The Farm Credit System

By Kerry Webb

The recent growth of the Farm Credit System as a source of agricultural credit has been especially rapid during the past decade. The system has funneled large amounts of money into agriculture in efforts to "...improve the income and well being of American farmers and ranchers...."[1] At the same time it has gained an increasing share of the agricultural lending market and become the nation's leading agricultural credit supplier.

In spite of its long history, there is generally a great deal of confusion regarding the nature of the Farm Credit System. Relatively few people outside of agriculture are familiar with how the system operates, or with its purpose, organization, or growth. Therefore, this article provides an examination of how the Farm Credit System functions and its importance in channeling funds to farmers and ranchers.

OVERVIEW

The Farm Credit System is the nation's leading supplier of agricultural credit. In January 1980, the system held over $48 billion of outstanding farm debt, accounting for almost one third of the total. By lending funds acquired in the national money markets, the Farm Credit System (FCS) is able to enhance the credit available to American farmers for both short- and long-term loans.

The FCS is made up of three types of lending institutions: (1) the Federal Land Banks and the Federal Land Bank Associations, (2) the Federal Intermediate Credit Banks and the Production Credit Associations, and (3) the Banks for Cooperatives. Although each institution is designated as a federally chartered instrumentality of the United States, the banks and associations are cooperatives owned by their respective borrowers.

The FCS is subject to the supervision of the Farm Credit Administration (FCA), an independent agency in the executive branch of the U.S. government (Figure 1). Within the Farm Credit Administration, the Federal Farm Credit Board acts on policy issues relating to the system and consists of 13 members, 12 of whom are appointed by the President and approved by the Senate. The thirteenth member is appointed by the Secretary of Agriculture to act as his representative. The board's duties also include the appointing of a governor for the FCA, who is responsible for carrying out directives of the Farm Credit

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[1] Farm Credit Act of 1971, Public Law 92-181, 85 Stat. 583, U.S. Code, p. 655.

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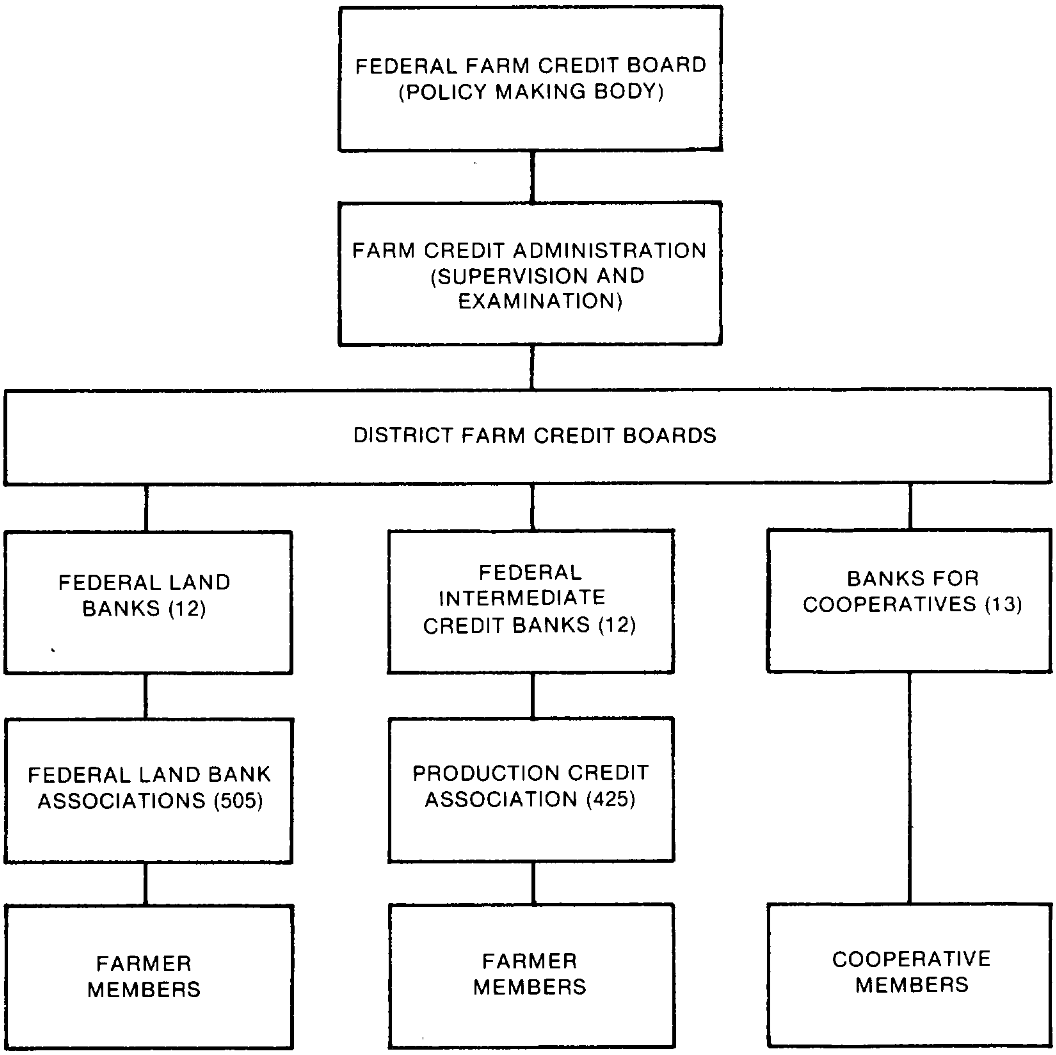
Board, handling the examination and supervisory function of the system, and ensuring that district banks and local associations are in compliance with the system's regulations. It should be noted that the Farm Credit Administration, although a government agency, receives no government funding. Expenses of the Farm Credit Administration are paid through assessments of all the Farm Credit Banks.

