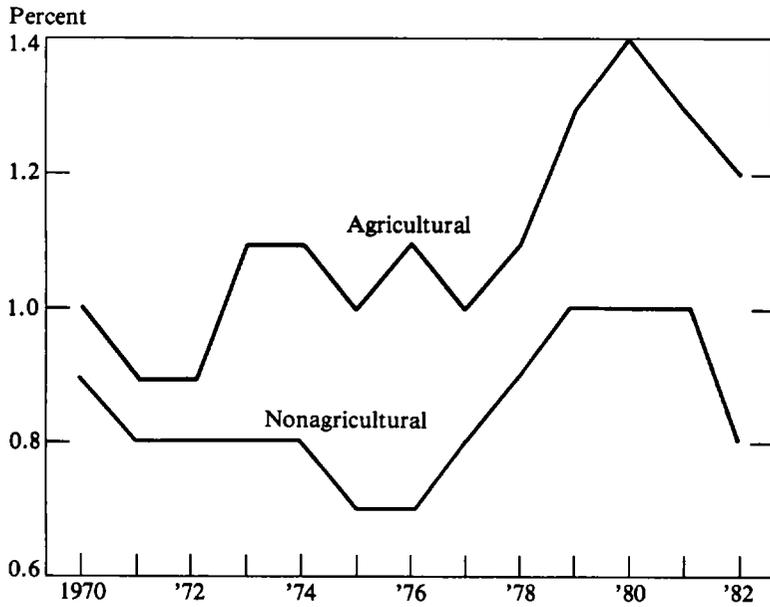
tural banks typically set aside about half as much of their income for writing off bad debts as nonagricultural banks. The reason for this disparity is not obvious, since agriculture is usually considered a risky industry. Part of the reason could have been the government's farm financial programs of the period, such as the Farmers Home Administration's economic emergency loan program. Growing infusions of government credit into the sector during the 1970s probably kept loan losses at agricultural banks lower than those at nonagricultural banks.

While a larger proportion of bank income has been needed to cover loan loss provisions at agricultural banks since 1979, the evidence does not suggest that agricultural banks are, on average, in serious trouble. In fact, the proportion of income set aside for loan losses is rising less rapidly at agricultural banks than at nonagricultural banks.

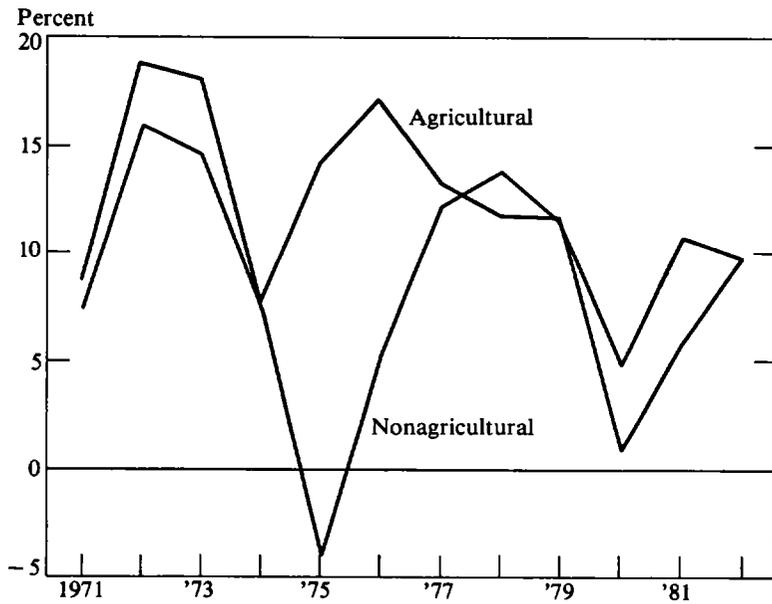
The profitability of agricultural banks, as measured by their return on assets, also suggests that most of them have not had serious difficulties (Chart 5). Their return on assets—the ratio of income after provision for loan losses to total assets—has been greater than that for nonagricultural banks every year since 1970, and the difference has grown. While the decline in return on assets began a year earlier at agricultural banks than at nonagricultural banks, the declines from their peaks have been about the same for both types of banks. The average return on assets at agricultural banks was higher in 1982 than in almost any year in the 1970s.

