
Priority Sector Lending by commercial Banks in the state of Andhra Pradesh: Borrower Lending Behaviour

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Abstract:

This study has found three mains results. It has found that Credit Standards Credit Standards Regard to Farmers negatively affected lending to farmers. The research has also found that Assessment of Return on Credit to Farmers negatively affected lending policy to farmers. Further, Assessment of Risk on Credit to Farmers negatively affected lending to farmers. This indicates that Credit Standards with Regard to Farmers; Assessment of Return on Credit to Farmers; and Assessment of Risk on Credit to Farmers reduces the amounts provided to the farmers in AP.

Policies should be put in place to help banks relax their credit qualification for farmers. Just like any other financial institution, banks want to ensure that their funds are safe as they lend to farmers. However, much as the farmers require funding, the risk control measures and their desire for profitability is stifling the lending.

This recommendation is based on the finding that tighter controls concerning credit standards to farmers, assessment of return on credit to farmers, and assessment of risk on credit to farmers tended to limit lending.

Key words: Borrower behaviour, Credit standards, Risk assessment, Relationship lending, creditworthiness

Introduction

The study sought to examine the relationship between borrower behaviors, relationship lending and credit repayment performance in Indian banks. The methodology used was cross-sectional survey design with a sample population of 150 respondents that were selected using purposive sampling technique and simple random sampling. A self-administered questionnaire was used to collect the data, processed and analyzed using the Statistical Package for Social Sciences (SPSS V16). Self-administered questionnaires and personal interviews were used to collect responses.

The findings revealed that there were significant positive correlations between borrower behaviour, relationship lending and credit repayment performance which implied that the way borrowers behaved during credit accessibility or after acquiring credit from the banks, had a lot of effect on determining the relationship that is formed during the lending process which would in turn affect effectiveness and efficiency of credit repayment. From the regression results, it was apparent that borrower behaviour was a strong predictor of credit repayment performance; therefore, the management of the banks should put a lot emphasis on

development of well nurtured relationships with borrowers so as to smoothen the lending process. Likewise, management should carry out a lot of awareness to the borrowers through training, workshops and dialogue so as to sensitize them on how best to invest the money and be able to pay back their debt without straining hard.

Statement of the Problem

The performance of credit repayment in Indian Banks has declined as evidenced by the recent RBI banking statistics, which revealed that the recovery rate and arrears rate were low, profitability margins had gone down and there was poor capacity utilization. Further evidence indicates continuous increase in the default rate. This could be due to poor borrower behaviour and lack of relationship lending as evidenced by unfavourable lending methodologies.

Purpose of the Study

The study sought to examine the relationship between borrower behaviour, relationship lending and credit repayment performance in Indian Banks.

Objectives of the Study

- i) To examine the relationship between borrower behaviour and credit repayment performance in Indian Banks.
- ii) To establish the relationship between relationship lending and credit repayment performance in Indian Banks.
- iii) To establish the relationships between borrower behaviour and relationship lending of the banks.
- iv) To examine the relationship between borrower behaviour, relationship lending and credit repayment performance in Indian Banks.

Research Design

A cross-sectional survey design was used to study the relationship between borrower behaviour, relationship lending and credit repayment performance. The survey was analytical and descriptive in nature studying the state of affairs of the bank at a point in time.

Research Questions

- i) What is the relationship between borrower behaviour and credit repayment performance in Indian Banks?
- ii) What is the relationship between relationship lending and credit repayment performance?
- iii) What is the relationship between borrower behaviour and relationship lending?
- iv) What is the relationship between borrower behaviour, relationship lending and credit repayment performance in?

Study Sample

The target population included 150 comprising of 50 credit officers and 100 business borrowers in all the Indian banks. Therefore, the responses from borrowers were represented by the number of the average monthly business borrowers from all the branches in central division.

Scope of the Study

The study focused on the relationship between borrower behaviour, relationship lending and credit repayment performance in Indian Banks.

Geographical Scope

The study was carried out in a sample of 10 public and private sector banks in India.

Significance of the Study

- i) The study will add to the already existing literature on determinants of credit repayment performance.
- ii) The study is expected to enable commercial banks identify the credit management policies that are critical in the lending business.
- iii) The financial institution used as a case study in the research will be able to improve on its lending policy formulation and assessment of its credit risk management abilities.
- iv) The study is expected to provide guidance to the Indian Banks and other regulators in the credit risk management policy formulation.
- v) The study is expected to stimulate further research into the area of lending policy formulation and performance of loans.

Data Sources

Primary Data

Primary data was obtained through the use of self-administered questionnaire to respondents following systematic and established academic procedures,. The questionnaires were used for the collection of data from borrowers and staff.

Secondary Data

Secondary data was obtained through the already existing bank's literature and any other literature from Indian Banks annual reports, credit performance reports, RBI Reports and journal articles. The reason for this was to make comparison of secondary data with primary data.

Data Collection Instruments

A self-administered questionnaire was used to collect data from respondents given that they were many in numbers that it would take much time to interview them face to face. More precise information was collected from the different categories of the respondents.

