ANALYSIS OF THE DETERMINANTS OF MICROCREDIT LOAN REPAYMENT DEFAULT AMONG MICROFINANCE BANKS BORROWERS IN THE KADUNA METROPOLIS, NIGERIA

BY

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BEING M.Sc. DISSERTATION SUBMITTED TO THE DEPARTMENT OF ECONOMICS BAYERO UNIVERSITY, KANO, IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THEAWARD OF M.Sc. DEGREE IN ECONOMICS.

FEBRUARY, 2017

Declaration

I hereby declare that this work is product of my research efforts undertaken under the supervision of **Dr. Shehu Mohammed Tijjani** and has not been presented anywhere for the award of a degree or certificate. All sources have been duly acknowledged.

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Certification

This is to certify that the research work for this dissertation and the subsequent write-up by **Yahaya Ja'afaru** with registration number **SPS/11/MEC/00008** were carried out under my supervision.

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Acknowledgments

All thanks and sincere greetings are to Allah the Exalted the Merciful, who gives knowledge because He is the All- knower, who guides man to the righteous path. Peace and blessings be upon His messenger, who came last with supreme guidance.

I wish to express my sincere gratitude and appreciation to my parents and all members of my family for their support and encouragement throughout my studies.

My profound gratitude goes to my supervisors, Dr. Shehu Mohammed Tijjani and Prof. Mansur Idris for spending a substantial part of their time reading my work, criticizing if where necessary, explaining the criticism to my understanding and offering very priceless suggestions and pieces of advice.

My deep and sincere gratitude goes to Prof. Ahmad Muhammad Tsauni, Prof. UA Jalingo, Prof. Binta Tijjani, Dr. Aminu Aliyu, Dr. Hassan Sulaiman, Abdullahi Muhammad Adamu, Dr. Muhammad Ibrahim Abdullahi, Nafiu Abdulsalam, Ibrahim Gumel, Nura Kabuga, Mustapha Bacha and all the other departmental staff, Academics and Non- Academics.

Words cannot express the financial support of Abbas Abdullahi Marafa, Abdullahi Muhammad Adamu and Dr. Muhammad Ibrahim Abdullahi. I can only pray to Almighty to reward you abundantly.

I further wish to sincerely thank Malam Kasimu Ibrahim for his support and especially making his time, computer, printer available to me.

I wish also to thank my friends who encouraged and supported me at all times financially or otherwise.

Finally, I wish to thank my study mates for their priceless support and advice and any other person who contributed in one way or the other toward my educational career.

Dedication

This work is dedicated to the late Ramatu Abdullahi, May Allah forgive her sins and make Jannatul Firdausi (paradise) her abode and my family members who's love and care encouraged me in my educational endeavours.

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Abstract

This research examines the determinants of Microcredit Loan Repayment Default among Microfinance Banks Borrowers in the Kaduna Metropolis with an aim of identifying the major factors that cause loan repayment default in the study area. The area was chosen due to its economic activity and population. Primary data was collected from 412 sampled borrowers of microfinance bank loans in the study area, using the interview method, with the help of a structured questionnaire. Also, cluster sampling was used to select the sample out of the population. Logit and probit models were used to determine the relationship between the dependent variable (loan repayment default) and the independent variables (the socio economic characteristic of borrowers and economics factors) using stata version 11. Results reveal that Male borrowers, marital status, Loan repayment period, Interest rate and Cost of operation are among the factors causing loan repayment default in Microfinance banks. Also, the result reveals that the experience of the borrower, educational level, age and loan repayment mode reduce the level of loan default in microfinance banks. Microfinance banks should extend their loans to experienced borrowers who have many years of experience in their businesses, educated borrowers, and elderly and responsible borrowers and as well adjust their repayment mode to give their borrowers greater freedom for better utilization and repayment. Also, for microfinance banks to survive and continue on the path of profitability, training loan officers as well as borrowers should not be undermined because training both staff and borrowers will improve efficiency and thereby reduce the level of loan default . Moreover, borrowers should be encouraged to organize themselves in to cooperative societies, because it has been observed that group lending is a good method of improving repayment. Finally, visitation and follow up on loans are indispensible issues mitigating against loan default.

CHAPTER ONE: INTRODUCTION

1.1 Background to the study

Small and Medium Scale Enterprises (SMEs) are the building blocks of any growing economy like Nigeria. Some of the roles of SMEs in an economy include employment generation, rural development, youth empowerment, contribution to national income and growth and spread the development of adaptable technology, as well as regional balance growth. SMEs play an important role in the economic growth and sustainable development of any economy (Ariyo, 2005). SMEs look small or inconsequential, but they are actually the foundation of any economically stable nations.

The potential benefit of SMEs to any economy in terms of output of goods and services, the creation of jobs with relatively low capital cost, the provision of a vehicle for reducing income disparity and the development of a pool of skilled and semi-skilled workers as basis for future industrial expansion is crucial.

Kpelai (2009) asserts that SMEs are the engine room for the growth of any developing economy, because they form the bulk of business activities in developed and developing economies. That is why countries such as those of Canada and Croatia acknowledged that SMEs are crucial for industrial restructuring and have formulated national SMEs financing policies targeted at developing the subsector. In Nigeria, the government has enacted various policies and introduced various schemes aimed at financing SMEs. However, it is worrisome to note that up till today SMEs in Nigeria are starved of funds and adequate financing because of the risky nature of the subsector, which makes the policies fail.

According to Olomola (2001) formal and informal institutions have been involved in the provision of microcredit. The two fundamental financing concepts have been identified by many researchers, scholars and practitioners (Aruwa, 2004). The formal forms of financing are the ones regulated by the government, while the informal forms of financing are not so regulated by the Government. According to Aruwa (2004) the popular formal sources of financing are commercial banks and development banks, while the informal sources, on the other hand, comprises borrowing from friends and relatives.

According to Josephine and Igbani (2014) CBN is of the view that "the formal financial system provides services to about 35% of the economically active population, while the remaining 65% are excluded from access to financial services". It goes further to stress that most of those without access to financial services dwell in the rural areas. Nwankwo (2008) noted that over 95% of the businesses in Nigeria are small and that conventional banks choose not to finance such businesses.

To solve the financing problems of the SMEs and provide a strong and reliable source of finance for the subsector through formal means, the microfinance bank policy was launched in 2005 to replace Community Banks in an effort to take banking to the grassroots of Nigeria as well as sanitize the system. Microfinance is acknowledged as one of the prime strategies to achieve growth and development (Iganga, 2007). It involves the supply of loans, savings and other basic financial services to the poor. But loan default has been identified as one of the major problems which drain financial strength and cripple microfinance banks in Nigeria due to low repayment of the loan facility.

Mustapha (2009) stressed that loan default is a major threat to microfinance banks' sustainability; it is the deadly "virus", which afflicts their operation. It demoralizes staff and deprives beneficiaries of further valuable services. The high rate of loan delinquency makes the SMEs subsector unattractive to financial institutions and exposes Microfinance Banks to serious risk. Credit risk is an investor's risk of loss arising from a borrower who does not make payments as promised. Such an event is called a default. Another term for credit risk is default risk. Investor losses include loss of principal and interest, decreased cash flow and increased collection costs. Credit risk can be mitigated using risk based pricing, covenants, credit insurance, tightening and diversification (Ross et al, 2008).

For Microfinance Banks (MFBs) to achieve their financial motive, they must adhere to good risk management principles. This study tries to identify the factors that bring about loan repayment default among the borrowers of microfinance bank loans, with the aim to reduce the risk exposure of the Microfinance Banks in order to improve their efficiency and profitability.

1.2 Statement of the Problem

Lending remains one of the major functions of banks in all economies and the interest charged on loans and advances today constitutes a sizeable part of banks earnings. Credit provision is a risky business and most microfinance banks are therefore at a disadvantage of information on the borrower's behavior, which leads to loan repayment default. Loan repayment default is one of the critical issues of Microfinance banks in Nigeria that concerns all stakeholders (Marr, 2002)

However, loan repayment default creates nightmares for not only the lenders, but also poses a serious setback to the economy. It has also become a major threat to the profitability of Microfinance banks in Nigeria.

According to Ghatak (1999), the lending capacity of MFIs is destroyed, as a result of declining flow of repayment. Tomola (2011) asserts an average repayment rate of 92.93% for commercial banks, which was higher than the 34.06% for the micro-credit schemes.

Babajide, the chairman, National Association of Microfinance Banks (NAMB), Lagos State chapter, reported on May 9, 2012 that, loan repayment has been a major problem in microfinance banking in the country, because, in Lagos State alone, over N10 billion is being owed by these micro-depositors who borrowed money from various institutions. Moreover, there was agitation for the creation of a special court by banks operators due to the cases of borrowers not willing to pay. They have been taken to court but the court keeps adjourning the cases. Based on the above request, the CBN in February 2013 sent a bill to the National Assembly demanding for the special court (Business Day Online).

The Managing Director, Nigeria Deposit Insurance Corporation (NDIC), Alhaji Umaru Ibrahim said on Tuesday, March 4, 2014 that the Central Bank of Nigeria (CBN), had approved the liquidation of 83 licensed microfinance banks Ibrahim disclosed this when he appeared before the Senate Committee on Banking and Currency to defend NDIC's 2014 budget.

The determination of loan a applicant's ability to pay back a loan before disbursement is a very vital issue and could only be achieved through the identification of factors that bring about loan repayment default in microfinance banks with the aim of minimizing the risk exposure of microfinance banks in Nigeria.

1.3 Research Objectives

Main objective

The main objective of this study is to examine the relationship between loan default and borrower's characteristics in microfinance banks, taking the Kaduna metropolis as a case study.

Other specific objectives of the research are:

i. To ascertain the major causes of loan repayment default in microfinance banks.
ii. To examine the nature of the relationship between loan repayment default and borrowers characteristics in microfinance banks.
iii. To assess the extent of the loan repayment default in microfinance banks.
iv. To identify the characteristics of loan defaulters of microfinance banks.

1.4 Research Questions

The research seeks to address the following research questions:

i. What are the major causes of loan repayment default in Microfinance Banks in the Kaduna metropolis?
ii. What is nature of the relationship between loan repayment default and the borrower's characteristics in microfinance banks?
iii. What is the extent of the loan repayment default in the microfinance banks?

iv. What are the characteristics of the loan defaulters of microfinance Banks?

1.5 Significance of the Study

The aim of any research work is finding solutions to a problem which is affecting the well being of the people in our society. As a result, this research was conducted to proffer solutions to the problem of repayment in microfinance banks in the study area, because the problem has led to the collapse of many microfinance banks not only in the study area but in the country in general. For example in 2014, the Central Bank of Nigeria (CBN) approved the liquidation of 83 licensed microfinance banks. It is expected that this research would assist the microfinance banks to identify and categorize borrowers with similar characteristics as good or bad borrowers and as well come up with internal policies that will guarantee the repayment of loans plus the interest in future.

Also, the researches is aimed at improving the operational efficiency of the microfinance banks and thereby reduce their risk exposure and bring about higher profitability, so that the banks would continuously provide capital for the economically active people in society who have not been considered by the organised banking sector due to the lack of collateral. This would accelerate growth and development in our society.

Microfinance banks, if provided with enabling environment and properly managed could provide capital for the poor to be self reliant. It promotes the development of entrepreneurs at the grass-root level of the society, thereby alleviating poverty and reducing income inequality. It is hoped that this research would help microfinance banks to maintain their position in a competitive environment through the adoption of good risk reduction strategies and continuously provide financial services to their clients in an efficient and better manner.

Therefore, it is hoped that the result of the study will serve not only as a useful guide to policy makers in order to map out effective and efficient ways of controlling loan repayment default Nigeria, but it will be of paramount importance to ensure a paradigm shift towards sustainable microfinance operation. Finally, it is my optimism that this research will add to the existing body of knowledge, thereby serving as reference material for policy making and other academic works.

1.6 Scope and Limitations of the Study

This research is expected to cover the entire Microfinance Banks in the study area to give adequate grounds for the generalization of the research findings. But due to time and financial constraint, the research cannot cover them entirely in the study area. As a result, some Microfinance Banks were selected using cluster sampling and simple random sampling methods in the study area (the Kaduna metropolis), which include Microcred Microfinance Bank, and NUT Endwell Microfinance Bank.