So, while problems in agriculture have affected the financial condition of agricultural banks, the evidence regarding the profitability of these banks does not seem to indicate a crisis in the stability of banks lending to farmers. Loan losses at agricultural banks have increas-

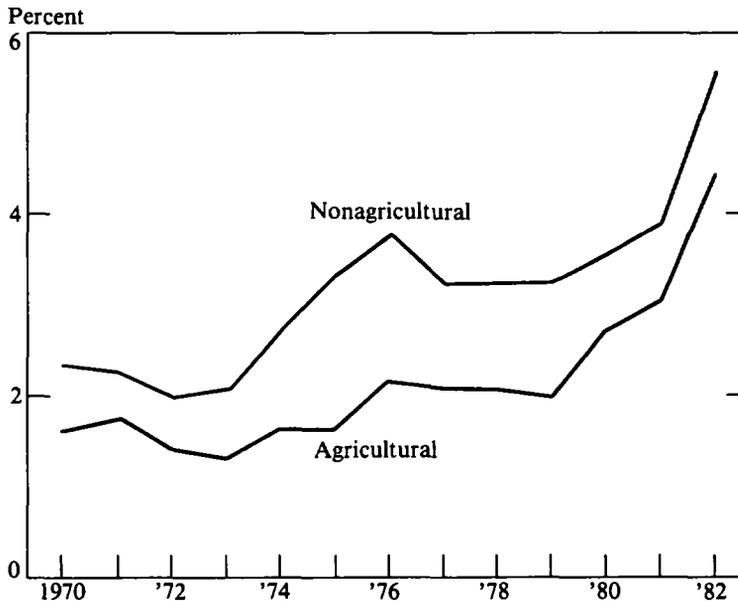
**CHART 5**  
**Return on Assets at Commercial Banks**



**CHART 6**  
**Percentage Growth in Loans at Commercial Banks**



**CHART 7**  
**Ratio of Loan Losses to**  
**Total Reserves at Commercial Banks**



ed rapidly, but bank income also has grown enough that losses are not overwhelming.

#### *Trends in bank solvency*

Loan losses can be put into perspective by comparing them with total loans and the reserves banks can draw on before they fail.

Loan losses have outpaced the average growth in loans at all banks (Chart 6). Loans at agricultural banks were almost four times greater in 1982 than in 1970, but loan losses were almost eight times greater. Loans at nonagricultural banks were almost three times greater in 1982, with loan losses about five times greater. Although the increases in loan losses compared with increases in loans rose much more at agricultural banks, most of the difference came after 1979. As a proportion of total loans, losses in 1979 were about the same as in 1970, at all banks.

If, as it appears, agricultural banks have become more integrated into national markets in recent years—and, therefore, have become more like nonagricultural banks—the recent ratio of loan losses to total loans may be only temporary. A similar rise in loan losses was seen at nonagricultural banks after the general economic recession of 1974-75. Loan losses had begun to decline in nonagricultural banks by 1977, however, and by 1979 the ratio of loan losses to total loans had returned to its 1970 level.

Loan losses relative to reserves—allowances for loan losses plus net worth—have risen faster at agricultural banks than at nonagricultural banks since 1979, but the average agricultural bank is still more capable of absorbing current losses than the average nonagricultural bank (Chart 7). Two factors account for this difference. Agricultural banks have generally been more conservative than nonagricultural banks

in that they entered the 1970s with more reserves relative to losses. They also gained on nonagricultural banks in their ability to cover losses during the decade because they did not experience large increases in loan losses until 1980.

While the agricultural recession of 1980-82 has clearly affected the financial condition of agricultural banks, the impact has been limited so far and there is little to suggest that these banks, on the whole, are in significantly worse condition than other banks. In some ways they are better off. The rapid increase in loan losses at agricultural banks could become a cause for future concern, but through the end of 1982 losses had not severely reduced either the profitability of the average agricultural bank or its solvency. Although individual banks may be having difficulties, agricultural banks as a group do not appear to have more problems than the banking system as a whole.

### **The financial condition of the farm credit system**

Many of the same questions about the financial condition of agricultural banks also apply to the Farm Credit System. Although the system is the largest private lender to agriculture, it is not generally as well known as commercial banks. For that reason, this section begins with a description of some of the system's distinguishing features. The profitability and solvency of the system's components that lend to farmers are then analyzed.<sup>6</sup>

#### *Description of the system*

The Farm Credit System (FCS) is a confederation of farmer-owned cooperatives composed of three networks of banks: district-level Federal Intermediate Credit banks (FICB's) and local Production Credit associations

(PCA's); district-level Federal Land banks (FLB's) and local Federal Land Bank associations (FLBA's); and district-level Banks for Cooperatives. In the FICB-PCA network, PCA's make short to intermediate-term loans to finance farmers' variable inputs and machinery. The FLB-FLBA network makes longer term loans backed by farm real estate. The Banks for Cooperatives make loans to farmer-owned input supply, processing, and marketing cooperatives.

All three of these banking networks participate in interlocking loan loss agreements. If losses exceeded specified limits, the loan loss reserves of all the banks could be used to cover losses of any individual bank. Losses are shared first among like associations within a district. If large enough, the losses can then be shared among like banks across districts. Finally, the reserves of the other FCS banks throughout the country can be drawn upon.