As shown in Figure 2, there are 12 Farm Credit Districts across the country. Each

Figure 1



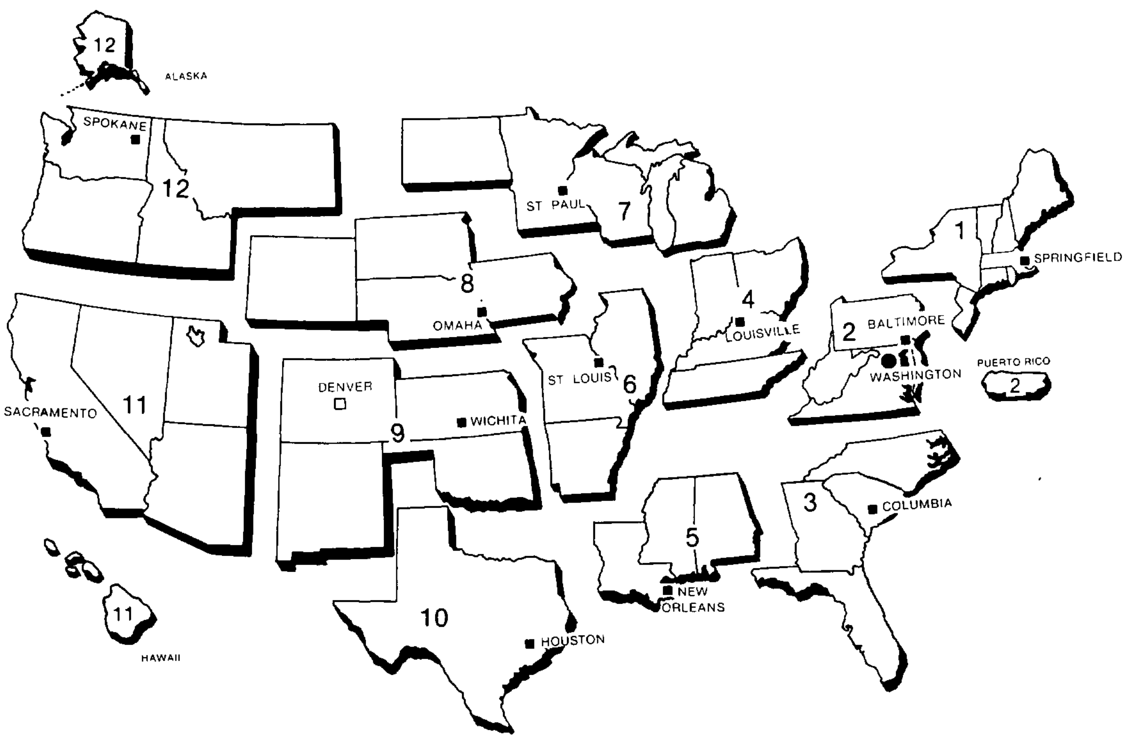
Source: Farm Credit Administration

district has a Federal Land Bank, a Federal Intermediate Credit Bank, and a Bank for Cooperatives. The FCA is located in Washington, D.C., and there is also a Central Bank for Cooperatives located in Denver. The Central Bank services district banks for cooperatives by making loans directly to them and participating in loans that exceed their respective lending limits. The operation of each of these institutions will be discussed later in this article.

On the local basis, actual loans to farmers are handled either through the Federal Land Bank Associations (FLBA's), acting as agents for the Federal Land Banks, or through Production Credit Associations (PCA's). Presently, there are more than 500 FLBA's and more than 400 PCA's throughout the country. Loans to agricultural cooperatives are handled directly with the district Bank for Cooperatives.