The major problem encountered has to do with the behavior of some of the respondents, who were not ready to cooperate to supply the information required for the successful gathering of data. They were always in haste and some of them cannot read the questions written in English. Moreover, as we all know, research requires time and financial resources and the shortage of each, limits the efforts of the researcher and hinders the successful completion of any research work, but the little resources were managed properly to successfully complete this work.

Despite the limitations, it is hope that the results of this research will provide a meaningful basis for filling the gap and making recommendations that can be used by management of Microfinance Banks to improve the repayment of loans and reduce loan repayment default.

1.7 Research Outline

The study has five chapters in all, with chapter one highlighting the background of the study, the problem of the study, the significance of the study, the scope and limitation of the study and, finally, the plan of the study. Chapter two comprises a literature review, which includes; Conceptual Literature on Credit, Microcredit, Microfinance and Loan Default in Microfinance. This is closely followed by the theoretical framework which is mostly of Portfolio Management. Lastly, Empirical Literature on the subject matter was also reviewed. Chapter three dwells on the Methodology, which explains the type and method for collecting data and the background history of the study area as well as the model for the study.

Chapter four, deals with data presentation, analysis and interpretation. Similarly, the results and findings were discussed. Analysis and interpretation of data were done in the light of the problems and challenges in Nigeria.

Chapter five summarized the whole study and findings thereof. The conclusion is made based on the findings of the study, while recommendations were also put forward in line with the problems identified in the study.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter reviews conceptual issues (of credit, credit risk, loan default, microcredit and microfinance) and the empirical literature and the theoretical frame-work underpinning the research topic.

2.2. Conceptual Literature

2.2.1 The Concept of Credit

According to Onyeagocha (2001), the term “credit” is used specifically to refer to the faith placed by a creditor (lender) in a debtor (borrower) by extending a loan usually in the form of money, goods or securities to the debtor. Essentially, when a loan is made, the lender is said to have extended credit to the borrower and he automatically accepts the credit of the borrower. Credit can, therefore, be defined as a transaction between two parties in which the creditor or lender supplies money, goods and services or securities in return for promised future payments by the debtor or borrower.

2.2.2 The Concept of Credit Risk

According to Obalemo (2004), credit risk is the probability that a borrower would not pay back the lender as agreed. He further stresses that the probable occurrence of partial or total default requires a thorough risk assessment prior to granting loans. Adebisi (2012) defines credit risk as the potential variation in the net income from non- payment or delayed payment of the credit facility granted to customers. According to the Basel Committee of Banking Supervision (2001), credit risk is the possibility of losing the outstanding loan partially or totally due to credit events (default risk).

Moreover, the Global Risk Management Group in its 1999 report defines credit risk as the potential that the bank borrower will fail to meet obligation in accordance with agreed terms. It added that the effective management of credit risk is a critical component of a comprehensive approach to risk management and essential to the long term success of any banking organization.

2.2.3 The Concept of Loan Default in Microfinance

Peter (2011) defines Loan default as when an individual borrower falls behind with his monthly repayments. He added that “if an individual borrower is late with just one payment, then he is technically classified as delinquent”. Thus, default is the failure to pay back a loan. It can be of two main types, which include debt service default and technical default. Debt service default occurs when the borrower has not made a scheduled payment of interest or principal, while technical default occurs when an affirmative or a negative covenant is violated. However, the latter is not very common in microfinance institutions but mainly applies to banks. Loan default has been identified as probably the single largest reason for the downfall of the institutions involved in the provision of credit. Thus, the goal of achieving minimum loan default to ensure healthy loan portfolio will ultimately lead to the sustainability of MFBs.

Microfinance banks must accept the fact that most loan default cases are caused not only by bad borrowers. Aside the behavior on the part of borrowers, which has been noticed to have contributed to loan default, the MFBs are also noticed to have contributed to the loan default. They have not played their part well in implementing an effective methodology as to how to grant microcredit.

2.2.4 The Concept of Microcredit

Norhaziah and Mohammed (2010) defined microcredit or micro lending as an extremely small loan given to impoverished people to help them to become self-employed. Microcredit was given to the poor individuals for income-generating activities that will improve their living standards. The loans characteristics are too small, short-term credit (a year or less), no collateral, required weekly repayment, poor borrower and mostly women who are not qualified for a conventional bank loan. Usually, the loan pays high interest rates because of the high cost in running microcredit programs. Microcredit is also used as the extension of very small loans to those who are in poverty that designed to spur entrepreneurship and help them out from poverty the group. These individuals lack collateral, steady employment and verifiable credit history, which, therefore, cannot even meet the most minimal qualifications to gain access to traditional credit.

According Norhaziah and Mohammed (2010) Grameen Bank defined microcredit as small loans given to the poor for undertaking self-employment projects that would generate income and enable them to provide for themselves and their families. The target population comprises women microenterprises from the low-income households and the loans have no collateral.

Therefore, based on all definitions given, it can be concluded that microcredit is just a small credit given to the poor that engage in microenterprise or for the purpose of income generating activities.

2.2.5 The Concept of Microfinance

The term "microfinance" evolved from the concepts of "microcredit" and "microenterprise" financing to include the importance of savings as well as borrowing. Although the three terms are used interchangeably, microfinance represents the field as a whole, while the other two terms are more technical and refer only to credit provision (Maria, 2004).

Gonzalez-Vega (2008) defined microfinance as the provision of financial services to low-income clients, including consumers and the self-employed, who traditionally lack access to banking and related services. He further stated that microfinance is a place for the poor and near- poor clients to get access to a high quality financial service, which includes not just credit but also savings, insurance and fund transfer.

According to Ledgerwood (1999), microfinance is a provision of a broad range of financial services, such as savings, credit, insurance and payment services to the poor or low-income group who are excluded from the normal banking sectors. Microfinance is a development approach that provides financial as well as social intermediation. According to Robinson (2002), microfinance is a development approach that provides financial as well as social intermediation. The financial intermediation includes the provision of savings and credit and insurance services, while social intermediation involves organizing citizens' groups to voice their aspirations and raise concerns for consideration by policy makers and develop their self-confidence.

Robinson (2002) defines microfinance as “ Small-scale financial services, primarily credit and savings, provided to people who farm or fish and who operate small enterprises or microenterprises where goods are produced, recycled, repaired, or sold; who provide services; who work for wages or commissions; who gain income from renting out small amounts of land, vehicles, draft animals, or machinery and tools; and to other individuals and groups at the local levels of developing countries, both rural and urban”. Moreover, Conroy (2002) stated that microfinance is the provision of a broad range of financial services, such as deposits, loans, payment services, money transfers and insurance to poor and low-income households and their MEs.

According to the regulatory guideline for microfinance banks by the CBN (2005), a microfinance loan is a facility granted to an individual or a group of borrowers whose principal source of income is derived from business activities involving the production or sale of goods and services. That the maximum principal amount shall not exceed N500, 000 or as may be reviewed from time to time by the CBN. Generally, a microfinance loan is granted to the operators of micro-enterprises, such as peasant farmers, artisans, fishermen, women, senior citizens and non-salaried workers in the formal and informal sectors. The said loans are usually unsecured, but typically granted on the basis of the applicant's character and the combined cash flow of the business and household.

The World Bank defines microfinance as "…. Small-scale financial services, primarily credit and savings, provided to people who farm or fish and who operate small enterprises or microenterprises where goods are produced, recycled, repaired, or sold; who provide services; who work for wages or commissions; who gain income from renting out small amounts of land, vehicles, draft animals, or machinery and tools; and to other individuals and groups at the local levels of developing countries, both rural and urban" (Robinson, 2002).

On the other hand, microfinance encompasses broad financial services given to the poor and low-income groups for many reasons and not just for income generating activities.

Woller and Parsons (2002), described microfinance as the second revolution in credit theory and policy where the first revolution is microcredit. They further opined that Microfinance Institutions (MFIs) were established to fill the gap in the financial services sector by providing funds to the poor and lower income group and thus alleviating poverty and enhancing their business activities. The MFIs provide funds for start-up business or for working capital.

MFB are usually non-governmental organizations (NGOs) who are profit-oriented. NGOs assume poverty is created through social processes that deprive the poor of their rightful access to social resources, including credit. These NGOs help the poor to find credit to support their small enterprises or income-generating activities. These institutions acted as a financial intermediation like the formal bank. The difference between formal banks and microfinance institutions (MFIs) is the former focus on rich clients, and the latter to MFIs clients who are poor people.

According to Remenyi (2000), subsidized credit and subsidized banking with the poor are inimical to “best practice in microfinance”. Moreover, MFIs also offer skills training and marketing to their clients.

2.3.0 Review of Empirical Literature

Much empirical literature regarding loan repayment default as well as risk management exist, but this study will review only the literature related to micro finance banks and institutions. Suraya et al (2012) conducted a research on the determinants of microcredit loans repayment problem among microfinance borrowers in Malaysia. Microfinance institutions often face loan repayment problems. Loan default or lower loan collection can be caused by the borrowers’ themselves or unfavourable loan’s characteristics designed by the microfinance institutions. This research investigates the determinants of loan repayment problems among microfinance borrowers in TEKUN and YUM institutions in Malaysia. By using the logistic regression model, the empirical results showed borrower characteristics (age, gender and type of business involved) and microcredit loan characteristics (mode of repayment and repayment amount) are among the factors that contribute to microcredit loan repayment problems among TEKUN and YUM borrowers in Malaysia.

Tundui and Tundui (2013) conducted research on Microcredit, Micro-Enterprising and Repayment Myth: The Case of Micro and Small Women Business Entrepreneurs in Tanzania. The aim of this research is to examine the sources and determinants of loan repayment among women microcredit clients. Primary data was used based on a surveyed random sample of 286 business owners who were pride microfinance programme clients in Morogoro and Iringa towns. Logistic regression results show that loan size, interest rate and the duration of membership in the programme do not predict loan repayment. It was found that household size, the number of household members with fixed salaries and decision making regarding loan use have a significant influence on loan repayment. The results demonstrated that business skills and management practices play a very significant role. Furthermore, they suggested that there is a need for an integrated and holistic policy approach in supporting and promoting micro enterprising among the women rather than piecemeal initiatives.

Charles (2013) conducted a research on the relationship between loan default and repayment schedules in microfinance institutions in Ghana. The study is an investigative type and used only primary data. Questionaires were administered to some customers of Tema and Lapaz branches of Sinapi Aba Trust. Data were analyzed by means of ordinary least square regression, graphs and tables. The results indicated that there was no relationship between loan default and repayment schedule in microfinance institutions, rather the study find a significant relationship between the interest charge on loans, moral hazards, and over-borrowing by customers. Also, the inability of the loan officers to visit borrowers was also found to have contributed significantly to loan default among customers.

George (2012) examines some risk factors that influence loan default repayment among customers in Akatakyiman rural Bank Limited, Komenda, Ghana. Secondary data were collected on the variables from the credit department of the bank. A total of 100 observations were made for the period of 4 years (2006-2010). Logistic regression model was fitted on the data. It was found that the variables used, such as collateral security and type of loan, were significant, while sex, marital status, age, education level and town were not. He concluded that the risk of customer who used collateral as a security in assessing the loan is less than that of the customer who used a personal guarantee.

Haron et al (2012) assessed the effectiveness of credit management systems on the loan performance of microfinance institutions in Kenya, specifically to examine the effects of credit terms, client appraisal, credit risk control measures and credit collection policies on loan performance. Descriptive research design was adopted. The respondents were the credit officers of the microfinance institutions in Meru town. Collection policy was found to have a higher effect on loan repayment with X^2=12.74, P = 0.000 at the 5% significance level. Also, the research indicated that there is a relationship between effective credit management systems and loan performance within microfinance institutions. The researchers, therefore, suggests further researcher on the following: Reasons for loan defaults from clients' perspective in microfinance institutions and the effect of Credit Referencing of customers on loan performance in microfinance institutions.

