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THE PROFITABILITY OF AGRICULTURAL CUSTOMERS FOR COMMERCIAL BANKS IN THE SOUTHEAST

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Changes which have occurred in the U. S. agricultural and economic environments over the past few years have important implications for the financing of agriculture. Increased dependence on purchased inputs, coupled with inflation in all areas, has placed added emphasis on the need of farmers to secure capital to fund their operations. A parallel concern is the ability and willingness of financial institutions to supply adequate financing.

Commercial banks have a dominant position in the total agricultural market and as a result farmers are dependent on them (Melichar and Waldheger). Because of this dependence and for the health of the agricultural economy, commercial banks must continue to supply adequate amounts of funding. If banks are to do this, they must continue to perceive agricultural lending and relationships with agriculturally oriented customers as being consistent with their own profitability goals. Our research results indicate the relative importance and profitability associated with agricultural customers in comparison with other customers.

PAST RESEARCH

The ability and willingness of commercial banks to meet the credit needs of agriculture depend on several factors. If demand from the agricultural sector continues, overall loanable funds' availability, money market conditions, the return on alternative investments, and actions of other agricultural lenders will all influence the desire and capability of banks to lend to agriculture. The growth of holding companies, the expansion of branch banking, more readily accessible national money markets, easier marketing of negotiable instruments, and correspondent banking relationships have made it somewhat easier for rural banks to compete for available funds and thus be willing and able to meet the needs of agricultural borrowers (Snider). Some rural banks, however, still operate at a credit deficit and are unable to obtain funds necessary to meet rural credit demand (Federal Reserve Board of Governors).

A major problem confronting many banks is

that loan requests from farmers exceed legal lending limits. To meet these demands, banks must either have a working relationship with another financial institution or expand their own capital structure (Boehlje). Some research has indicated that even though rural banks may have been able to establish correspondent relationships with other institutions, these dealings are likely to be economically inefficient (Barry et al.). Typically, rural banks are required to keep large balances on deposit with correspondent banks as compensation for loan participation. Such requirements could significantly increase loan costs and lower credit availability in tight money periods (Barry). This situation would also tend to shift rural funds into urban areas (Shane).

The deposit relationship banks have with their customers is a primary factor influencing the bank's capacity to lend and invest (Hodgman). The fact that many customers who borrow also deposit directly affects the profitability of lending activities. Podolecki indicates that this "feedback" realized from the deposits of borrowers could generate as much as a 2 percent yield differential of loans over nonloan investment activities.

Rational bank management should adjust earning assets and investment portfolios to reflect relative costs and returns associated with all alternatives. Emphasis on the profit contribution of each borrowing relationship will aid in meeting overall profit maximization goals. Specific research by LaDue et al. examined the levels of deposits held by several customer types and the relative profitability of various loan categories. Their analysis, based on data from New York banks, implied that agriculturally oriented customers and accounts provide profitable business for the bank. Deposit balances, loss rates, recovery rates, and productivity of lending personnel working with agricultural loans were all favorable. Values for the sample loans indicated that comparable net returns could be received on farm loans and commercial loans even if the rate charged for farm loans were .77 percent lower.

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EMPIRICAL ANALYSIS

Data for our analysis were taken from Call Reports and samples of customer accounts from five Alabama Banks.¹ These data were selected to permit an analysis of the relative importance and profitability of each type of customer and loan category served by the banks. Banks were selected so that each major agricultural area of Alabama was included, giving a representation of the diverse agriculture in the state. Because agricultural and banking conditions throughout Alabama are similar to those in other Southeastern states, results should be comparable for other states in the region.