Figure 2

COOPERATIVE FARM CREDIT SYSTEM



● Farm Credit Administration
□ Central Bank For Cooperatives
■ Farm Credit Banks
Federal Land Banks
Federal Intermediate Credit Banks
Banks for Cooperatives

FEDERAL LAND BANKS

For many years prior to World War I, farmers had criticized the availability and terms of mortgage credit for agricultural purposes. Practically all of the credit furnished to agriculture was provided through private lenders: commercial banks, insurance companies, farm mortgage and equipment companies, and individuals. However, credit conditions were tight in terms of high interest rates, short repayment periods, and binding foreclosure policies. Moreover, there was very little mechanism to provide an orderly movement of funds from the surplus areas of the Northeast to the funds-short farming regions of the West.[2]

Beginning in 1913, much Congressional debate developed as to the most efficient way to relieve the farm credit problems. In 1916, the Federal Farm Loan Act was passed, creating a cooperative system of 12 Federal Land Banks. The bill also created the National Farm Loan Associations, now called Federal Land Bank Associations, with authorization to act as the local lending agents of the FLB's, as well as to service such loans. This legislation was enacted not only to alleviate farm mortgage problems, but also to provide farmers with the opportunity to better control and manage their own source of credit.

The 12 Federal Land Banks were originally capitalized with $750,000 each, primarily through the purchase of stock by the U.S. Treasury. After moderate growth in the early years, the market share of the cooperative land bank system rose sharply in the mid-1930s when other sources of funds dried up. By 1947, all of the stock held by the Treasury had been retired. Since then, the banks have been capitalized by stock held by the FLBA's, other direct borrowers, and retained earnings.[3] Thus the Federal Land Banks, as well as all other Farm Credit System banks, do not have governmental budget allocations, nor do they lend government funds, nor are their loans guaranteed by the government. They are borrower-owned cooperatives, providing long-term credit at cost to members.

The FLBA's are capitalized by purchases of stock held by the farmers who are borrowing from the association. Each borrower is required by law to purchase stock in an amount of not less than 5 per cent but no greater than 10 per cent of the face value of the loan. When the loan is repaid in full, the stock is retired. Each stockholder has one vote in the association regardless of how many shares held, and is eligible to vote on policy questions and in the election of the board of directors. Dividends may be declared on the stock of either the FLB's or FLBA's, subject to approval of the FCA and FLB, respectively.

Federal Land Banks make long-term (generally 5- to 40-year) loans to farmers, ranchers, agribusinesses, and rural residents. About 91 per cent of FLB loans are used for purchasing new real estate, improving land and buildings, or refinancing previous real estate or other short-term loans. The remainder of the loans are used for land bank stock, machinery, livestock, operating expenses, and other miscellaneous purposes.[4] All loans are secured by a first lien on real estate, and in no case can

2 Murray R. Benedict, *Farm Policies of the United States, 1790-1950* (New York: The Twentieth Century Fund, 1953), p. 145.

3 In the early 1930s, thousands of farm mortgages were being called by private lenders. In order to save many farmers from bankruptcy, the government injected $200 million into the Farm Credit System as a means of refinancing farmers through land bank loans and compensating the Federal Land Banks for losses incurred when interest rates were ordered lowered by the Emergency Farm Mortgage Act of 1933.

4 "Characteristics of Federal Land Bank Loans," 1978, Statistical Bulletin 23, Farm Credit Administration, Washington, D.C., November 1979, p. 10.

Table 1
OUTSTANDING FARM REAL ESTATE DEBT, JANUARY 1
(Per Cent of Total Held by Various Lenders)

	Total * (millions of dollars)	Commercial Banks	Federal Land Banks	Life Insurance Companies	Farmers Home Admin.	Individuals * and Others
1920	8,449	14 3	3.5	11 5	—	70.7
1930	9,631	10 4	12.5	22.0	—	55.1
1940	6,586	8 1	30.5	14.9	0.5	45 9
1950	5,579	16.7	16.2	21.0	3.6	42.5
1960	12,082	12 6	19.3	23 3	5 6	39.1
1970	29,183	12 1	22.9	19.6	7.8	37 5
1975	46,288	12.9	29.0	13.6	6 9	37.6
1979	72,978	11.7	33.7	14.4	6.2	33.9
1980	85,850	10.1	34.6	14.2	8.1	33.0

SOURCE: E. Melichar and M. Waldheger, **Agricultural Finance Databook**, Annual Series, Division of Research and Statistics, Board of Governors of the Federal Reserve System, Washington, D.C., November 1979 and recent revisions supplied by the authors.

*The figures shown for Individuals and Others are estimated. As a result, the total figures are also estimated.

the loan amount exceed 85 per cent of the appraised value of the security. The percentage loaned, however, is dependent upon the same standards of credit worthiness that is common to all lending, i.e., financial position, collateral, repayment capacity, etc. Repayment plans on most loans specify a fixed number of instalments amortizing the loan over its life, and all new loans made by the FLB's carry a variable interest rate, i.e., the rate can change during the life of the loan depending on changes in the bank's cost of funds. Borrowers may prepay any part or all of their loans at any time without penalty.

Growth of FLB loan volume has, on average, outpaced that of all other farm real estate lenders during the last 30 years, with especially strong relative growth during the 1970s. However, during and immediately after World War II, the market share of FLB's declined as their lending terms became less competitive with those of other lenders who were reentering the market after having dropped out during the Depression. By 1953, the FLB market share had reached its post war low of 14.8 per cent. The downward trend was reversed, however, with the passage of the Farm Credit Act of 1953, which provided some structural changes within the Farm Credit Administration and enhanced its ability to compete with other lenders. The Farm Credit Act of 1971 permitted FLB's even more flexibility in terms of lending requirements and the determination of farm family credit needs. By the end of 1979, outstanding farm real estate debt held by FLB's had grown to $29.7 billion and accounted for 35 per cent of the total. Average loan size had grown from $4,776 in 1950 to $113,000 in 1979.