Dadson (2012) investigates the determinants of loan repayment default among farmers in the Broog Ahofo region of Ghana. Data used in the research was gathered through a survey of 374 farmers in five districts. The study employed the probit model to investigate the factors that influence farmer's loan repayment default. The result showed that farm size and engagements in off-farm income generating activities reduce the likelihood of loan repayment default significantly. Also, a large loan amount and a longer period as well as access to training are more likely to reduce loan repayment default. Thus, any policy that aimed at improving farm size, farm income and the cultivation of cash crops would significantly reduce loan repayment default. In addition, loan repayment default would be reduced if the lenders train their loan beneficiaries and offer them adequate amounts of loan and a longer repayment period.

Abula et al (2013) assessed the repayment performance of rural farmer loan beneficiaries of Microfinance Bank in Kogi State Nigeria, using primary and secondary data. Two hundred and forty respondents were sampled, using the multi-stage random sampling. Statistical and econometric techniques, such as means, percentages and regression, were used for the analysis. Empirical results revealed that, the volume of loan borrowed, Annual Household Income and size of farm affected repayment by beneficiaries and were significant at $P \geq 0.01$.

The mean age, years spent in school, household size, farming experience, farm size and farm income were found to be significant and 44years, 13years, 8persons, 34.5years, 3.45ha and N75,000, respectively. The mean loan repayment performance of respondents for all the agricultural enterprises was found to be 88.96%. To achieve a better repayment performance, group lending and the credit delivery method, now a common feature of Microfinance credit delivery should be encouraged and sustained.

Eyo et al (2013) analyze the effectiveness of loan delinquency management strategies used on farmers in Akwa Ibom state, Nigeria. The specific objectives are to assess the management strategies aimed at reducing loan delinquency. They compare the extent of loan default among lending institutions and analyze the impact of some variables in reducing loam repayment problems. A multi-stage sampling technique was used to select 8 banks and the 92 farmers included in the research. A questionnaire was the primary tool of data collection. Data analyses utilized descriptive statistic and logit models. The results showed that the loan delinquency strategies used were not satisfactory with a mean management quality score of 82. The loan default rate was still high despite these delinquency reducing strategies. In fact, 82% of the loan beneficiaries were delinquent. However, the mean delinquency rate was high for microfinance banks (27%) and lowest in commercial Banks (11%). The findings reveal that the behavior of selected variables: primary occupation, loan size, loan use, duration of loan and visits of the officials, are some of the variables that need to be manipulated to achieve the desired goal of loan repayment.

Tomola (2011) compares the performance of loans granted to small and medium enterprises by banks with that of micro-credit institutions in Nigeria, using Ondo State as a case study. Descriptive statistics were used to analyze the data collected through primary source. The research reveals that the average repayment rate of 92.93% for banks was higher than the 34.06% for the micro-credit schemes. That is, the banks performed at much higher levels than micro-credit schemes. Based on the findings, it was recommended that there should be stern efforts by the credit institutions in screening loan applications, monitoring approved loans and enforcing loan contracts. Government should provide the basic infrastructural facilities, which unnecessarily increase the cost of doing business in the country

Edafiaje (2011) conducted research on Impact Assessment of the role of Microfinance Banks in Financing Small Scale Enterprises in Delta State, Nigeria. The population of the study comprised all the MFBs in the two selected parts of Delta State. For the sake of convenience, purposive sampling was employed to select six MFBs branches (three from each part) for the study. Ten respondents were randomly selected from each of the MFBs and administered copies of a well-structured questionnaire used as the instrument for data collection. The study showed that microfinance service, particularly those sponsored by government, resulted in an increased level of credit disbursement and gains in agricultural production and other activities. The effects were short-lived, due to the unsustainable nature of the programme. Microfinance banks should increase the interval between asking for loans repayment and the time of granting the loans, as this renders useless the study or verification of the borrower feasibility study, more especially under an inflationary period.

Afolabi (2010) analyzed the loan repayment of small scale farmers in Oyo state, Nigeria. He specifically identified some socio-economic characteristics of respondents and quantitatively determined some socio economic characteristics of farmers that influence the level of loan repayment. A multi-stage sampling technique was used to select 286 respondents in the study area and structured questionnaires administered to them to collect data. Ordinary least square was used to determine the socio economic characteristics that influence the level of repayment. The result showed that 60.23% of the respondents were males. Analysis also reveals that 83.92% of these farmers operate 4.9 hectares or less.82 (2867%) obtained their loans from informal sources while 17.83% patronized formal sources. The result of the repayment function showed that the regressor explained 68.49% in the variation of the regressand.

Ugwumba and Nnabuife (2008) conducted a research to investigate the loan repayment by microfinance cooperators of the Nigerian Agricultural Cooperative and Rural Development Bank (NACRDB) in Anambra State, Nigeria. Descriptive statistics and multiple regressions were employed in data analysis. Results showed that majority of the cooperators were 41 years and above, suggesting a strong peer influence in group formation. Mean annual income, expenses and savings were N102, 763.00, N101, 620.00 and N8, 750.00 respectively, implying a poor savings culture. Seventy one percent of the cooperators repaid more than 62% of their loans as at when due. Eight variables the amount of loan borrowed, positive socio-cultural activities, access to business related information and the amount spent on business investment were significant and positively correlated to repayment; while distance between dwelling place and bank, the number of days between loan application and disbursement and the poverty level influenced repayment negatively but were equally significant. The F-value (11.39) was highly significant. Policy issues should be tailored towards: sustaining the group lending strategy, increasing loan sizes and reducing administrative costs as well as time lag between loan application and disbursement, among others. The cooperators on their part should scale down on wasteful socio-cultural expenses and embrace savings culture.

Oke et al (2007) examined the factors that influenced micro-credit repayment among members of microfinance non-governmental organizations (NGOs) in South Western Nigeria. Ten out of the twenty-three (23) variables that went into the multiple regression model were significant ($p = 0.001$ or $p = 0.05$). They are: income, distance between dwelling place and bank, the amount of business investment, socio-cultural expenses, the amount of loan borrowed, access to business information, penalty for lateness to group meetings, membership of cooperative society, the number of days between loan application and disbursement and the poverty indicator.

2.4.0 Theoretical Literature

According to Jhingan, (2004), Portfolio management refers to the prudent management of a bank's assets and liability in order to seek some optimum combination of liquidity, safety and income or profit. The three main objectives of portfolio management, which a wise bank follows, are:

liquidity, safety and income or profit. Mather (1962) described three basic principles for evaluating credit as safety, suitability and profitability. In the first instance, the safety of any advance or loan is of the utmost importance. Banks must emphasize, among other things, the character (honesty, integrity and reliability) of borrowers. The probability that the amount granted would be repaid from the cash flows generated from the operations of the company must be a matter of high requirement.

These three objectives are opposed to each other because to achieve one the bank will have to sacrifice the other objectives. For example, if the bank seeks a higher profit, it may have to sacrifice some safety and liquidity. If it seeks more safety and liquidity, it may have to give up some income or profit. Because of the apparent conflict between the objective of liquidity, safety and profitability, economists have tried to resolve this conflict by laying down certain theories from time to time. These principles or theories govern the distribution of assets and keeping in-view these objectives. These principles are also called the theories of liquidity management. The portfolio management theories include: the real bill theory, the shiftability theory, the liability theory and the anticipated income theory. Out of the above theories, two are selected for this research because they can be applied in the microfinance context. These theories are real bill theory and the anticipated income theory (Jhingan, 2004).

2.4.1 The Real Bill Theory

The doctrine e real bill doctrine was found in the writings of John Law (1705), Simon Clement (1710), Adam Smith (1776), Charles Bosanquet (1810), Thomas Tooke (1845) and many others. The doctrine states that a bank should advance only short term self-liquidating productive loan to business firms. Self-liquidating productive loans are those which are meant to finance the production and movement of goods through the successive stages of production, storage, transportation and distribution. When such goods are ultimately sold, the loans are considered to liquidate themselves automatically. For instance, a loan given by the bank to a businessman to finance inventories would be repaid out of the receipts from the sales of those inventories and the loan would be automatically self-liquidated (Jhingan, 2004)

The importance of the short term self-liquidating productive loan is that the bank possesses liquidity since the loan liquidates itself automatically and matures in short run and is for productive purposes. There is no risk of its running into bad debt; also being productive, such a loan earns income for the bank.

2.4.2 The Anticipated Income Theory

This theory was developed by H. V. Prochnow (1944) on the basis of the practice of extending the "term loan" by the United States Commercial Banks. According to this theory, regardless of the nature and the character of a borrower's business, the bank plans the liquidation of the "term loan" from the anticipated income of the borrower at the time of granting the loan. Banks should not consider only the security, but the anticipated earnings of the borrower. The theory provides a bank with the method of the analysis of credit-worthiness of a borrower, that is, it gives bank criteria for evaluating the potentials of a borrower to successfully repay a loan on time. Thus, the loan by the bank gets repaid out of the future income of the borrower in installments instead of a lump sum at the time of the maturity of the loan. This satisfies and fulfils the three objectives of portfolio management.

Liquidity is assured to the bank when the borrowers saves and repays the loan regularly in installment. It satisfies the safety principles, because the bank grants a loan not only on the basis of good security but on the ability of the borrower to repay the loan. The bank can utilize the excess reserve in granting the term loans and is assured of regular income. Lastly the term loan is very beneficial to the business community, which gets funds for medium term.

These theories emphasize that bank should ensure the safety of all the loan facility before granting it, because, the profitability and liquidity of any financial institution, which give out loans depends on the safer facility granted, which brings back the principal plus the interest. To accomplish these goals, banks must ensure the proper screenings of loan applications as well as applicants to determine their credit worthiness before giving out any loan to them. This will assist in reducing loan default, running down microfinance banks and as well ensuring strong and reliable banks.

2.5.0 The 5 C's Model of Client Appraisal

Microfinance Institutions use the 5Cs model of credit to evaluate a customer as a potential borrower (Abedi, 2000). The 5Cs help MFBs to increase loan performance, as they get to know their customers better. These 5Cs are: character, capacity, collateral, capital and condition. As ascertained, character basically is a tool that provides information about the applicant's credit worthiness. This is the personal impression the client has to the potential lender. According to Ouma (1996), the factors that influence a client can be categorized into the personal, the cultural, the social and the economic. The psychological factor is based on a man's inner worth rather than on his tangible evidences of accomplishment. MFBs consider this factor by observing and learning about the individual. In most cases, it is not considered on the first application of credit by an applicant, but from the second time. Under social factors, lifestyle is the way a person lives. This includes patterns of social relations (membership groups), consumption and entertainment. A lifestyle typically also reflects an individual's attitudes, values or worldview. Reference groups in most cases have an indirect influence on a person's credibility. MFI's try to identify the reference groups of their target, as they influence a client's credibility. Personal factors include age, life cycle stage, occupation, income or economic situation, personality and self concept. Under life cycle stage, for example, older families with mature children are not likely to default since it's easier to attach collateral on their assets since they are settled unlike unsettled young couples. The MFI's will consider the cash flow from the business, the timing of the repayment and the successful repayment of the loan.

Anthony (2006) defines cash flow as the cash a borrower has to pay his debt. Cash flow helps MFI's to determine if the borrower has the ability to repay the debt. The analysis of cash flow can be very technical. It may include more than simply comparing income and expenses. MFI's determine cash flow by examining existing cash flow statements (if available) and reasonable projections for future ratios. These ratios are guidelines to assist lenders to determine whether the borrower will be able to service current expenses plus pay for the additional expense of a new loan.

Collateral is any asset that customers have to pledge against debt. Collateral represents assets that the company pledges as the alternative repayment source of a loan. Most collateral is in form of hard assets, such as real estate and office or manufacturing equipment. Alternatively, accounts receivable and inventory can be pledged as collateral. Lenders of short term funds prefer collateral that has duration closely matched to the short term loan.

According to Weston and Eugene (1966), capital is measured by the general financial position of the borrower as indicated by a financial ratio analysis, with special emphasis on the tangible net worth of the borrower's business. Thus, capital is the money a borrower has personally invested in the business and is an indication of how much the borrower has at risk if the business fails.

Condition refers to the borrower's sensitivity to external forces, such as the interest rates, inflation rates, the business cycles as well as competitive pressures. The conditions focus on the borrower's vulnerability.

