

Agricultural Lending Practices Of Selected Financial Institutions In Alabama

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INTRODUCTION

AGRICULTURE, through necessity, is making major production adjustments.

The economic growth problem in agriculture is closely related to the development of farm sizes that will effectively utilize modern technology and production methods. Therefore, the adoption of modern agricultural technology on individual farms will require higher capital investments. As commercialization and specialization continue to increase, credit will play an important role in capital needed to maintain or increase farm incomes.

The role of credit will become more important as other sources of capital such as inheritance, personal savings and renting prove insufficient. In the past, use of farm credit has increased substantially, and credit institutions have improved their policies and programs to meet this increased volume of credit. Even though some changes have been made there are still many needed adjustments in credit service. Changes must be made if credit institutions are to continue to meet the changing farm credit needs and to safeguard the lender's investment in view of current and prospective conditions.

The agricultural credit complex — made up of individuals, commercial banks, Federal Land Banks (FLB), Production Credit Associations (PCA), The Farmers Home Administration (FHA), the Commodity Credit Corporation (CCC) and life insurance

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companies — is a very desirable arrangement. The suppliers of credit have no rigid spheres of influence and tend to complement each and also furnish wholesome competition. The FLBs, PCAs and life insurance companies, from the farmers viewpoint, are able to provide unlimited amounts of credit. The rationing of funds by these agencies is on a quality basis, almost exclusively, rather than on a price basis. The supply of credit provided by banks and individuals cannot normally be thought of as unlimited because it is rationed on both a price and quality basis. Occasionally these latter groups, banks and individuals, may find it necessary to restrict lending to agriculture because of heavy investments in other fields. But there are enough lenders and the competition is sufficient so that if one credit source is restrictive on new loans other lenders usually take up the slack.

There is general agreement that prospective credit supplies to agriculture are likely to be adequate for expected demand; therefore most farmers, except those with very low equities, have access to all the credit they are willing to use for making adjustments. However, lenders must do more than simply provide the amount of capital needed if they are to effectively serve the credit needs of a dynamic agriculture. The quality of service is equally important. Quality includes competent and intelligent evaluation of the prospects and risks in the operation to be financed. It also includes counseling on financial management when appropriate including particularly schedules of advances and repayments. In the credit market for agriculture, the lender's decision in each individual case is considered to be the most practical means of allocating agricultural credit as a resource.

Objectives

Any changes in the practices and policies adopted by farm credit institutions in order to serve agriculture more effectively should come only after the present performance of credit institutions' needs are analyzed. This study included an investigation of loan policies, including loan limits, terms of borrowing, processes and criteria of granting a loan and how these can be altered by lenders for the benefit of all parties. The objectives of this credit study were: (1) To analyze and evaluate current lending practices of selected Alabama agricultural credit institutions. (2) To determine the extent of commercial bank involvement in agricultural affairs in Alabama.

Source of Data

Primary data were obtained from 14 commercial banks, 4 Production Credit Associations, and 3 Federal Land Bank Associations by personal interview of management personnel during the Fall of 1968. Primary data of two different categories were obtained: (1) aggregate data on farm credit extended during 1968, and opinions concerning the farm credit situation in the area where the institution provided services, and (2) a detailed description of a sample of five or six farm credit users from each institution. To supplement data obtained from sample banks, completed questionnaires obtained from nine commercial banks in Alabama which responded to the Annual Agricultural Credit Situation Survey conducted by the American Bankers Association in 1968 were used. These data were combined with the primary data since they provided the same type of information regarding bank activities in farm lending programs.

In addition, other secondary data were collected from three credit supervisory agencies. Items included in these secondary data and their sources were as follows: (1) Alabama Farm Credit Data (1962 through 1968) — Agricultural Committee, The American Bankers Association. (2) Summary of The 1966 Survey of Farm Loans at Commercial Banks — Federal Reserve Bank of Atlanta. (3) Report of the 1966 Survey of Production Credit Associations Borrowers and Their Loans — Farm Credit Administration.

Secondary data were used to evaluate the aggregate agricultural credit situation in Alabama while data collected from the initial survey or The American Bankers Association were analyzed to appraise farm loan policies and procedures of credit institutions affecting the supply of credit to farmers.

Selection of Lending Institutions Sample

Since this study was concerned specifically with farm loan policies and procedures used by lending institutions in Alabama, an area probability method of sampling was used in selecting banks, PCAs, and FLBAs to be visited to obtain information for the study. This method permitted groups of banks to be selected rather than individual banks. Banks selected by this method were further divided according to their capital and surplus values. Only one bank was chosen at random from the same size of bank grouping to ensure a distribution according to bank size. Since only

one PCA and FLBA serve a given area, their size or volume of business was not considered in the selection of sample.

COMMERCIAL BANK LOANS TO FARMERS

The most important source of farm loans in Alabama is commercial banks. On January 1, 1968 insured commercial banks in the State held farm loans totaling 147.2 million dollars. This amount was 40.7 million greater than that held by the next largest lender, Federal Land Bank Associations. Of the total amount of loans held by commercial banks in 1968, non-real estate loans accounted for 74.5 million dollars or 50.6 per cent of all farm loans. Real estate loans accounted for 72.7 million dollars, or 49.4 per cent of total farm loans. Farm loans made by commercial banks increased by 91 per cent from 1961 to 1968. Non-real estate loans as a proportion of all farm loans declined constantly during this period whereas real estate loans increased from 42.1 per cent to 49.4 per cent of the total value of farm loans. The volume of farm loans supplied by commercial banks is likely to continue this increase.

The following sections deal with the sample of 42 banks (including 21 branch banks) in Alabama. All of these banks had one or more types of loans to farmers during 1968 and comprised 10.8 per cent of Alabama's commercial banks. The volume of farm loans in sample banks accounted for 19.8 per cent of Alabama's farm loan volume in 1968. Loans discussed will be those obtained during 1968. The original amounts of loans outstanding January 1, 1968 were not enumerated.