All banks in the system are funded jointly by the sale of systemwide bonds in national and international money markets. Until 1978, each of the banking networks sold its own bonds. With the introduction of joint bonds, however, all banks in the system are jointly and severally liable for repayment of the systemwide bonds.

These risk sharing arrangements make analysis of the financial condition of the FCS somewhat less difficult than the analysis for banks, in that aggregate data are more meaningful. While every commercial bank must rely on its own reserves to cover losses, PCA's and FLBA's can call on the reserves of other FCS institutions. Since there are substantial differences in the loan loss histories of the FLB

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<sup>6</sup> Data are in the Reports of Operations for the Federal Land Banks and the Production Credit Association Reports of Operations compiled by the Farm Credit Administration for the years 1970 through 1982.

**TABLE 2**  
**Loan Loss Experience Farm Credit System**

Year	Production Credit Associations		Federal Land Banks	
	Million Dollars	Percent Increase	Million Dollars	Percent Increase
1970	\$ 7.8	—	0	—
1971	12.5	60.3%	\$0.4	0
1972	6.3	-49.6	0.1	-75.0%
1973	-0.1	—	-0.1	—
1974	5.7	—	0.0	—
1975	20.3	256.1	0.1	0
1976	22.1	8.9	0.1	0
1977	20.4	-7.7	4.4	4300.0
1978	10.7	-47.5	0.9	-79.5
1979	3.8	-64.5	0.5	-44.4
1980	22.4	489.5	0.3	-40.0
1981	44.2	97.3	0.9	200.0
1982	162.0	266.5	1.5	66.7

Data developed from reports of operation for the respective banking systems provided by the Farm Credit Administration.

and PCA networks, however, the following analysis examines the two systems separately.

Analysis of the production credit system is based on aggregates of the profitability and solvency of local PCA's. Consideration of the financial statements of district FICB's would not be appropriate, since these district banks provide funds not only to PCA's but also to other financial institutions. Analysis of the FLB-FLBA network is based on aggregate data of district-level FLB's, which own the farm loans and provide no funds to other organizations. As Banks for Cooperatives do not lend directly to farmers, their financial condition is not analyzed.

#### *Trends in Farm Credit System profitability*

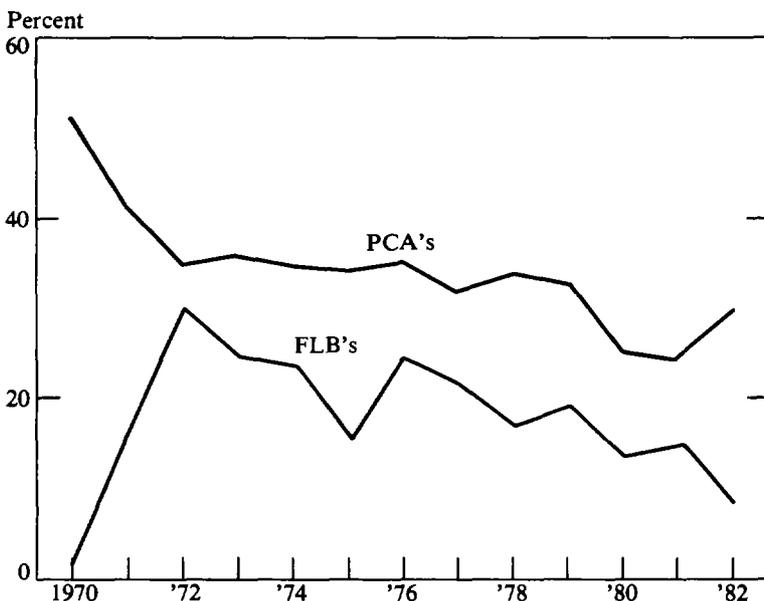
Effects of farm recessions are easily identified by examining FCS loan losses, particular-

ly the losses of the PCA's (Table 2). For example, in the farm recession of 1976-77, the PCA loss rate was about twice the rate in nonrecession years. The first multimillion dollar loss in recent FLB history was in 1977.

The farm recession of 1980-82 has produced much larger losses for PCA's but has not yet had much effect on FLB's. Total PCA losses in 1980-82 were more than for the entire 1970-79 period. Losses for FLB's will probably peak sometime in the future, because farmers delay default on real estate loans as long as possible and the FLB's can postpone recognition of losses on real estate loans until the property is sold, which may take years. The trend to larger FLB losses has already been established, however, and will likely continue until the farm sector recovers.

