

**CREDIT RISK MANAGEMENT AND LOAN PERFORMANCE ON MICROFINANCE  
INSTITUTIONS; A CASE STUDY OF PRIDE MICROFINANCE  
KABALAGALA BRANCH**

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1163-05014-05611**

**A RESEARCH REPORT SUBMITTED TO THE COLLEGE OF ECONOMICS AND  
MANAGEMENT IN PARTIAL FULFILLMENT OF THE REQUIREMENTS  
FOR THE AWARD OF BACHELORS DEGREE OF BUSINESS  
ADMINISTRATION (ACCOUNTING AND FINANCE)  
OF KAMPALAININTERNATIONAL  
UNIVERSITY**

**AUGUST, 2019**

**DECLARATION**

I, **Maniriho Samson** declare that this work is my original and has not been presented for a degree or any other academic award in any University or Institution.

Signature:  .....

Date: 18 / 08 / 2019

MANIRIHO SAMSON

**APPROVAL**

I confirm that this proposal entitled "*Credit Risk Management and Loan Performance in Microfinance Institutions*" was carried out by the candidate under my supervision.

Signature.....

Date: 19 / 08 / 2019

**Dr. Joseph B.K. Kirabo**

## **DEDICATION**

This piece of work is dedicated to my beloved mum Mrs. Bahizi Evas, my brother Mr. Ruganzu Paul and my sisters for their moral, spiritual and financial support rendered to me throughout this study. May God richly reward you.

## ACKNOWLEDGEMENT

At the very beginning I would like to express my sincere gratitude to the Almighty God for giving me the strength and knowledge to complete this research.

I also thank my beloved mum Mrs. Bahizi Evas my brother Mr. Ruganzu Paul and my sisters for their moral, spiritual and financial support rendered to me throughout this study.

I would wish to extend my sincere appreciation to my supervisor Dr. Joseph K. B. Kirabo for his advice, support and guidance.

Lastly, I would like to thank my friends especially Annet, Mariam, Alex, rogers, Ruth and Bruce who helped me through the hard times I encountered and made me complete this course successfully.

May the Almighty Lord reward you accordingly.

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## LIST OF ACRONYMS

ACP	–	Average Collection Period
BoU	-	Bank of Uganda
CAMEL	–	Capital adequacy, Asset quality, Management, Earnings, and Liquidity
CR-AE	–	Credit Risk Allocative Efficacy
CR-CE	–	Credit Risk Cost Efficiency
DEA	–	Data Evolvment Analysis
DFCU	–	Development Finance Company OF Uganda Limited
GCC	–	Gulf Cooperation Council
MENA	–	Middle East and North America
MFI	–	Microfinance Institutions
NPLs	–	Non-Performing Loans
ROA	–	Return on Assets
ROE	–	Rate on Equity
SPSS	–	Statistical Package for Social Scientists

## ABSTRACT

*The concept of Microfinance in Uganda is one of the most developed in the Sub-Saharan Africa. However, given the importance of credit risk in microfinance functioning, the efficiency of Microfinance Risk Management which includes techniques, methods, processes, procedures, activities and incentives is expected to significantly influence its loan performance. This study therefore sought to determine the relationship between credit risk management and loan performance in microfinance institutions (MFIs) in Uganda; a case of Pride Microfinance, Kabalagala Branch. A descriptive research design was adopted. The target population comprised twelve MFIs and a sample size of 30 respondents obtained by purposively sampling the respondents from staff members of pride microfinance, Kabalagala branch. Data collection was done using questionnaires and analyzed using SPSS where descriptive and inferential statistics were conducted. The study found a positive and statistically significant relationship between credit risk environment, credit appraisal process, credit administration, measurement and monitoring, internal control over credit risk and loan performance in the microfinance bank's the senior management in the MFIs should develop policies and procedures, establish overall credit limits, have a system for monitoring the condition of individual credits and an independent internal control system for conducting ongoing assessment of the microfinance's credit risk management process.*

## CHAPTER ONE

### INTRODUCTION

#### 1.0 Introduction

This chapter discusses the background of the study i.e. historical perspective, theoretical perspective, conceptual perspective and contextual perspective, statement of the problem, purpose of the study, research questions, scope of the study, significance of the study and operational definition of key terms.

#### 1.1 Background to the Study

##### 1.1.1 Historical Perspective

On the international context on the global agenda organizations including the commercial banks across the globe. The research conducted on Benedikt, Ian, Judit, & Wolf (2007) studied the credit risk management policies for ten banks in the United States and found that advance credit risk management techniques (proxies by at least one collateralized loan) help permanent to achieve their target in loan level. The findings confirm the general efficiency- enhancing implications of new risk management techniques in a world with frictions suggested in the theoretical literature. Banks are financial institutions that accept deposit and make loans. Microfinance banks in the world extend credit (loan) to different types of borrower for many different purposes. For most customers, bank credit is the primary source of available debt financing and for banks: good loans are the most profitable assets (Mishkin, 2004. pp 8-9). Even if Credit creation is the main income generating activity for banks. It also involves huge risks to both the lender and the borrower. The risk of a trading partner not fulfilling his/her obligation as per the contract on due date or anytime thereafter can greatly jeopardize the smooth functioning of a Bank's business. On the other hand, a bank with high credit risk has high bankruptcy risk that puts the depositors in jeopardy (danger) that can easily and most likely prompt Bank failure.

Credit risk is the most obvious risk in the banking and possibly the most important in terms of potential losses. The default of a small number of key customers could generate very large losses and in an extreme case could lead to a bank becoming insolvent. This risk relates to the possibility that loans will not be paid or that investments will deteriorate in quality or go in to default with consequent loss to the bank. Credit risk is not confined to the risk that borrowers are unable to pay; it also includes the risk of payments being delayed, which can also cause problems for the bank. So, in order to protect their own interest and the wealth of Bank shareholders/depositors, banks need to investigate and monitor the activities of the will be and existing borrowers.

Adequately managing those risks related with credit is critical for the survival and growth of any financial institutions. In case of banks, the issue of credit risk is even greater concern because of the higher level of perceived risk resulting from some of the characteristics of clients and business conditions that they find themselves in.

Generally, Credit risk management is a structured approach to manage uncertainties arising from the probability that the borrower will default to pay the money that he/she takes as a loan (either the principal or interest or both). Effectiveness in this area has an impact on the profitability, liquidity, solvency, loan portfolio and financial leverage of commercial banks in every country.

### **1.1.2 Theoretical Perspective**

The study is based on Credit Risk Theory, although people have been facing credit risk ever since early ages, credit risk has not been widely studied until recent 30 years. Early literature (before 2012) on credit uses traditional actuarial methods of credit risk, whose major difficulty lies in their complete dependence on historical data. Several theories have been advanced to explain Credit risk management but one that has been closely linked with the work-related credit risk is the theory of Bank Risk Theory. It was developed by David Pyle in 1997 University of California and it was used to study why risk management is needed and outlines some of the theoretical underpinning of contemporary bank risk management with an emphasis on market and credit risks. This theory indicates that credit and market risks management have an effect directly or indirectly on the banks survival. As applied to this study, this theory holds that researcher would expect the independent variables credit risk management to influence or explain the dependent variable which are banks profitability because without effective and efficient credit risk management, banks profitability, liquidity, solvency are unthinkable.

### **1.1.3 Conceptual Perspective**

Credit risk refers to the risk that a borrower will default on any type of debt by failing to make required payments. The risk is primarily to the lender and includes lost principal and interest, disruption to cash flows, and increased collection costs. The loss may be complete or partial and can arise in a number of circumstances. Greuning and Iqbal (2007) define credit risk as the risk of losses caused by the default of borrowers. Default occurs when a borrower cannot meet his financial obligations. Credit risk can alternatively be defined as the risk that a borrower deteriorates in credit quality. This definition also includes the default of the borrower as the most extreme deterioration in credit quality. Credit risk is managed at both the transaction and portfolio levels. But, institutions increasingly measure and manage the credit risk on a portfolio basis instead of loan-by-loan basis.

Nelson (2002) views credit management as simply the means by which an entity manages its credit sales. It is a prerequisite for any entity dealing with credit transactions since it is impossible to have a zero credit or default risk. Credit risk management in this study is conceptualized as risk identification, risk monitoring and loans approval assessment. Risk identification refers to the process of identifying dangerous or hazardous situations and trying to characterize it. It is a procedure to deliberately analyze, review and anticipate possible risks (Barton, 2012). Babbal & Santomero, (2007) argued that risk monitoring is the process of keeping track of the identified risks, monitoring residual risks and identifying new risks, ensuring the execution of risk plans, and evaluating their effectiveness in reducing risk. Abedi (2000) contend that the first step in limiting credit risk involves screening clients to ensure that they have the willingness and ability to repay a loan. Microfinance Institutions use the 5Cs model of credit to evaluate a customer as a potential borrower.

Performance refers to how well an organization is performing. Good performance is an indicator of success and development of all organizations. Today best practices evaluate organizational performance in terms of financial results, Products innovations, customer loyalty and people performance helps ensure organizational goals are being achieved Armstrong (1987). Performance is a major concern to all organizations. It's the level at which an organization is placed in a particular industry various measures are used to measure it, ranging from gross sales, profit, market share ,competitive advantage and customer rating Flamini (2009) defined organizational performance in terms of how well an organization accomplishes its objectives. It point out that performance refers to the quality and quantity of individual or group work achievement. In this study performance is conceptualized through profitability, market growth and turnover (work output).

#### **1.1.4 Contextual Perspective**

Credit risk management being an important aspect for any organization still lag behind in Uganda's development banking sector given that most employees in the country stay in the prevalence of an environment supported by mixed managerial capabilities with limited regulations especially for the credit (Powell, Benjamin, Nowrasteh, 2012).