Loan growth and volume vary among the 12 districts. For example, in the Columbia District, the Federal Land Bank holds over 50 per cent of the farm real estate debt, while in the Sacramento District, the FLB holds a market share of only about 25 per cent. Although each district has increased its market share by at least 5 percentage points during the last decade, the largest growth came in the eastern seaboard states and in the Great Plains. Table 1 summarizes the growth over time of FLB's relative to other agricultural lenders, and

Table 2
OUTSTANDING FARM REAL ESTATE DEBT, JANUARY 1, 1979
(Per Cent of Total Held by Various Lenders in Farm Credit Districts)

District	Total (millions of dollars)	Commercial Banks	Federal Land Banks	Life Insurance Companies	Farmers Home Admin	Individuals and Others
1	1,664.0	12 5	38.8	2.8	11.4	34.4
2	2,675.9	25.1	36.0	3 6	5.7	29.6
3	5,384.0	12.2	50.9	12.4	5.6	18.9
4	8,115.8	22.3	33.1	8.7	4.6	31 3
5	3,391.2	18.7	36.4	18.8	7.6	18.4
6	8,316.5	17.2	32.6	15.9	5.4	28 9
7	8,610.5	13.2	32.8	6.3	6.9	40.8
8	9,579.0	5.4	31.6	15 9	6.8	40.3
9	6,554.4	8.0	39.7	15.6	6 7	30.3
10	4,584 2	10.8	30 7	18.4	4 2	36.0
11	7,541.4	4.9	24.5	23.1	1.7	45.7
12	5,815.3	1.8	33.3	17.3	6.7	40.8

SOURCE: "Farm Real Estate Debt, 1979," Statistical Bulletin 21, Farm Credit Administration, Washington, D.C., November 1979.

Table 2 shows outstanding farm real estate debt holdings among lenders in the Farm Credit Districts.

There are several reasons for the rapid growth of FLB lending. Aggressive marketing and efficient service have been keys to gaining new customers. More importantly however, commercial banks and other lenders have been, at times, constrained in the amount and kinds of loans they can make due to usury law limitations and fund availability problems. In general, FCS lending has been considered exempt from state usury ceilings. Moreover, relatively low interest rates have also been an important growth factor for the land bank system. A generally lower overall rate structure compared to other lenders has been primarily due to the ability to raise funds through the issuance of bonds in national markets and to price their loans according to the average cost of these funds. As a result, changes in new loan rates at FLB's generally lag behind changes at commercial banks, insurance companies, and others where the acquisition and pricing of funds are primarily based upon marginal costs of deposits (small banks) and current market rates (insurance companies and large banks). Thus, during periods of rising interest rates, FLB's (as well as other Farm Credit Banks) will more than likely have lower rates than commercial banks. When interest rates are declining, however, commercial banks may have lower rates. Table 3 compares interest rates charged on real estate loans by agricultural banks of the Tenth Federal Reserve District and by the Federal Land Bank of Wichita.[5] As shown in Table 3, the spread on real estate loans has increased as money market conditions have stiffened during the last several years. Such spreads have been a key factor in the growth of Federal Land Bank lending.

FEDERAL INTERMEDIATE CREDIT BANKS

The Federal Intermediate Credit Banks (FICB's), along with the Production Credit Associations, form the second type of major lending institution within the Farm Credit

[5] It should be noted that the required purchases of stock when borrowing at an FCS bank or association are generally included as part of the total loan. As a result, the effective interest is somewhat higher than the rate shown in Table 3. An origination fee may also be charged.

Table 3
QUARTERLY REAL ESTATE LOAN INTEREST RATES

	Agricultural Banks*	Federal Land Bank†	Spread (Ag. Banks-FLB)
1977: I	9.44	8.50	.94
II	9.43	8.50	.93
III	9.41	8.25	1.16
IV	9.39	8.25	1.14
1978: I	9.57	8.25	1.32
II	9.56	8.25	1.31
III	9.72	8.50	1.22
IV	9.87	8.50	1.37
1979: I	10.38	8.50	1.88
II	10.37	9.00	1.37
III	10.54	9.00	1.54
IV	11.20	9.50	1.70
1980: I	12.47	10.00	2.47
II	15.48	10.50	4.98

*Simple average of real estate loan rates from agricultural banks in Colorado, Oklahoma, Nebraska, and New Mexico, as reported in the quarterly Agricultural Credit Survey made by the Federal Reserve Bank of Kansas City.

†Lending rate charged on new real estate loans by the Federal Land Bank of Wichita. Stock purchases and loan fees are not taken into account in the rates shown.