Provisions for loan losses have increased at PCA's and FLB's since 1970, although the provisions have not kept pace with incomes (Chart

**CHART 8**  
**Ratio of Provision for Loan Losses**  
**To Net Income in the Farm Credit System**



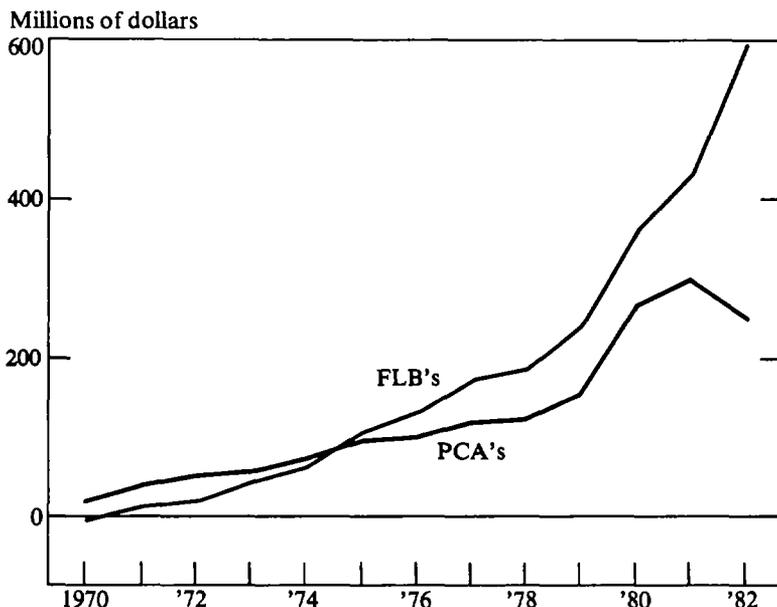
8). Unlike commercial banks, which normally accumulate loan loss reserves based on experience with actual loan losses, FCS reserves are mandated by Congress. The PCA's can charge up to 0.5 percent of their outstanding loans against current income until they have accumulated a maximum reserve of 3.5 percent of loans outstanding. FLB's keep reserves of no less than 1 percent of their outstanding loans, and none of the banks has more than 2 percent of their loans in reserve. In most years, therefore, there has been a large disparity between provisions for loan losses and actual loan losses. Provisions for losses have been more than twice the actual losses at PCA's in all recent years except 1982. Except for 1970, when reserves for losses declined, FLB's annual provisions for loan losses have been 10 to 100 times greater than the net losses actually sustained.

Incomes of PCA's and FLB's are less cyclical than incomes of commercial banks (Chart 9).

Some slowing in income growth in 1977 and 1978 can be discerned, probably as a result of lower interest rates at commercial banks. Because FCS banks base the price of their loans on the average cost of their bonds outstanding, changes in the interest rates they charge tend to lag behind changes in the rates commercial banks charge. When market interest rates are falling, therefore, the FCS is at a competitive disadvantage and they probably reduce their incomes to compensate.

Reductions in income growth can also be seen in 1981 and 1982. In fact, income at PCA's declined in 1982. Net income, however, is not necessarily a good measure of the performance of a cooperative system, where managers typically try to maximize service delivery at minimum cost rather than maximize profits. Income does indicate, however, how much the provision for loan losses could be increased without raising interest rates to borrowers.

**CHART 9**  
**Net Income in the Farm Credit System**



*Trends in Farm  
Credit System solvency*

The FCS grew rapidly in the 1970s (Chart 10). From 1970 to 1982, total loans grew 296 percent at PCA's and 573 percent at FLB's. The growth was not constant, however. Increases in loans slowed during the agricultural recessions of the mid-1970s and early 1980s. From 1970 through 1982, farm loans declined as a proportion of total loans at both PCA's and FLB's. PCA's expanded their loans by increasing loans to farm-related businesses, and FLB's increased their loans for rural housing.

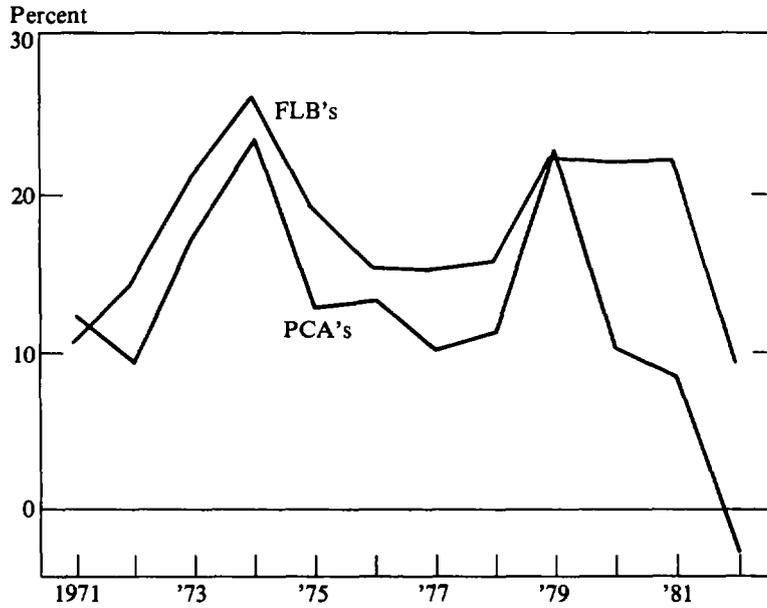
Except for PCA's in 1982, ratios of loan losses to total reserves—allowances for losses plus net worth—show the system has been in a strong position to withstand losses. Annual losses at FLB's never exceeded 0.5 percent of total reserves during the study period from 1970 (Chart 11). Losses at PCA's did not exceed 2

percent of reserves until 1982. In 1982, however, losses of the PCA network amounted to more than 25 percent of their allowance for loan losses.