Measurement of the Variables

- Borrower behaviour was measured basing on the item scale adapted from Nguyen, (2007). The items in the domain were scored on the 5 point Likert scale ranging from strongly disagree (1) to strongly agree (5).
- Relationship lending was measured basing on the item scale adapted from Berger and Udell, (2002). The items in the domain were scored on the 5 point Likert scale ranging from strongly disagree (1) to strongly agree (5).

- Credit repayment performance was measured basing on the item scale adapted from Orebiyi, (2002). The items in the domain were scored on the 5 point Likert scale ranging from strongly disagree (1) to strongly agree (5).

Reliability and Validity of the Research Instruments

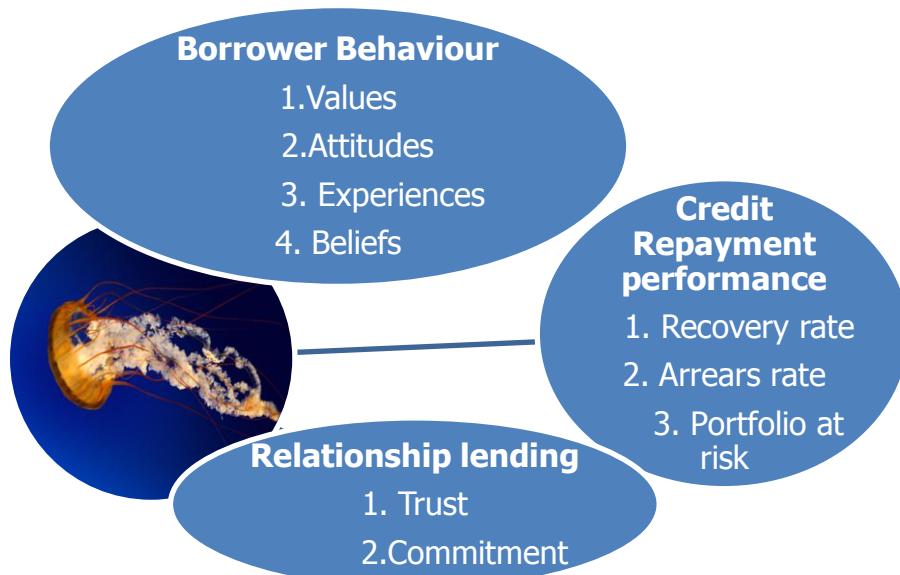
Closed questionnaire were developed in harmony with the guidelines specified by Sekaran (2000). First, an item analysis was done to see whether the items in the instrument belong there and a pre - test was carried out to check validity and reliability so as to minimize on vagueness of the results to be generated. The validity of the instrument was further measured using the Content Validity Index (CVI). Reliability (internal consistency and stability) of the instruments was tested using Cronbach's Alpha Coefficient. The researcher first tested inters - item consistency reliability to ensure that there was the consistency of respondents' answers to all items in the measure.

Conceptual Framework

The model shows the relationship between borrower behaviour, relationship lending and credit repayment performance. The independent variables are borrower behaviour and relationship lending with credit repayment performance as the dependent variable. The model shows that borrower behaviour and relationship lending enhance credit repayment performance.

According to the conceptual framework, borrower behaviour affected the relationship during the lending process between the borrowers and bank loan officers which in turn affected the credit repayment performance of the bank (recovery rate, portfolio growth and portfolio quality). From the model borrower behaviour was measured according to borrower values, attitudes, experiences and beliefs; relationship lending was measured according to trust and commitment and credit repayment performance was measured according to recovery rate, arrears rate and portfolio at risk.

CONCEPTUAL FRAME WORK



This chapter covered the review of the literature on the relationships between borrower behaviour, relationship lending and credit repayment performance.

Borrower Behavior, Relationship Lending and Credit Repayment Performance

The impact of credit reporting on repayment behaviour should depend on the presence of alternative disciplining mechanisms. One alternative disciplining mechanism is relationship banking. Theoretical models suggest that implicit contracts between lenders and borrowers, i.e., banking relationships, can motivate high effort and timely repayments (Cole, Goldberg and White, 2004). Empirical studies confirm that some credit market segments (in particular, small business lending) are pervaded by relationship banking and that these relationships improve the access of potential borrowers to credit (Berger and Udell, 2006). Experimental studies also confirm that long-term relationships are a powerful disciplinary device. In credit markets dominated by repeated interactions (e.g., working capital loans), information sharing may therefore not be required to discipline borrowers. In contrast, in credit markets dominated by short-term interactions (Brown, Falk, and Fehr 2004, Fehr and Zehnder 2005), borrowers may only be motivated to repay if they know that, due to credit reporting, their current behaviour is observable by other lenders.

Table 3.2: Validity and Reliability

Variable	Anchor	Cronbach Alpha Value
Borrower Behaviour	5-Point	.6125
Relationship Lending	5-Point	.9014
Credit Repayment Performance	5-Point	.8629

Source: Primary data

Data Analysis

Data collected from the primary source was compiled, sorted, edited for accuracy and clarity, classified, coded into a coding sheet and analyzed using a Statistical Package for Social Science (SPSS 16.0). During data analysis, cross tabulations, and frequency tabulations, Pearson's correlation analysis and regression analysis were used to present the results of the study. The cross tabulations and frequency tabulations were used to present the results for the sample characteristics, the Pearson's correlation analysis was used to present the relationships between the study variables and a regression analysis was used to study the variance in credit repayment performance caused by a combined effect of borrower behaviour and relationship lending.