Given the risk of sustained informality, the authorities need to carefully consider the potential impact of the formalization process. The lack of regulation and supervision of financial institutions presents a formidable barrier for financial institutions to improve operations and compliance. In the Uganda context, it will be important that key financial institutions are engaged in structuring

the transitional arrangements from informality (unregulated and unsupervised provision of financial services) to a formal business environment. For instance, the central bank needs to begin to provide inter-bank payment and settlement services to financial institutions and the government by acting as the banker of banks and cashier of the government and ensuring that the discharge of inter-bank payment obligations takes place across the settlement accounts of financial institutions maintained with the central bank in order to ensure settlement finality. However, it can only do this working with licensed financial institutions so as not to compromise financial integrity and safety of the nascent financial system (Powell, 2009).

In preparation for the implementation of the core banking and accounting system, BOU has established an organization structure that includes Banking Operations and Accounting and Finance units that is yet to be presented to the Board of Directors for approval. The proposed organizational structure for these two units will be subject to further refinement under the Public Sector Capacity Injection and Institutional Strengthening Project in order to maximize the benefit of the core banking system platform implementation. The refined organizational structure will be consistent with the central bank functions stipulated in the Bank of Uganda Act of 2011 and Financial Institutions Law of 2012. In this way, the central bank will be able to demonstrate operational proficiency and effectiveness in carrying out its fiscal agency role utilizing improved systems, processes and procedures that are consistent with international standards and accepted practice (Benjamin, Nowrasteh, 2012).

## **1.2 Statement of the Problem**

Currently according to Bank of Uganda (BoU) statistics, total private sector credit stood at Shs11.4 trillion in December 2015 and by June 2016, it had marginally increased to Shs11.5 trillion. This indicates growth of less than one per cent. Furthermore, figures from two listed commercial banks for the first half of the financial year indicate a similar trend. In the first half of the year, the loan book for Pride Microfinance Bank Uganda was almost flat, with the bank lending Shs1.87 trillion. This is just a one per cent rise from Shs1.85trillion over the same period in 2015. DFCU Bank loan was one per cent down in the first half of 2016 to Shs759.4b compared to Shs766.8b over the same period in 2015. NPLs as a percentage of total loans stood at seven per cent in June 2016, a rate last seen in December 2003. At the end of 2015, several commercial banks such as Crane Bank, Standard Chartered Bank, and DFCU had some of the highest NPLs in the market leading them to make provisions, using their income, to cover for the delayed payment by borrowers. The risk of rising NPLs has led banks to proceed with caution. The banking business is so sensitive because more of their income (revenue) will be generated from credit (loan) given to their customers

(Jeoitta Colquitt, 2007). This credit creation process exposes the banks to high credit risk which leads to loss. Without effective credit risk management good bank performance or profit will be unthinkable. Credit Risk management is considered by researchers as a yard stick for determining failure or success of a financial institution. It has not been given much attention in recent times especially in Djiboutian banking industry it is research work seeks to bring light the need for financial institutions, pay attention to the management of credit risk. An assessment of commercial bank credit risk management framework provided the state of the bank's ability to handle the inherent risks in its operations, Ahmed (2003).

It is obvious that banks are increasingly facing credit risk (or counterparty risk) in various financial instruments other than loans, including acceptances, interbank transactions, trade financing foreign exchange transactions, financial futures, swaps, bonds, equities, options, and in the extension of commitments and guarantees, and the settlement of transaction. There are many causes of credit risk but the major causes of credit risk are poor asset management and low level of liquid, also if the present value of the asset declines, it affects the solvency and brings to the bank losses, which can lead to bankruptcy. Credit risk arises from non-performance by a borrower it may arise from either an inability it or an unwillingness to perform in the pre-committed contracted manner. The most famous contributor to the bad loans of many field local commercial banks was insider lending, the next to insider lend lug it can also be a factor of high interest rate charging to borrower, which can contribute the bank to be failure. There are many possible that result low or poor commercial bank profitability and is not easy to identify the possible cause of the problem, it is include in effective credit risk management, cash misuse, no access control, poor financial management, week receivables control. Poor employee recruiting, too much operational expenses, asset misappropriation, poor and had debt recover. The most important cause of low commercial bank profitability is improper credit risk management, effective credit risk management is one of the principal factors that entail ho the banks performance can he increased and meet desired outcome of the bank, and so, for this statement in-effective credit risk management may cause poor pride micro finance banks loan performance. In addition the credit risk management and low profitability of commercial banks has not received adequate research expertise and attention in Kabalagala. Therefore this Research study attempts to fill the gap by studying the situation in Kabalagala and proving more empirical and comprehensive evidences of understanding the relationship between in proper credit risk management and low pride microfinance bank loan performance and lack of the credit reference bureau in Kabalagala, brings the financial institution in Kabalagala to face much credit risk which is then lowering their loan performance.



### **1.3 Purpose of the Study**

The purpose of the study was to examine the relationship between credit risk management and loan performance in pride microfinance Kabalagala branch.

### **1.4 Specific objectives**

- i. To determine the level of credit risk management and loan performance in pride microfinance Kabalagala Kampala.
- ii. To determine the level of profitability in selected in pride microfinance Kabalagala Kampala.
- iii. To examine the relationship between risk management and loan performance in pride microfinance Kabalagala Kampala.

### **1.5 Research questions**

- i. What is the level of credit risk management and loan performance in pride microfinance Kabalagala Kampala?
- ii. What is the level of profitability in pride in microfinance Kabalagala Kampala?
- iii. What is the relationship between risk management and loan performance in pride microfinance Kabalagala Kampala?

### **1.6 Scope of the Study**

#### **1.6.1 Content scope**

This study was to examine credit risk management and performance of pride micro finance Kabalagala Kampala. Also, due to lack of adequate comparable data on other players in the pride microfinance Kabalagala Kampala the study was unable to provide a complete picture of in different institutions in relation to peer group trends and industry norms in all cases.

#### **1.6.2 Geographical Scope**

This study was carried out in the capital city of Kampala. It was conducted within the offices of public and private commercial banks. It investigated how credit risk management and loan performance of commercial banks in different institution in pride microfinance Kabalagala Kampala, since it is the capital city of Kampala where most private and public financial institution bases their services to other part of the country.

### 1.6.3 Time scope

The study was carried out for a period of three months that is from May to July 2019

### 1.7 Significance of the study

It is expected that this study will provide an indication of how the credit risk management landscape looks like in pride banking sector since there are no significant differences in the structural and operational models in the various banks in horn of Africa banks.

The study will also provide a guide for further studies on credit risk management in the industry. In addition, this study will add to the stock of knowledge available on credit risk management which other researchers had conducted in the past.

The study will also help credit risk managers investigate risks associated with their operations, hence improve profitability, another immense contribution is that a wide pool of shareholders may emerge out of a good risk management resulting in the increment of the price of a firm's share as demand for the firm's share will rise and companies would be able to charge higher premium. In connection with the above, a company can attain a competitive advantage over its existing and potential competitors and will also serve as a reference material for lecturers and students who wish to know much in this area.

### 1.8 Operational definition of key terms.

**Credit:** The analysis of the financial soundness of borrowers has been at the core of banking activity since its inception. This analysis refers to what nowadays is known as credit, that is, the risk that counterparty fails to perform an obligation owed to its creditor

**Risk:** Risk implies future uncertainty about deviation from expected earnings or expected outcome. Risk measures the uncertainty that an investor is willing to take to realize a gain from an investment. **Management:** as a systematic process for the identification, evaluation of pure loss exposure faced by an organization or an individual, and for the selection and implementation of the most appropriate techniques for treating such exposures.

**Performance:** refers to the accomplishment of a given task measured against preset known standards of accuracy, completeness, cost, and speed. **Loan performance:** refers to the total amount of money given out in different loan products, to the different types of borrowers, this may be comprised of: salary loans, group guaranteed loans, individual loans and corporate loans.

## CHAPTER TWO

### LITERATURE REVIEW

#### 2.0 Introduction

This chapter includes the theoretical review, conceptual review, review of related literature, empirical review and research gaps.

#### 2.1 Theoretical Review

Several theories have been advanced to explain Credit risk management but one that has been closely linked with the work-related credit risk is the *theory of Bank Risk Management Theory*. It was developed by David Pyle in 1997 University of California and it was used to study why risk management is needed, and outlines some of the theoretical underpinning of contemporary bank risk management with an emphasis on market and credit risks this theory indicates that credit and market risks management have an effect directly or indirectly on the banks survival. As applied to this study, this theory holds that researcher would expect the independent variables credit risk management to influence or explain the dependent variable which are banks profitability because without effective and efficient credit risk management, banks profitability, liquidity, solvency are unthinkable.

Credit risk has been mentioned or even defined. However, it still needs to be repeated from a deeper point of view. Basically, it is understandable that credit risk occurs when the debtor cannot repay part or whole of the debt to the creditor as agreed in the mutual contract. More formally, "credit risk arises whenever a lender is exposed to loss from a borrower, counterparty, or an obligor who fails to honor their debt obligation as they have agreed or contracted". This loss may derive from deterioration in the counterparty's credit quality, which consequently leads to a loss to the value of the debt. Or in the worst case, the borrower defaults when he/she is unwilling or unable to fulfill the obligations.

In banking, credit risk is taken for granted as a fundamental feature of the institutions. If an organization refuses to acknowledge the inherent risk, it is not in the lending industry. Wherever risk survives its enemy, risk management, will also exist and light against it. Credit risk management is simply the procedures implemented by organizations with the aim of diminishing or avoiding credit risk. Credit risk management has been a hot topic of debate as it is one of the fastest evolving practices thanks to institutional developments in the credit market, diversification of financial institutions participating in the lending business and modern technologies.