Bankers' Preference For Farm Loans

There were 266 commercial banks in Alabama, of which 252¹ or 95 per cent, had one or more types of loans outstanding to farmers in 1968. Because of the number and distribution, bankers tended to be closer to agricultural lending markets than most other financial institutions. In mid-1968, agricultural loans of sample banks accounted for 12 per cent of their total loan volume. For individual banks, agricultural loans varied from six to 48 per cent of total loan volume, with the median at 22 per cent. This indicates the degree to which farmers rely on commercial banks for financing and how banks, in turn, rely on farmers for loan markets.

¹ 122 branch banks were not included in the count.

TABLE 1. NUMBER OF SAMPLE BANKERS EXPRESSING PREFERENCES FOR LOANS BY TYPE OF LOANS, ALABAMA, 1968

Type of loan	Preferred	Not preferred	No opinion
	No.	No.	No.
Residential mortgage loans.....	9	7	5
Consumer loans.....	14	2	5
Commercial loans.....	7	3	11
Agricultural loans.....	6	6	9
Total.....	36	18	30

Since individuals relied heavily on commercial banks for credit needs, bankers interviewed were asked to indicate preference for making four different types of loans, residential mortgage loans, consumer loans, commercial loans and farm loans. Consumer loans were preferred by the largest number of bankers, Table 1.

Chi-square tests were made in order to determine if there was any significant difference among preferences of bankers according to types of loans. Comparisons in each case were between two types of loans, Appendix Table 1.

There were significant differences between bankers' preferences for consumer loans and agricultural loans, and between consumer loans and commercial loans. Generally consumer loans were preferred to agricultural loans and commercial loans. There was no definite relationship in size of banks, in terms of capital and surplus, to bankers' preference for farm loans.

A difference was found in preference for farm loans according to farm loan volume of the bank as a proportion of total loans. For 11 banks in which farm loans exceeded 25 per cent of their total loans, six preferred to make farm loans whereas only two preferred to make other types of loans. For the remaining three no opinion was expressed. For banks in which farm loans were 25 per cent or less of total loans, four out of 10 preferred other types of loans while the remaining six indicated no preference on types of loans.

The most important factor affecting bankers' preference for a certain type of loan seemed to be the level of loan-deposit ratios.² Bankers with less demand for loans than they could have granted from their resources generally expressed no opinion on preferences. For instance, for five banks, in which combined farm loans amounted to 48 per cent of all farm loans, no opinion was expressed. Reasons for "no opinion" were that they would be able

² A chi-square value was determined by using the actual number of banks preferring consumer loans and banks expressing no opinion according to their loan-deposit ratio. $X^2 = 10.315$, $df = 2$, significant at 0.10 level and at the 0.01 level.

to handle from their own sources all legitimate loan requests, as long as customers had established satisfactory credit ratings in the past and could provide required security for loans. However, bankers with a high loan-deposit ratio generally had a preference as to a type of loan. Bankers preferring consumer installment loans explained that this type of loan would bring relatively high earnings. The monthly installment feature would provide a certain amount of stability to the return flow of funds that might enable them to accept higher loan ratios. As long as bankers faced a high loan-deposit ratio, they tended to venture into consumer loans or other loans with short-term maturities such as farm operating loans.

Trends of Agricultural Credit Demand

The overall trends of agricultural adjustments, increase in average farm size, decline in number of farms and large credit requirements of farmers were well reflected in trends of farm credit volume and number of farm loans at rural banks. To get data on the trend of agricultural credit demand by farmers, bankers were asked to indicate any changes that had occurred in volume and number of loans in 1968 compared to 1963. They were also asked how many farm loan requests exceeded the legal loan limits of individual banks and characteristics of "unacceptable" farm loan applications for reasons other than exceeding legal loan limits.

Changes in Farm Credit Demand

Farmers' credit needs have increased with size and volume of enterprises. Therefore, the aggregate trend of farm adjustments occurring in Alabama was reflected in farm loan portfolios of commercial banks. More than a third of the bankers interviewed indicated that volume of farm loans had substantially increased from 1963 to 1968, Table 2. On the other hand more than a third

TABLE 2. CHANGES IN VOLUME AND NUMBER OF FARM LOANS REPORTED BY BANKERS BETWEEN 1963 AND 1968, ALABAMA

Changes between 1963 and 1968	Volume of farm loans		Number of farm loans	
	Banks	Banks	Banks	Banks
	<i>No.</i>	<i>Pct.</i>	<i>No.</i>	<i>Pct.</i>
Substantial increase.....	8	38	1	5
Some increase.....	6	29	0	0
Unchanged.....	3	14	7	33
Some decrease.....	3	14	8	38
Substantial decrease.....	1	5	5	24
Total.....	21	100	21	100

also said there had been some decrease in number of farm loans.

By 1968, most major farm creditors increased their financial support to the farm economy. Commercial banks had in their farm loan portfolios about one-fourth of farm credit extended by major lenders. Compared to 1963 and 1968, the volume of farm loans at banks had increased by 26 per cent and 4 per cent respectively. However, the rates of change in agricultural credit in the individual banks showed some differences. Factors responsible for these differences for the rates of changes were reported to be: (1) the type of local economic activity, (2) the number of potential farm borrowers, (3) bankers' desire to provide credit to farmers which depended upon the availability of loanable funds, and (4) degree of competition from other credit agencies in the community.

Five of the eight banks in which volume of farm credit had substantially increased had substantially fewer loans than in 1963 and two banks had some decrease in number of loans. Thus, loans made in 1968 were larger in size, on the average, than in 1963. Only one national bank had gained a large increase in both volume and number of farm loans. This was because the bank had changed its policy in order to increase the loan-deposit ratio by increasing farm loans since 1963. Also, this bank served as a correspondent bank to many rural banks and participated in over-line requests referred by other banks.

Six banks indicated that their loan volume had increased. The number of loans remained unchanged however, with the exception of one bank in which the number of loans declined. In the other seven banks where volume of farm loans declined or was unchanged, bankers indicated that the contributing factors to decreased volume were: (1) the overall decreases in agricultural activities in their area, and (2) the increased competition from PCAs and FLBAs. However, all bankers who had experienced an increase in farm loan volumes cited the high capital needs of farmers to enlarge and improve farm businesses were the most important factors to these increases. There were no significant relationships of bank size, measured in terms of capital and surplus, to farm loan volume in proportion to total loans.³

³ $X^2 = 6.443$, $df = 4$, not significant at 0.10 level.