Limitations of the Study

- Respondents withholding information due to fear of being victimized. However, the researcher assured them that the information would be kept confidential.
- Unwillingness of respondents to fill questionnaires. The researcher ensured consistency in contacting the respondents and made sure reminders are sent to them to fill the questionnaires.
- Respondents having a view of not obtaining any direct benefit from the research results. However the researcher assured them that they would benefit in the long run when the pertinent issues are raised to management and acted upon.

RESULTS AND FINDINGS OF THE SURVEY

The study begins with the demographic characteristics of the respondents such as age, educational level, tenure and gender which were all presented using cross tabulations. The descriptive for the items in the instrument were also presented using means for each item to define the relative opinion of the respondents for that particular item. The results from the Zero Order correlations and the regression analysis results were presented.

Sample Characteristics

To present sample characteristics, cross tabulations and frequency distributions were used to indicate variations of respondents based on age, educational level, tenure and gender. The sample characteristics were presented basing on the responses from staff and borrowers.

Correlation Analysis

In this section, the results that address the research questions are presented and Pearson's correlation test was used to answer the research questions of the study. To investigate the relationships among the constructs a Zero-order correlation table was generated. Pearson correlations were run to establish the relationships between the study variables so as to answer the objectives of the study. The results are presented in the table below:

Table 4.5: Relationships between the variables

	1	2	3
Borrower Behaviour (1)	1.000		
Relationship Lending (2)	0.2860	1.000	
Credit Repayment Performance (3)	0.405	0.355	1.000

** Correlation is significant at the 0.01 level (2-tailed).

Source: Primary data

Borrower Behavior and Credit Repayment Performance

Correlation results indicated a significant positive relationship between borrower behaviour and credit repayment performance ($r = .404^{**}$, $p<.01$). This is confirmation that borrower values, attitudes, experience and beliefs had a positive effect on the improvement of loan repayment rate, reduction on the arrears rate and portfolio at risk of the bank. The results imply that if borrower behaviour was in favour of the bank's credit terms, this would positively affect credit repayment performance.

Relationship Lending and Credit Repayment Performance

Correlation results indicated a significant and positive relationship between relationship lending and credit repayment performance ($r = .355^{**}$, $p<.01$). The results reveal that trust and commitment on the part of the borrowers and staff contributed much on the performance of credit repayment and therefore enhanced the credit repayment rate, caused a reduction in arrear rate and portfolio at risk at the bank. This is confirmation that if the management of the bank put a lot of emphasis on improving lending relationships, this would enhance credit repayment performance.

Borrower Behavior and Relationship Lending

Correlation results indicated a significant and positive relationship between borrower behaviour and relationship lending ($r = .260^{**}$, $p < .01$). The results provide basis that borrower values, attitudes, experience and beliefs positively determined borrower commitment and trust which implied that a unit change in borrower behaviour would enhance the quality of lending relationships at the bank. When the borrowers positively behave towards the credit terms of the bank, this would improve the quality of the lending relationships between the borrowers and the bank.

Borrower Behavior, Relationship Lending and Credit Repayment Performance

Correlation results indicated a significant and positive relationship between borrower behaviour and relationship lending ($r = .260^{**}$, $p < .01$), and relationship lending and credit repayment performance ($r = .355^{**}$, $p < .01$). This implies that the way borrowers behaved during credit accessibility or after acquiring credit from the bank, had a lot of effect on determining the relationship that is formed during the lending process which would in turn affect effectiveness and efficiency of credit repayment. Therefore, having favorable borrower values, attitudes, experience and beliefs in an environment which promotes trust and commitment on either parties, this would greatly enhance credit repayment performance at the bank.

Regression Analysis

Regression analysis was used to determine the extent to which borrower behaviour, relationship lending predict credit repayment performance in Indian banks. The results obtained are shown by table 4.6 below:

Table 4.6: Regression Analysis

Model	Un-standardized coefficients		Standardized coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.476	0.302		4.872	0.000
Borrower Behaviour	0.267	0.092	0.275	3.062	0.003
Relationship Lending	7.232E-02	0.076	0.102	.944	0.325
Dependent Variable: Credit Repayment Performance					
R Square = .271					
Adjusted R Square = .247					

Source: Primary data

Table 4.6 shows that the “adjusted R square” results indicate that the combination of borrower behaviour and relationship lending predict 25.5% of the variance in Credit Repayment Performance of Indian Banks. The most significant predictor of credit repayment performance was borrower behaviour (Beta= .275, t= 3.062, Sig. = 0.003) whereas relationship lending (Beta= .102, t=.944, Sig 0.325) was not found to be a significant predictor of credit repayment performance. The low value of the adjusted R square is revelation that other than borrower behaviour and relationship lending, there were other variables that influenced credit repayment performance at the bank.