Credit risk is one of the oldest and most important forms of risk faced by banks as microfinance. It is defined as the degree of value fluctuations in debt instruments and derivatives due to changes in the underlying credit quality of borrowers and counterparties. And, it is also measured as the uncertainty of future credit losses around their expected levels. In the literature, early research on credit risk can be traced back to Black and Scholes (1973). They put forward a basic model for corporate default risks which was called a structural model of credit risk (Black & Scholes, 1973). While the study of Merton (1974) on the pricing of risky debt was published, interest in pricing models for credit risk has been discussed extensively.

Credit risk management is defined as identification, measurement, monitoring and control of risk arising from the possibility of default in loan repayments (Early, 1996; Coyle, 2000). Credit risk management is a structured approach to manage uncertainties arising from the profitability that the borrower will default to pay the money that he/she takes as a loan (either the principal or interest or both). Effectiveness in this area has an impact on the profitability, liquidity, solvency, loan portfolio and financial leverage of commercial banks in every country. In this problem area, i.e. impacts of credit risk management on banks profitability there are some studies conducted in different countries such as:

Credit Risk Management and Profitability of Commercial Banks in Sweden. They took 4 banks to study this area and used multiple regression models to analyze their findings. Lastly, the researchers obtained that there is a reasonable effect credit Risk Management on profitability of those banks (Ara, 2009).

Studied on Bank performance and credit Risk Management and their study result shows there is a significant relationship between bank performance (in terms of profitability) and credit risk management (in terms of loan performance). Better Credit Risk Management results in better bank performance (Takang Feliz Achou and Ntui Claudine Tenguh, 2008)

Credit risk management lies in the heart of the banking institution. It remains central to the heart of the banking industry and must qualify for core status (Harrison, 1996) with the majority of banks assets being in the form of loans, the lending functions played a critical role in banking credit risk management (BIS, 1999). The basis of a sound credit risk management is the identification of the existing and potential risks in the bank in the lending activities (Froot et al 1998) and RAM, 2004)

According to (McNaughton et al. 2013) credit risk management is the support, control systems and other practices necessary to manage the outstanding risk assets, normal repayments and to

monitor business risks properly (Pandy, 1995) credit risk management is the support, control systems and other practices necessary to manage the outstanding risk. Credit risk management involves the process of making decisions relating to the investment of funds such decisions should be carefully analyzed as they are characterized by an element of uncertainty (Pandy 1995). Credit risk management as a process of decision making which involves minimizing the value of credit sales (Lyman and Carros, 1978).

Although credit risk is not the only risk faced by a commercial bank, it is the risk that has caused financial devastation in Uganda commercial banks (Ssewagudde, 2000). According to him the business of banking is all about measuring and accepting risk. Poor credit risk management manifests itself into poor lending policy, lack of internal controls, poor credit analysis and documentation high level of insider lending and fraud.

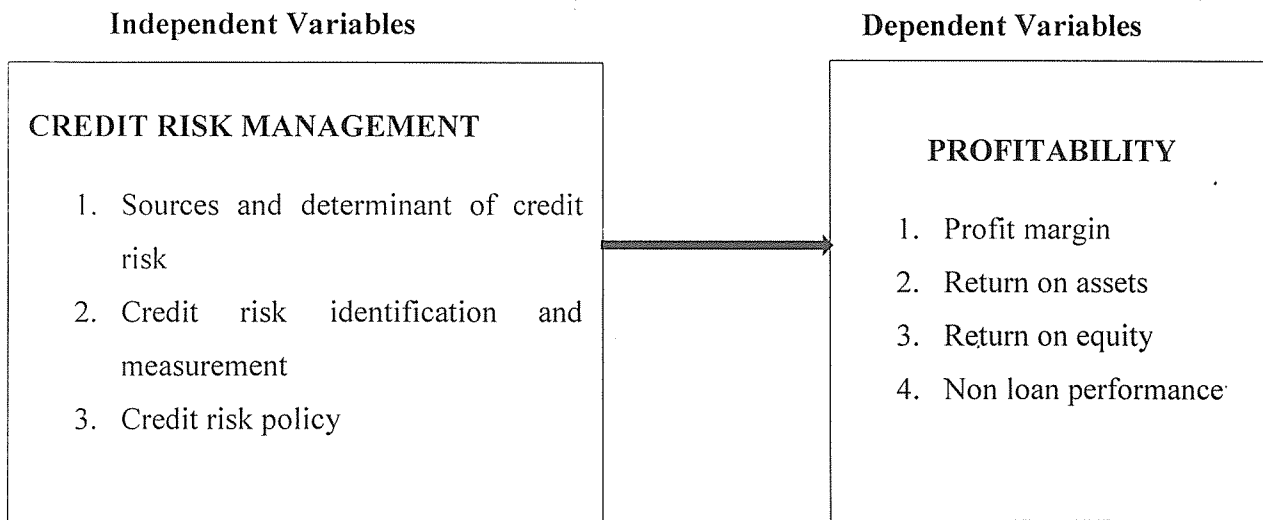
(Besis, 1998) defined financial performance as a management initiative to upgrade the accuracy and timeliness of financial information to meet the required standards while supporting day to day operation. Financial performance is measured or coined into what is referred to as CAMEL (capital adequacy, asset quality management (earning and liquidity)).

(Merion et al., 1993) and Harrison, 1996) the fortunes of the banking industry over the past decades have proved beyond doubt that there is need for improved credit risk management. However, a bank has put in place all measures of managing credit risk like risk transfers, risk sharing among others but still registering a high number of impaired loans. For this case, the researcher intends to investigate the course of the problems.

## 2.2 Conceptual Framework

**Figure 2.1 Conceptual Framework**

Conceptual framework showing the relationship between credit risk management and profitability of selected microfinance institutions.



Source: adapted and modified from literature review by McNaughton et al, (2013).

### Credit Risk Management

According to Early (1996) and Coyle (2000) Credit risk management is defined as identification, measurement, monitoring and control of risk arising from the possibility of default in loan repayments.

Risk management of financial institutions represents all policies and procedures those financial institutions have implemented to manage, monitor and control their exposure to risk (Vasile Dedu and Roxana Nechil 2010). Basis of a sound credit risk management is to identify existing and potential risks inherent in lending.

Credit risk management is a structured approach to manage uncertainties arising from the probability that the borrower will default to pay the money that he/she takes as a loan (either the principal or interest or both). Effectiveness in this area has an impact on the profitability, liquidity, solvency, loan portfolio and financial leverage of commercial banks in every country. In this problem area, i.e. impacts of credit risk management on banks profitability there are some studies conducted in different countries such as:

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Credit risk is one of the oldest and most important forms of risk faced by banks as financial intermediaries. It is defined as the degree of value fluctuations in debt instruments and derivatives due to changes in the underlying credit quality of borrowers and counterparties. And it is also measured as the uncertainty of future credit losses around their expected levels. In the literature, early research of credit risk can be traced back to Black and Scholes (1973).

They putted forward a basic model for corporate default risks, which was called a structural model of credit risk (Black & Scholes, 1973). While the study of Merton (1974) on the pricing of risky debt was published interest in pricing models for credit risk has been discussed extensively.

Credit Risk management will enable general bankers, staff, and credit analyst trainees to understand the basic information and principles underlying credit risk evaluation, and to use those underlying principles to undertake an analysis of non-financial and financial risks when preparing a credit proposal. Since the best loans are the ones that do not present problems during the repayment phase, the authors also focus on elements relating to the proactive management of those loans during their inception (Andre Fight).

In general measures to counter such risks include management policies and credit risk parameters to be controlled in credit risk. In order to prevent insolvency credit risk should be properly controlled, in this regard it is necessary to adopt an adequate management which leads to the increase of shareholders value, and policies and procedures should be in place and strictly enforced by the senior management of the financial institutions.

Banks make profit from the spread between the interest rate they charge to borrowers and the interest rate they pay to depositors. Lending has always been the primary function of banks, and accurately assessing a borrower's credit worthiness has always been the only method of lending successfully (Andrew Fight, 2004). To insure reasonable profit, banks attempt to make loans that will be fully repaid with interest on due date. Therefore, banks are directly concerned about borrowers repaying their loans on a timely basis so that the value of the banks can be maximized.

If banks don't manage credit risks effectively, they won't be profitable and won't be in business very long. Banks can reduce their exposure to credit risk on different loans by applying major credit risk management principles (as identified by Fredrick Mishkin).

The primary concern is the ability to earn profits while also ensuring that an organization has adequate regulatory capital for economic losses and shareholders requirements (Colquitt, 2007, p 20). The process of credit assessment relies on information provided by the borrower and has three main targets as outlined by Colquitt, (2007 Identifying and controlling risks by determining the borrower's probability of repaying the debt. Identifying a borrower's primary source of debt repayment that will be available to repay an extended credit obligation, and evaluating the probability that a secondary repayment source will be available in the event that the primary source becomes unavailable. According to Bagchi (2003) the following basic considerations are the basic elements of credit risk management, namely:

**Risk identification:** banks should not only recognize and understand credit risk from new clients but also existing clients on both transaction and portfolio level.

**Risk measurement:** accurate and timely measurement of risk is essential to effective risk management systems. Periodical the measurement tools should be tested on accuracy.

**Risk monitoring:** to ensure timely review of risk position and exceptions. Monitoring reports should be frequent, timely, accurate and informative and should be distributed to appropriate individuals to ensure action when needed.

**Risk control:** the bank should establish and communicate risk limits through policies, standards and procedures that defines responsibility and authority.

According to Bagchi (2003) stipulated that proper credit risk architecture, policies and framework of credit risk management, credit rating system, monitoring and control contributes in success of credit risk management system. He emphasized that because of the fact that market conditions and company structures are different, risk management should be adjusted by institutions to comply with their needs and circumstances.