Overline Loan Requests

Since the size of farms has continued to increase for many years, it was thought that credit requests of many farmers might have risen to exceed the amount that rural banks could legally grant to an individual from their own resources. Only two banks in 21 reported that they received overline requests for farm loans that exceeded their legal lending limit during 1968.

Legal lending limits fix the maximum outstanding credit that a bank may extend to an individual or a firm. The legal limits are intended to provide safeguards against serious financial difficulty if one borrower defaults. For national banks, the legal limit for most loans was 10 per cent of the bank's capital and surplus, except that loans secured by cattle may go up to 15 per cent. Alabama imposes similar limits to its chartered banks. The Banking Laws of Alabama state:

"No bank shall lend to any one person, firm or corporation more than twenty per cent of its capital, unimpaired surplus and undivided profits; and, where any loan exceeds ten per cent of the capital, unimpaired surplus and undivided profits, such excess shall be secured by good collateral or other ample security; . . ." (Title 5, sec. 82., Alabama Code, Recompiled 1958.)

It was expected, therefore, that the proportion of banks with overline requests would be strongly correlated with size of bank, especially when size was measured by capital and surplus. Both of the banks that received overline requests in 1968 had approximately \$300,000 capital and surplus. One bank had two overline requests by a total amount of \$436,000 and the other had only one overline request for \$136,000. These banks indicated that they solved all three of these overline farm loan demands by referring the entire amount of loans to a correspondent bank. The one national bank which did not disclose number and volume of participation loans had granted loans on a participation basis when the originating banks were unable to grant the entire amount of loan. The estimated number of participation loans was relatively small but total dollar amount was believed more significant. Survey data indicated that overline requests would remain rather unimportant to small banks at least for the foreseeable future.

Characteristics of Unacceptable Farm Loan Request in Banks

The farm loan requests turned down for reasons other than exceeding legal limit and any exerted restraints by policies of banks

TABLE 3. NUMBER AND PROPORTION OF BANKERS EXPRESSING REASONS FOR REJECTING LOANS AND PROPORTION OF REJECTED LOAN REQUESTS BY REASONS, 12 SAMPLE BANKS, ALABAMA, 1968

Reasons for rejection of farm loan	Banks reporting		Proportion of rejected loans
	No.	Pct.	Pct.
Excessive amount of outstanding debt from one or more sources.....	9 ¹	82 ²	20
Unsatisfactory physical security.....	8	73	21
Bad credit rating of applicant.....	7	64	30
Poor management ability.....	7	64	33
Longer term than bank was willing to grant.....	5	46	19
Others ³	3	27	75

¹ Banks reported in the table would not necessarily equal 12 since all banks indicated more than one reason for rejection of loan requests.

² Per cent of banks reporting was computed on the basis of 12 banks.

³ Others included starting farmers whose credit rating was not established and marginal farmers whose continuation of farming was in doubt.

on farm portfolios were referred to as unacceptable farm loans. Characteristics of rejected loan applications were obtained from 12 banks. A considerable degree of variability prevailed in reasons listed for rejecting loan applications. Major reasons for rejecting loan applications are presented in Table 3.

Bankers mentioned that most unacceptable operating or intermediate-term loan requests were for small convenience loans of less than \$300 from marginal farmers. These loans were believed to be used for paying old bills to other institutions and would have to be secured by a few acres of crops and/or several cows. Bankers indicated that since the number of marginal farmers was declining every year, they would not get an adequate number of such loan requests to cover cost of handling or servicing them. Eighty-eight per cent of all unacceptable loan requests were for operating or intermediate term loans.

The reasons most frequently mentioned by bankers for rejecting long-term requests were unsatisfactory physical security and poor management ability of applicants. Bankers generally turned down long-term loan requests when they felt that credit extended to these farmers would be unprofitable for them or the amount requested greatly exceeded the amount banks were willing to grant on the basis of security provided. Also many bankers indicated that they preferred not to extend loans to beginning farmers because of lack of security and insufficient information on managerial ability.

Farm Loan Practices

The structural adjustments taking place in agriculture dictate the intensity of credit demand; therefore, the policies of bankers and their procedures in examining loan requests have an impact on the economic growth of many individual farms. If present trends continue, banks can expect an expansion in aggregate loan demand. Farmers with large loan requests plus improved income flows will request better banking services.

One future requirement of farm borrowers may include continuous debt financing to implement long-run production plans rather than operating on a year to year basis as in the past. Under these conditions, bankers may be expected to evaluate loans more in terms of productivity and less on value of collateral pledged by farmers.

An attempt was made to analyze certain dominant loan characteristics which exemplified the banker's need for security and profit. The security, method of repayment, interest rate, and foreclosure frequency reflected bank policy and the relative bargaining strength of the borrower and the lender.

Security Requirements for Farm Loans

The relative importance of real estate and chattel mortgages as security was evidenced by larger proportions of farm loans secured by these two types of security. Without exception, all bankers interviewed required collateral for farm loans longer than one year. These bankers indicated that they considered loan applications on individual merit but the decisive factor in extending farm loans, especially loans having maturities for more than one year, was adequacy of chattel and/or real estate mortgages.

Data revealed that 95.5 per cent of loans having maturities more than one year were secured by real estate and/or chattel mortgages while only 49.5 per cent of loans with maturities less than a year had mortgage securities. Unsecured loans amounted to only 4.5 per cent of loans with longer than one year terms whereas 50.5 per cent of short-term loans were unsecured. As an average, banks held real estate and chattel mortgages on 81.5 per cent of farm loans and the remaining 18.5 per cent were extended on an endorsed basis without any security.