DISCUSSION, CONCLUSION AND RECOMMENDATIONS

This study presents the discussion, conclusions, and recommendations arising out of the research findings. The study has generated several findings of which are in line with existing literature and previous research findings.

Borrower Behavior and Credit Repayment Performance

The findings revealed a significant positive relationship between borrower behaviour and credit repayment performance which implied that if the borrower behaviour was in favour of the bank's credit terms such that the borrowers complied with them then this would affect credit repayment performance.

Information asymmetries coupled with costly enforcement of repayment severely limits the profitability of lenders. The problem is particularly acute in agriculture because the nature of production precludes the use of many of the mechanisms used in microfinance. In addition, all farmers need cash at the same time, so allowing some farmers to borrow only after others have repaid their loans is problematic because some farmers would end up receiving credit when they do not need it. Even if all clients were allowed to borrow at the same time, joint liability may be ineffective if most production shocks are covariate.

Relationship Lending and Credit Repayment Performance

The findings showed a significant and positive relationship between relationship lending and credit repayment performance which implied that if the bank put a lot of emphasis on nurturing borrower relationships.

Therefore, the main benefit attributed to bank financing with respect to other sources of finance is that banks help overcome problems of asymmetric information by producing and analysing information and by designing loan contracts that improve borrowers' incentives.

Determinants of lending to farmers by public sector banks and private sector banks in Andhra Pradesh.

Liberalization of the financial market and financial reforms should be applauded for a gradual increase in financial intermediation, this doesn't seem to have had significant impact to famers as seen from the agricultural sector's performance in terms of farm yields over the years; a situation which has seriously constrained the agricultural sectors' development and to a large extent floundered attempts to alleviate poverty in the country. The attitudes that characterize bank lending to farmers and the information gap between banks and farmers complicates credit accessibility by farmers thereby curtailing their productivity and profitability. Theoretical approaches given by previous studies don't seem to agree on what issues determine commercial bank lending in general, let alone lending to the farmers. AP studies by focused on factors determining profitability in the formal banking sector which does not effectively lend to farmers. Other studies on micro finance institutions focused on credit rationing and its influence on the operations of small and micro enterprises. This study will help to address the factors that contribute to lending to farmers by commercial banks in AP.

A key development challenge over decades has been to increase agricultural productivity. One constraint facing farmers is lack of access to formal sector credit to enable them to take advantage of economic opportunities to increase their level of output, hence move out of poverty. Small scale farmers and the rural poor have been concerned about the design of various financial sector policies. Agricultural finance is dedicated to financing agricultural related activities such as; input supply, production, processing and distribution. Small loans to rural farmers, rarely justify the costs of legal action to call in a claim on land and then liquidate it. Similarly, movable assets such as livestock and equipment are also fairly high risk without proof of ownership and insurance cover. Consequently, access to credit by farmers is subject to lending terms of the banks and information asymmetry. Proper information sharing between

banks and the borrowers can reduce risks and increase access to credit by allowing banks screen borrowers at a lower cost. However, due to lack of accurate information about individuals or firms and their financial background, the banking industry finds it hard to select a good client.

Access to financial services can improve e-commercialization of smallholder agriculture and contribute to poverty alleviation among rural communities. The study asserts that more than seventy percent of AP population is rural and experiences high incidence of poverty. A major portion, if not all, of these rural folks depend on agriculture for their livelihood. There is, therefore, need to tailor financial products for these people to stimulate higher productivity in their farming activities as a channel of achieving pro-poor growth and poverty reduction. However, formal financial markets fail in the provision of funding to the majority of smallholder farmers in developing countries.

This descriptive survey is meant to enhance a systematic description that is as accurate, as valid and as reliable as possible regarding the responses on determinants of lending to farmers by commercial banks in AP. The variables to be studied include lending to farmers policy, credit to farmers' standards, credit terms for farmers' and recollection policy of loans to farmers.

Lending to Farmers by Commercial Banks

Commercial banks are the most important savings, mobilization and financial resource allocation institutions. These roles make them an important part of economic growth and development. In performing this role, commercial banks can mobilize financial resources and efficiently allocate them to productive investments. Irrespective of the economic policies of a country, commercial banks are interested in lending to numerous customers bearing in mind profitability, liquidity and solvency. However, the decisions to lend by commercial banks are influenced by a lot of factors. These factors include: the prevailing interest rates, the volume of deposits, the level of their domestic and foreign investment, their liquidity ratio, prestige and public recognition.

The agricultural sector in any country plays an important role in its economic growth and development through the contributions made to wealth creation, employment, food production, and income generation. Many farmers in AP, however, still find it difficult when it comes to accessing credit from the formal financial institutions. This has hampered their desire to increase performance through modern farming. This inaccessibility to formal financing has led to poor growth and sometimes decline in agricultural productivity over the past years. It is therefore expected that there is a positive relationship between lending to the private sector and lending by commercial banks. However, the lending is highly dependent on factors like profitability, liquidity, solvency, information asymmetry and availability of money for lending. With respect to farmers, lending to farmers policy is expected to be affected by the standard of credit to farmers, the credit terms for farmers and the recollection Policy of loans to farmers.