**Credit risk:** Credit in bank is a contractual agreement in which a borrower receives something of value now and agrees to repay the lender at some later date. However, credit risk is defined as the probability that some of a bank's assets, especially its loans, will decline in value and possibly



become worthless. It arises from non-performance by a borrower, either an inability or an unwillingness to perform in the pre-committed contracted manner.

Credit Risk is the potential that a bank borrower/counter party fails to meet the obligations on agreed terms, there is always scope for the borrower to default from his commitments for one or the other reason resulting in an increase in crystallization of credit risk to the bank, this is the reason why regulators are continuously improving their measurement and implementing regulations such as the Basel Capital Accords (Raghavan, 2003).

In this regard banks are continuously developing methods to assess the borrower's credit worthiness and risk evaluation and measurement methodologies to analyze, measure, and manage credit risk a default therefore reduces the present value of the loan and consequently the value of the bank's business (Colquitt, 2007)

According to Bhattacharya (1997, p 637) a loan-asset becomes a substandard asset when there is a default on interest and installment payments, which immediately entails provisioning for losses. In current Surinamese practices a default period of 90 days is seen as a substandard asset and is called a non performing loan (CBVS regulations on credit classification and provisioning. 2004).

Thereby the banks are also not entitled to book profit for unpaid interest. This is a warning signal for banks to improve the process of evaluation, management and control of credit risk, but most of all to take timely actions to minimize losses.

Credit risk has two components namely business risk and borrower risk. Bhattacharya defines business risk as the inability of the business or project to service its debt in time due to the income generation capacity of the business (Bhattacharya, 1997).

Business risk is made up of systematic risk and unsystematic risk. Systematic risk is exogenous and therefore unavoidable. Unsystematic risk is unique risk (internal) which is independent of political, economic and other factors. According to Bhattacharya (1997, p 638) in terms of portfolio analysis, unsystematic risk accounts for 70% of the total risk and the remaining 30% is systematic risk. It can be concluded that the bulk of the total risk is internal and therefore can be managed and controlled.

#### **Source and Determinant of Credit Risk in Banks**

Studies dealing with internal determinants employ variables such as size, capital, credit risk management and expenses management. The need for risk management in the banking sector is

inherent in the nature of the banking business. Poor asset quality and low levels of liquidity are the two major causes of bank failures and represented as the key risk sources in terms of credit and liquidity risk and attracted great attention from researchers to examine their impact on bank profitability. Credit risk is by far the most significant risk faced by banks and the success of their business depends on accurate measurement and efficient management of this risk to a greater extent than any other risk (Giesecke, 2004). Increases in credit risk will raise the marginal cost of debt and equity, which in turn increases the cost of funds for the bank (Basel committee, 1999).

Thus risk is determined by factors extraneous to the bank such as general unemployment levels, changing socio-economic conditions, debtors' attitudes and political issues. Credit risk according to Basel Committee of Banking Supervision BCBS (2001) and Gastineau (1992) is the possibility of losing the outstanding loan partially or totally, due to credit events (default risk). Credit events usually include events such as bankruptcy, failure to pay a due obligation, repudiation/moratorium or credit rating change and restructure. Basel Committee on Banking Supervision BCBS (1999) defined credit risk as the potential that a bank borrower or counterparty will fail to meet its obligations in accordance with agreed terms. Heffernan (1996) observed that credit risk is the risk that an asset or a loan becomes irrecoverable in the case of outright default, or the risk of delay in the servicing of the loan.

The present value of the asset declines, thereby undermining the solvency of a bank. Credit risk is critical since the default of a small number of important customers can generate large losses, which can lead to insolvency (Bessis, 2002).

Observed that banks are increasingly facing credit risk (or counterparty risk) in various financial instruments other than loans, including acceptances, interbank transactions, trade financing foreign exchange transactions, financial futures, swaps, bonds equities, options, and in the extension of commitments and guarantees, and the settlement of transaction (BCBS, 1999).

Asserts that credit risk arises from non-performance by a borrower, it may arise from either an inability or an unwillingness to perform in the pre-committed contracted manner (Anthony, 1997). Claimed that the single biggest contributor to the bad loans of many of the failed local banks was insider lending. He further observed that the second major factor contributing to bank failure were the high interest rates charged to borrowers operating in the high-risk (Brown bridge, 1998).

The most profound impact of high non-performing loans in banks portfolio is reduction in the bank profitability especially when it comes to disposals. According to BCBS (1982) stated that lending

involves a number of risks. In addition to risk related to the credit worthiness of the borrower, there are others including Funding risk, interest rate risk, clearing risk and Foreign exchange risk, international lending also involves country risk. Observed that historical experience shows that concentration of credit risk in asset portfolios has been one of the major causes of bank distress, this is true both for individual institutions as well as banking systems at large (BCBS, 2006).

State that the most obvious characteristics of failed banks are not poor operating efficiency, however, but an increased volume of non-performing loans. Non-performing loans in failed banks have typically been associated with regional microeconomic problems (Robert and Gary, 1994).

Observed that the US office of the Comptroller of the Currency found the difference between the failed banks and those that remained healthy or recovered from problems was the caliber of management (De Young and Whalen, 1904). Superior managers not only run their banks in a cost efficient fashion, and thus generate large profits relative to their peers, but also impose better loan underwriting and monitoring standards than their peers which result to better credit quality.

According to Koehn and Santomero (1980), suggest that bank risk taking has pervasive effects on bank profits and safety. According to Bohakovia (2003) asserts that the profitability of a bank depends on its ability to foresee, avoid and monitor risks, possible to cover losses brought about by risk arisen.

This has the net effect of increasing the ratio of substandard credits in the bank's credit portfolio and decreasing the bank's profitability (Mamman and Oluyemi, 1994). The banks supervisors are well aware of this problem, it is however very difficult to persuade bank managers to follow more prudent credit policies during an economic upturn, especially in a highly competitive environment. The claim that even conservative managers might find market pressure for higher profits very difficult to overcome. A high level of financial leverage is usually associated with high risk. This can easily be seen in a situation where adverse rumors, whether founded or precipitated financial panic and by extension a run on a bank. Few banks are able to withstand a persistent run, even in the presence of a good lender of last resort. As depositors take out their funds, the bank hemorrhages and in the absence of liquidity support, the bank is forced eventually to close its doors. Thus, the risks faced by banks are endogenous, associated with the nature of banking business itself, whilst others are exogenous to the banking systems (Umoh, 2002 and Ferguson, 2003).

Owojori et al., (2011) highlighted that available statistics from the liquidated banks clearly showed that inability to collect loans and advances extended to customers and directors or companies related to directors/managers was a major contributor to the distress of the liquidated banks. For example At the height of the distress in 1995, when 60 out of the 115 operating banks in Nigeria were distressed, the ratio of the distressed banks non-performing loans and leases to their total loans and leases was 67%. The ratio deteriorated to 79% in 1996: to 82% in 1997: and by December 2002. The licenses of 35 of the stressed banks had been revoked. In 2003, only one bank (Peak Merchant Bank) was closed. No bank was closed in the year 2004. Therefore, the number of banking licenses revoked by the CBN (Central Bank of Nigeria) since 1994 remained at 36 until January 2006. When licenses of 14 more banks were revoked, following their failure to meet the minimum re-capitalization directive of the CBN.

At the time, the banking licenses were revoked, some of the banks had ratios of performing credits that were less than 10% of loan portfolios. In 2000 for instance, the ratio of non-performing loans to total loans of the industry had improved to 21.5% and as at the end of 2001, the ratio stood at 6.9%. In 2002, it deteriorated to 21.27%. 21.59% in 2003, and in 2004, the ratio was 23.08% (NDIC Annual Reports- various years). In a collaborative study by the CBN and the Nigeria Deposit Insurance Corporation (NDIC) in 1995, operators of financial institutions confirmed that had loans and advances contributed most to the distress. In their assessment of factors responsible for the distress, the operators ranked bad loans and advances first, with a contribution of 19.5%. In 1990, the CBN issued the circular on capital adequacy which relate bank's capital requirements to risk-weighted assets. It directed the banks to maintain a minimum of 7.25 percent of risk-weighted assets as capital: to hold at least 50 percent of total components of capital and reserves: and to maintain the ratio of capital to total risk-weighted assets as a minimum of 8 percent from January, 1992. Despite these measure and reforms embodied in such legal documents as CBN Act No. 24 of 1991 and Banks and other financial institutions (BOFI) Act No.25 of 1991 as amended, the number of technically insolvent banks increased significantly during the 1990s. The deregulation of the financial system in Nigeria embarked upon from 1986 allowed the influx of banks into the banking industry.

As a result of alternative interest rate on deposits and loans, credits were given out indiscriminately without proper credit appraisal (Philip, 1994). The resultant effects that many of these loans turn out to be bad. It is therefore not surprising to find banks to have non-performing loans that exceed 50 per cent of the bank's loan portfolio. The increased number of banks over-stretched their existing human resources capacity which resulted into many problems such as poor credit appraisal

system, financial crimes, accumulation of poor asset quality among others. The consequence was increased in the number of distressed banks. However, bank management, adverse ownership influences and other forms of insider abuses coupled with political considerations and prolonged court process especially as regards debts recovery created difficulties to reducing distress in the financial system (Sansui, 2012).

## **Credit risk identification and measurement**

### **Risk identification**

Banks are confronted with information asymmetry. A symmetric information is a situation where one party does not know enough about the other part to make accurate decisions because there is inequality in information. Inequality in information creates problems in the financial system on two fronts: before the transaction is entered and after. The role of information's processing in bank intermediation is a crucial input. Through information gathered from the applicant banks are able to identify credit risk involved in the transaction. In Surinamese practice this inequality in information is also caused by a willful action of the client not to submit information to the financial Institution (Mishkin, 2010).