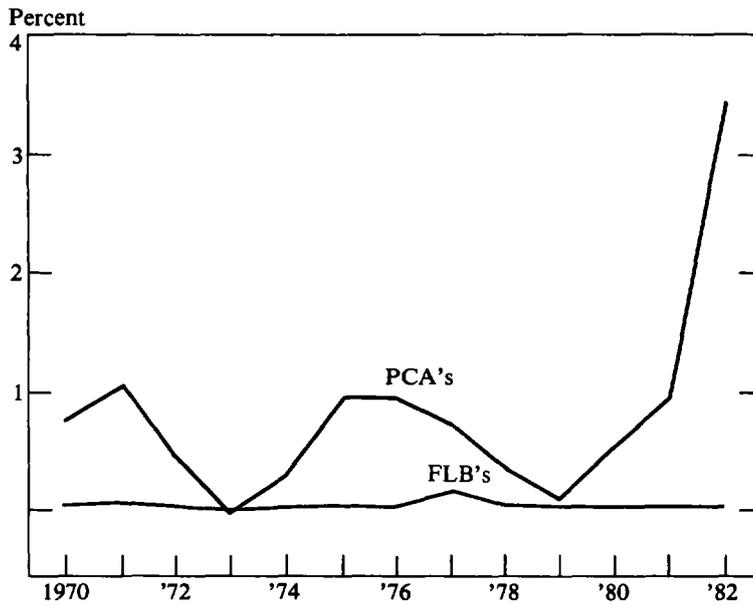
Thus, if PCA's made no additional provisions for loan losses, their allowance for losses would have been sufficient to cover such losses for only about four years. Additional provisions are made, however. Losses in 1982 exceeded PCA provisions for losses by about \$48 million. At that rate, it would take almost 13 years to exhaust PCA's past accumulations of loan loss reserves, and their equity would still be untouched.

While the farm recession has brought unusually high loan losses in the Farm Credit System, neither the system nor any of its components lending to farmers seem to be in danger. The FLB network shows remarkable strength. Even though most of its losses from the current farm recession may occur in future

**CHART 10**  
**Percentage Growth in Loans in the Farm Credit System**



**CHART 11**  
**Ratio of Loan Losses to Total Reserves**  
**in the Farm Credit System**



years, it is hard to imagine a crisis in farming that would place the integrity of FLB's in jeopardy, and although PCA's have experienced greater losses than FLB's, they also seem secure. Loan loss provisions at PCA's can be increased without generating negative profits. These banks therefore, could remain solvent for more than a decade—even if loan losses exceed provisions for losses every year by as much as they did in 1982.

## Conclusions

The current financial condition of private agricultural lenders reflects the farm recession of 1980-82. The problems of agriculture and the financial institutions lending to farmers was found to be worse at the end of 1982 than in the cyclical downturn of 1976-77, due partly to the greater integration of rural financial markets into national money markets and the greater volatility of interest rates since 1979. Loan losses at both agricultural banks and within the Farm Credit System were higher than at any recent time.

The financial condition of agricultural banks, however, has not seriously deteriorated. Both the profitability and solvency of agricultural banks since 1979 compare favorably with previous years and with the performance of nonagricultural banks. The national economic downturn since 1979 has caused loan losses to increase at all categories of banks. Since agricultural banks have, on average, been more conservatively managed than other banks, they may well come through the farm recession with less difficulty than nonagricultural banks. Some agricultural banks are probably facing serious problems, but as a group they do not currently require more concern than the banking system as a whole.

The Farm Credit System also has incurred substantially larger loan losses than at any

other time in the period since 1970. Nevertheless, the system seems capable of absorbing losses with its financial stability unimpaired. Loss sharing agreements in the system provide a backstop for individual components, allowing losses to be spread across large systemwide reserves. Federal Land Banks showed almost no increase in loan losses through 1982. While their losses may still be in the future, it seems unlikely the losses will be large enough to substantially reduce reserves already accumulated. PCA loan losses in 1982 were greater than in recent history, but even at that loss rate, PCA's would not deplete their own reserves for over a decade.