THE FARMING SECTOR

Access to credit is a major and complicated challenge in the agriculture sector. Commercial banks have the need to link their future profitably with the growth of lending to the agricultural segment. This means making agricultural lending a significant integral part of each of the commercial banks' growth strategy. Banks fail to appreciate the potential of the agriculture sector and the problems and realities related to production, products, and the political and economic organization of the value chain.

The agricultural sector is composed mainly of primary producers of small size, where the risks are greatest because primary producers have the least negotiating ability among the players in their industry making them mere price takers. The sector is also characterized by inefficient use of resources like water, fertilizer and land leading to low productivity. This sector is susceptible to environmental shocks like changes in weather patterns. Production is too small leading to inability to achieve economies of scale.

The agriculture sector is very capital intensive with low return on investment necessitating long term financing. The sector is a highly knowledge-based sector; rural based with slowly improving poor physical infrastructure. Even the introduction of new technology and new techniques is slow, coupled with lack of attention to financial literacy and to good business management. Its adaptation to changing market conditions on the supply side is also slow (Beck, Demirguc, Laeven, & Maksimovic, 2006).

Commercial Banks in AP and the Farming Sector

Nott (2003) argued that adequate and timely information enables lenders to set loan terms accordingly. Failure to exchange information between the lender and the borrower brings about information asymmetry between the two parties, and to address this problem, lenders limit their credit facilities to sectors which they perceive to possess limited information symmetry. In addition, to compensate for the high information asymmetry risks, lenders tend to charge higher interest rates, and lend for a short time period, hence constraining credit affordability. They also ask for collateral, limit the loan amount, and in most cases banks are located in urban centres which further limit credit accessibility by rural farmers. Become inefficient and forces market participants to take risks because it is assumed that information that is provided is always inadequate and untimely. In financial markets, information asymmetry arises between borrowers and lenders because borrowers generally know more about their projects than lenders do. Information asymmetry entails absence of accurate, timely, complete, quantity and quality information about the borrowers' ability and willingness to pay back the loan(Nott, 2003). According to Kenneth & Adrian (1997), the bank's decision to lend is often complicated by inadequate and inaccurate information. In the quest to screen out borrowers likely to default, banks need information. Although banks demand that borrowers disclose all the required information, borrowers often conceal information that is likely to work in their favour. It is therefore necessary to develop methods of evaluating the volume and quality of financial and non-financial information given by farmers.

In AP, the expansion and improvement of the productivity of the agriculture sector is one of the key drivers of the realization of the development goal. Farming is believed to be a generator of employment directly and indirectly while ensuring food security for AP. However, there seems to be financing issues in this sector especially with regard to formal financing. To reorganize financing to this key sector, it is important that the factors that determine lending to this sector in AP are discovered to be used as input when designing financing policy.

The agricultural sector in AP plays an important role in the economic growth and development. Farmers in AP however, still experience difficulties in accessing credit from the formal financial institutions to increase their performance through modern farming. The study therefore, seeks to find out the determinants of lending to farmers by commercial banks in AP, and how they affect the performance of farmers

Factors Determining Commercial Banks' Lending to Farmers

Information Quality and Quantity

Information is the degree of information content, form and time characteristics that give it value to specific individuals and users. It is observed that information asymmetry can be measured on the basis of information quality and quantity, where quantity is the adequacy of information according to the perception of the receiver. The quality of information is determined by the level of its completeness, correctness, and the impartiality with which it is collected. The more accurate it is the higher the quality. Information is of good quality if it is reliable, timely, complete, fair and consistent, and presented in clear and simple terms, relevant and understandable to its users .Information quality can be enhanced through increased information disclosure. Increased information disclosure has an incentive of reducing information search costs and promotes informed lending practice. Information sharing avails more information to parties involved which further reduces on the risks of information asymmetry. In developed countries, credit bureaus collect information from various sources and provide such records as the repayment behaviours of individuals and firms for a variety of

uses, thereby reducing information asymmetries so lenders are able to screen borrowers at a lower cost. As a result, lenders can make credit decisions faster and reduce risks, hence increasing lending. The quality and quantity of information desired by banks in most developing countries is still low and hence complicating sound decision making.

Credit Accessibility

Credit was defined by Ellis (1992) as a sum of money in favour of the person to who control over it is transferred, and who undertakes to pay it back. According to Penchansky& Thomas (1981) access refers to entry into or use of something or to the factors influencing entry or use. Thus, access to credit may be referred to as, the right to obtain or make use of or take advantage of borrowed money from a lender. In a developing country context, credit is an important instrument for improving and enhancing the productivity capacity of any sector. It also facilitates the flow of savings from surplus units to deficit units (Diagne et al, 2000).

The outcome of this is that only a small proportion of the total number of rural households and farmers credit from the formal sector. Again among those with access to the institutional credit, a very small group particularly the rich and the elites in the village receive a very large share of the total amount disbursed. Consequently, the overwhelmingly constrained borrowers are forced to turn to the rather expensive and unreliable informal credit sources (Okurut et al, 2004).