System. Established by the Farm Credit Act of 1923, the FICB's were designed to discount the short- and intermediate-term notes of farmers from various financial institutions such as banks or finance corporations. Thus, the FICB's were intended to serve primarily as an additional source of funds for private lenders.

During their early years, FICB's experienced relatively slow growth, due in part to conservative lending policies. However, the major reason for slowness was because the FICB's lacked a direct link to the farmer, since they could only lend to other financial institutions. For the most part, however, country banks showed little interest in discounting with the FICB's, where profit margins were legally limited to 1 1/2 per cent and discounting with an FICB was less attractive than other alternatives. Therefore, relatively few outside financial institutions used FICB's as a funding source during the agricultural depression of the 1920s. As a result, after 10 years a major credit shortage still was perceived to exist in the farm economy. To make credit more accessible, Congress authorized in 1933 the establishment of local Production Credit Associations which could discount loans with the FICB's and, in effect, become the "retail outlet" for credit made available to them from the FICB's.

FICB's are capitalized through issues of stock and participation certificates. Only PCA's may hold voting stock, although they may also hold nonvoting stock in the district bank.[6] Participation certificates are issued to financial institutions other than PCA's, which discount notes with the FICB. Holders of participation certificates have no voting rights in the association.

FICB's are authorized to discount, purchase, or participate in any note from the PCA's, or to extend loans directly to them. Under certain conditions, FICB's can also discount or purchase notes of agricultural credit from any national or state bank, trust company, agricultural credit corporation, savings institution, credit union, incorporated livestock loan company, or any other agricultural producers association engaged in extending credit to farmers. For national or state banks, trust companies, and savings institutions, credit can be advanced if the aggregate liabilities of the institution do not exceed twice the paid-in and unimpaired capital and surplus of the institution. Any other type of agricultural lending corporation (e.g., agricultural credit corporation, credit union, livestock loan company) must be positioned so that their aggregate liabilities do not exceed 10 times the paid-in and unimpaired capital and surplus. Also under FCA regulations commercial banks must also have a seasonal peak loan-to-deposit ratio of at least 60 per cent and have at least 25 per cent of their volume in agricultural loans.

Discounting relationships of other financial institutions (OFI's) with FICB's have grown rapidly in the last several years. Loans and discounts outstanding have nearly doubled in the last 5 years and amount to over $660 million. Commercial lenders in the St. Louis, St. Paul, Omaha, and Wichita districts account for over 70 per cent of the discounting done through FICB's. In spite of this growth, however, discount relationships still amount to less than 1 per cent of the outstanding nonreal estate farm debt. Reasons why banks have hesitated to do more discounting with the FICB have generally been because of the increase in paper work and limitations on the amount of permissible loans.[7]

All loans extended by FICB's must be repaid within seven years and may provide for a variable interest rate. Rates are set in order to provide the lowest reasonable costs, while maintaining a sound financial posture considering the costs of funds, other bank expenses, and borrower needs.

Production Credit Associations

Production Credit Associations make short- and intermediate-term loans to farmers, ranchers, producers of aquatic products, rural residents, and farm-related businesses. Stock purchase requirements are much the same as for the FLBA's and entitle farm borrowers to vote on the management and policies of the association. Thus, the PCA's are cooperative associations owned and controlled by their members without government support. PCA loans are used for a variety of purposes and may include nonfarm—related uses. However,

[6] The Farm Credit Act of 1971 allows the Federal government to make temporary investments in system banks to meet borrowers' emergency credit needs. Section 4.0 states that all district banks as well as the PCA's (under certain circumstances) may issue nonvoting stock which the governor of the FCA may purchase on behalf of the Federal government.

[7] On the other hand, bankers wishing to discount have, at various times, criticized FICB's for limiting access to funds by not approving requests for discount relationships when they were most needed. FICB's have contended that discount requests from other lenders increase in tight money periods and ease off during other times. Moreover, fears that increased discounting with other institutions might lead to fund shortages for PCA's and representation on district bank boards have probably also been drawbacks to increasing discount relationships.

the most recently published survey data indicate a substantial number of loans were used to meet family living and farm operating expenses and to purchase livestock.

Factors used in determining credit worthiness are generally the same as for FLBA's, although each PCA within a district may use somewhat different guidelines in approving loans. Those guidelines would be determined by the financial strength of the PCA itself and by the purpose of the loans. Recognizing the need that farmers have for recurring credit availability, many PCA's have established advance lines of credit, which cover all financial requirements for an entire season. The farmer draws the money as needed and repays according to a prearranged schedule. Borrowers pay interest on loan dollars only after the money is drawn and are charged no further interest on the loan portion repaid. In short, a borrower pays interest on each dollar used only for the number of days he uses it.

The market share of nonreal estate farm debt held by the PCA's has risen from 7.5 per cent in 1950 to 25.7 per cent in 1980, and presently accounts for over $18 billion in loans outstanding. Much of the increase in PCA lending has come as lending volume by individuals (e.g., merchants and suppliers) has declined.