Kinds of securities required for farm loans differed little among banks studied. All bankers indicated that unless a customer had established a good credit rating and the term of the loan applied

TABLE 4. PERCENTAGE OF SAMPLE BANKS REQUIRING VARIOUS KINDS OF SECURITY ACCORDING TO MATURITIES OF FARM LOANS, ALABAMA, 1968

Classification of security	Maturities of farm loans		
	Less than one year	One to three years	Over three years
	<i>Pct.</i>	<i>Pct.</i>	<i>Pct.</i>
Unsecured	21.4	-----	-----
Endorser or Comaker	7.1	-----	-----
Chattel Mortgage	57.2	58.3	-----
Real estate mortgage	14.3	41.7	100.0
a. First mortgage only	-----	-----	(83.3)
b. Second mortgage	-----	-----	(8.3)
c. Real estate plus chattel mortgage ¹ ..	(14.3)	(41.7)	(8.3)
Total	100.0	100.0	100.0

¹ Including first and second real estate mortgages.

for was a year or less, they strongly preferred to hold a chattel and/or real estate mortgage, Table 4.

Approximately 83 per cent of bankers required a first mortgage on real estate as security for loans having maturities of over three years. The size of loans granted to an individual averaged between 50 and 60 per cent of the appraised value of real estate. Bankers stated that upward pressure in price of farm real estate had been strongly influenced, in many instances, by high prices of some land with a definite locational advantage for future commercial or industrial sites. Therefore bankers used a conservative ratio in their appraised value of farmland in order to eliminate dangers of credit overextension based on current market values.

The use of real estate and chattel mortgages as security was also important for loans maturing 1 to 3 years. While only 58.3 per cent of banks required a chattel mortgage, the remaining banks required use of a real estate in addition to a chattel mortgage, or vice versa. This was true if one kind of security was not sufficient to cover the entire loan. For loans maturing within a year, almost two-thirds of bankers requested borrowers to pledge real property or other collateral.

Lenders indicated that real estate mortgages were used in an effort to ensure that one lender would handle all the borrower's credit needs. Also, the use of chattel mortgages on crops, cattle and equipment was intended to ensure that borrower would apply income derived from the financed activities to repay loans as agreed by both parties. Bankers indicated that by increasing security requirements, marginal borrowers and speculative uses of real estate credit could be discouraged, and consequently banks would have fewer high risk loans in their loan portfolios.

Loan Delinquencies

Although farm debt has increased substantially since 1950, bankers reported favorable trends in the traditional indicators of quality of farm loans and in the financial position of borrowers. Typically, the current record of borrowers was measured from two different types of trends — loan delinquencies and loan repayments.

The record of debt repayment was reflected through repossession and foreclosures. The number of bankers reporting farm loan delinquencies and ratios of these loans to amounts outstanding according to type of loan are shown in Table 5. There were no foreclosures or repossessions of collateral during 1967 and 1968 by banks surveyed.

Based on data obtained from 21 commercial banks, only an average of 0.5 per cent of non-real estate loans involved payments that were 30 days overdue in the quarter ending June 30, 1968. Delinquent non-real estate loans were held by 38 per cent of banks. Only one banker reported delinquent real estate loans. The low rate of delinquencies among these banks was attributed to growth in farm assets, and incomes and productivity since 1950, all of which had strengthened the farmer's debt repayment ability. Also, the majority of bankers stated that adjustments in credit procedures had tended to maintain the overall quality of farm loans.

The increased use of term loans which gave farmers flexibility in financing their operation and loans in which repayment schedules closely matched farmers' cash receipts have contributed to minimize credit risks. Records of farm loans made in 1968 by these banks showed clearly that quality of loans did not fall below respective desired levels of individual bankers. By increasing

TABLE 5. NUMBER OF BANKS REPORTING DELINQUENCIES OF REAL ESTATE AND NON-REAL ESTATE LOANS, 21 BANKS, ALABAMA, 1968

Delinquencies	Farm real estate loans	Nonreal estate loans
	No.	No.
Banks reporting none.....	20	13
Banks reporting one or more.....	1	8
Ratio of dollar amount delinquent to amount outstanding:		
Less than 1.5 per cent.....	0	7
1.5 per cent and over.....	1	1

lending standards — more margin in collateral, limits in credit extension to marginal farmers, and use of credit life insurance — bankers in Alabama were able to hold loan delinquencies to a low level.

Analysis Aids for Farm Loan Requests

Although all commercial banks have the same general objectives of expanding deposits and investing funds profitably and safely, the management policy for agricultural lending varied depending upon: (1) the nature and types of deposits, (2) balance of the investment portfolio, (3) alternative demand for credit, and (4) rate of return on farm loans. By utilizing adequate credit management tools, bankers were able to minimize the risk and thus both lenders and borrowers benefited from the loan.

A farm credit file with accurate information will aid bankers investigating loan requests prior to extending or refusing the application. Forms designed to obtain information concerning the credit needs, financial position, repayment capacities and managerial skills of applicants varied considerably among bankers interviewed. The number of banks utilizing various types of forms and the proportion of customers requested by banks to submit the specified forms are shown in Table 6.

Bankers made considerable use of financial statements in serving their customers. All banks studied kept financial statements on either all customers or major customers. However, the conditions under which financial statements were used varied widely. In three banks, an intensive effort was made to keep current financial statements on all customers even though they did not have active loan accounts with the banks. Farm borrowers at these

TABLE 6. NUMBER OF SAMPLE BANKS AND PERCENTAGE OF FARM BORROWERS ON THE AVERAGE PER BANK USING APPLICATION, FINANCIAL AND OPERATING STATEMENTS, FARM BUDGETS AND SPREAD SHEETS, ALABAMA, 1968

Classification of forms	Banks using forms	Banks not using forms	Per cent of customers required to submit forms
	No.	No.	Av.
Farm loan application.....	21	5 ¹	100
Financial statement.....	21	5 ¹	43
Operating statement.....	11	10	30
Farm budget.....	5	16	28
Spread sheet.....	6	15	20

¹ Five banks used one form designed for both as application and financial statement.

banks were asked to revise their financial statements at least once a year. Three other banks required financial statements for only unsecured loans. The other 15 required statements from all customers who wanted to borrow \$1,000 or more.