Loan Size

When dealing with credit applications lenders are never sure about the extent to which applicants are honest in the information they provide. Lending presents credit risks that have to be mitigated either by giving reduced loan amounts that the lender feels the borrower can pay, or by totally rejecting the application. Even with granted applications the lender has to reduce default risks. Necessary precautions are put in place in case the borrower fails to pay (Akoten et al, 2006).

Location of Financial Institution

Location from Financial institutions and physical distance of farm households from formal lending institutions is one of the factors that influence access to formal credit. According to Hussian (2007) farm households are discouraged to borrow from bank if it is located farther. This is because both temporal and monetary costs of transaction, especially transportation costs, increase with lender-borrower distance which raises the effective cost of borrowing at otherwise relatively lower interest rate in the sector. Similarly, few financial institutions are willing to grant loan applications from distantly located borrowers because of the high processing and monitoring costs. Long distances increase transaction costs which complicate the loan monitoring process and consequently creating moral hazard risks.

Constraints of Credit Accessibility to Farmers

Diagne et al (2000) stated that a household is said to have access to a type of credit if at least one of its members has a strictly positive credit limit for that type of credit. Similarly, a household is classified as credit constrained for a type of credit if at least one of its members is constrained for that type of credit. Access to financial services by farmers is normally seen as one of the constraints limiting their benefits from credit facilities. However, in most cases the access problem, especially among formal financial institutions, is one created by the institutions mainly through their lending policies. This is manifested in the form of prescribed minimum loan amounts, complicated application procedures and restrictions on credit for specific purposes.

Okurut (2006) noted that the rural poor farmers are excluded from the formal financial system due to the fact that formal banks are either unwilling or unable to serve farmers. These banks face high risk and transaction costs, difficulties in enforcing contracts, and penalization by the central bank for lending to enterprises that lack traditional collateral. They also lack reliable information on borrowers, appropriate information systems and instruments for managing risk.

Population

The target population of this study comprised of commercial banks in AP.

Sample

All commercial banks in AP were eligible in the study. However a sample of 20 randomly selected banks was targeted to participate in this study. The head of marketing department per bank was the respondent to the self-administered questionnaire that was used for this study. This is because the marketing department has information concerning the issues to do with factors determining the performance of their financial products in the market.

Data Collection

The primary data were collected using self-administered questionnaires. One questionnaire was sent to each of the marketing managers of the 20 commercial banks in the sample. The questionnaire to be used is in A 5-point Likert scale was used to determine the determinants of commercial banks lending to farmers in AP. Closed ended questions enabled the research study to collect quantitative data while open-ended questions will be used to collect qualitative data.

Data Analysis

The primary data collected using the questionnaires were compiled, sorted, edited, classified and coded, and analyzed using a computerized data analysis package SPSS. The mean and standard deviation were used to analyze which of the factors identified per variable least or most influenced lending decisions towards farmers. Pearson's correlation analysis was run to determine the existence and significance of the relationship between lending policy, credit standards to farmers, return on credit to farmers and risk on credit to Farmers.

Bank lending was measured by amount of the loan borrowed by farmers, interest rates, credit limits, and loan period in terms of the percentage rate charged by commercial banks, the amount of the loan borrowed by farmers, and months a borrower should have repaid the loan respectively. Credit standards to farmers were measured basing on the loan size, collateral requirements by banks and location of the borrowers from the bank.

Return on credit to farmers was measured by return on equity (ROE), profitability of extending credit to the farmers and the amount of loans given to farmers. Risk on credit to farmers was measured by the loan recollection policy with regards to farmers, interest rates charged to farmers and the levels of defaults experienced on credit to farmers

The regression model below was used to determine the relationship between lending policy to farmers and credit to farmers' standards, bank profitability and Farmers' loan recollection policy. Lending to farmers policy is the dependent variable while the independent variables are credit standards, credit terms and collection policy. Each of the variables, and will be the average of the respondent per bank.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + e$$

Where:

Y = Lending to Farmers

X1 = Credit standards to Farmers

X2 = Return on credit to farmers

X3= Risk on credit to Farmers

β_0 = Intercept Term ,

$\beta_1\beta_2\beta_3$ = Sensitivity of Lending to farmers to the independent variables.

e = The error term

The – at 95% confidence level was used to measure the significance of the constants of regression, β_0 , β_1 , β_2 , and β_3 . The significance of the whole regression was tested using the F-test at 95% confidence level. The strength of the level to which the three independent variables x1, x2 and x3 explain the variation in lending was assessed using the coefficient of determination, and the Adjusted R^2 .

DATA ANALYSIS RESULTS AND DISCUSSION

This chapter presents the data and provides the interpretation of the findings from the analysis. It presents data analysis ending with the determination of whether the ending is related to credit standards with regard to farmers, assessment of return on credit to farmers and assessment of risk on credit to farmers. The data is presented and then analyzed in comparison with other similar studies.