Use of PCA credit varies substantially from district to district. Generally, farmers east of the Mississippi River rely much more heavily on PCA credit than farmers elsewhere. Since 1970, the market share of nonreal estate farm debt held by PCA's has actually declined in 10 of the 12 districts. Substantial growth during the 1970s has only occurred in the Louisville and Sacramento districts. Tables 4 and 5 compare the lending volume of PCA's with other non real estate lenders.

In addition to providing credit, many PCA's provide other services which have helped to attract customers. These services include insurance plans, point-of-sale credit, electronic farm recordkeeping, and the leasing of equipment needed in the farming operations of the stockholders.

PCA's have been able to offer credit at very competitive rates, and much of their growth probably stems from this fact. Like the Federal Land Banks, FICB's raise their funds in national money markets and then channel these funds to the PCA's within each district. Most PCA's charge a variable interest rate that reflects the average cost of obtaining funds from the district FICB plus an increment to cover their own operating expenses. An additional increment may be charged by some PCA's to account for the risk associated with individual borrowers. Table 6 lists the interest rates charged by commercial banks and PCA's.

PCA's may also participate with commercial banks or other lenders in agricultural lending. In 1974, when participations were first authorized, there were just over $20 million in outstanding participations, with more than half that volume coming from private lenders in the Wichita district. At the end of 1979, however, outstanding participations had risen to over $242 million, doubling in 1978 and 1979. Commercial banks wishing to participate with PCA's must fulfill one of the following terms: (1) retain at least 50 per cent of the total loan, (2) retain at least 10 per cent of each loan as long as the ratio of agricultural loans to total loans is not materially reduced, or (3) retain the maximum amount of the participated loan permitted to which the bank is subject. More and more banks are turning to PCA's as a source of credit. However many banks are hesitant to participate with PCA's whom they see as their chief competitor. Moreover, banks must also buy (often on behalf of a borrower) participations certificates in the PCA at the same rate as a regular borrower buys PCA

Table 4
OUTSTANDING NONREAL ESTATE FARM DEBT, JANUARY 1

Per Cent of Total Held by Various Lenders
(Excludes CCC Loans)

	Total (millions of dollars)	Commercial Banks	PCA's	OFI's Indebted to FICB	Farmers Home Admin.	Individuals and Others
1950	5,154	39.8	7.5	1.0	6.7	45.0
1955	7,196	40.8	8.0	0.8	5.8	44.6
1960	11,528	41.8	11.8	0.8	3.5	42.2
1965	16,366	42.7	13.9	0.8	3.9	38.7
1970	21,168	48.8	21.2	1.0	3.7	25.2
1975	35,225	51.8	27.0	1.1	3.0	17.2
1978	51,142	50.3	26.4	0.7	6.1	16.4
1979	59,600	47.4	25.2	0.9	9.0	17.5
1980	70,300	43.9	25.7	0.9	12.8	16.7

SOURCE: E. Melichar and M. Waldheger, **Agricultural Finance Databook,** Annual Series, Division of Research and Statistics, Board of Governors of the Federal Reserve System, Washington, D.C., November 1979 and recent revisions supplied by the authors.

Table 5
OUTSTANDING NONREAL ESTATE FARM DEBT, JANUARY 1, 1979

Per Cent of Total Held by Various
Institutional Lenders in Farm Credit Districts
(Excluding CCC Loans)

District	Total (millions of dollars)	Commercial Banks	PCA's	OFI's Indebted to FICB's	Farmers Home Admin.
1	1,326.0	39.1	35.8	–	25.1
2	1,374.8	43.5	34.4	3.0	19.0
3	3,213.3	24.8	52.9	0.1	22.3
4	5,159.5	40.0	55.2	0.2	4.7
5	2,137.9	39.3	27.1	1.3	32.3
6	5,202.6	69.2	23.0	0.3	7.5
7	6,253.4	53.5	30.7	1.1	14.7
8	8,667.4	70.7	17.8	0.6	10.9
9	5,341.2	70.6	20.1	2.6	6.7
10	3,448.6	64.0	21.9	2.6	11.5
11	4,592.5	60.9	33.5	1.3	4.2
12	2,887.4	55.7	32.6	0.1	11.6

SOURCE: "Nonreal Estate Farm Debt, 1979," Statistical Bulletin 22, Farm Credit Administration, Washington, D.C., November 1979.

stock. In spite of these objections, substantial expanded growth for PCA-bank participation relationships is expected during the 1980s.

BANKS FOR COOPERATIVES

The third major branch of the Farm Credit System is made up of the Banks for Cooperatives (BC's). Since five out of six American farmers are members of agricultural cooperatives, a special system was established in order to facilitate credit flows to these farmer-owned organizations. Thus, the Banks for Cooperatives are charged with furnishing a dependable and continuing source of funds to more than 3,000 agricultural cooperatives nationwide. Like the other two branches of the FCS, the BC's were originally funded by the Federal government but have since become entirely owned by the cooperatives who borrow from them. Loans are made to meet any credit need an eligible cooperative may have in order to perform its marketing, processing, supply, or service function. Thus the loans can be used for either meeting operating expenses or for acquiring additional physical facilities.