2.6.0 Guidelines for Microfinance Banks in Nigeria

These Supervisory and Regulatory Guidelines are issued by the Central Bank of Nigeria (hereinafter referred to as the "CBN" or the "Bank") in exercise of the powers conferred on it by the provisions of Section 33 subsection (1)(b) of the CBN Act 7 of 2007 and in pursuance of the provisions of Sections 61-63 of the Banks and Other Financial Institutions Act (BOFIA) 25 of 1991 (as amended).

2.6.1 Terms and Definitions

For the purpose of clarity, the following terms and definitions shall be used in the applicable sections of these Guidelines.

Microfinance Bank

A microfinance bank (MFB), unless otherwise stated, shall be construed to mean any company licensed by the CBN to carry on the business of providing financial services, such as savings and deposits, loans, domestic fund transfers, other financial and non-financial services to microfinance clients.

Microfinance Bank Target Client

A microfinance bank target client shall include the economically active low-income earners, low income households, the un-banked and under-served people, in particular, vulnerable groups, such as women, the physically challenged, youth, micro-entrepreneurs, informal sector operators, and subsistence farmers in urban and rural areas.

Microenterprise

A microenterprise is a business that operates with very small start-up capital. The management is often built around the sole owner or micro-entrepreneur. It provides employment for few people mainly the immediate family members and does not often require formal registration to start.

The management and accounting requirements are very simple and flexible. Generally, most micro-entrepreneurs work informally, without business licenses or formal records of their activities. The scope of economic activities of micro-enterprises typically includes primary production and crafts, value added processing, distributive trades and diverse services.

Microfinance Loan

A microfinance loan is granted to the operators of micro-enterprises, such as peasant farmers, artisans, fishermen, youth, women, senior citizens and non-salaried workers in the formal and informal sectors. The loans are usually unsecured, but typically granted on the basis of the applicant's character and the combined cash flow of the business and household.

The tenure of microfinance loans is usually within 180 days (6 months). Tenures longer than six (6) months would be treated as special cases. In the case of agriculture or projects with longer gestation period, however, a maximum tenure of twelve (12) months is permissible and in housing microfinance, a longer tenure of twenty-four (24) months is permissible. In line with best practice, the maximum principal amount shall not exceed N500 000 or one (1) per cent of the shareholders fund unimpaired by losses and/or as may be reviewed from time to time by the CBN.

Microfinance loans may also require joint and several guarantees of one or more persons. The repayment may be on a daily, weekly, bi-monthly or monthly basis or in accordance with the amortization schedule in the loan contract.

Related Party

A related party is an individual or group of individuals that is related in some ways to any of the Directors and Management staff of an MFB. This could include a family member, relative, shareholder, related company or proxy or associates.

2.6.2 Permissible and Prohibited Activities

Permissible Activities

A MFB shall be allowed to engage in the provision of the following services to its clients:

a) Acceptance of various types of deposits, including savings, time, target and demand from individuals, groups and associations; except public sector deposits;

b) Provision of credit to its customers, including formal and informal self-help groups, individuals and associations;

c) Promotion and monitoring of loan usage among its customers by providing ancillary capacity building in areas, such as record keeping and small business management;

d) Issuance of redeemable debentures to interested parties to raise funds from members of the public with the prior approval of the CBN;

e) Collection of money or proceeds of banking instruments on behalf of its customers including clearing of cheques through correspondent banks;

f) Act as agent for the provision of mobile banking and micro insurance services to its clients.

g) Provision of payment services, such as salary, gratuity, and pension for employees of the various tiers of government;

h) Provision of loan disbursement services for the delivery of the credit programme of government, agencies, groups and individual for poverty alleviation on non-recourse basis;

i) Provision of ancillary banking services to its customers, such as domestic remittance of funds and safe custody;

j) Maintenance and operation of various types of account with other banks in Nigeria;

k) Investment of its surplus funds in suitable instruments, including placing such funds with correspondent banks and in Treasury Bills;

l) Pay and receive interests as may be agreed upon between the MFB and its clients in accordance with existing guidelines;

m) Operation of micro leasing facilities, microfinance related hire purchase and arrangement of consortium lending, as well as supervision of credit schemes to ensure access of microfinance customers to inputs for their economic activities;

n) Receiving of refinancing or other funds from CBN and other sources, private or public on terms mutually acceptable to both the provider of the funds and the recipient MFBs;

o) Provision of microfinance related guarantees for its customers to enable them to have better access to credit and other resources;

p) Buying, selling and supplying industrial and agricultural inputs, livestock, machinery and industrial raw materials to low-income persons on credit and to act as agent for any association for the sale of such goods or livestock;

q) Investment in shares or equity of a body corporate, the objective of which is to provide microfinance services to low-income persons;

r) Investment in cottage industries and income generating projects for low-income persons, as may be prescribed by the CBN;

s) Provision of services and facilities to customers to hedge various risks relating to microfinance activities;

t) Provision of professional advice to low-income persons regarding investments in small businesses; rendering managerial, marketing, technical and administrative advice to customers and assisting them in obtaining services in such fields;

u) Mobilize and provide financial and technical assistance and training to microenterprises;

v) Provision of loans to microfinance clients for home improvement, housing microfinance and consumer credits; and

w) Performance of non-banking functions that relate to microfinance business development services, such as co-operatives and group formation activities, rural industrialization and other support services needed by micro enterprises (CBN Regulatory and Supervisory Guideline 2012)

Prohibited Activities

No MFB shall undertake any business other than those permitted, as stated in the preceding paragraph or such activities as may be prescribed from time to time by the CBN. Specifically, no MFB shall engage in the provision of the following financial services:

a) Acceptance of public sector (government) deposits except for the permissible activities (g) and (h) in sub-Section 2.6.2 of these Guidelines;
b) Foreign exchange transactions;
c) International commercial papers;
d) International corporate finance;
e) International electronic funds transfer;

f) Clearing house activities;

g) Collection of third party cheques and other instruments for the purpose of clearing through correspondent banks.

h) Dealing in land for speculative purposes;

i) Dealing in real estate except for its use as office accommodation;

j) Provision of any facility for speculative purposes;

k) Leasing, renting and sale/purchase of any kind with its directors, officers, employees or persons who either individually or in concert with their family members and beneficiaries own five per cent (5%) or more of the equity of the MFB, without the prior approval in writing of the CBN; and

(l) Financing of any illegal/prohibited activities, such as gambling, drug-trafficking, and firearms.

m) No MFB shall undertake any business or activity other than those permitted, as stated above or as may be prescribed by the Central Bank of Nigeria from time to time. Any contravention of this regulation constitutes a ground for the revocation of the MFB's licence (CBN Regulatory and Supervisory Guideline 2012)

2.6.3 Ownership and Licensing Requirements

(a) Ownership Requirements

A microfinance bank may be established by individuals, a group of individuals, community development associations, private corporate entities and foreign investors. No individual, group of individuals, their proxies or corporate entities and/or their subsidiaries shall own controlling interest in more than one MFB, except as approved by the CBN.

A bank holding company that intends to set up any category of MFBs as subsidiaries shall be required to meet the prescribed capital and other requirements stipulated in these Guidelines.

(b) Licensing Requirements

There shall be three (3) categories of MFBs:

A Unit Microfinance Bank is authorized to operate in one location. It shall be required to have a minimum paid-up capital of N20 million (twenty million Naira) and is prohibited from having branches and/or cash centres.

A State Microfinance Bank is authorized to operate in one State or the Federal Capital Territory (FCT). It shall be required to have a minimum paid-up capital of N100 million (one hundred million Naira) and is allowed to open branches within the same State or the FCT, subject to prior written approval of the CBN for each new branch or cash centre.

A National Microfinance Bank is authorized to operate in more than one State including the FCT. It shall be required to have a minimum paid-up capital of N2 billion (two billion Naira) and is allowed to open branches in all States of the Federation and the FCT, subject to prior written approval of the CBN for each new branch or cash centre.

(c) Transformation Path

A Unit MFB that intends to transform to a State MFB shall be required to surrender its licence and obtain a State MFB licence, subject to fulfilling stipulated requirements.

A State MFB that intends to transform to a National MFB must have at least five (5) branches, which are spread across the Local Government Areas in the State of its original operation. This is to ensure that the MFB has gained the experience necessary to manage a National MFB. It shall also be required to surrender its State MFB license and fulfill other stipulated requirements for a National MFB licence.

No new promoter(s) shall be allowed to apply directly for a National MFB licence, that is, a National MFB shall emerge through organic growth from a State MFB.

The prescribed minimum capital requirement for each Category of MFB may be reviewed from time to time by the Central Bank of Nigeria.

(d) Licensing Documentation Requirements

1) Promoter(s) seeking a licence for MFB business in Nigeria shall apply in writing to the Governor of the Central Bank of Nigeria. The application shall indicate which of the three (3) categories of licences is being applied for.

2) Such application shall be accompanied with the following:

Non-refundable application fee of N50,000, N100,000 and N250,000 for Unit, State and National MFBs respectively in bank drafts or e-payment, in favour of the Central Bank of Nigeria; The deposit of the minimum capital requirement for the relevant category of MFBs, which shall be made through e-payment into the MFB Share Capital Deposit Escrow Account with the CBN. The capital thus deposited together with the accrued interest shall be released to the promoters after the grant of a licence; Satisfactory, verifiable and acceptable evidence of payment by the proposed shareholders of the minimum capital requirement for the category of licence being applied for; including personal statement that capital does not originate from bank credit, any form of credit, questionable sources and any activity that relates to money laundering or any illicit activity; Certificate of capital importation issued by an authorized dealer [banks] in the case of foreign capital;

A copy of detailed feasibility report disclosing relevant information that shall include:

i. The objectives and aims of the proposed MFB;

ii. The justification for the establishment of the MFB;

iii. The services that the MFB intends to provide;

iv. The branch expansion programme (if any) within the first five years in the case of State and National MFBs;

v. The proposed training programme for staff and management succession plan;

vi. A five-year financial projection for the operation of the MFB, indicating its expected growth and profitability;

vii. Details of the assumptions upon which the financial projection has been made;

viii. The organizational structure of the MFB, setting out in detail, the functions and responsibilities of the top management team;

ix. The composition of the Board of Directors and the Curriculum vitae (CV) of each member including other directorships held (if any);

x. Proposed social performance management framework indicating the social values to the clients over a five (5) year period;

xi. Appropriate management information systems, internal controls, enterprise risk management framework and procedures including manuals of operations; and

xii. The conclusions based on the assumptions made in the feasibility report.

f. A copy of the draft Memorandum and Articles of Association;

3) A letter of intent to subscribe to and payment for the shares of the proposed MFB, signed by each subscriber;

4) A list of promoters/proposed shareholders in tabular form, showing their business and residential addresses (not post office addresses) and the names and addresses of their bankers;

5) The Names, CVs and copies of credentials of the proposed members of the Board of Directors. The CVs must be personally signed and dated; No proposed MFB under this policy shall incorporate/register its name with the Corporate Affairs Commission (CAC) until a written approval-in principle (AIP) has been communicated to the promoters by the CBN, a copy of which shall be presented to the CAC.

6) In considering an application for a licence, the CBN shall satisfy itself that:

A. The promoters and the proposed Management team are approved persons to invest in/manage the financial services industry in Nigeria by regulatory standards;

b. The promoters have submitted the names, curriculum vitae and credentials of the top management team of the proposed MFB;

c. The minimum paid-up capital/shareholders' funds of the relevant category being applied for is acceptable and the source is verifiable and found satisfactory to the CBN;

d. The quality of the management of the proposed MFB is sound;

e. The earnings prospect of the company is realizable; and

f. The objects of the company as disclosed in its Memorandum and Articles of Association agree with the permissible activities listed in the provisions of Section 2.1 of these Guidelines.

7) The CBN shall before the issuance of an Approval-in-Principle (AIP) arrange an appraisal interview for the promoters of the proposed MFB. The date and time for the interview shall be communicated to the promoters in writing.

8) If satisfied, the Governor may grant a licence to the MFB and where the grant of licence is declined, the promoter shall be communicated in writing and their capital deposit refunded.

9) The CBN may at any time vary or revoke any conditions of a licence or impose additional conditions.