Despite the adverse effects of the farm recession on private agricultural lenders, there is no substantial evidence to support concern over the financial condition of these lenders. Continued monitoring of the financial situation is no doubt justified, since continuation of loan losses at recent rates could eventually create significant problems. The general expectation, however, is that as a result of government farm programs and a recovery in the general economy, the agricultural recession will be brought to an end. At that point, the financial condition of agricultural lenders should begin to improve.

# Appendix

The following tables present data used in the preceding article. The tables are included here, because they cover more detail than could be incorporated into the article itself, they contain

information that is not readily available from other sources, and they provide a basis of nationwide comparison for several similar regional projects that are underway.

**TABLE 1**  
**Average U.S. Commercial Bank Income Statistics: 1970-82**  
 (Thousands of dollars)

Year	Net Income			Provision for Loan Losses			Actual Loan Losses		
	Ag*	Nonag†	Small Nonag‡	Ag	Nonag	Small Nonag	Ag	Nonag	Small Nonag
1970	\$ 70.2	\$ 549.1	\$174.0	\$ 9.2	\$ 80.0	\$ 27.6	\$ 12.5	\$142.2	\$ 40.8
1971	74.7	580.7	181.0	9.3	97.7	30.2	13.2	159.3	41.9
1972	81.8	612.2	188.5	9.2	107.7	29.7	12.8	137.1	37.3
1973	110.2	681.4	212.8	11.4	135.9	34.8	14.2	166.1	43.0
1974	126.0	709.7	211.0	15.1	242.5	53.4	19.2	253.4	63.6
1975	130.5	710.9	199.8	15.8	377.6	63.0	21.0	394.2	75.6
1976	148.9	755.5	221.9	20.1	377.4	67.9	24.9	428.9	80.3
1977	159.1	846.1	251.8	21.3	326.7	63.5	25.8	356.5	71.8
1978	177.2	1006.9	287.1	27.0	344.1	75.8	29.3	345.9	78.0
1979	223.9	1185.2	325.7	29.5	364.4	78.2	31.3	360.0	82.1
1980	264.0	1267.9	346.2	41.5	424.1	86.6	47.4	460.9	97.2
1981	279.3	1329.8	347.9	54.3	477.5	95.1	61.5	495.6	104.4
1982	285.3	1335.6	338.8	96.2	768.4	135.6	103.6	746.7	143.4

Source: Board of Governors of the Federal Reserve System.

\*Agricultural banks have at least 25 percent of their yearend loans made to farmers.

†Nonagricultural banks are all banks with less than 25 percent of their yearend loans made to farmers.

‡Small nonagricultural banks are nonagricultural banks as defined as above, with less than \$100 million in total assets.

**TABLE 2**  
**Average U.S. Commercial Bank Balance Sheet Statistics: 1970-82**  
(Millions of dollars)

Year	Total Assets			Total Loans			Farm Loans		
	Ag*	Nonag†	Small Nonag‡	Ag	Nonag	Small Nonag	Ag	Nonag	Small Nonag
1970	\$ 7.1	\$ 66.1	\$19.3	\$ 3.4	\$34.4	\$ 9.6	\$0.8	\$0.4	\$0.3
1971	7.9	71.6	21.0	3.7	36.9	10.4	0.9	0.5	0.3
1972	9.2	80.5	22.6	4.4	42.7	11.4	1.0	0.5	0.3
1973	10.7	87.8	23.7	5.2	48.9	12.4	1.2	0.6	0.3
1974	11.4	93.7	24.4	5.6	52.3	12.8	1.3	0.6	0.3
1975	12.7	95.0	25.6	6.4	50.2	13.1	1.4	0.6	0.4
1976	13.9	99.3	26.7	7.5	52.7	14.4	1.7	0.7	0.4
1977	15.1	109.9	28.7	8.5	59.0	16.1	1.9	0.8	0.5
1978	16.5	120.7	30.1	9.5	67.0	17.7	2.1	0.9	0.5
1979	18.2	131.9	31.2	10.6	74.6	18.1	2.3	1.0	0.5
1980	20.0	142.7	32.6	10.7	78.1	17.9	2.4	1.0	0.5
1981	22.1	155.5	34.1	11.3	86.3	18.3	2.5	1.0	0.5
1982	24.4	170.9	35.3	12.4	94.6	18.5	2.8	1.1	0.5

Year	Net Worth			Allowance for Loan Losses		
	Ag	Nonag	Small Nonag	Ag	Nonag	Small Nonag
1970	\$0.6	\$ 5.6	\$1.7	\$0.055	\$0.705	\$0.158
1971	0.7	6.0	1.7	0.059	0.703	0.158
1972	0.8	6.5	1.8	0.067	0.737	0.162
1973	0.9	6.9	2.0	0.076	0.811	0.172
1974	1.0	7.4	2.1	0.083	0.878	0.180
1975	1.1	7.8	2.2	0.093	0.882	0.182
1976	1.1	7.6	2.2	0.073	0.612	0.135
1977	1.2	8.2	2.3	0.076	0.651	0.141
1978	1.4	8.8	2.5	0.084	0.740	0.153
1979	1.6	9.6	2.6	0.094	0.853	0.162
1980	1.8	10.5	2.8	0.101	0.925	0.168
1981	2.0	11.4	2.9	0.109	1.045	0.176
1982	2.2	12.3	3.1	0.123	1.194	0.183

Source: Board of Governors of the Federal Reserve System.