Analysis of Data and Presentation of Findings

Response Rate and Data Reliability

As given in Table 4.1 the Cronbach's Alpha for Lending Policy to Farmers was 0.76 which is acceptable. That of Credit Standards with Regard to Farmers was 0.80 which is good. That of Assessment of Return on Credit to Farmers was 0.84 which is good. The Cronbach's Alpha for Assessment of Risk on Credit to Farmers 0.81 which is good. The data collected can therefore provide reliable findings.

Table : 1 Reliability Analysis

Variable	Cronbach's Alpha	Remark
Lending Policy to farmers	0.76	Accepted
Credit Standards with regard to Farmers	0.8	Good
Assessment of Return on credit to farmers	0.84	Good
Assessment of Risk on Credit to Farmers	0.81	Good

Source: research findings

Descriptive Statistics

Table 4.2 shows the summary statistics of the responses to the variables in the questionnaire. The mean for Lending Policy to Farmers (LPF) was 2.85 ($\sigma = 0.68$) indicating a slight disagreement with the lending policy. The maximum level of agreement with lending policy was 3.30 while the lowest score was 1.80. The mean score for Credit Standards with Regard to Farmers (CSRF) was 3.10 ($\sigma = 0.76$) indicating slight agreement that lending policy was affected by Credit Standards with Regard to Farmers. The highest mean score was 2.00 indicating a disagreement that Credit Standards with Regard to Farmers affected lending policy to farmers while the highest mean score was 4.40 which was an agreement that Credit Standards with Regard to Farmers affected the lending policy to farmers.

The highest mean score for Assessment of Return on Credit to Farmers (ARCF) was 3.00 ($\sigma = 0.90$) indicating neutrality to the effect of the Return on Credit to Farmers on the lending policy. The highest mean score was 4.40 which indicated an agreement that Return on Credit to Farmers affected the lending policy. The lowest mean score was 1.60 which was a disagreement that Return on Credit to Farmers affected lending policy. The mean score for Assessment of Risk on Credit to Farmers (ACR) was 3.37 ($\sigma = 0.61$) indicating a slight agreement that Risk on Credit to Farmers affected lending policy. The highest mean score was 4.70 which was a strong agreement that Risk on Credit to Farmers affected lending policy. The lowest mean score was 2.80 which was a disagreement that Risk on Credit to Farmers affected lending policy to farmers.

Descriptive Statistics

Variable	Mean	Minimum	Maximum	Std. Dev.
LPF	2.85	1.8	3.8	0.68
CSRF	3.1	2	4.4	0.76
ARCF	3	1.6	4.4	0.9
ACR	3.37	2.8	4.7	0.61

Source: Research findings**Correlation and Regression Analysis**

Table 4.22 presents the correlation between the four variables in this study. The values used in the regression were the averages of the responses per variable per bank. As shown there was strong positive correlation between Assessment of Return on Credit to Farmers and Assessment of Risk on Credit to Farmers, $r(11)=0.57$. Weak positive correlation was found between Credit Standards with Regard to Farmers and Assessment of Return on Credit to Farmers, $r(11)=0.01$ and between Credit Standards with

Regard to Farmers and Assessment of Risk on Credit to Farmers, $r(11)=0.02$. Weak negative correlation was found: between Lending Policy to Farmers and Credit Standards with Regard to Farmers, $r(11)=-0.39$; between Lending Policy to Farmers and Assessment of Return on Credit to Farmers, $r(11)=-0.16$; and between Lending Policy to Farmers and Assessment of Risk on Credit to Farmers, $r(11)=-0.27$.

Correlation matrix

Variable	LPF	CSRF	ARCF	ACR
LPF	1	-0.39	-0.16	-0.27
CSRF		1	0.01	0.02
ARCF			1	0.57
ACR				1

Source: research findings

(Note: LPF= Lending Policy to Farmers; CSRF= Credit Standards with Regard to Farmers; ARCF = Assessment of Return on Credit to Farmers; ACR= Assessment of Risk on Credit to Farmers)

Table 4.23 presents the regression analysis of the variables with Lending Policy to Farmers as the dependent variable with Credit Standards with Regard to Farmers; Assessment of Return on Credit to Farmers; and Assessment of Risk on Credit to Farmers as the independent variables. The constant term of the regression was 4.90 indicating that there was strong activity in lending to farmers independent of Credit Standards with Regard to Farmers; Assessment of Return on Credit to Farmers; and Assessment of Risk on Credit to Farmers. The constant term was statistically significant, $t(11)=3.16$, $p<0.05$.The coefficient of Credit Standards with Regard to Farmers was -0.34 indicating that Credit Standards with Regard to Farmers negatively affected lending to farmers. However, the coefficient was not statistically significant, $t(11)=-1.15$, $p>0.05$.The coefficient of Assessment of Return on Credit to Farmers was -0.006 indicating The coefficient of Assessment of Return on Credit to Farmers was -0.006 indicating that Assessment of Return on Credit to Farmers negatively affected lending policy to farmers. However the coefficient was not statistically significant, $t(11)=-0.02$, $p>0.05$.The coefficient of Assessment of Risk on Credit to Farmers was -0.29 indicating that Assessment of Risk on Credit to Farmers negatively affected lending to farmers.