Five bankers used the loan application and the financial statement in one combined form in order to simplify paper work. They reported that by utilizing this combined form bank examiners could be satisfied and an adequate financial record of borrowers could be maintained. An average of 43 per cent of total borrowers was required to submit financial statements per bank.

Operating statements were not used to a large extent by bankers in making farm loans. Ten out of 21 bankers interviewed did not use operating statements under any circumstances. Only 11 bankers used an operating statement only in a limited number of instances when data for preparing such statements were obtainable without much difficulty or when the line of credit being considered was questionable.

Five out of 21 bankers reported the use of farm budgets (cash flow schedules) in their lending. Use of farm budgets was usually limited to customers with loans in excess of \$5,000, an average of 28 per cent of total borrowers.

Six bankers maintained a comparative analysis sheet in evaluating some farm loans. The number of customers who provided necessary information for the comparative analysis sheet totaled less than 20 per cent of total borrowers per bank. Bankers who used only the loan application commented that the financial status of the majority of farmers had been known to them for many years; thus loans could be extended without additional forms. Borrowers of these loans had very favorable repayments records. Bankers also indicated that they had no intention of using additional forms in the foreseeable future as long as they could keep old customers with good credit ratings. It was not possible to evaluate effectiveness of individual banks utilizing such forms because farm loan delinquencies have remained at the same low level in banks utilizing specially designed forms and banks using no additional forms.

Interest Rates for Agricultural Loans

Since the interest rate is an index of the "price" of loans, considerable study was devoted to those factors associated with interest rates. A statistical analysis of interest rates by banks, pur-

pose of loans and term of loans was made. In the granting of loans, a banker has a good deal of discretion. He can attract or discourage loans in two ways: either by manipulating the rate of interest that he charges or by manipulating the other conditions of a loan, such as more severe collateral requirements or by stiffening the requirements for granting loans.

Perhaps of all the characteristics associated with farm loans, the interest rate was negotiated most vigorously at certain banks and with particular customers. However, other banks had rates well established and quite rigid. Also some borrowers did not actively seek lower rates. There was a general tendency toward rigid rates among banks surveyed. The interest rates banks were charging for operating, intermediate-term and real estate loans varied among banks as presented in Table 7.

Analysis of interest rates stated by bankers for different types of loans yielded mean interest rates of 6.91, 6.88, and 6.70 per cent for operating, intermediate-term and real estate loans, respectively. Statistical tests indicated that the mean interest rates did not differ significantly.

The weighted average rate of interest on all three types of loans was 6.83 per cent. However, discounting or computing interest using the "add-on" basis increased effective rates significantly. Effective interest rates carried by loans outstanding as of July 1, 1968 are presented in Table 8 according to purpose of loan.

The mean effective interest rates were analyzed statistically to determine if there was a significant difference among them. Results indicated that the probability of obtaining a significant difference among sample means was not too great to be attributable

TABLE 7. NUMBER OF 21¹ SAMPLE BANKS BY TYPE OF LOAN ACCORDING TO REPORTED INTEREST RATES, ALABAMA, 1968

Interest rate charged	Type of loan			Total
	Operating	Intermediate-term	Real estate	
	No.	No.	No.	No.
6.00-6.49.....	2	2	2	6
6.50-6.99.....	5	4	11	20
7.00-7.49.....	10	12	5	27
7.50-7.99.....	2	2	2	6
8.00 and over.....	1	0	0	1
Total number of banks.....	20	20	20	60
Mean interest rates.....	6.91	6.88	6.70	6.83

¹ One of the sample banks which indicated more than one interest rate for a type of loan was omitted from this analysis.

TABLE 8. COMPUTED EFFECTIVE INTEREST RATES ON LOANS OUTSTANDING BY PURPOSE OF LOAN, 20 ALABAMA BANKS, 1968

Purpose of loan ¹	The mean interest rate
	<i>Pct.</i>
Current expenses	8.55
Feeder livestock.....	8.38
Other operating expenses.....	8.58
Intermediate-term investment.....	9.22
All other livestock.....	9.09
Machinery and equipment.....	8.93
Buy farm real estate.....	8.22
Others ²	6.75
Average.....	8.47

¹ Classification of loan purposes in this table was modified from the table used by the Federal Reserve Bank of Atlanta in *Monthly Review*. August 1967.

² Includes consolidation debt and debt for consumer durables.

to chance.⁴ Therefore on the basis of evidence presented, it was concluded that interest rates, either stated or effective, did not vary significantly according to type or purpose of loan.

Relationships between a number of variables indicating the borrower's financial position and average interest rates on loans extended to farmers were analyzed, Appendix Table 2. It was found that interest rates paid by farm borrowers varied significantly according to amount of outstanding loan, net worth and total assets of borrowers. The relationship was negative, that is with increases in amount of loan, net worth, and total assets, interest rates tended to decline. The relationship observed in the other two variables, total debt and annual gross sales of farm produce with average interest rates, were not very strong although they were still negative, as an average.

In view of the close association between amount of outstanding loan, net worth and total assets of borrowers and average interest rates it was likely that the type of borrower a particular bank had was quite important in determining the interest rate structure of a particular bank.

COMPARISON OF FARM LOAN PRACTICES OF PRODUCTION CREDIT AND FEDERAL LAND BANK ASSOCIATIONS WITH COMMERCIAL BANKS

The credit sources available to serve agriculture appear to be adequate as to both number and kinds of facilities. In addition to commercial banks, credit is provided through Production Credit

⁴ The computed value for $F(6,43)$ was 0.47, not significant at 0.10 level.

Associations, Federal Land Bank Associations, The Farmers Home Administration, life insurance companies, dealers and individuals. Among these suppliers of farm credit, two agencies, PCAs and FLBAs which specialize in short- and intermediate-term, and long-term credit respectively, have provided a major share of the credit to agriculture in Alabama.