\*Agricultural banks have at least 25 percent of their yearend loans made to farmers.

†Nonagricultural banks are all banks with less than 25 percent of their yearend loans made to farmers.

‡Small nonagricultural banks are nonagricultural banks as defined above, with less than \$100 million in total assets.

**TABLE 3**  
**Average U.S. Commercial Bank Ratios: 1970-82**  
 (Percent)

Year	Loans/Assets			Farm Loans/Total Loans			Loan Losses/Allowance for Loan Losses		
	Ag*	Nonag†	Small Nonag‡	Ag	Nonag	Small Nonag	Ag	Nonag	Small Nonag
1970	46.8%	48.8%	48.5%	50.4%	6.9%	7.3%	57.6%	16.6%	98.1%
1971	46.2	48.6	48.3	50.7	6.7	7.2	62.5	104.5	110.2
1972	45.5	49.7	49.5	49.8	6.6	7.0	47.1	70.7	75.9
1973	46.0	50.9	50.5	49.7	6.4	6.9	60.4	96.8	105.4
1974	47.2	51.3	51.0	49.1	6.2	6.7	43.6	132.1	143.7
1975	48.3	50.7	50.6	49.3	6.2	6.7	65.0	113.5	122.4
1976	52.2	53.6	53.7	48.7	6.1	6.6	87.7	191.3	209.2
1977	54.3	55.9	56.1	48.2	6.1	6.7	78.8	135.5	149.1
1978	55.9	58.4	58.6	47.7	6.1	6.7	61.6	105.5	115.7
1979	56.7	57.3	57.3	47.9	6.0	6.6	49.9	92.8	102.0
1980	52.0	54.2	54.1	47.9	5.9	6.5	71.9	91.4	99.4
1981	49.8	52.9	52.7	47.8	5.6	6.3	84.0	103.1	114.8
1982	49.7	52.1	51.9	54.6	5.5	6.3	146.7	290.4	144.0

Source: Board of Governors of the Federal Reserve System.

\*Agricultural banks have at least 25 percent of their yearend loans made to farmers.

†Nonagricultural banks are all banks with less than 25 percent of their yearend loans made to farmers.

‡Small nonagricultural banks are nonagricultural banks as defined above, with less than \$100 million in total assets.

**TABLE 4**  
**Farm Credit System Income Statistics: 1970-82**  
 (Millions of dollars)

Year	Net Income		Provision for Loan Losses		Net Loan Losses	
	PCA*	FLB†	PCA	FLB	PCA	FLB
1970	\$ 23.7	-\$ 9.7	\$ 25.2	-\$ 0.2	\$ 7.8	\$0.0
1971	45.0	12.3	31.8	2.4	12.5	0.4
1972	56.9	24.1	31.0	10.4	6.3	0.1
1973	63.4	49.4	36.1	16.4	-0.1	-0.1
1974	80.4	66.0	43.8	20.7	5.7	0.0
1975	102.1	113.3	54.6	21.4	20.3	0.1
1976	110.2	138.8	61.3	45.6	22.1	0.1
1977	129.1	178.7	63.3	49.7	20.4	4.4
1978	132.2	189.5	69.5	39.2	10.7	0.9
1979	160.5	247.8	81.9	58.7	3.8	0.5
1980	276.1	367.7	96.6	60.5	22.4	0.3
1981	308.6	435.5	101.5	76.9	44.2	0.9
1982	260.9	597.6	114.3	59.3	162.0	1.5

Source: Farm Credit Administration.

\*PCA represents national totals of the operations of all Production Credit Associations.

†FLB represents national totals of the operations of the Federal Land Banks.