10) Where a licence is granted subject to some conditions, the MFB shall comply with those conditions to the satisfaction of the CBN within such period, as the CBN may deem appropriate in the circumstances. Any MFB that fails to comply with such conditions shall be guilty of an offence under Section 60 of BOFIA, 1991 (as amended).

11) Every licensed MFB shall be required to add "Microfinance Bank" after its name, which shall be registered with the Corporate Affairs Commission in compliance with the Companies and Allied Matters Act (CAMA).The font size of all characters in its full name, which shall appear on all banking instruments, signage and sign boards, shall be the same. Failure to comply with this requirement at its Head Office and branches shall attract a penalty of N100,000, N150,000 and N250,000 for Unit MFB, State MFB and National MFB, respectively per office/branch where non-compliance is observed and a warning letter to ensure immediate compliance shall be served.

(e) Application and Licensing Fees

The application and licensing fees, which may be varied at the instance of the CBN, shall be as follows:

Unit MFB State MFB National MFB

Non-refundable Application fee N50, 000 N100, 000 N250, 000

Non-refundable Licensing fee N100, 000 N250, 000 N1, 000,000

Change of Name fee N20, 000 N50, 000 N100, 000

An MFB wishing to convert its licence status shall be required to pay the applicable non-refundable application and licensing fee.

(f) Conditions for Grant of Approval-In-Principle

The Central Bank of Nigeria, on receipt of an application, which is complete in all respects, shall process the application and if satisfied with the overall quality of the proposal, grant Approval–in-Principle for establishing the MFB within three (3) months of receipt of the application. An Approval-in-Principle does not confer a permission to commence operation before the grant of a final licence.

(g) Conditions for Final Licence and Commencement of Business

An MFB with Approval-in-Principle shall be granted a final operating licence and may commence business after satisfying and complying with the conditions stated below:

The promoters of the MFB have submitted the following documents to the CBN:

i. A copy of the shareholders' register in which the equity interest of each shareholder is properly reflected;

ii. A copy of the share certificate issued to each shareholder;

iii. Certified true copy of Form CAC 2 (Return of Allotments) filed with the CAC;

iv. Certified true copy of Form CAC 7 (Particulars of Directors), and a written confirmation that the Board of Directors approved by the CBN has been installed;

v. Certified true copy of the Memorandum and Articles of Association approved by the CBN and filed with the CAC;

vi. The opening statement of affairs audited by an approved firm of accountants practicing in Nigeria;

vii. Certified true copy of the certificate of incorporation of the company (together with the original for sighting purposes only);

viii. A copy each of the letters of offer and acceptance of employment by top management staff and a written confirmation that the Management team approved by the CBN has been put in place; and

ix. A letter of undertaking to comply with all the rules and regulations guiding the operations of MFBs.

The MFB shall inform the CBN of the location and address of its Head Office in Nigeria (certified true copy of Form CAC 3) and shall confirm that all infrastructures for take-off are in place. In addition, the MFB shall show evidence that appropriate management information system, internal controls, enterprise-wide risk management (ERM), and procedures including manuals of operations have been put in place. The MFB shall be informed in writing by the CBN that it may commence business after satisfactory physical inspection of its premises. The MFB shall inform the CBN in writing of the date of commencement of business.

2.6.4 Insurance Coverage

(a) Compliance with Deposit Insurance Scheme

In accordance with Section 15(1) of the Nigeria Deposit Insurance Corporation (NDIC) Act 2006, every licensed MFB shall be required to insure its deposit liabilities with the Corporation.

(b) Compliance with Staff Fidelity Insurance

An insured MFB shall have fidelity insurance coverage up to such level as may be prescribed from time to time by the NDIC (Section 33 of the NDIC Act 2006).

2.6.5 Membership of National Association of Microfinance Banks

Every MFB shall be required to be a financial member of the National Association of Microfinance Banks (NAMB), that is, all MFBs are required to pay their annual subscription to NAMB not later than 31stJanuary of every year.

2.6.6 Compliance with Money Laundering (Prohibition) Act 2011, Terrorism (Prevention) Act 2011 and Know Your Customer (KYC) Circulars

Every MFB shall be required to comply with the Money Laundering (Prohibition) Act 2011, Terrorism (Prevention) Act 2011, the principles and procedures of Know Your Customer (KYC) and relevant circulars as issued by the CBN from time to time. Also, an MFB shall have a Compliance Officer designate for this purpose, who shall not be below the grade of a Management staff.

2.6.7 Prudential Requirements

General Prudential Requirements

Every MFB shall comply with the following requirements:

(a) Compulsory Investment in Treasury Bills

An MFB shall be required to maintain not less than 5% of its deposit liabilities in Treasury Bills (TBs), which may be obtained directly from the CBN. Non-compliance shall attract a fine of 1% of the amount not invested. Investment in Treasury Bills by any MFB shall, however, not exceed 10% of its deposit liabilities at any point in time.

(b) Liquidity Ratio

The operation of an MFB requires the maintenance of high level of liquid assets to meet frequent requests for funds from clients and for field operations. Every MFB shall be required to maintain a minimum ratio of twenty percent (20%) of its deposit liabilities in liquid assets, including the investment in Treasury Bills.

(c) Limit of Lending to a Single Borrower and Related Party

The maximum loan by an MFB to any individual borrower, Director or related borrowers shall not exceed 1 percent, and in the case of group borrowers, a maximum of five (5) per cent of the MFB's shareholders' fund unimpaired by losses or as may be prescribed by the CBN from time to time. In addition, aggregate insider-related lending at any time shall not exceed five (5) per cent of its shareholders' funds unimpaired by losses. For this purpose, loans under a staff scheme shall not apply, but shall be in accordance with the staff conditions of service.

Any contravention will attract a penalty of N250, 000.00 on the MFB and a letter of warning to the Managing Director. Subsequent defaults will be a ground for the removal from office of the affected Officer(s).

(d) Loan Portfolio Composition

The value of the loan portfolio of an MFB shall, at all times, be a minimum of 80 per cent for micro loans and a maximum of twenty (20) per cent for small and medium enterprises (SMEs).

(e) Maximum Equity Investment Holding Ratio

The aggregate value of the equity participation of an MFB in all permissible enterprises shall NOT exceed 7.5 per cent of its shareholders funds unimpaired by losses.

(f) Provision for Classified Assets

Provision for performing and non-performing risk assets and other assets shall be as stated hereunder. Days at Risk (No. of days missed payment) Description Provisioning Requirement or Allowance for Probable Loss (%)

0 Performing 1

1 – 30 days Pass and Watch 5, 31 – 60 days Substandard 20, 61 – 90 days Doubtful 50, 91 or more days and for restructured loans Lost 100

All MFBs shall be required to review their loans and advances and other assets at least once every thirty days, and make appropriate provisions. As part of its monthly returns, every MFB shall send a schedule of loans/investments, showing the provisions made for losses or deterioration in the quality of its risk assets to the Director, OFISD and Director, SIID of the NDIC.

(g) Special Standards Prudential

The following traditional banking regulations shall be adjusted from time to time at the discretion of the CBN to accommodate the peculiarities of microfinance.

Unsecured Lending Limits:

Any unsecured advances or loans or credit facilities of an aggregate amount to an individual in excess of fifty thousand naira [N50,000] is not permitted. For the purpose of applying this regulation to microfinance loans of MFBs, group guarantees or third party guarantees of an individual acceptable to the MFB shall qualify as collateral.

Loan Documentation Requirement:

Given the nature of microfinance loan sizes and customers, collateral registration, financial statements of borrowers or evidence that those businesses are formally registered shall not be required.

Restriction of Co-signers as Borrowers:

The restriction prohibiting a commercial bank from lending to someone who has co-signed or otherwise guaranteed a loan from the same bank shall not apply to group lending's of an MFB.

Cash Reserve Requirements:

The mandatory cash reserve requirements (CRR) for Deposit Money Banks shall not apply to an MFB, rather an MFB shall be required to have compulsory investment of five per cent (5%) of its total deposit liabilities in treasury bills which shall qualify as specified liquid asset in computation of its liquidity ratio.

Portfolio- At- Risk [PAR]

PAR is the outstanding principal amount of all loans that have at least one installment past due for one or more days. The amount includes the unpaid principal balance but excludes the accrued interest. Under PAR, loans are considered past due if payment has fallen due and remained unpaid.

Loan repayments shall apply first to any interest due, and then to any installment of principal that is due but unpaid, beginning with the earliest installment. The number of days of lateness is based on the due date of the earliest loan installment that has not been fully paid.

Limit: It shall be required that PAR shall not exceed 5 per cent at any given time for an MFB.

Past Due Microfinance Loans: This is any loan which repayment is past due for at least one day in accordance with the agreed repayment term in the loan contract. Such loans whether restructured or refinanced shall attract appropriate provision for loan loss. The past due microfinance loans shall remain in the account of the MFB until it is fully repaid or written off.

Accrual of Interest Earned: No accrual of interest to the income statement shall be allowed after the microfinance loan has become past due. Interest accrued shall not be recognized as income after the microfinance loan had become past due, rather it should be transferred to the interest-in-suspense account. All interests already accrued and/or booked shall be reversed from income and the accrued interest transferred to interest-in-suspense account.

This provision is for the purpose of passing entries in the books of the MFB, without prejudice to the right of the bank to collect the interest due to it from its clients.

Restructured Microfinance Loans: These represent microfinance loans that have been renegotiated or modified to either lengthen or postpone the original scheduled installment payments, or substantially alter the original terms of the loans. Restructured loans, which shall include refinanced loans [i.e. loans disbursed to enable repayment or part repayment of prior loans that was past due], shall be treated as non-performing and the interest thereon shall be transferred to the interest-in-suspense account. No microfinance loan shall be restructured more than two (2) times.

Writing off of Microfinance Loans as Bad Debts: Microfinance loans that have been fully provided for except director-related facilities may be written off in accordance with the MFBs' policy and communicated to the CBN. Director-related facilities shall require prior approval of the CBN before such can be written off as bad debts.

(h) Implementation of Recommendations in Examination Report

The Board and management of licensed microfinance banks shall ensure the implementation of all recommendations contained in the CBN/NDIC Examination Reports. Failure to do so shall attract a penalty of N100, 000 for each recommendation not fully implemented. Persistent non-implementation of the recommendations contained in the Examination Reports shall be considered a ground for the removal of the affected Board member(s) and management staff from office.

2.6.8 Assessment of Soundness

In response to the changing financial landscape, a more risk based approach to the supervision of MFBs would be adopted. For this purpose, a robust, dynamic and proactive Risk Based Supervision (RBS) Framework had been developed to provide an effective process to assess the safety and soundness of all microfinance banks operating in Nigeria. This is to be achieved by evaluating the MFB's risk profile, financial condition, risk management practices and compliance with applicable laws and regulations.

Inherent risk is intrinsic to all business activities and arises from exposure to, and uncertainty from, potential future events. Inherent risk would therefore be evaluated by considering the degree of probability and the potential size of an adverse impact on an institution's capital or earnings. The effectiveness of the risk management control functions put in place by the MFB shall form the basis for moderating the level of aggregate inherent risk associated with any particular activity.

The framework considers risks on a consolidated basis and groups them into the following categories for assessment purposes:

Credit risk, market risk, operational risk, liquidity risk, legal and regulatory risk, strategic risk, Insurance risk (for MFBs involved in micro insurance business).

2.6.9 Disclosure of Required Information to Credit Reference Bureaux

An MFB shall be required to supply information on all its credit clients to licensed Credit Bureau from time to time. In addition, every MFB shall provide:

i. Details of non-performing loans or credit accommodations classified as doubtful or lost in its portfolio, where the amount owed is not in dispute, the customer has not made any satisfactory proposals for repayment following formal demand, and the customer has been given at least twenty-eight (28) days notice of the intention to disclose that information to the Credit Reference Bureau;

ii. Information on its customers involved in financial malpractices including the issuance of dud cheques.

iii. No information other than that referred to in the above sub-sections (i) and (ii) shall be divulged by any institution to the Credit Reference Bureau without customers' consent.

Nothing in this section shall prevent MFBs and Credit Reference Bureaux from disclosing the information referred to in paragraphs (i) and (ii) above provided the information is disclosed in good faith and/or in the normal course of business. Any customer of an MFB has a right to know his credit status has been forwarded to the Credit Reference Bureau.