Non-real estate loans of eight PCAs in 1968 amounted to almost 60 per cent of the loan volume from commercial banks. Also farm real estate loans of 18 FLBAs were one and a half times greater than the average of commercial banks. These two credit institutions provided strong competition for commercial banks, and also improved the quality of agricultural credit service significantly. Thus, comprehensive analysis of loan management of commercial banks, PCAs and FLBAs was made in order to reveal differences in loan policies and procedures.

Comparability of Outstanding Loans

As of January 1, 1968 PCAs held \$43.8 million in non-real estate loans outstanding to approximately 5,400 farmers, and FLBA's real estate loans outstanding were \$106.5 million to about 11,200 farmers in Alabama. The average size of non-real estate loans made at PCAs and that of real estate loans of FLBAs was \$10,800 and \$9,500 respectively. On the average, therefore, farmers who borrowed from PCAs and FLBAs used substantially larger amounts of credit compared to the average size loan of \$3,101 made by commercial banks.

To seek factors responsible for the differences in the average amounts of credit used by these groups of farmers, farm and farm operator characteristics were analyzed. According to survey data, a relatively smaller proportion of PCA and FLBA customers than bank customers had assets of less than \$25,000. The proportion of bank customers who had assets less than \$25,000 was 54.6 per cent; whereas, the proportions of PCA and FLBA customers were 37.1 and 39.8 per cent respectively.⁵

When the average size loan for farmers at the three institutions was compared, PCA and FLBA customers had a larger volume of debt than customers of commercial banks, but if average size of loans was compared for farmers in the same asset groupings, the differences were not large enough to be significant when the probable sampling errors were considered.⁶

⁵ $X^2 = 18.076$, $df = 6$, significant at 0.10 level and also at 0.01 level.

⁶ $X^2 = 3.994$, $df = 6$, not significant at 0.10 level.

Compared with bank borrowers, a larger proportion of PCA and FLBA customers had gross farm incomes above \$10,000.⁷ The proportion of farmers with annual gross farm incomes in excess of \$10,000 was 42.7 per cent for PCAs and 31.9 per cent for FLBAs but only 21.1 per cent of bank customers had gross farm incomes greater than \$10,000. However, size of debt per borrower in the same farm income groupings was not significantly different among borrowers of the three institutions.⁸

Thus the higher average debt of PCA and FLBA borrowers was explained by a higher concentration of farmers with larger assets and higher annual gross farm incomes using larger loans than farmers with smaller assets and lower gross farm incomes.

It appeared that none of the farm and farm operator characteristics obtained in the survey explained why farmers with larger assets and higher gross farm incomes made relatively more use of FLBA and PCA loans than commercial banks. The differences in the financial position of borrowers at the three institutions were therefore assumed to be related to institutional differences between banks, PCAs and FLBAs.

Institutional Differences

The data indicated that loan activities of PCAs and FLBAs attracted a higher proportion of the larger farm units than commercial banks. Many factors might have accounted for this heavy concentration by PCAs and FLBAs among the larger farm units. Factors which differentiated lenders were: (1) loan limits, (2) PCA and FLBA specialization in agricultural lending, (3) security requirement for farm loans, (4) interest rates, and (5) repayment schedules.

Loan Limits

Loan limits are affected by structural restrictions of lending institutions. This is illustrated in the case of banks. Since loanable funds of banks were generally obtained locally, in some cases banks were not able to obtain sufficient funds at competitive rates to meet their farm credit requests at going rates.

Individual overline requests have probably been handled through the banking system with greater efficiency than local demands that have resulted from overall liquidity shortages. Most large correspondent banks were eager to participate with their

⁷ $X^2 = 17.566$, $df = 4$, significant at 0.10 level and also at 0.01 level.

⁸ $X^2 = 4.788$, $df = 4$, not significant at 0.10 level.

customers in handling overline loan requests of farmers.⁹ But in many instances, smaller banks preferred not to be bothered with such credit, and the loans were eventually made by two or more credit agencies. Unlike the structural problem or the restriction imposed on banks, the PCA and FLBA limit on loan maxima may be exceeded in cases approved by the supervisory authorities and both PCAs and FLBAs can obtain whatever loan funds are required from the investment market.

PCA and FLBA Specialization in Agricultural Lending

In the past, commercial banks have held a dominant position in agricultural credit, but as science was applied to agriculture, bank management has realized its limitation in dealing with technical farm problems. Also the increased demand by farmers for larger size and longer-term loans necessitated bankers to require more competent supervision of agricultural loans. Since PCAs and FLBAs specialize in farm lending, they have advantages over banks in their operation. Some of these advantages are discussed in this section.

Agricultural Specialists — The survey indicated that only 3 out of 21 banks had agricultural specialists and among them only two specialists were with institutions having total deposits of \$100 million or more. PCAs and FLBAs generally collected more information on a farmer-borrower operation, inspected the operations more often and did a more thorough job of analyzing repayment potential. This specialization enabled them to make larger loans in certain instances than many bankers would. Therefore agricultural specialists' knowledge and desire to appraise probable returns may become essential if banks are to remain competitive in providing effective credit to farmers.

Variation in the Number of PCAs, FLBAs, and Banks — Variation in the number of facilities is another important difference between banks, PCAs and FLBAs. One PCA and FLBA may serve 5 or 6 counties while several banks may serve one county. This factor influences the relative number of loans between the two sources, and may also influence the average size of loans. Farmers would probably not drive the greater distance to a PCA to arrange for small loans. Furthermore, a PCA fieldman would probably not canvass a large area for the smaller farm loans.

⁹ Based on the response of four banks which also served as correspondent banks for rural banks.

Security Requirements for Farm Loans

FLBA loans must be secured by duly recorded first mortgages on farm real estate. Since farm mortgage loans are written for a long period of time, the value used in determining the loanable amount is the normal market value of the farm. FLBAs surveyed indicated that loans were extended up to 68.4 per cent of the appraised normal market value of farmland including the value of the association stock equal to 5 per cent of the loan value. Farm borrowers were required to purchase this stock in order to get the loan. In most cases, the amount of the loan did not exceed 50 per cent of the current market value of the farm.