The coefficient was not statistically significant, $t(11)=-0.64$, $p>0.05$.the whole regression was not statistically significant and the variation in Lending Policy to Farmers was poorly explained

by the variation in Credit Standards with Regard to Farmers; Assessment of Return on Credit to Farmers; and Assessment of Risk on Credit to Farmers, $F(3,7)=0.66$, $PF>0.05$, $R^2=0.22$.

Regression Result

Variable	Coefficient	Std.Error	t-ratio	P- value
Constant	4.9	1.55	3.16	0.02
CSRF	-0.34	0.3	-1.15	0.29
ARCF	-0.006	0.31	-0.02	0.98
ACR	-0.29	0.45	-0.64	0.54
F(3,7)	0.66			
P- VALUE (F)				0.6
R-squared	0.22			
Adjusted R- squared	-0.11			

Source: Research Findings

The regression model was found to take the form:

$$\text{Lending policy to farmers} = 4.90 - 0.34(\text{CSRF}) - 0.006(\text{ARCF}) - 0.29(\text{ACR})$$

Interpretation of the Findings

This study has found three mains results. It has found that Credit Standards Credit Standards Regard to Farmers negatively affected lending to farmers. The research has also found that Assessment of Return on Credit to Farmers negatively affected lending policy to farmers. Further, Assessment of Risk on Credit to Farmers negatively affected lending to farmers. This indicates that Credit Standards with Regard to Farmers; Assessment of Return on Credit to Farmers; and Assessment of Risk on Credit to Farmers reduces the amounts provided to the farmers in AP

Policies should be put in place to help banks relax their credit qualification for farmers. Just like any other financial institution, banks want to ensure that their funds are safe as they lend to farmers. However, much as the farmers require funding, the risk control measures and their desire for profitability is stifling the lending. This recommendation is based on the finding that tighter controls concerning credit standards to farmers, assessment of return on credit to farmers, and assessment of risk on credit to farmers tended to limit lending.

Commercial banks should adopt special arrangements for lending to farmers other than lumping them together with other borrowers. Because many farmers are not accessing credit, the credit terms given to farmers such as loan period, credit limits and interest rates need to be designed and determined according to the specific nature of the farming business, so as to enable them repay the loans as per schedule.

Commercial banks should supply vital information such as monitoring fees, insurance fees, and penalty for early loan repayment to farmers since such costs affect their profitability. Credit beneficiaries also need to be well informed on their obligations, particularly in loan repayment needs.

AP is an agriculture based country and there is a lot of interest in the financing activities in this vital sector. The explanation provided by theory that there is connection between lending policy and issues like credit standards; assessment of return on credit; and assessment of risk on credit to farm may not be universal to all sector or countries. This research was, therefore, designed to find out the determinants of lending to farmers by commercial banks in AP. The

study was conducted through a survey using self-administered structured questionnaires delivered to commercial banks in AP. The respondents were required to provide an assessment of their lending policy to farmers vis-a-vis their policies on Credit Standards with Regard to Farmers; their Assessment of Return on Credit to Farmers; and their assessment of Risk on Credit to Farmers. The results indicate that banks give out loans to finance farming activities and that farmers have reliable sources of income that enable them to pay back their loans in time. The results show that Credit Standards Credit Standards Regard to Farmers negatively affected lending to farmers. The research has also found that Return on Credit to Farmers negatively affected lending policy to farmers. Further, Risk on Credit to Farmers negatively affected lending to farmers. This indicates that Credit Standards with Regard to Farmers; Return on Credit to Farmers; and Risk on Credit to Farmers reduces the amounts provided to the farmers in AP. Factors such as the location of the financial institution, loan size extended to farmers, interest rates charged on credit to farmers affect lending to farmers by commercial banks. Based on the findings and the conclusions of this study, it is recommended that policies should be designed to ensure that the income from farmers in AP is stabilized to mitigate risk and improve their creditworthiness. Policies should also put in place to ensure that farmers have skills to manage their finances properly to maintain excellent financial records with banks. Policies should be put in place to help banks relax their credit qualification for farmers so as to stimulate the demand and supply of credit.

Conclusion

From the findings of this research the following conclusions are drawn. Banks give out loans to farmers and farmers have sources of income that enable them to pay for the loan and the accruing interests. The banks rely on the financial statements of applicants, but did not strictly push for collateral for the loans given to farmers. The profitability of banks together depended on their view farmers as profitable customers with high returns, however, the location of the banks within easy reach to facilitate borrowing by farmers were not a serious factor driving profitability. The loan recollection policy of the banks was determined by their consideration that credit to farmers is riskier than credit to other borrowers.

It is also concluded that standards adopted before lending to farmers has a great effect on the amount of credit demanded and supplied.

High credits standards regard to farmers reduce lending to farmers. Strict rules in the assessment of return on credit to farmers negatively also reduce the amount of credit given to farmers. Further, higher standards of assessment of risk on credit to farmers reduce lending to farmers. This indicates that credit standards with regard to farmers; assessment of return on credit to farmers; and assessment of risk on credit to farmers reduces the amounts provided to the farmers in AP.

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