Deposit Comparisons

Deposit balances are important to a bank in that they increase reserve levels, thus increasing the possibility for investments and potential profit. The total sample included accounts of 90 active farmers, 84 retired farmers, 72 agribusinesses, 70 other commercial businesses, and 90 other individuals (Table 1). For

TABLE 1. AVERAGE CUSTOMER DEPOSIT BALANCE, CASE STUDY BANKS, 1977

Customer Category and Deposit Type	Number of Customers	Average Dollars
<u>Active Farmer</u>	90	
Checking		6,897
Savings		1,296
C.D.'s		6,202
Total		14,395
<u>Retired Farmer</u>	84	
Checking		5,414
Savings		3,411
C.D.'s		23,601
Total		32,426
<u>Agribusiness</u>	72	
Checking		22,323
Savings		1,530
C.D.'s		7,580
Total		31,342
<u>Commercial Business</u>	70	
Checking		13,582
Savings		1,063
C.D.'s		14,040
Total		28,685
<u>Other Individuals</u>	90	
Checking		2,100
Savings		1,378
C.D.'s		4,478
Total		7,956

the banks included in the study, agricultural customers (active farmers, retired farmers, and agribusinesses) accounted for about 68 percent

of all deposits. More important, the average balances held by these groups, respectively \$14,395, \$32,426, and \$31,342, were significantly different from those of nonagricultural categories. Active farmers had almost twice the levels of deposits as other individuals. Retired farmers and agribusinesses averaged more than either of the nonfarm categories. These deposit levels, particularly those of the retired group, emphasize the benefits that can accrue to banks that maintain a strong relationship with agricultural customers.

Profitability Analysis

Banks included in the study held loans in all major categories (Table 2). The fact that their

TABLE 2. AVERAGE ANNUAL LOAN VOLUME/BANK, AND PERCENT COMPOSITION FOR SAMPLE BANKS, 1973-1977

Loan Category	Average Loan Volume / Bank (\$000)	Percent Composition
Farm	5,829	8.6
Commercial	18,249	27.0
Installment	18,555	27.5
Mortgage	24,345	36.0
Other	614	.9
Total	67,581	100.0

portfolio was diversified indicates that alternatives for lending other than to agriculture were available.

Profitability of the commercial bank loan portfolio is influenced by many factors. Two of the most important, which were examined in our research, are the loan-loss rate and the personnel cost, both administrative and clerical, associated with the lending activities of the bank. Other variables affecting loan profitability are the rate of loan turnover, the level of competition from other lenders, usury laws and other limitations on interest rates that can be charged, and the portion of the bank's overhead allocated to the loan department.

The first step in determining the profitability associated with each type of loan was to examine the rates of loss and recovery. Total net loan loss, net loss per dollar loaned in each category, and the average recovery rate are given in Table 3. The greatest amount of net loss for the sample banks is in installment loans, 58.9 percent of total losses, and the least is in the farm category, only 3.4 percent of the total.

Installment loans have the greatest amount

¹A copy of the form used for data collection can be found in Moore's thesis.

TABLE 3. AVERAGE ANNUAL NET LOAN LOSS AND PERCENT OF TOTAL LOSS, LOAN LOSS/DOLLAR LOANED IN CATEGORY, AND AVERAGE ANNUAL RECOVERY RATE BY LOAN TYPE FOR SAMPLE BANKS, 1973-1977

Type of Loan	Annual Net Loan Loss		Net Loss/Dollar Loaned		Recovery Rate
	Dollars	Percent	Dollars	Percent	
Farm	5,990	3.4	.10		26.8
Commercial	58,457	33.6	.32		35.4
Installment	102,623	58.9	.55		36.3
Mortgage	7,025	4.1	.02		39.2

of loss in proportion to the total loan volume, .55 percent or .55 cents per dollar loaned. Mortgage loans have the smallest rate of loss in proportion to amount extended, .03 percent. Though these small values may seem insignificant, they take on added importance when one considers that the total profit margin on loans for a bank may be as low as 2 percent. For the sample banks, the ratio of net operating profit to total loans is 2.2 percent (Moore).