2.6.10 Operational Requirements and Control Opening /Relocation and Closing of Branches/Cash Centres

Unit MFBs are prohibited from opening branches or cash centres. A State or National MFB shall obtain approval from the CBN, in writing, to open new branches or cash centres.

Any MFB that contravenes the provisions of paragraph (a) of this section shall be liable to pay penalties of N250, 000 per branch for a Unit MFB, N500, 000 per branch for a State MFB and N1, 000,000 per branch for a National MFB. In addition, such unapproved branch office Or cash centre should be closed within a period of thirty (30) days. Any MFB that relocates its Head Office, branch or cash centre without prior approval of the CBN in writing shall be liable to pay a penalty of N500, 000, irrespective of the category of MFB. Failure to close an unapproved branch office or cash centre in line with the provisions of these Guidelines shall attract a fine of N5, 000.00 for each day of default, irrespective of the category of MFB.

(a) Change of Name

Every MFB shall be required to obtain CBN's approval before effecting a change of name as contained in its operational licence. Any

MFB that fails to obtain prior approval of the CBN for change of name shall be liable to a penalty of N500,000, irrespective of the category of the MFB.

(b) Display of Licence

A copy of an MFB's licence shall be displayed in a conspicuous position at its Head Office as well as in all branches and cash centres, if any. Any MFB that contravenes this provision shall be liable to pay a fine of N100, 000 for each location without the display of the licence.

(c) Display of Interest Rates and Fees

Every MFB shall display on a daily basis and in a conspicuous place at its Head Offices, branches and cash centres, its interest rates and fees. Interest rates and fees shall be quoted on an annual basis. In contravention, an MFB shall be liable to pay a penalty of N50 000, after which N5000 shall be payable for each day during which the offence continues.

(d) Internal Control

Every MFB shall develop, implement and submit evidence of implementation of an internal control framework. The internal control framework adopted by the MFB should be developed in line with the Committee of Sponsoring Organizations (COSO) of the Tread way

Commission 2004 and should comprise the following areas of internal control;

control environment risk assessment control activities information and communication and monitoring

Failure to comply with any of the above provisions shall attract a fine of N100 000.

2.6.11 Restructuring and Re-Organization

Except with the prior consent of the Governor of the CBN, no MFB shall enter into an agreement or arrangement:

i. Which will result in a change in the control of the MFB;

ii. For the sale, disposal or transfer of the whole or any part of the business of the MFB;

iii. For the amalgamation or merger of the MFB with any other company;

v. For the restructuring of the MFB; and

vi. To employ a managing agent or to transfer its business to any such agent.

2.6.12 Participation of Existing Financial Institutions in Microfinance Activities

Any financial institution under the purview of the Central Bank of Nigeria that intends to transform into a microfinance bank shall apply to the Bank and ensure that the licensing requirements for an MFB are met.

(a) Deposit Money Banks (DMBs):

A Deposit Money Bank (DMB) wishing to engage in microfinance services could continue to do so through a designated department/unit and/or offer microfinance as a financial product. The department/unit shall be headed by a staff of not less than a Deputy General Manager or its equivalent and must meet the certification condition specified in paragraph 2.6.3 of these Guidelines.

(b) Non-Governmental Organization Microfinance Institutions (NGO-MFIs)

The Guidelines recognize the existence of credit-only, membership-based microfinance institutions, which are not required to come under the regulatory and supervisory purview of the CBN but are, however, supervised by the appropriate Ministry. Such institutions shall engage in the provision of microcredit to their targeted population but shall not mobilize deposits from the general public. Registered NGO-MFIs shall be required to forward periodic returns on its activities to the CBN primarily for statistical purposes.

2.6.13 Collaboration to Regulate Deposits/Saving Mobilizing Institutions

To prevent regulatory arbitrage in the sub-sector, the CBN shall collaborate with other relevant agencies of the government to monitor the activities of financial cooperatives and NGOs that have significant operations due to their micro savings/deposit taking activities from their members. Any of these Institutions that attains a total assets of N20,000,000 (twenty million Naira only) and or total membership/clients of two thousand (2,000) shall be encouraged to transform to the relevant category of MFB, subject to the licensing requirements.

Collaboration between the CBN, NDIC, SEC, NAICOM, CAC, National Association of Microfinance Banks (NAMB), Association of Non-Bank Microfinance Institutions in Nigeria (ANMFIN), and other relevant government agencies shall be promoted to reduce arbitrage in the practice of microfinance.

2.6.14 Conditions for the Revocation of Licence

The grounds for revoking a licence granted to an MFB may be any or all of the following:

a. Submission of false information/data during and/or after the processing of the application for licence;
b. The use of proxies or disguised names to obtain a licence to operate as an MFB;
c. Engaging in functions/activities outside the permissible scope of its licence as specified in Section 2.6.2 of these guidelines;
d. Persistent failure to comply with request for information/data in the form required/specified by the CBN;

e. Engaging in activities prejudicial to the Nigerian economy;
f. Failure to redeem matured obligations to customers;
g. Failure to render statutory monthly returns for a continuous period of 6 months or for a cumulative period of 6 months in a financial year.
h. Unauthorized shop closure;
i. Failure to comply with any directive issued by the CBN;
j. Engaging in prohibited activities as listed in these Guidelines;
k. Technical insolvency, i.e. where an MFB's assets are insufficient to cover its liabilities.
l. Such other conditions applicable to banks and other financial institutions which constitute a ground for revocation of licence under the Banks and other Financial Institutions Act (BOFIA) 1991(as amended); and
m. Any other act(s) which in the opinion of the CBN constitute(s) a violation or a serious default.

2.6.15 Exit Conditions

The condition for exit of a licensed MFB shall be as prescribed by the relevant sections of the Banks and Other Financial Institutions Act (BOFIA), 1991 (as amended) as applicable to deposit taking financial institutions and the Companies and Allied Matters Act (CAMA) 1990.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Historical Background of the study area: Kaduna Metropolitan

3.1.1Location and Geography of the study Area

The study area is the Kaduna metropolitan Area of Kaduna State. This comprises Kaduna North, Kaduna South and some parts of Igabi, and Chikun Local Governments. Kaduna metropolitan is found between latitude 10^0 35^1 North and $10^0 40$ North and longitude 7 °251 East and 7° 201 East. It is bounded in the north and west by Igabi Local Government area and in the south and the east by Chikun Local government area (Dauda and Oyedele 2001).

The major occupation of the local government areas is commercial undertakings, civil service and farming. Agricultural products of the area include maize, rice, beans, fish, vegetables, fruits, dairy products and animal rearing.

Kaduna metropolis forms the administrative, commercial and industrial centre. The population growth has expanded as a result of rural urban migration and natural increase. As functions were performed in the town, it became more varied and complex. More people are attracted to it; so the town experienced physical expansion to accommodate new activities and additional population.

According to 2006 the population census projection Kaduna North has a population of 357,694, Kaduna South 402,390, Igabi 430,229, and Chikun 368,250 which give a total population of 1,558,563 in the four local governments. The population density was about 700 persons per square kilometers (Census, 2006). The current estimated growth rate is put at 3.50/0 per annum. The increase in population is not only in the number of people, but also in term of purchasing power, which is more important. Musa (2011) explained that the factors responsible for this rate of growth are natural growth and migration.

In terms of the commercial activities, the greater parts of the population are engaged in commercial activities, secondary and tertiary activities, manufacturing and so on. The area has markets such as the Central Market, Chechenia Market, Panteka Market, Kawo Market, etc. Also, the area has various shopping malls and gas stations. These businesses are mostly patronized on a daily basis they offer a wide range of commodities for sale. There is also the availability of social amenities, such as electricity, pipe borne water, hospital or health services, communication facilities, e.t.c. which has increased the migration of people to the study area (Dogo, 2006).

3.2 Population of the Study

In research methods, population is the entire aggregation of items from which samples can be drawn. In this research, the population comprises all the clients of Microfinance Bank in the Kaduna metropolis.

3.3 Sampling Technique

This research adopted a stratified sampling technique by dividing the study area into local government areas. Four hundred and twelve (412) borrowers of selected Microfinance Banks in the entire local government areas were sampled for interview, using structured questionnaires to derive relevant, reliable and sufficient data from the borrowers.

3.4 Data Collection Method

In this study, only primary data concerning loan repayment default were used. Sources of primary data for this study comprise the sampled borrowers of the selected Microfinance Banks. Data were gathered through the interview method with the help of a structured questionnaire. The questionnaire was developed based on the research questions.

3.5 Model Specification and Estimation Technique

The estimation technique adopted is from the work of Suraya et al (2012) because it is considered best for this research work with little modifications.In this study, the data collected were analysed using binary choice modelling to investigate the factors that cause loan repayment default in Microfinance banks in the Kaduna Metropolis. In order to identify and examine the determinants of microcredit loan default in the study area, two binary choice models of logit and probit were selected. Specifically, the models were considered in order to analyse the dichotomous dependent variables which takes the response 1 or 0. The study could have used Ordinary Least Square (OLS) but that has shown to be inadequate when the dependent variable is discrete.

In both theory and practice, whether to use logit or probit depends on the assumption made about the distribution of the ε_i (error term), whereas in logit model the error term follows logistic distribution, while that of the probit model is normally distributed. Despite these differences, the application of both models does make much difference since both models give similar results (Gujarati, 2007). However, in reality there is little justification for choosing between logit and probit regression in estimating binary discrete outcomes modelling (Greene, 1997; Stock and Watson, 2003). Gujarati (2004) is of the view that researchers generally prefer the logit model because of its comparative simplicity.

In this case, the primary requirement is the need for a probability model that captures two basic features; firstly, as the value of X (predictor) increases, the conditional mean p = E (Y=1/X) increases but never steps outside the 0-1 interval and secondly, the relationship between P and X is non-linear, that is, P asymptotically approaches 0 or 1 as X approaches 0 or 1, respectively. Therefore, using binary choice models, the probability of loan default p is expressed as a function of the underlying predictor variables represented by a vector *x.* The outcome of the models can be given a latent variable interpretation to provide a link with the linear regression model. Thus, the probability of a borrower to default or not can be denoted by y_i, depend on the observed socioeconomic and the economic characteristics of the individual and unobserved characteristics. The determinants of the loan repayment default model were estimated using logistic regression. Hence, assuming a linear relationship the model will be,

Loan Repayment Default = f (Borrower socio economic characteristics, and economic characteristics) (1.1)

$$P_i = E(Y_i = 1|X_{ij}) = \frac{1}{1+e^{-z_i}} = \frac{1}{1+e^{-(\propto + \sum_j \beta_j X_{ij} + \varepsilon_i)}} \quad (1.2)$$

Where:

P_i is the estimated probability of a loan repayment default (high value of Pi signifies loan repayment default, risk);

Y_i is equal to 1 if the borrower defaulted loan repayments, Since receiving the microcredit loan (having a repayment default); 0 if the borrower never defaulted a loan repayment (not having a repayment default);

$$Z_i = \propto + \sum_j \beta_j X_{ij} + \varepsilon_i \quad (1.3)$$

Z_i is the probability of a loan repayment default

α and β are an intercept term and parameter, respectively.

X_{ij} are the vectors of borrowers socio economic characteristics, and Borrowers economic characteristics and;

ε_i Is the error term.