The bank has access to different types of information in order to manage risks namely hard information and soft information. Godbillon-Camus describe hard information as external via public information namely balance sheet data, rating, credit scoring. This information is quantitative and verifiable. Soft information is described by Godbillon-Camus as internal via bank-borrower relationship (judgments, opinions, notes, reports), is qualitative and non-verifiable, therefore manipulable, but produces more precise estimation of the debtor's quality. Soft information is therefore a source of both moral hazard and adverse selection since there is a party with unknown information from the other party. It is a potential driver of organizational modifications in the bank in order to limit the moral hazard problem. There are three types of dimensions that allow us to distinguish hard information from soft information, which are the following:

**Nature:** hard information is also rather "backward looking" (like, balance sheet data) as soft information is rather "forward looking" (e.g. business plan).

**Collecting method:** collection of hard information is impersonal, and it doesn't depend upon the context of its production (hard information is therefore exhaustive and explicit), as collecting soft information is personal and includes its production and treatment context. Cognitive factors:

subjective judgment, opinions and perception are absent in hard information, whereas they are integral components of soft information. Several advantages regarding hard information of which the main advantages are that these are at low cost, easily collected, easier comparable and verifiability and therefore non-manipulability (Godbillon-Camus et al., 2005).

### **Credit rating systems measurement**

Credit rating systems provide a road map to the entire credit process. The two most common credit ratings lenders used are internal and external ratings (ratings provided by public rating agencies). Internal ratings are based on historical customer information relative to the credit relationship that a borrower has with the financial service entity.

Rating systems have developed to provide two basic components that are essential to the credit process and risk management practices which are:

To assign the credit risk grades by ranking transactions according to the perceived credit risk. To group credit to distinguish among possible outcomes by quantifying the default risk and loss estimates, all transactions have some level of default risk, the assumption is that the degrees of risk can only be identified through credit grades that distinguish the different default frequencies (Colquitt 2007 p.287).

### **Credit risk Policy**

Defines a credit policy as a set of guidelines designed to minimize costs associated with credit while maximizing the benefits from it (McNaughton, 1996). He also notes that a good credit policy should be one that ensures operational consistency and adherence to uniform and sound practices. A good credit policy should involve effective initiation, analysis, credit monitoring and evaluation. A credit policy is one of the essential tools in an organization. It is a primary tool as well as a procedure established to provide management with reasonable assurance that the credit system is functioning as it should. When credit is granted, accounts receivable are created and expected to be collected in near future. A credit policy is built on three major variables and these include credit terms, credit standards and collection procedures (Pandey, 1995, Van Horne, 1994 and Kakuru 2001).

A firm's investment in accounts receivables depends on the volume of credit sales and collection period. Credit policy is used to refer to the combination of the three decision variables as credit standards, credit terms and collection efforts. He again states that there is only one way in which the financial manager can affect the volume of credit sales and collection period and consequently, investment in accounts receivables and this is through a credit policy (Pandey, 1979)

## **2.2 Review of Related Literature**

### **Credit Standards.**

These are the criteria, which the firm follows in selecting customers for credit. This is a very fundamental credit policy variable that requires intensive analysis. A credit standard is one of the controllable decision variables that directly influence investment in trade credit (Pandey, 1995, Graham, 1999) emphasized that individual accounts of credit applicants need a great deal of scrutiny and that for this reason, it is important that standards be set basis on the individual credit applicants. Gitman (1982) argues that credit standards provide guidelines for determining whether to extend credit to a customer and how much credit should he extended (Kakuru 2001) noted that it is important that credit standards be set basing on individual credit applicants by considering credit information, credit analysis, and credit limit and default rate.

### **Credit Information**

Before extending credit to any of its operators, sufficient in Formation should be collected about the customers. This is done in a bid to minimize losses. According to Otero (1994) reliable and timely information is critical to managing the credit process. If timely and useful information is available, management is much better equipped to direct and control prudent credit processes.

### **Credit/Customer Analysis**

This involves establishing the willingness and ability of the beneficiary to meet obligations as they fail due. It should ensure loans meet credit standards and the policy guidelines for credit analysis to be effective, it should follow a typical domestic process flow beginning with data collecting and moving to action observing (Picchkel, 1998). Credit analysis is an important aspect in designing a credit policy since it culminates into the seasons regarding the amount of loan granted to the applicants.

### **Credit Limit**

This is the maximum amount of credit, which the firm can extend to customers at any point in time, as this limit is decided the analysis should carefully scrutinize the amount of contemplated sales and the customer's financial strength. There is need to lower the amount of credit where slow paving tendencies crop up.

### **Average Collection Period (ACP)**

According to (Pandey, 1998) refers to that period in which debts remain uncontrollable. It measures the number of days for which a credit transaction remains outstanding and thus determines the speed of payment by customers.

### **Default Rate**

This is the measure of the portion of the uncontrollable receivables that is bad debts loss ratio. This ratio indicates the default risk that is the unlikelihood that customers will fail to pay their credit obligation. Basing on experience, the financial manager should be able to make a reasonable judgment regarding the chance of default. Pandas (1993) identified 5cs as measurement parameters in setting credit standards and these include character, capacity, condition, capital and collateral.

Collateral is a tangible asset in which a bank takes securing interest. Such security should be safe and easily marketable. This may include land titles, houses, balances on savings accounts and guarantees (McNaughton, 1996).

### **Evaluating the Credit Applicant**

Having established the terms of credit to be offered, the firm must evaluate individual credit applicants and consider the possibilities of bad debts losses or slow payment. The credit evaluation procedure involves: collecting credit information, analyzing this information that is credit investigation and analysis and finally make the credit decision.

### **Collecting Credit Information**

This is done to minimize losses resulting from investigating in unrecoverable clients. Sources of such information include: banks, companies, associated competitors, supplies and individuals applicants, (Kakuru, 2001) argues that collection of such information is not free but this cost is justifiable.

### **Profitability of Commercial Bank**

Profitability is making more money than you spend or put another way, revenue less expenses. But which revenues and which expense shall you include and when to include them is not clear when we take a closer look at any business and its customer's behavior (business dictionary).

Financial performance of a commercial bank can be measured by profitability. According to (Codjia, 2010), financial performance will look at the statement of an accounting summary that details a business organization's revenues, expenses and net income. A corporation may prepare a statement of financial performance on a monthly, quarterly or annual basis (Codjia, 2010). Bank



profitability and bank interest margins can be seen as indicators of the efficiency of the banking system, as they drive a wedge between the interest rate received by savers on their deposits and the interest paid by lenders on their loans (Kunt et al., 2001). This measure of profitability is the most important for stockholders of a bank since it reflects what the bank is earning on their investments (Rasiah, 2010).

The profitability performance of the commercial banks can be measured using profitability ratio. There are many ways to measure the profitability performance According to Rushdi and Tennant (2003), profitability can be measured in a number ways including return on assets (ROA), return on equity (ROE) or profit margins. Other than that, getting on top of financial measures of the bank performance is an important part of running a growing business, especially in the current economic climate. In addition, ROA and Return on equity (ROE) are the indicators of measuring managerial efficiency (Hassan, 1999 & Samad, 1998).

The advantage of using profitability ratios is that they are inflation invariant: that is they are not affected by changes in price levels. Besides that, the ROA is a helpful measurement when comparing the profitability of one company to another, either or those within the same industry or those from a different industry. Therefore, the ROA is a valuable measure when comparing the profitability of one bank with another or with the commercial banking system as a whole (Rasiah, 2010).

### **Profit Margin**

According to Profit margin measures how much a company earns relative to its sales (Lesonsky, 2000). A company with a higher profit margin than its competitor is more efficient. However argues that describes the profit generating capacity of the flow of revenue, but does not tell much about the actual efficiency of its employees. Profit margin measures the percentage of each sales dollar, on average that represents profit. It is computes as follows:

$$\text{Net profit margin} = \frac{\text{Net Income}}{\text{Sales Revenue}}$$

### **Return on asset**

According to Return on Asset shows how well management is performing on all the firm's resources (Gilooly, 2004). According to Allis (2004) measures ROA how efficiently profit are being generated from the assets employed in the business when compared with the ratios of firms in a similar business. A low ratio in comparison with industry averages indicates an inefficient use of business assets. (Domash, 2002) says most investors prefer 5% ROA as the minimum acceptable as listed in the MSN Money's Key ratios 10 year summary.

The Return on assets ratio is calculated as follows:

$$\text{ROA} = \frac{\text{Net Income}}{\text{Average total Assets}}$$

### **Return on equity**

Return on equity or return on capital is the ratio of net income of a business during a year to its stockholders' equity during that year. It is a measure of profitability of stockholders' investments. It shows net income as percentage of shareholder equity (Rushdi & Tennant, 2003).

The formula to calculate return on equity is:

$$\text{ROE} = \frac{\text{Net Income}}{\text{Avg. Stockholder's Equity}}$$

Net income is the after tax income whereas average shareholders' equity is calculated by dividing the sum of shareholders' equity at the beginning and at the end of the year by 2. The net income figure is obtained from income statement and the shareholders equity is found on balance sheet. You will need year ending balance sheets of two consecutive financial years to find average shareholders' equity.

Return on equity is an important measure of the profitability of a company. Higher values are generally favorable meaning that the company is efficient in generating income on new investment. Investors should compare the ROE of different companies and also check the trend in ROE over time. However, relying solely on ROE for investment decisions is not safe. It can be artificially influenced by the management, for example, when debt financing is used to reduce share capital there will be an increase in ROE even if income remains constant.

## **Nonperforming loan**

NPL is a loan that is not earning income and Full payment of principal and interest is no longer anticipated, principal or interest is 90 days or more delinquent, or the maturity date has passed and payment in full has not been made.