The rate of recovery values indicate the relative percentages of past due loans that are eventually collected. Mortgage loans are the best with a 39.2 percent recovery rate. The rate for farm loans is the worst, 26.8 percent, indicating that eventual collection from those few who default on a farm loan is less likely than for the other categories.

The next area of cost examined in comparing the profitability of different types of loans was that associated with personnel. Loan officers, secretaries, and clerks are necessary for making and servicing loans. To analyze these costs and determine the productivity of personnel in each lending area, total working time and associated salaries of professional and secretarial staff were accumulated for the study banks. These totals were divided among the loan types to represent the amount of time and expense devoted to each loan category. Cost breakdowns were based on opinions of officers interviewed in each bank.

TABLE 4. AVERAGE LENDING PERSONNEL PRODUCTIVITY BY LOAN CATEGORY, FOR SAMPLE BANKS

Loan Category	Productivity Measure		
	Loan Volume/Lending Officer	Loan Volume/Clerical Worker	Salary Cost/Dollar Loaned
	Dollars	Dollars	Percent
Farm	6,844,802	6,140,514	.45
Commercial	9,397,206	5,071,658	.42
Installment	3,240,187	3,187,948	1.01
Mortgage	22,776,671	10,063,472	.20

Several productivity measures for lending officers and clerical workers were calculated (Table 4). Data on loan volume per person indicate that both lenders and clerical workers in the sample banks are most productive in mortgage lending and least productive in installment loans. The size of loans in each category would have an effect on this differential; however, data on size of loan by category were not available.

If profitability of lending is the major concern, the values given in the last column of Table 4 are the most important. These data indicate the relationship between total administrative cost and loan volume in each category or the cost per dollar loaned. Mortgage loans are the least expensive with a cost of .2 cents per dollar loaned and installment loans are the most costly, 1.01 percent.

Cost data for loan-loss and administrative expenses can be combined to give a more complete picture of the variability in expense associated with each loan category (Table 5). As would be expected from the data given heretofore, mortgage loans are the least expensive with all costs considered, .22 cents per dollar loaned in that category. Installment loans, which are the most expensive, have a cost of 1.56 cents per dollar loaned or 1.56 percent. Commercial loans and farm loans are the next most expensive, .74 percent and .55 percent, respectively.

Research results from a similar study conducted in New York (LaDue et al.) are also presented in Table 5. Even though the agricul-

TABLE 5. TOTAL COST (LOAN-LOSS AND ADMINISTRATIVE) PER DOLLAR OF LOAN BY LOAN CATEGORY FOR SAMPLE BANKS

Loan Category	Total Cost / Loan Volume	
	Alabama Percent	New York Percent
Farm	.55	.49
Commercial	.74	1.26
Installment	1.56	1.50
Mortgage	.22	.28

tural, industrial, and economic environments are somewhat different in the two states, overall results of the two analyses yield similar conclusions concerning the relative profitability of various types of commercial bank loans. The only major difference between the two sets of data is for commercial loans. The higher costs in New York possibly indicate higher levels of risk for business loans in the North. In both studies, agricultural loans compare very favorably with other lending alternatives. More explicitly, for Alabama data, the net return would be the same on a 10 percent mortgage

loan, a 10.33 percent farm loan, a 10.52 percent commercial loan, and a 11.34 percent installment loan.

SUMMARY

Persistent increases in both investment and operating capital requirements for agriculture are placing continued pressure on financial institutions for funding. Resource needs are such that many agricultural enterprises must obtain nonequity funds to continue to operate.

If commercial banks are to maintain their

role in agricultural financing, they must continue to perceive agriculturally oriented customers as being consistent with their operating goals. Our research results indicate that in terms of both deposits and loans, agricultural customers are consistent with a bank's goals. These customers have relatively high levels of deposits and low costs in terms of net loan-loss and administrative expenses. Data indicate that on the basis of loan cost, rational bank management would encourage agricultural investments and customer relationships.

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