Equation 1.2 represents the cumulative logistic distribution function. If P_i is the probability of having loan repayment default, then the probability of not having loan repayment default or (1 - P_i) is given by:

$$1 - p_i = \frac{1}{1+e^{z_i}} \tag{1.4}$$

Therefore, the odds in favour of having a loan repayment default or $\frac{p_i}{1+p_i}$ can be written as:

$$\frac{p_i}{1+p_i} = \frac{1+e^{z_i}}{1+e^{-z_i}} = e^{z_i} \tag{1.5}$$

Taking the natural log, equation 1.4 becomes:

$$Zi = \ln\left(\frac{p_i}{1-p_i}\right) = \propto + \sum_j \beta_j X_{ij} + \varepsilon_i \tag{1.6}$$

Where, $Z_{i,}$ is the natural logarithm of the odds ratio in favour of having a loan repayment default. The model is a binary choice model so the use of the ordinary least squares estimation technique is inappropriate (Maddala, 1983). Thus, to obtain efficient parameter estimates, the maximum likelihood estimation technique is applied to the logistic regression. The likelihood function L for the model as given by Maddala (2001):

$$L = \prod_{y_i=1} p_i \prod_{y_i=0} (1 - p_i) \qquad (1.7)$$

From equation 1.5, the probability of having a loan repayment default can be obtained by the following equation as given by Greene, (1997):

$$p_i = Prob(y_i = 1|x_{ij}) = \frac{e^{z_i}}{1+e^{z_i}} \qquad (1.8)$$

Model 1

$$y_i = \propto + \textstyle\sum_j \beta_j X_1 + X_2 + X_3 + X_4 + X_5 + X_6 + \varepsilon_i$$

y_i is the probability of loan default.

α and β are an intercept term and parameter, respectively.

While ε_i is the error term

Where the Socio economics Dependent Variables are:-

X_1 = Gender of borrower X_2= Marital status of borrower X_3 = Age of borrower

X_4 = Number of dependants X_5= Experience of borrower X_6 = Educational level of borrower

Model 2

$$y_i = \propto + \sum_j \beta_j X_1 + X_2 + X_3 + X_4 + X_5 + \varepsilon_i$$

y_i is the probability of loan repayment default.

α and β are an intercept term and parameter, respectively. While ε_i is the error term

Where the Economic Dependent Variables are:-

X_1= Sale X_2 =Cost of operation X_3 = Loan repayment period

X_4 = Loan repayment mode X_5 = Interest rate

3.6 Test for the Adequacy of Models

In this research, a test was conducted for the adequacy and the fitness of the models used in order to determine the nature and the extent of the relationships between the dependent variables and the independent variables, so that the findings of the research will be reliable for policy implementation as well as for reference purposes.

CHAPTER FOUR

DATA PRESENTATION /ANALYSIS / RESULTS/ FINDINGS AND DISCUSSION

4.1 Introduction

This chapter captures the presentation, analysis and discussion of the data used in the research work. Also, depicts the findings, which seek to answer the research questions against the background and objectives of the study. Generally, the chapter plays a vital role in the research work.

Table 4.1 Logistic result for Socio-Economic characteristics

Socio Characteristics	Marginal Effect	Odd Ratio	P>/Z/
Gender	0.285645 (0.0552)	3.28007 (0.0796)	0.000
Marital status	0.187340 (0.0572)	2.149095 (0.0513)	0.001
Age	-0.129104 (0.0549)	1.593081 (0.1320)	0.019
No. of dep.	0.302189 (0.0405)	1.130072 (0.2059)	0.502
Experience	-0.532297 (0.0373)	5.031021 (0.0180)	0.000
Edu. Level	-0.236833 (0.0518)	2.3835243 (0.0840)	0.000
Number of obs = 412 LR chi^2 (6) = 116.03 Prob > Chi^2 =0.0000 Pseudo R^2 = 0.2033 Log likelihood =- 227.38495			

Source: Data Survey 2015 Using Stata Version 11.0.

Results from table 4.1 shows that gender, marital status are positive and significant at the 1% significance level and experience and educational level are negative, but significant at the 1% significance level, while the age of borrowers is negative and significant at the 5% significance level. But number of dependents is not significant even at the 10% level of significance.

The analysis of marginal effects calculated as the partial derivatives of the non-linear probability function evaluated at each variables sample mean, reveals that a 1% increase in the probability that the gender is male would on average lead to a 28.5% increase in the rate of default. This implies that a 1% increase in the number of male borrowers would lead to a 28.5% increase in the rate of default. So, male borrowers have a greater probability of loan default.

Also one person increase in the number of married borrowers would on average lead to the 18.7% increase in the probability of loan default. This means that the married borrowers have a higher probability of loan default than the single borrowers. Moreover, one year increase in the age of a borrower would lead to a 12.9% decrease in the probability of default. This implies that there is a good relationship between age and the credit worthiness, since an increase in the years of the borrower would on average lead to 12.5% increase in the rate of repayment.

Indeed, an additional person (dependant) would on average lead to a 30% increase in the rate of loan default, although the number of dependent is not significant. But the result show a strong direct relationship between number of dependants and loan repayment default.

Similarly, a 1 year increase in the experience of a borrower would leads to a 53.2% decrease in the probability of default. This means that borrowers who are experienced in their business have the highest probability of repayment. So, microfinance banks focus and as well lend their money to this class of borrowers. Finally, an increase in the educational level of the borrower would on average lead to the 23.6% decrease in the rate of loan default.

Also, additional information can be obtained through the analysis of odd ratio, which calculates the probability of success and failure reveals that the odd chance of a male to default is 3 times higher than a female borrowers. This implies that male borrowers have a higher probability of defaulting compared to female borrowers because a male borrower would on average have defaulted three times before a female borrower once.

Also, the odd chance of married borrowers to increase default is 2 times higher than single borrowers. This implies that at least two married borrowers would default before a single borrower would default. This could be due to the higher financial commitments and other expenses.

Moreover, the odd chance of an additional person (dependant) to increase default is 1 times higher than if the number of dependents is maintained and the odd chance of 1 year increase in the age of an old responsible borrower to reduce loan repayment default is 1 times higher than that of a young borrower (ceteris paribus). This implies that an increase in the age of old borrowers who are creditworthy and responsible would increase the repayment of the loan borrowed.

The odd chance of a 1 year increase in the level of the experience of a borrower to reduce default is 5 times higher than borrowers who do not possess any experience and, finally, the odd chance of a 1 year increase the level of education to reduce default is 2 times higher than if the level of education is maintained.

Table 4.2 Probit Result for Socio Economic Characteristics

Socio Characteristics	Coefficient	Marginal Effect	P>\Z\
Gender	0.726422 (0.1462)	0.2820484 (0.0543)	0.000
Marital status	0.460872 (0.1462)	0.1810484 (0.0556)	0.001
Age	-0.284002 (0.1294)	-0.112629 (0.0513)	0.028
No. of dep.	0.572025 (0.4064)	0.226854 (0.0422)	0.573
Experience	-1.983944 (0.2917)	-0.535786 (0.0365)	0.000
Edu. Level	-0.601404 (0.1256)	-0.238505 (0.049)	0.000
Cons	3.038501 0.51469		0.000
Number of obs = 412 LR Chi^2 (6) = 115.94 Prob > Chi^2 = 0.0000 Pseudo R^2 = 0.2031 Log likelihood = -227.43269			

Source: Data Survey 2015 Using Stata Version 11.0.

From table 4.2 results showed that the gender and marital status and number of dependents are positive and significant at a 1% significance level, while experience and educational level are negatives but significant at the 1% level of significance. The age of borrower is negative and significant at the 5% level of significance.

The analysis of marginal effects shows that the probability that a 1% increase in the probability that the gender is male will on average lead to a 28.2% increase in the probability of default. Similarly, a 1% increase in the number of married persons would on average lead to a 18.2% increase in the rate of loan default. Moreover, a year increase in the age of a borrower would lead to an 11.2% decrease in the probability of default. This implies that there is a good relationship between age and the credit worthiness, since a 1 year increase in the years of the borrower would on average lead to an 11.2% increase in the rate of repayment.

Indeed, an additional person (dependant) would on average lead to a 22% increase in the rate of loan default, although, the number of dependents is not significant. But the result shows a strong direct relationship between the number of dependants and loan repayment default.

Moreover, a 1year increase in the experience of a borrower would lead to 53.5% decrease in the probability of default. Moreover, an increase in the educational level would lead to a 23.8% decrease in the probability of default by borrowers.

Table 4.3 Logistic Result for Economic Characteristics

Econs. Characteristics	Marginal Effect	Odd Ratio	P>/Z/
Sales	-0.046219 (0.05424)	1.203293 (0.26158)	0.394
Cost	0.102791 (0.05627)	1.607222 (0.15169)	0.068
L RP	0.32671 (0.90200)	3.901362 (0.05093)	0.000
LRM	-0.180553 (0.05568)	2.479121 (0.11221)	0.001
Interest rate	0.152567 (0.05768)	2.590451 (0.17325)	0.006
Number of obs = 412 LR Chi^2 (6) = 14.88 Prob > Chi^2 = 0.0000 psudoR^2 = 0.0734 Log likelihood = -264.4643			

Source: Data Survey 2015 Using Stata Version 11.0.

From table 4.3 results showed that the economic factors loan repayment period and interest rate are positive and significant at the 1% level of significance while, loan repayment mode is negative but significant at the 1% level of significance and the cost of operation is positive and significant at a 10% significance level. But sales are not significant even at the 10% significance level.

The analysis of marginal effects reveals that a 1% unit increase in the cost of operation would lead to approximately a 10.2% increase in the rate of default. Also 1 month increase in the repayment period would lead to a 32.6% increase in the rate of default. As a result, lending institutions should adhere to the agreed time of repayment of less than one year for small scale businesses, because any attempt to extend the repayment period would increase the rate of default by 32.6%. Moreover, short term loans of not more than one year should be encouraged for a business that requires small capital.

Moreover, a week adjustment of the repayment mode would automatically lead to an 18% decrease in the rate of loan default, because borrowers were given greater freedom to use the loan they collected in a better matter and as well plough back the profit before the collection time to generate more profit for themselves and their businesses.

Finally, a 1% increase in the rate of interest would approximately lead to a 15% in the rate of default. So, microfinance banks are advised to charge a reasonably rate of interest to allow their borrowers pay the principal amount plus the interest.

Also, the odds that a unit increase in the cost of operation would lead to the increase in the cost of operation are 1 times higher than if the costs of operation do not increase. Moreover, the odds that an increase in the loan repayment period would lead to default are 3 times higher than if not the period does not increase. This implies that any attempt to increase the repayment period above one year would automatically lead to 3 times increment in the rate of default. So, microfinance should adhere to the agreed period of repayment for small loans, because any attempt to increase the repayment would affect the repayment plans of the borrowers.

The odd chance of a one week change in loan repayment mode to reduce default is 2 times higher than if the existing repayment mode is maintained. Finally, the odd chance of an increase in the rate of interest to increase loan repayment default is 2 times higher than if the existing rate is maintained.

Table 4.4 Probit Result for Economic Characteristics

Econs. Characteristics	**Coefficient**	**Marginal Effect**	**P>/Z/**
Sales	0.0988557 (0.132992)	0.03941 (0.0529)	0.395
Cost of Operation	-0.252738 (0.138633)	0.10021 (0.0544)	0.068
LRP	0.8376115 (0.138952)	0.32383 (0.0502)	0.000
LRM	-0.450194 (0.142583)	-0.17704 (0.0546)	0.001
Interest Rate	-0.381274 (0.145832)	0.148176 (0.0501)	0.006
Cons	-0.084793 (0.175898)		0.630
Number of obs = 412 LR Chi2 (4) = 41.79 Prob > Chi^2 = 0.0000 Pseudo R^2 =0.0732 Log likelihood = -264.56869			

Source: Data Survey 2015 Using Stata Version 11.0.

From table 4.4 results showed that the economic factors loan repayment period and interest rate are positive and significant at a 1% level of significance while the loan repayment mode is negative but significant at a 1% level of significance, the cost of operation is positive and significant at a 10% significance level. But sales are positive but not significant even at a 10% significance level.

The analysis of marginal effects reveals that a 1% unit increase in cost of operation would lead to approximately a 10.2% increase in the rate of default. Also,1 month increase in the repayment period would lead to a 32.8% increase in the rate of default. As a result lending institutions should adhere to the agreed time of repayment, because any attempt to extend the repayment period would increase the rate of default by 32.8%. Moreover, short term loans of not more than one year should be encouraged, more especially for businesses that require small capital.

But a change of repayment mode from one week to two weeks or 1 month would automatically lead to 17.7% decrease in the rate of loan default, because borrowers were given greater freedom to use the loan they collected in a better matter and as well plough back the profit before the collection time to generate more profit for themselves and their businesses.