Farmers who borrowed from PCAs were also required to purchase association stock equal to 5 per cent of the amount of their loan. Except for loans made on the basis of an open note, most are secured by a mortgage or chattel property and/or real estate. Practices of banks and PCAs resulted in differences between the kinds of security used by these two lenders. For example, in a bank, about one-half of loans maturing within a year were secured by chattel and/or real estate mortgages. However, 96 per cent of the amount of loans with maturities longer than a year extended by banks had chattel and/or real estate mortgages. In contrast, 96 per cent of loans with maturities for less than a year made by PCAs had mortgages and almost all of the amount of loans had farm real estate and/or chattel mortgage security. While banks indicated that loans with maturities for less than one year showed less dependence on chattel or real estate mortgages for security, PCA loans in the same category relied on greater use of chattel and real estate security. Percentages of loans advanced on various kinds of security by types of lenders are shown in Table 9.

TABLE 9. PERCENTAGES OF LOANS ADVANCED ON VARIOUS KINDS OF SECURITY, BY SAMPLE BANKS AND PCAs, ALABAMA, 1968

Security classification	Maturities of farm loans			
	Less than one year		One to three years	
	PCA	Banks	PCA	Banks
	<i>Pct.</i>	<i>Pct.</i>	<i>Pct.</i>	<i>Pct.</i>
Unsecured.....	4.2	50.5 ¹	0.4	4.5 ¹
Endorser.....	1.5		0	
Chattel mortgage.....	43.3	49.5 ²	46.6	95.5 ²
Real estate mortgage.....	4.9		9.6	
Chattel and real estate mortgage.....	46.1		43.4	
Total.....	100.0	100.0	100.0	100.0

¹ This figure includes both unsecured and endorser loans.

² This figure includes chattel mortgages and/or real estate mortgages.

Since 71 per cent of PCA borrowers used package credit for their farming operation, securities were required usually for the entire amount even though a part of the loan was for current expenses with maturities less than a year. Apparently, such securities held by PCAs for package credit resulted in a higher per cent of mortgage securities for the portion of loans maturing within a year.

Interest Rates

As of July 1, 1968, all FLBA loans were made at interest rates of 6.75 per cent. Interest rates charged by PCAs varied according to the type of loan but the mean interest rate on loans for PCAs surveyed was 7.16 per cent during the first six months of 1968. PCAs and FLBAs charged interest only on the actual number of days the money was used which helped to reduce the cost of credit for PCA and FLBA borrowers.

Commercial banks had to pay competitive rates for interest for deposits as well as charge competitive rates for loans in order to compete with other financial institutions. Since loanable funds of banks are generally obtained locally, banks may not be able to obtain sufficient funds at competitive rates to meet their agricultural credit requests at going rates.

On the other hand, interest rates for PCAs and FLBAs were determined by costs of borrowed funds for the Cooperative Farm Credit system as a whole plus a margin for operating expenses and reserves. Thus PCAs and FLBAs usually had a competitive advantage in extending agricultural credit.

While the mean interest rate stated on loans was 6.83 per cent for sample banks which was lower than PCA's, the effective interest rate on bank loans was 8.5 per cent. This considerably higher rate than that for PCA loans resulted because of the add-on or discount method of interest rate charging practices by banks.

Repayment Schedules

Banks, as compared to PCAs, had a slightly higher percentage of their loans maturing within a year, 91 per cent compared to 81 per cent. Number of PCA and bank loans with maturities of between 1 and 3 years was 6.6 and 7.7 per cent respectively. Maturities over 3 years were 12.3 per cent for PCAs and 1.6 per cent for banks. Forty per cent of the real estate loans extended by FLBAs had maturities of less than 15 years and 60 per cent had maturities between 16 and 20 years.

For one-year loans made by banks and PCAs, repayment dates were scheduled at the normal marketing time for major products sold. For dairy and poultry farmers, quarterly or monthly repayment schedules were usually practiced by both lenders. Only one-third of the banks studied reported the volume of farm loan renewals during 1968 slightly above the 1967 level, while the remaining banks indicated no change or a decrease. PCAs surveyed indicated about 29 per cent of their loans would be renewed at the end of 1968.

SUMMARY AND CONCLUSIONS

As the efficiency of farm production has been greatly enhanced by technological developments, credit from external sources has played an important role as farmers have attempted to achieve greater profits via increased sales and/or reduced unit costs. Increasing returns to size have hastened farm enlargement and greatly increased demand for farm real estate credit. Since costs of many farm supply items such as machinery, breeding stock and specialized buildings can only be recovered after many years of use, each increase in purchased inputs from farm supply industries has resulted in a corresponding increase in credit demand for long-term credit. Thus most moves toward greater farming efficiency have involved larger quantities of credit for longer terms.

With the continuation of agricultural adjustment, credit may mean the very survival of the many farm firms even where it is used in relatively small amounts. Conversely, business activity of all financial institutions related to agriculture faces effects of changing farm production and income. As credit has become more of an indispensable production tool for many farmers, managers of farm credit institutions have been confronted with a challenge in furnishing credit to finance the increasing capital requirements of farmers.

This study was concerned with agricultural lending activities of selected rural banks, Production Credit Associations and Federal Land Bank Associations. Lending activities were considered in terms of commercial banks' propensity to extend credit to farmers and the incidence and methods of lending by rural banks. In addition lending practices of PCAs and FLBAs were studied in respect to differences compared with commercial banks.

Banks selected for the study had agricultural loans amounting to 12 per cent of the total number of loans made by these banks

at the beginning of 1968. Among the individual banks, farm loans ranged from 6 to 48 per cent of total loan volume.

The responses of bankers interviewed about agricultural credit indicated that no clear pattern had developed in agricultural lending, but the majority of bankers indicated that they had experienced an increase in farm loan volume and a decrease in number of loan requests over the past years. They cited increases in capital needs of the remaining farmers and the departure of the many marginal farmers as the major contributing factors for changes in farm credit. Bankers interviewed reported that loan delinquencies in their banks had remained at a low level for the past few years.