The issue of non-performing loans (NPLs) has gained increasing attentions in the last few decades. The immediate consequence of large amount of NPLs in the banking system is bank failure. Many researches on the cause of bank failures find that asset quality is a statistically significant predictor of insolvency (e.g. Dermirguc-Kunt, 1989, Barr & Siems, 1994), and that failing banking institutions always have high level of non-performing loans prior to failure.

It is argued that the non-performing loans are one of the major causes of the economic stagnation problems. Each non-performing loan in the financial sector is viewed as an obverse mirror image of an ailing unprofitable enterprise. From this point of view, the eradication of non-performing loans is a necessary condition to improve the economic status. If the non-performing loans are kept existing and continuously rolled over, the resources are locked up in unprofitable sectors: thus, hindering the economic growth and impairing the economic efficiency.

### **2.3 Relationship between credit risk management and bank Profitability**

As per different researchers and authors, Credit risk is the most significant of all risks in terms of Size of potential losses. As the extension of credit has always been at the core of banking operation, the focus of banks' risk management has been credit risk management. When banks manage their risk better, they will get advantage to increase their performance (return). According to (Anthony Santomero, 1997) Better risk management indicates that banks operate their activities at lower relative risk and at lower conflict of interests between parties.

The advantages of implementing better risk management lead to better banks performance. Better bank performance increases their reputation and image from public or market point of view. The banks also get more opportunities to increase the productive assets, leading to higher bank profitability, liquidity, and solvency (Tandelilin, Kaaro, Magadwartha, Suprivatna, 2007).

Therefore, effective credit risk management should be a critical component of a bank's overall risk management strategy and is essential to the long-term success of any banking organization. It becomes more and more significant in order to ensure sustainable profits in banks.

Therefore, effective credit risk management should be a critical component of a bank's overall risk management strategy and is essential to the long-term success of any banking organization. It becomes more and more significant in order to ensure sustainable profits in banks.

#### **2.4 Empirical Review**

Credit risk is a serious threat to the profitability of banks: therefore various researchers have examined the impact of credit risk on banks in varying dimensions. Evaluated the impact of credit risk on the profitability of Nigerian banks, Financial ratios as measures of bank performance and credit risk were collected from the annual reports and accounts of sampled banks from 2004-2008 and analyzed using descriptive, correlation and regression techniques. The findings revealed that credit risk management has a significant impact on the profitability of Nigerian banks. It concluded that banks profitability is inversely influenced by the levels of loans and advances, non-performing loans and deposits there by exposing them to great risk of illiquidity and distress (Kargi, 2011).

According to (Epure & Lafuente, 2012) examined bank performance in the presence of risk for Costa-Rican banking industry during 1998-2007. The results showed that performance improvements follow regulatory changes and that risk explains differences in banks and non-performing loans negatively affect efficiency and return on assets which the capital adequacy ratio has a positive impact on the net interest margin.

Assessed the effect of credit risk management on the profitability of commercial banks in Kenya. Data on the amount of credit, level of non-performing loans and profits were collected for the period 2004 to 2008. The findings revealed that the bulk of the profits of commercial banks are not influenced by the amount of credit and non-performing loans, therefore suggesting that other variables other than credit and non-performing loans impact on profits (According to Kithinji, 2010) examined the credit risk efficiency of 34 Taiwanese commercial banks over the period 2005-2008. The study used financial ratio to assess the credit risk and was analyzed using Data Envelopment Analysis (DEA). The credit risk parameters were credit risk technical efficiency (CR-TE), credit risk allocative efficiency (CR-AE), and credit risk cost efficiency (CR-CE). The results indicated that only one bank is efficient in all types of efficiencies over the evaluated periods. Overall, the DEA results show relatively low average efficiency levels in CR-TE, CRAL and CR-CE in 2008 (According to Chen and Pan, 2012). Investigated the relationship between bank performance and credit risk management. It could be inferred from their findings that return on equity (ROE) and return on assets (ROA) both measuring profitability are inversely related to the

ratio of non-performing loan to total loan of financial institutions thereby leading to a decline in profitability (Felix & Claudine, 2008).

Examined the key determinants of credit risk of commercial banks on emerging economy banking systems compared with the developed economies. The study found that regulation is important for banking systems that offer multi-products and services, management quality is critical in the cases of loan-dominant banks in emerging economies. An increase in loan loss provision is also considered to be a significant determinant of potential credit risk. The study further highlighted that credit risk in emerging economy banks is higher than that in developed economies (Ahmad & Ariff, 2007).

Assessed the impact of bank's specific risk characteristics, and the overall banking environment on the performance of 43 commercial banks operating in 6 of the Gulf Cooperation Council (GCC) countries over the period 1998-2008. Using fixed effect regression analysis, results showed that credit risk, liquidity risk and capital risk are the major factors that affect bank performance when profitability is measured by return on assets while the only risk that affects profitability when measured by return on equity is liquidity risk (Al-Khoury, 2011).

According to (Ren-Niaceur & Omran, 2008) in attempt to examine the influence of bank regulations, concentration, financial and institutional development on commercial banks' margin and profitability in Middle East and North Africa (MENA) countries from 1989-2005 found that bank capitalization and credit risk have positive and significant impact on banks' net interest margin, cost efficiency and profitability.

According to (Ahmed, Takeda & Shawn, 1998) in their study found that loan loss provision has a significant positive influence on non-performing loans. Therefore, an increase in loan loss provision indicates an increase in credit risk and deterioration in the quality of loans consequently affecting bank performance adversely.

## **2.5 Research Gap**

The literature above focuses on credit risk, credit risk management, causes and determinants of credit risk, identification and measurement of credit risk, banks profitability, the way how risks are managed, impacts of supervision of banks to non-performing loan, and banks profitability and many others which has linkage in banks probability and credit risk management separately.

But there is no paper conduct to measure the impacts or credit risk management to banks profitability except, research conducted on pride microfinance. Almost all theories supports that there are positive co-movement among credit risk management and banks profitability.

To assure that and to measure its impact level there must he research in each country. We cannot tell the impact level from the scratch or simple horn the theory. Measuring the impact level of credit risk management is needed to make countries credit risk management department well aware about the impacts level of credit risk management towards profitability of their business. It is also very much important fur policy makers.

It is well known that banks in our country are profitable for the time being, however to sustain their profit in the future and even to make them more profitable than before, the impact level of credit risk management must be identified and corrective action must be taken in advance. When the researcher says corrective action, it's referring appropriate credit risk management mechanisms to the country. So in this study the rese rcher wants to measure the impact level of credit risk management towards profitability's of commercial banks in Pride microfinance Kabalagala Kampala Uganda.

## CHAPTER THREE

### METHODOLOGY

#### 3.0 Introduction

The chapter presents the research design, Area of the study, sample size, sampling procedure, Research instruments, reality and validity, data, collection methods and data analysis

#### 3.1 Research design

The research was based on the case study. (Saunders et al., 2003) defined a case study as a strategy for doing research which involves an empirical investigation of a particular contemporary phenomenon within its real life context using multiple sources of evidence''. This fit well with the author's intentions to investigate a real life issue through a variety of data collection methods.

(Jankowicz, 2000) suggests the appropriateness of a case study when they focus on a set of issues in a single organization. The qualitative research design was descriptive in nature and enabled the researcher to meet the objectives of the study. A statement was used to assign variables that were not adequately measured using numbers and statistics. The quantitative research designs were used in form of mathematical numbers and statics assigned to variables that was not easily measured using statements or themes. These approaches were adopted to enable the researcher get and analyses relevant information concerning people's opinions about the role of budgeting in financial performance of microfinance institutions.

#### 3.2 Area of the study

The study focused on the credit management and loan performance of microfinance institutions with specific reference to Pride Microfinance Limited, Kabalagala, along Ggaba Road Kampala the researcher chose pride microfinance, because the factory does credit risk management but its loan performance seems not to have improved.

#### 3.3 Population of the study

The research was conducted in pride microfinance, which had a population of 60 respondents. The study population included company workers in the department of; Human Resource, Procurement, Marketing, Production and Finance Department.

The researcher used a sample size that was selected from the study population as representative sample representing the entire study population of 60 elements. This selection of sample size helped the researcher minimize resources such as time and money in addition to other resources.

### **3.4 Sample size**

The sample size comprised of a representative sample of 30 employees in total with a sample selection of 8 are from the Human Resources, 3 Procurement, 8 Production and Operation, 9 Marketing, 2 Finance Department from various departments.

### **3.5 Data collection sources**

The researcher employed both primary and secondary sources of data collection in a bid to come up with sound, concrete and credible research findings. The researcher therefore used the questionnaire, and interviews in the process of collecting primary data and text books, magazines, internet (majorly pride microfinance website) and others to collect the secondary data.

**Primary source:** The researcher used face-to-face interviews and administered questionnaires to collect first hand data from the respondents.

**Secondary source:** Under this source, the researcher uses text books, published research dissertations, newspapers internet and specified website to collect the data.

### **3.6 Research instruments**

This involved the instruments that were used during the study in Pride microfinance.

**Questionnaires:** According to Robson (2013), a questionnaire is commonly applied to research, designed to collect data from a specific population. Questionnaires are commonly used as research instruments because of the distinct advantages they yield (Leary, 2010). The researcher therefore chose a descriptive research methodology and designed questionnaires to collect the required data. The questionnaires were divided into two sections. The first section was intended to provide demographic information that would provide a clear understanding of the sample attributes of the research objectives.

### **3.7 Data collection methods**

**Face-to-face interview:** The researcher employed face to face interview method under which interview guide was used. The interview guide was a tool used to collect data from Pride microfinance staff and other employees who were selected from the study population. The interview guide tool of data collection was chosen because it was cheap to administer to the respondents who was scattered over a large area.