Table 6
NONREAL ESTATE LOAN INTEREST RATES

	Commercial Banks*	PCA's†	Spread (Banks-PCA)
1950-59 (Average)	6.5	6.4	0.1
1960-69 (Average)	7.0	6.9	0.1
1970-76 (Average)	8.4	8.3	0.1
1977:I	8.8	8.2	0.6
II	8.7	8.1	0.6
III	8.7	7.9	0.8
IV	9.1	8.0	0.8
1978:I	9.2	8.4	0.8
II	9.3	8.7	0.6
III	9.6	9.0	0.6
IV	10.4	9.2	1.2
1979:I	11.0	10.0	1.0
II	11.2	10.6	0.6
III	11.3	10.9	0.4
IV	13.6	11.0	2.6
1980:I	14.1	12.1	2.0

SOURCE: E. Melichar and M. Waldheger, **Agricultural Finance Databook,** Monthly Series, Board of Governors of the Federal Reserve System, Washington, D.C., March 1980, p. 28.

*Dollar-weighted average of effective rates on loans of $1,000 or more made in the first full business week of the second month of the quarter.

†Unweighted average of quoted rates, first day of quarter. Stock purchases and loan fees required of borrowers from these cooperatives are not taken into account in the rates shown.

To be eligible for loans from the BC's, the cooperatives, members must be farmers, ranchers, producers of aquatic products, or those cooperatives engaged in providing business services such as rural electricity, telephone, or other utility services. The cooperatives must also do at least 50 per cent of their business with or for their members, and at least 80 per cent of their voting stock must be in the hands of farmers, ranchers, or commercial fishermen (70 per cent for utility cooperatives). Additionally, the cooperatives must have a method of voting which allows only one vote per member.

Term loans are offered by the BC's in order to finance long-term assets on working capital and are usually secured by the assets being financed. Interest rate policies vary slightly among the banks, but generally variable interest rates are charged on the funds advanced for the actual time the funds are outstanding. Seasonal loans are also made in order to finance current assets such as inventories or peak seasonal needs, and they generally mature within 18 months. Seasonal loans may be secured or unsecured, depending on the purpose of the loan. In addition to credit, BC's also provide counseling in financial management, planning methods, credit standards, and auditing procedures. Thus, the scope of the Bank for Cooperatives' services ranges well beyond that of strictly providing credit.

As in the other branches of the FCS, when a cooperative borrows from a BC, the borrower must purchase stock or its equivalent. In this case, the stock requirement cannot exceed 10 per cent of the amount of the loan. Voting stock is issued only to cooperatives, and each stockholding cooperative is entitled to vote in the affairs of the district BC.

The Central Bank for Cooperatives was established to provide a systemwide clearinghouse for financing cooperatives. When a district BC has reached its lending limit to any one cooperative (25 per cent of the net worth of the district BC for term loans), the Central Bank may be invited to participate in the loan. Moreover, other district BC's may also join in the loan in order to raise the funds needed.

Loan growth by the BC's has been climbing rapidly during the last 10 years. In 1970, loans outstanding at BC's totaled $1.7 billion. By 1979, however, loans outstanding had grown to $8.1 billion and accounted for over 60 per cent of the credit extended to agricultural cooperatives. Just as importantly, the amount of new loans made during one year have risen from $2.1 billion in 1970 to more than $19 billion in 1979. About 55 per cent of the loans are made to cooperatives dealing in the marketing or processing of livestock or crop products, 34 per cent to cooperatives dealing in farm supplies, and about 11 per cent to cooperatives dealing in farm business services and utilities. Table 7 summarizes loan growth at the Banks for Cooperatives.

FUNDING THE FARM CREDIT SYSTEM

Funds for most of the operational expense and lending functions of the FCS are acquired through the sale of bonds and notes in the national money market. Direct responsibility for the acquistion of some $50 billion per year lies with the system's fiscal agency located in New York City. After each bank has determined and reported its funding need, the fiscal agent will consult with bond dealers and with the governor of the FCA to determine the amount and terms of the issues to be offered. The system's bonds and notes are then sold through a nationwide chain of securities dealers. The dealers in turn sell the bonds to other private and public investors, thereby tapping a source of funds which otherwise might not flow into the agricultural sector. Only the amount of bonds issued by the U.S. Treasury exceeds the amount issued in the national money market by the Farm Credit System.

The securities presently issued by the FCS are consolidated systemwide notes and bonds and are the joint and several obligations of all 37 Farm Credit Banks. Prior to 1979, however, each of the three branches issued their own securities, and they still maintain the authority to do so. All of the issues are backed by collateral requirements equal to the amount of securities outstanding. In addition, Farm Credit Banks maintain large credit lines with commercial banks for extra protection. As a result, Farm Credit System securities have an excellent track record, in that investors have never failed to receive principal and interest when due.