Moreover, a 1% increase in the rate of interest would approximately lead to a 14% in the rate of default. So, microfinance banks are advised to charge a reasonably rate of interest to allow their borrowers to pay the principal amount plus the interest.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary

This research titled the determinants of microcredit loan repayment default amongst microcredit borrowers of microfinance in Nigeria is aimed to investigative the factors that bring about loan repayment default in the microfinance bank in Nigeria. Microfinance banks are established to support small businesses through the provision of microcredit to people at the grassroots level who are considered as risk borrowers and sidelined by the commercial banks and as well excluded by the organized banking sector. Concepts were defined and the literature reviewed. The portfolio management theory was selected for this research.

The study uses primary data collected from microfinance banks borrowers in the study area through the interview method with the help of a structured questionnaire. 412 borrowers were interviewed and the data used in the research were collected from them. Logistic and probit regression models were used to derive out salient information out of the data, using stata version 11 for the estimation. The result reveals that both socio economic and economic factors were among the factors that bring about loan default in the microfinance banks in Nigeria.

5.2 Conclusion

In conclusion, findings reveal that factors such as gender, marital status, cost of operations, repayment period and the interest rate are responsible for loan repayment default in microfinance banks in the study area while the age of borrowers, the experience of a borrower in his business, the educational level of the borrowers and the loan repayment mode have a significant influence to improve the repayment of loans.

Also, microfinance banks should have a good loan policy that would secure their loan and guarantee repayment before the disbursement of any loans. This could be only achieved through well planned and tight screening processes and as well a close supervision after disbursement. Moreover, microfinance banks must develop and design processes of tapping genuine information through well designed forms in a systematic manner, because most borrowers conceal vital information that would assist in the decision whether or not to grant a loan

5.3 Recommendations

Based on the findings from this empirical investigation, the following recommendations are made on how to improve repayment and as well control loan repayment defaults in Microfinance in Nigeria in order to sustain the banks and improve their profitability. That:

i. Government should establish credit bureaus that determine the credit worthiness of borrowers. This would help microfinance Banks in determining to who loans should be given and who should not be given.

ii. Government should have provided goods policies on education, health and other important sectors to reduce the burden on the poor and people who have families.

iii. Government should have developed the necessary infrastructure in order to create an enabling environment for small scale businesses to survive. This will beat down their cost and increase their profit.

iv. Microfinance Banks should adhere to their repayment period of one year, but adjust the repayment mode to enable borrowers to repay back loans without default

v. Microfinance banks should adhere to all the policies and directives of monetary authorities, so that they can reduce their risk exposure because they are dealing with a segment of the society that is risky in nature.

vi. It has been observed that group lending is one of the methods which improve the repayment of loans, because of peer pressure, so Microfinance Banks should encourage their borrowers to organize themselves into trade societies and come up with an internal arrangement to serve them better.

vii. For any bank to survive and continue on a path of profitability, training credit officers is inevitable and should be given high priority.

viii. Banks should consider experience and high integrity in the placement of managers who are responsible for managing the credit portfolio. This will largely influence the quality of risk assets management and engender confidence in the banking subsector.

ix. Visitation and follow-up on loans are indispensable issues in guiding against bad debts. This should be entrenched into credit administration and the control procedure to confirm the utilization of funds, the managerial ability of customers and the safety of assets financed by the bank. Follow-up could confirm the deviation from agreed conditions of the loan and this can always be quickly checked before the loan goes bad.

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APPENDICES

Logistic regression

Number of obs	=	412
LR chi2(6)	=	116.03
Prob > chi2	=	0.0000
Pseudo R2	=	0.2033

Log likelihood = -227.38495

ld	Odds Ratio	Std. Err.	z	P>|z|	[95% Conf.	Interval]
gender	3.280007	.0796447	4.89	0.000	2.03792	5.279131
ms	2.149095	.0513192	3.20	0.001	1.34584	3.431767
ar	1.593081	.1320867	-2.35	0.019	.3833021	.9176724
nd	1.130072	.2059534	0.67	0.502	.7906357	1.615236
exp	5.031021	.0180317	-5.97	0.000	.0099285	.0969254
el	2.383542	.0804062	-4.57	0.000	.2542951	.5784263

Marginal effects after logit

y = Pr(ld) (predict)
= .55360852

variable	dy/dx	Std. Err.	z	P>|z|	[95% C.I.	]	X
gender*	.2856457	.05529	5.17	0.000	.177279	.394012	.504854
ms*	.1873405	.05728	3.27	0.001	.075074	.299607	.533981
s ar	-.1291045	.05492	-2.35	0.019	-.236745	-.021464	1.54369
nd	.3021893	.04504	0.67	0.002	-.058059	.118496	1.19417
exp*	-.5322976	.03732	-14.26	0.000	-.605443	-.459152	.854369
el	-.2368339	.05181	-4.57	0.000	-.338381	-.135287	2.45631

(*) dy/dx is for discrete change of dummy variable from 0 to 1

Probit regression

Number of obs	= 412
LR chi2(6)	= 115.94
Prob > chi2	= 0.0000
Pseudo R2	= 0.2031

Log likelihood = -227.43269

ld	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
gender	.7264224	.1462532	4.97	0.000	.4397713	1.013073
ms	.460872	.143483	3.21	0.001	.1796504	.7420936
ar	-.2840021	.1294389	-2.19	0.028	-.5376977	-.0303065
nd	.0572025	.1064614	0.54	0.572	-.1514582	.2658631
exp	-1.983944	.2917639	-6.80	0.000	-2.555791	-1.412098
el	-.601404	.1256351	-4.79	0.000	-.8476443	-.3551638
_cons	3.038501	.5146986	5.90	0.000	2.029714	4.047292

Marginal effects after probit

y = Pr(ld) (predict)
= .54339028

variable	dy/dx	Std. Err.	z	P>|z|	[95%	C.I.]	X
gender*	.2820484	.05437	5.19	0.000	.175492	.388605	.504854
ms*	.1814691	.05564	3.26	0.001	.072422	.290516	.533981
ar	-.1126296	.05131	-2.20	0.028	-.213187	-.012073	1.54369
nd	.2268543	.04223	0.54	0.591	-.060086	.105457	1.19417
exp*	-.5357865	.03657	-14.65	0.000	-.607456	-.464117	.854369
el	-.238505	.04974	-4.79	0.000	-.335999	-.141011	2.45631

(*) dy/dx is for discrete change of dummy variable from 0 to 1

Logistic regression

```
                                                  Number of obs   =        412
                                                  LR chi2(4)      =      41.88
                                                  Prob > chi2     =     0.0000
Log likelihood =  -264.4643                       Pseudo R2       =     0.0734

------------------------------------------------------------------------------
          ld | Odds Ratio   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
       sales |   1.203293   .2615886     0.85   0.395     .7858244    1.842542
        cost |   2.660722   .1516996    -1.80   0.071     .4212946     1.03622
         lrp |   3.901362    .902008     5.89   0.000     2.479794    6.137859
         lrm |   2.479121    .112275    -3.14   0.002     .3026771    .7584241
         lnt |   2.590451    .173225    -3.35   0.006     .3026771    .7584241
------------------------------------------------------------------------------
```

Marginal effects after logit

```
      y  = Pr(ld) (predict)
         =  .51443016
------------------------------------------------------------------------------
variable |      dy/dx    Std. Err.     z    P>|z|  [    95% C.I.   ]      X
---------+--------------------------------------------------------------------
   sales*|   .0462196      .05424    0.85   0.394  -.060087  .152526   .631068
    cost*|  -.1027916      .05627   -1.83   0.068    -.21307  .007487   .679612
     lrp*|   .3267154      .05093    6.42   0.000    .226893  .426527   .631068
     lrm*|  -.1805537      .05568   -3.24   0.001  -.289687  -.07142   .660194
     int*|   .1525678      .05568   -3.64   0.006  -.289687  -.07142   .660194
------------------------------------------------------------------------------
(*) dy/dx is for discrete change of dummy variable from 0 to 1
```

Probit regression

Number of obs	=	412
LR chi2(4)	=	41.79
Prob > chi2	=	0.0000
Pseudo R2	=	0.0732

Log likelihood = -264.50869

ld	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
sales	.0988557	.1329921	0.74	0.457	-.161804	.3595153
cost	-.2527388	.1386333	-1.82	0.068	-.5244551	.0189776
lrp	.8376115	.1389521	6.03	0.000	.5652705	1.109953
lrm	-.4501694	.1425657	-3.16	0.002	-.729593	-.1707458
_int	.4592487	.0655489	7.01	0.000	.3303921	.5881053
_cons	-.0847913	.1758987	-0.48	0.630	-.4295464	.2599638

Marginal effects after probit

y = Pr(ld) (predict)
= .51484509

variable	dy/dx	Std. Err.	z	P>|z|	[95%	C.I.]	X
sales*	.0394101	.05299	0.74	0.457	-.064452	.143273	.631068
cost*	-.1002197	.05449	-1.84	0.066	-.207019	.00658	.679612
lrp*	.323837	.05028	6.44	0.000	.225299	.422375	.631068
lrm*	-.1770431	.05469	-3.24	0.001	-.284231	-.069855	.660194
int*	.148176	.05028	6.44	0.006	.225299	.422375	.631068

(*) dy/dx is for discrete change of dummy variable from 0 to 1

DIAGNOSTICS TESTS

Logit & Probit (Socio Economic)

```
Logistic model for loan, goodness-of-fit test

number of observations =       412
number of covariate patterns =        40
Pearson chi2(33) =       192.18
Prob > chi2 =         0.0000
```

```
Probit model for loan, goodness-of-fit test

number of observations =       412
number of covariate patterns =        40
Pearson chi2(33) =       186.17
Prob > chi2 =         0.0000
```

Logit & Probit (Economic)

```
Logistic model for loan, goodness-of-fit test

number of observations =       412
number of covariate patterns =        27
Pearson chi2(21) =       129.66
Prob > chi2 =         0.0000
```

```
Probit model for loan, goodness-of-fit test

number of observations =       412
number of covariate patterns =        27
Pearson chi2(21) =       129.67
Prob > chi2 =         0.0000
```

DEPARTMENT OF ECONOMICS
FACULTY OF SOCIAL AND MANAGEMENT SCIENCES
BAYERO UNIVERSITY KANO

QUESTIONAIRE

I am currently M.sc student at Bayero University, Kano, undertaking a research on the "Determinants of Microcredit loan repayment default among Microfinance borrowers in Nigeria" A study of Kaduna metropolis. This questionnaire is aimed at obtaining information about the factors that brings about repayment problem in Microfinance banks in the study area. Your responses will be used for postgraduate research and in view of this, your sincere response will help in identifying the important factors that causes the problem and it will be treated with utmost confidentially, as it will be purely used for academic purpose. You are hereby please requested to kindly and sincerely respond to the question by appropriately ticking the correct answer in the spaces provided.

Thank you for anticipated cooperation.

Yours faithfully,

JAAFARU YAHAYA

SECTION: A

1. Gender
   Male [ ]
   Female [ ]

2. Marital status
   Single [ ]
   Married [ ]

3. Age of respondent
   18-30 years old [ ]
   31-45 years old [ ]
   46-60 years old [ ]
   61-above years old [ ]

4. Number of dependants
   1-5 people [ ]
   6-10 people [ ]
   more than 10 people [ ]

5. What is your Educational level?
   Primary [ ]
   Secondary school [ ]
   Tertiary [ ]
6. Did you have experience on the business you are doing?
   Yes [ ]
   No [ ]
7. Did you ever default in the repayment of your loan?
   Yes [ ]
   No [ ]
8. Number of times you defaulted
   One [ ]
   Two [ ]
   Three [ ]
   More than three [ ]

SECTION: B

1. What is your Business type?
   Agricultural type of business [ ]
   Small business [ ]
2. Does your operating cost reasonable to enable you repay your loan?
   Yes [ ]
   No [ ]
3. What is the repayment period of your loan?
   More than 1 year [ ]
   Less than 1 year [ ]
4. Does the repayment period of the loan affect your ability to repay back loan?
   Yes [ ]
   No [ ]
5. Does the loan Repayment mode of the bank affect your ability to repay loan?
   Yes [ ]
   No [ ]
6. Does the Interest charge on loan affect your repayment ability?
   Yes [ ]
   No [ ]