### **3.8 Data analysis**

Data analysis is the process of bringing order, structure and meaning to the mass of information gathered (Mugenda & Mugenda, 2003). The instruments yielded both qualitative and quantitative



data. The major difference between qualitative and quantitative data typically consists of words while quantitative data consists of numbers (McNamara, 2010). After collecting all the necessary data, the data was coded and edited, analyzed and rephrased to eliminate errors and ensure consistency. It involved categorizing, discussing, classifying and summarizing of the response to the end.

### **3.9 Validity and Reliability of instruments**

#### **3.9.1 Validity of instruments**

Validity is the extent to which the instruments use during the study measure the issues they are intended to measure (Amin, 2005). To ensure validity of instruments, the instruments were developed under close guidance of the supervisor. After designing the questions, the researcher used a pre-tested. This helped to identify ambiguous questions in the instruments and able her to re-align them to the objectives. The questionnaire was given to the supervisor to judge the validity of questions according to the objectives. After the assessment of the questionnaire, the necessary adjustments were made bearing in mind the objectives of the study. Then a content validity index (CVI) OF 0.81 was measured by using the following formula,

$$\text{CVI} = \frac{\text{Number of items rated as relevant}}{\text{Total number of items rated in the questionnaire}}$$

$$\text{CVI} = \frac{20}{26}$$

$$\text{CVI} = 0.81$$

Thus if the CVI computed is above 0.7, the standard Cronbach alpha, the instruments were considered valid. This is also in line with (Amin, 2005) who noted that the overall CVI for the instrument should be calculated by computing the average of the instrument and for the instrument to be accepted as valid the index should be 0.70 or above.

#### **3.9.2 Reliability of Instruments**

Reliability is the extent to which the measuring instrument produced consistent scores where the same group of individuals is repeatedly measured under the same conditions. The researcher administered one type of questionnaire to all the participants. As well the researcher used Cronbach's alpha. The components reliability takes into account that indicators have different loadings and can be interpreted in the same way as Cronbach's alpha (that is, no matter which particular reliability coefficient is used, an internal consistency reliability value above 0.70 is regarded as satisfactory, whereas a value below 0.60 indicates a lack of reliability)

### **3.10 Ethical Considerations**

Walton (2013), research ethics are specifically interested in the analysis of ethical issues that are raised when people are involved as participants in research study. Research ethics have three main objectives which involve: the objective to protect human participants, ensuring that research is conducted in a way that serves interest of individuals, groups and the society as a whole. Lastly, the final objective was to examine specific research activities and projects for their ethical soundness i.e. looking at issues such as the management of risk, protection of confidentiality and the process of informed consent (Walton, 2013). The researcher obtained a letter from the institution to present to Price Microfinance requesting for authority to carry out a research on the company. The letter served as assurance that the information gathered will be strictly for academic purposes. Participants were informed that the information they gave was to be kept confidential. Also, the researcher focused on specific research areas concerning the cost control and its impact on profitability, looking at issues such as protection of confidentiality of participant's information.

### **3.11 Limitations of the study**

In view of the following threats to validity, there was misinterpretation of the questions by the respondents, lack of co-operation by some respondents was constraint to this study. In Uganda it is common that researchers are viewed in a negative way, usually staff thinks it is a problem of finding exercise that might render most of the jobless at the end of the exercise. This study however emphasized to the respondents that the study was purely for academic purposes also where respondents felt redundant to participate in spite of the assurance the study resorted to willing and available respondents. The cost of the research was very high in regard to the already incurred cost of accessing relevant stationary, printing and the yet incurred cost of photocopying, binding, transport, and telephone charges. The financial constraint was solved by asking my friends and family to raise some money for my research work.

## CHAPTER FOUR

### DATA PRESENTATION, ANALYSIS AND INTERPRETATION OF FINDINGS

#### 4.0 Introduction

This chapter presents the findings from the study as well as the interpretation and analysis of both the primary and secondary data with reference to Credit Risk Management and Loan Performance on Microfinance Institutions; A case of Pride Microfinance Kabalagala Branch. This was done mainly through questionnaire to the selected respondents. The study was carried out with the aim of providing answers to the research questions in chapter one using the methodology described in chapter three. In the presentation of findings, tables were used to present frequencies, percentages, correlation and regression results used to describe and analyse findings, and draw conclusions. The data obtained from the field was presented and analysed with descriptive statistics to provide answers for the research questions (questionnaires) from the selected respondents.

#### 4.1 Response Rate

Response rate also known as completion rate or return rate in survey research refers to the number of people who answered the questionnaires divided by the number of people in the sample. Questionnaires were handed to 30 employees of pride microfinance from different departments namely Human Resource, Procurement, Production and Operations, Marketing and Finance Department. Overall, 30 responded to the questionnaires which represented a response rate of 100% as reflected in the table 4:1;

**Table 4.1: Showing the Response Rate**

Category	Sample Size	Actual Response	Percentage response per category
All respondents	30	30	100%

Source: Primary Data, 2019

## 4.2 Demographic characteristics of the respondents

This section presents the characteristics respondents such as their gender, marital status, age bracket, number of years worked and highest level of education attained. The results are presented in table form with generated respective frequencies.

### 4.2.1 Gender of Respondents

The gender of the respondents was captured and categorized into male and female. The study captured gender to establish the participative level and responsive generic concern of the respondents. Gender of respondents is illustrated in table 4:2,

**Table 4.2: Showing Gender of Respondents**

Response	Frequency	Percentage (%)
Male	22	73.3
Female	8	26.7
<b>Total</b>	<b>30</b>	<b>100</b>

Source: Primary Data, 2019

From the table 4:2, 73.3% of the respondents were male, and 26.7% were female. This implies that there was no gender bias in the study. To supplement this, the staff list showed that the bank had employed more male than female employees. However the study did not recognize variations in responses based on gender, although the previous study conducted and had revealed that credit risk management and loan performance in Uganda varied depending on gender. Female managers were reported to focus on perceived usefulness while male managers focused on attitude (Orobia, 2013).

### 4.2.2 Age of the Respondents

The age distribution of the respondents was captured to ascertain the distribution of the age to gain an insight about successive planning at Pride Microfinance as far as credit risk management and loan performance was concerned and the results are illustrated in Table 4:3;

**Table 4.3: Showing the Age of the Respondents**

Response	Frequency	Percentage (%)
15-29 years	3	10
30- 39 years	10	33.3
40-49 years	11	36.7
50 years and above	6	20
<b>Total</b>	<b>30</b>	<b>100</b>

**Source: Primary Data, 2019**

From the table 4:3, 10% of the respondents were below 30 years of age, 33.3% were between 30 to 39 years of age, 36.7% were between 40 to 49 years, and 20% were 50 years and above. This implies that respondents were mature enough to answer questions in the questionnaire and that there is a balance in age categories of workers which indicated good successive planning. Therefore the microfinance is likely to remain stable in respect to credit risk management and loan performance by avoiding possible distortions in case of retirement or resignation of knowledgeable staff.

#### **4.2.3 Level of Education of the Respondents**

The researcher was interested in the level of education of respondents in order to establish whether employees had the required knowledge, understanding and skills to perform their duties and understand the policies and guidelines pertaining to credit risk management and loan performance. The education status of respondents is illustrated in table 4:4.

**Table 4:4. Showing the Level of Education**

Response	Frequency	Percentage (%)
Certificate	6	20
Diploma	8	26.7
Degree	14	46.7
Masters	2	6.6
<b>Total</b>	<b>30</b>	<b>100</b>

**Source: Primary Data, 2019**

From the table 4:4,46.7% of the respondents were degree holders, 26.7% were Diploma holders, and 20% certificate holders and 6.6% of the respondents are Masters Holders. This implied that

all respondents had attained a certain level of formal education that would help them in understanding the policies and guidelines for credit risk management and that the responses given would be perceived to be a true expression of their understanding of credit risk management and loan performance. In fact, documentary review showed that the finance manager who was directly responsible for credit risk management was a certified public accountant, deemed to have the needed skills, knowledge and competence to steer efficient credit risk management practices that was needed to promote financial performance on microfinance institutions.

#### 4.2.4 Period of service in the Bank

Another category the study used to find out demographic information about respondents was the length of service. The researcher intended to find out, for how long the respondents had worked in Pride Microfinance, Kabalagala Branch to ensure that the respondents actually had knowledge and confidence about what they were talking about. The findings from this category are as stated in the table 4.5.

**Table 4:5 Showing the Period of Service of Respondents**

Response	Frequency	Percentage (%)
Less than a year	6	20
1-5 years	12	40
6-10 years	8	26.7
11 years and above	4	13.3
<b>Total</b>	<b>30</b>	<b>100</b>

Source: Primary Data, 2019

From the table 4.5, it reflects the number of years the respondents had been employed in service of pride microfinance. 20% of responses had not completed a year at pride microfinance, 40% was in the range of 1 to 5 years, 26.7% had served between 6 to 10 year and 13.3% of the respondents have worked more than 11 years and above. This implies that almost half of the respondents had worked at Pride Microfinance for a period of over 5 years therefore they had experience with the organization's credit risk management and loan performance for the period under study. This was an indication that this experience can be used to improve profitability and orient new employees on credit risk management. Also this experience implies that the information given by respondents during the study may be reliable.

### 4.3 Factor Analysis

Factor analysis was used to extract factors that measured the credit risk management variables using the principal component analysis and varimax method. Factors with eigen values  $> 1$  were extracted and items with correlation coefficients below  $+ 0.3$  deleted because they were considered to be having low contribution to the factors extracted. Table 10 shows correlation coefficients for the four factors extracted: background of applicant (credit history), technical feasibility, financial viability, and credit rating and this form the appraisal component.