The securities are issued in several forms. Discount notes of 5- to 270-day maturity are sold daily in denominations of $50,000, $100,000, and $1 million. Bonds of 6- and 9-month maturity are sold each month, while long-term bonds are sold in January, April, July, and October, and as the needs of the banks dictate. Bonds having original maturity of less than 13 months are issued in denominations of $5,000, while bonds with maturities of 13 months or more are issued in $1,000 denominations. Thus, the securities provide investment alternatives where timing, flexibility, and maturity selections are important considerations.

Yields of Farm Credit securities are generally higher than on comparable U.S. Treasury issues, and interest income derived by investors is exempt from state and local taxation. Individuals, corporations, and state and local governments all hold FCS securities. Commercial banks are the largest single group of buyers and hold about 30 to 40 per cent of

Table 7
BANKS FOR COOPERATIVES LOAN VOLUME
(Millions of Dollars)

Year Ending June 30	Loans Made During Year	Per Cent Change From Previous Period	Loans Outstanding End of Period	Per Cent Change From Previous Period
1970	2,105.1	––	1,748.6	––
1971	2,764.5	31.3	2,035.8	16.4
1972	2,911.9	5.3	2,061.4	1.3
1973	4,880.0	67.6	2,725.2	32.2
1974	6,821.1	39.8	2,733.0	0.3
1975	8,895.4	30.4	3,371.4	23.4
1976	9,778.7	9.9	4,412.7	30.9
1977	11,769.9	20.4	5,275.8	19.6
1978	12,684.4	7.8	6,109.5	15.8
1979*	18,950.7	36.0	8,147.6	33.0

* For year ending December 31, 1979.

SOURCE: "45th Annual Report of the Farm Credit Administration and the Cooperative Farm Credit System, 1977-78," Farm Credit Administration, Washington, D.C., June 1979, p. 101.

Table 8
YIELDS ON FARM CREDIT AND TREASURY SECURITIES

Farm Credit Sale Date*	FCS 6-Month Bond†	U.S. Treasury 6-Month Bill‡	Spread
1-24-79	10.50	10.09	.41
5-23-79	10.25	10.23	.02
9-19-79	11.40	11.03	.37
1-30-80	13.15	12.78	.37
4-23-80	13.25	12.84	.41

* Farm Credit Securities sold on these dates are issued in the first week of the following month.

† Coupon rates for new issues of Farm Credit Banks Consolidated Systemwide Bonds.

‡ Coupon equivalent rate of 6-month Treasury Bills based on 182-days maturity and issued in the same week of the Farm Credit sales.

the outstanding issues. Flexibility is also enhanced by an active secondary market for the securities. Table 8 summarizes recent activity for Farm Credit System securities.

Proceeds from the sale of the securities are distributed to the district banks, and since each bank has generally participated in several issues it can calculate an average cost of funds. The local PCA, for example, would pay that cost plus a spread for operation expenses of its district FICB. The PCA would then lend the money to farmers with an additional increment to cover its own costs.

OUTLOOK AND CONCLUSIONS

The effectiveness of the Farm Credit System in the 1980s will depend on its ability to expand both its funding and its lending markets. Greater competition and more sophistication in money markets will likely necessitate an increasingly aggressive procurement policy by the FCS. As countries, corporations, institutions, and individuals bid for growing credit needs, the FCS will be pressed to meet its own needs competitively. To do so, the FCS is investigating the possibilities of selling its securities in the Eurobond and Asian bond markets, as well as establishing fiscal agency branch offices in London and Hong Kong.

If present trends continue, outstanding farm debt will double by 1990. Moreover, as agricultural technology advances, the industries serving agriculture will also experience increased credit needs. Thus, conditions will challenge all agricultural lenders to establish loan programs which can effectively meet changing credit needs and yet remain competitive.

For the FCS, the expansion of agricultural credit needs will require enlarging their service capabilities. PCA's expect to increase their market share of short- and intermediate-term lending by 10 per cent during the 1980s. With major farm cooperatives moving toward establishing their own export concerns, increased pressure will come upon the FCS for the financing of agricultural exports—a $38 billion market that is expected to double in the next 5 years. Federal Land Banks will also be pressed for credit as farms become larger in size and scope of production. In addition, if loan-to-deposit ratios at country banks remain relatively high, more and more banks may turn to the FCS in order to establish participation or discounting relationships.

The Farm Credit System has established itself as an important source of agricultural credit. Its ability to gather funds from diverse sections of the economy (as well as from foreign investors) and to channel them to agriculture through a cooperative system of lending institutions has been beneficial to farmers for more than 60 years. In spite of its size and recent growth, the FCS is still owned and controlled by the farmers and ranchers that it serves, and the system maintains sufficient flexibility to service local needs. As a result, the Farm Credit System will play a major role in the determination of U.S. agricultural production and marketing efforts in the coming years.

Research Working Papers of the Federal Reserve Bank of Kansas Ctiy

Research Working Papers published by the Federal Reserve Bank of Kansas City from June 1979 through April 1980 are listed below. Copies may be obtained by writing the Research Division, Federal Reserve Bank of Kansas City, 925 Grand Avenue, Kansas City, Missouri 64198.

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