TABLE 5

**Farm Credit System Balance Sheet Statistics and Ratios: 1970-82**  
(Billions of dollars)

Year	Total Assets		Total Loans		Farm Loans		Net Worth		Allowance For Loan Losses	
	PCA	FLB	PCA*	FLB†	PCA	FLB	PCA	FLB	PCA	FLB
1970	\$ 5.8	\$ 7.6	\$ 5.6	\$ 7.4	\$ 5.3	\$ 7.1	\$ 0.9	\$ 0.8	0.1	0.1
1971	6.6	8.3	6.3	8.2	6.1	7.9	1.0	0.9	0.2	0.1
1972	7.2	9.5	6.9	9.4	6.6	9.1	1.1	0.9	0.2	0.1
1973	8.5	11.6	8.1	11.4	7.8	10.9	1.3	1.1	0.2	0.1
1974	10.4	14.5	10.0	14.4	9.5	13.4	1.6	1.3	0.3	0.2
1975	11.8	17.4	11.3	17.2	10.7	16.0	1.8	1.6	0.3	0.2
1976	13.3	20.0	12.8	19.9	12.2	18.5	2.0	1.9	0.3	0.3
1977	14.8	23.2	14.1	23.0	13.4	21.4	2.3	2.2	0.4	0.3
1978	16.4	26.9	15.7	26.7	14.9	24.6	2.6	2.6	0.5	0.4
1979	20.0	33.3	19.3	32.7	18.0	29.6	3.0	3.1	0.5	0.5
1980	22.2	41.0	21.3	40.0	19.6	35.9	3.5	3.8	0.6	0.5
1981	24.3	50.0	23.1	49.0	21.0	43.6	3.9	4.7	0.7	0.6
1982	23.8	54.7	22.2	53.7	20.1	47.8	4.1	5.5	0.6	0.7

(Percent)

Year	Loans/Assets		Farm Loans/ Total Loans		Allowance For Loan Losses	
	PCA	FLB	PCA	FLB	PCA	FLB
1970	95.3%	97.7%	95.2%	96.4%	5.2%	0.0%
1971	95.6	98.1	95.7	96.4	7.5	0.3
1972	95.8	98.5	96.1	96.2	3.3	0.1
1973	96.2	98.5	96.1	95.4	0.0	0.0
1974	96.3	98.6	95.0	93.3	2.1	0.0
1975	95.9	99.0	95.0	92.8	6.7	0.0
1976	95.9	99.4	95.0	92.7	6.4	0.0
1977	95.8	99.4	95.0	92.8	5.2	1.3
1978	95.8	99.1	94.5	92.3	2.4	0.2
1979	96.3	98.2	93.5	90.8	0.7	0.1
1980	95.8	97.4	92.1	89.8	3.7	0.1
1981	95.2	98.0	90.8	88.9	6.7	0.1
1982	93.6	98.3	90.5	89.0	26.5	0.2

Source: Farm Credit Administration.

\*PCA represents national totals of the operations of all Production Credit Associations.

†FLB represents national totals of the operations of the Federal Land Banks.

# Monetary Policy Issues in the 1980s

As an outgrowth of the recent and prospective complications in monetary policymaking, the Federal Reserve Bank of Kansas City sponsored a symposium on "Monetary Policy Issues in the 1980s," held at Jackson Hole, Wyoming, on August 9 and 10, 1982. The 271-page proceedings of this symposium, the contents of which are listed below, include papers and comments by a number of leading academicians and central bankers.

## Formulating Monetary Policy in the 1980s

- Introductory Remarks, *Ronald L. Teigen*
- Issues in the Coordination of Monetary and Fiscal Policies, *Alan S. Blinder*  
Discussion, *William Poole*  
Discussion, *James Tobin*
- The Role of Expectations in the Choice of Monetary Policy, *John B. Taylor*  
Discussion, *Phillip Cagan*  
Discussion, *Frederic S. Mishkin*  
Discussion, *Robert J. Gordon*
- The Effect of U.S. Policies on Foreign Countries: The Case of Canada, *Charles Freedman*  
Discussion, *Herman-Josef Dudler*  
Discussion, *Richard N. Cooper*

## Implementing Monetary Policy in the 1980s

- Introductory Remarks, *Donald D. Hester*
- The Effect of Alternative Operating Procedures on Economic and Financial Relationships, *Carl E. Walsh*  
Discussion, *Bennett T. McCallum*  
Discussion, *James L. Pierce*
- Selecting Monetary Targets in a Changing Financial Environment, *Edward J. Kane*  
Discussion, *Robert H. Rasche*  
Discussion, *Raymond E. Lombra*
- Using a Credit Aggregate Target to Implement Monetary Policy in the Financial Environment of the Future, *Benjamin M. Friedman*  
Discussion, *Allan H. Meltzer*  
Discussion, *Richard G. Davis*

To obtain a free copy of the proceedings of this symposium, or any of the previous symposiums listed below, write to the Public Affairs Department, Federal Reserve Bank of Kansas City, 925 Grand Avenue, Kansas City, Missouri 64198.

*World Agricultural Trade:  
The Potential for Growth, 1978*

*Western Water Resources: Coming Problems  
and the Policy Alternatives, 1979*

*Future Sources of Loanable  
Funds for Agricultural Banks, 1980*

*Modeling Agriculture  
for Policy Analysis in the 1980s, 1981*