Some banks loaned funds to farmers strictly on a security basis as long as loanable funds were available while the propensity of some bankers to lend to farmers appeared to be based on the estimated farm and nonfarm income of farmers and favored self-liquidating loans.

The majority of banks used a note dated for the full period of the loan while some banks extended funds to farmers on an installment basis. These banks usually charged interest on original amounts resulting in a higher average cost of borrowing for farmers. Rates of interest on loans extended by PCAs and FLBAs were always charged on the outstanding balance and resulted in a lower average cost of borrowing than for bank loans.

The major reasons for rejecting a loan request were unsatisfactory physical security and poor management ability of applicants. Officers of PCAs and FLBAs cited a few cases of rejected loans which were not large enough to evaluate statistically.

While the staffs of PCAs and FLBAs involved mostly agricultural specialists, only larger banks hired farm specialists. Also few banks utilized forms to supplement the examination of loan requests while officers of PCAs and FLBAs used financial and operating statements, farm budgets and spread sheets extensively to determine potential profitability of loans for both lenders and borrowers.

The basic conclusion arising from this study was that there was not uniformity in agricultural lending among banks and among individuals within banks. The variation was found to be significantly associated with borrowers' financial position and loan demand of the nonagricultural sector of the economy in the community where banks were located.

One of the major impressions gained from this study was the hazard attached to making generalized statements pertaining to bank practices in handling farm loans. However, there were some indications which reasonably lead to the conclusion that rural banks followed a more conservative lending policy than the other institutions studied. Although the banking business is subject to restrictions from both state and Federal Reserve regulations, there remained a rather wide area where bankers could consider the utilization of certain advantages inherent in banking. Advantages in location and varied financial services of banks could be utilized to compete with PCAs and FLBAs.

Commercial banks did not appear to have any uniform criteria to be used in evaluating farm loans. Although there were comments from some bankers to the effect that loans were made on the basis of investment productivity, the responses dealing with security collateral pointed to the conclusion that borrower's net worth was a major factor in making loans. Furthermore, the lender was more apt to look with favor upon lending to a farmer with a good credit rating.

APPENDIX

APPENDIX TABLE 1. CHI-SQUARE VALUES FOR PREFERENCE OF BANKERS
FOR VARIOUS TYPES OF LOANS, ALABAMA, 1968

Preference of bankers tested between two types of loans	N	X ²	df	P<0.10
Residential mortgage loans and agricultural loans.....	42	1.84	2	NS ¹
Agricultural loans and commercial loans.....	42	1.28	2	NS
Agricultural loans and consumer loans.....	42	6.34	2	S ²
Consumer loans and residential mortgage loans.....	42	3.86	2	NS
Consumer loans and commercial loans.....	42	4.78	2	S
Residential mortgage loans and commercial loans.....	42	4.10	2	NS

¹ Not significant.

² Significant.

APPENDIX TABLE 2. SIMPLE CORRELATION COEFFICIENTS OF SELECTED
VARIABLES WITH AVERAGE INTEREST RATES ON LOANS EXTENDED
TO BORROWERS, SAMPLE BANKS, ALABAMA, 1968

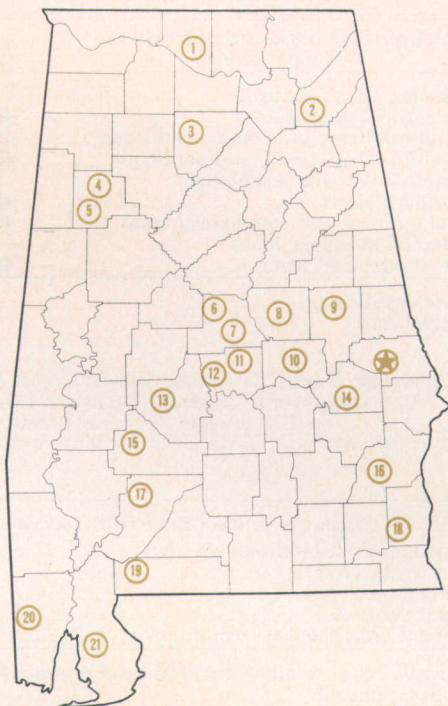
Variable	Correlation coefficient (r)	Significance
Correlation of average interest rates with borrowers:		
Amount of outstanding loan (X ₁).....	r = -0.863	S ¹
Net worth (X ₂).....	r = -0.880	S
Total assets (X ₃).....	r = -0.720	S
Total debt (X ₄).....	r = -0.290	NS ²
Annual gross sales of farm produce (X ₅).....	r = -0.386	NS

¹ Significant at or above the 0.05 level of probability.

² Not significant.

AGRICULTURAL EXPERIMENT STATION SYSTEM OF ALABAMA'S LAND-GRANT UNIVERSITY

With an agricultural research unit in every major soil area, Auburn University serves the needs of field crop, live-stock, forestry, and horticultural producers in each region in Alabama. Every citizen of the State has a stake in this research program, since any advantage from new and more economical ways of producing and handling farm products directly benefits the consuming public.



Research Unit Identification

★ Main Agricultural Experiment Station, Auburn.

1. Tennessee Valley Substation, Belle Mina.
2. Sand Mountain Substation, Crossville.
3. North Alabama Horticulture Substation, Cullman.
4. Upper Coastal Plain Substation, Winfield.
5. Forestry Unit, Fayette County.
6. Thorsby Foundation Seed Stocks Farm, Thorsby.
7. Chilton Area Horticulture Substation, Clanton.
8. Forestry Unit, Coosa County.
9. Piedmont Substation, Camp Hill.
10. Plant Breeding Unit, Tallassee.
11. Forestry Unit, Autauga County.
12. Prattville Experiment Field, Prattville.
13. Black Belt Substation, Marion Junction.
14. Tuskegee Experiment Field, Tuskegee.
15. Lower Coastal Plain Substation, Camden.
16. Forestry Unit, Barbour County.
17. Monroeville Experiment Field, Monroeville.
18. Wiregrass Substation, Headland.
19. Brewton Experiment Field, Brewton.
20. Ornamental Horticulture Field Station, Spring Hill.
21. Gulf Coast Substation, Fairhope.