**Table 4:6: Rotated Component Matrix: Appraisal**

	1	2	3	4
We demand for a business plan from all clients/ borrowers	.742			
We analyze the business plans to identify risk exposure	.742			
We consider professionalism in the respective business	.533			
We look at the relevant experience in the loan applicant	.711			
We consider cash flow projections of a given project before finance it.		.493		
We look at the long term planning horizon of every applicant.				
We look at the conditions ie political, economic before we finance a project		.405		
We look at collateral as a secondary source of repayment	.396			
We consider the accounts receivable and inventory as security		.319		
We look at capitalization of the business			.575	
We consider the net worth of the business			.542	
We consider the past track record of repayment		.557		
We look at character of the loan applicant	.309	.679		
We look at the credit trustworthiness of loan applicants		.745		
We look at the leadership quality or capacity of managers		.784		
We periodically monitor projects financed.		.747		
We consider capacity of loan applicants				
We request for past financial reports from all clients		.576		
We demand for audited financial reports		.595		
We analyze financial reports	.0482			
We calculate the ratio analyze for the profitability, efficiency, leverage		.684		
We analyze the growth in sales of our clients		.514		
Interest coverage ratio is important before we finance				.542
We look for the sound management policies of our borrowers.				.490
We only finance projects with sound financial management policies	.792			
We finance projects with potential market/ trade	.315			
We look at the consumption behaviour of the market.	.733	.300	.443	
We look at the marketing strategy of the loan applicant	.676			
We finance projects that use appropriate technology				
We have qualified staff to assess the level of technology	.735			
We look at access to infrastructure				.343
We look at the availability of raw materials before we finance a project	.525			.457
We look at the implementation plan of all projects	.573			
We consider if a project has specialized man power	.561			
The bank has an internal credit rating system	.691			
We do credit rating on all projects		.510		
I participate in the design of credit rating system	.596			
The bank quantifies risk through credit rating	.678			
We base our rating on financial reports				.485
We rate the management capacity of loan applicants	.472			
Our rating system predicts debt servicing capacity of loan applicants.	.535			
The rating used can determine deteriorating / non performing loans			.442	
We use public and private information in rating	.421			
I know how to use rating system			.808	
The bank monitors all problem loans	.660			
<b>Eigen</b>	<b>9.11</b>	<b>6.090</b>	<b>3.860</b>	<b>3.254</b>
<b>% of variance</b>	<b>19.383</b>	<b>12.974</b>	<b>8.213</b>	<b>6.923</b>



From the table 4:6, credit history has an eigen value of 9.11, and a percentage of variance of 19.383. Technical feasibility has an eigen value of 6.090 and a percentage of variance of 12.974. Financial viability has an eigen value of 3.860 and a percentage of variance of 8.213. Credit rating has an eigen value of 3.254 and a percentage of variance of 6.923. Table 4:7 has factors extracted for other risk management techniques namely: risk transfer, risk diversification, and risk retention and this form the component of other risk management techniques. Their associated eigen values and correlation coefficients are shown in the table 4:7;

**Table 4:7. Rotated Component Matrix: Other risk Management Techniques**

	1	2	3
Our loan portfolio is fully insured			.569
Clients are requested to provide financial guarantees		.770	
Our loans are guaranteed with fixed deposits			.767
We consider debentures as loans guarantee	.315		
We participate in loan portfolio hedging against risk		.677	
The bank use credit derivatives to hedge risk		.761	
The bank has used interest rates swaps in market		.545	
The bank uses forward exchange rate contract to hedge the risk		.679	
Risk transfer improves loan recovery		.717	
The loan portfolio is invested inn different sectors of the economy	.646		
We do not concentrate our loan portfolio in particular sector of the economy	.634		
Decision to diversify is taken by management			.703
Diversification has reduced risk exposure in this institution			.396
We invest in different loan products	.599		
Default level has reduced due to diversification		.396	
Retention is only used to cover a small portion of loss			.418
Loss that is cored by retention is about 5% of the loan portfolio			
We prefer covering loss from bank resources			
We have widely used risk retention to know how much exists in our loan portfolio			
We constantly carry our loan retention reviews	.574		
The bank has risk management policy	.572		.604
The bank has pre-set concentration limits in every	.692		
The bank has preset portfolio limit	.458		
All staff members are evaluated	.679		
The bank quickly responds top market changes	.515		
We used risk based pricing in our loan portfolio	.785		
We periodically assess credit quality of our loan portfolio			
<b>Eigen values</b>	<b>4.249</b>	<b>3.790</b>	<b>3.025</b>
<b>% of variance</b>	<b>15.737</b>	<b>14.035</b>	<b>11.205</b>

Source : Primary data, 2019

The results from the 4:7, show that risk transfer had eigen value of 4.249 and a percentage of variance of 15.737. Risk diversification had had an eigen value of 3.790 and a percentage of variance of 14.035. Risk retention had an eigen value 3.025 and a percentage of variance of 11.205 implying that the variable extracted are relevant in measuring credit risk.

#### 4.4 Relationship between Variables.

Multiple correlations were used to establish the relationship between appraisal, financial viability, technical feasibility, credit rating with loan performance. Loan performance was measured using two ratios namely; ratio of non- performing loans to total advances, ratio of provisions to total advances. The results of the above relationship are summarized in table 4:8 below with corresponding correlation coefficients as tabulated.

**Table 4:8 Showing Corresponding correlation coefficients**

Spearman's rho	1	2	3	4	5	6	7	8
Appraisal 1	1							
FVA 2	0.666	1						
TECHFEAS 3	0.683	0.628	1					
RATING 4	0.58	0.693	0.679	1				
TRANSFER 5	0.485	0.252	0.378	0.329	1			
DIVERSIF 6	0.659	0.338	0.432	0.414	0.387	1		
RENTENTI 7	0.318	0.055	0.001	0.162	-0.008*	0.119	1	
MAGMT 8	0.638	0.412	0.588	0.589	0.306	0.556	0.044	1
Provisions/Total Advances	0.575	0.275	0.398	0.352	0.262	0.348	0.400	0.374
NPL/Total Advances	0.575	0.275	0.398	0.352	0.262	0.348	0.4	0.374

##### 4.4.1 Relationship between Loan Appraisal and Loan Performance

This section deals with objective one which was establishing the relationship between loan appraisal and loan performance in the microfinance institutions banks. The researcher observed a significant positive relationship between loan appraisal with Provision/Total advances ratio ( $r = 0.575$ ,  $P$ -value  $< 0.01$ ). There was also a significant positive relationship between loan appraisal and the ratio of non- performing loans to total advances ( $r = 0.575$ ,  $P$ -value  $< 0.01$ ) as shown in table 12.

##### 4.4.2 Relationship between Financial Viability and Loan Performance

In line with objective one, there was a significant positive relationship between financial viability and the ratio of provision to total advances ( $r = 0.275$ ,  $P$  – value  $> 0.005$ ). Similarly, there was a

significant positive relationship between ratio of nonperforming loans to total advances ( $r = 0.275$ ,  $P - \text{value} > 0.005$ ).

#### **4.4.3 Relationship between Technical Feasibility and Loan Performance**

From the results in the table 12, there was a significant positive relationship between provision to total advances, and non – performing loans to total advances ratio ( $r = 0.398$ ,  $0.398 P < 0.001$ ) respectively. This was done following objective one of this research.

#### **4.4.4 Relationship between Credit Rating and Loan Performance**

According to the results as tabulated in table 12, there was a significant positive relationship between credit rating and provisions to total advances ratio ( $r = 0.352$ ,  $P = \text{value} < 0.05$ ). In the same way, there was also a significant positive relationship between credit rating with ratio of non – performing loan to total advances ( $r = 0.352$ ,  $P = \text{value} < 0.05$ ).

#### **4.5 Relationship between Other Risk Management Techniques and Loan Performance.**

This deals with objective two which was to establish the relationship between other risk management techniques with loan performance. Note that other risk management techniques have three variables namely; risk transfer, risk diversification, and risk retention.

##### **4.5.1 Relationship between Risk Transfers with Loan Performance.**

According to table 12, there was a significant positive relationship between risk transfer with provisions to total advances ( $r = 0.262$ ,  $P > 0.05$ ). In the same way, the researcher also established that there was significant positive relationship between risk transfer with non- performing loans to total advances ( $r = 0.262$ ,  $P > 0.05$ ).

##### **4.5.2 Relationship between Risk Diversification and Loan Performance**

From table 12, there was a significant positive relationship between risk' diversification with provisions to total advances, and non – performing loans to total advances ( $r = 0.348$ ,  $0.348 P < 0.05$ ) as shown in table 12.

##### **4.5.3 Relationship between Risk Retention and Loan Performance**

Risk retention analysis helps to know how much risk is there in loan structure, and provides you with a risk retention capacity for any financial institution. There was a significant positive relationship between risk retention with provision to total advances, non- performing loans to total advances ( $r = 0.400$ ,  $0.400 P < 0.01$ ) respectively.

In general, there was a significant positive relationship between other risk management techniques and loan performance ie provision to total advances, non- performing loans to total advances ( $r = 0.374$ ,  $0.374$ ,  $P = 0.01$ ).

## CHAPTER FIVE

### SUMMARY OF THE FINDINGS, CONCLUSION AND RECOMMENDATIONS

#### 5.0 Introduction

This chapter presents a summary of major findings from the study, conclusions resulting from the study, recommendations derived from the study, and ends with the suggested areas of further research. The study indeed provided a challenging but yet enriching wealth of experience putting the different parts of the study together.

#### 5.1 Interpretation and Discussion of Results.

This section is divided into two parts. The first part deals with interpretation and discussion of findings in relation to the relationship between credit risk management and loan performance in pride microfinance institution.

##### 5.2.1 Examining the Relationship between Loan Appraisal and Loan Performance.

The Pearson correlation test on the relationship between loan appraisal and loan performance revealed that there was a significant positive relationship between loan appraisal with Provision / Total advances ratio ( $r = 0.575$ ,  $P\text{-value} < 0.01$ ), and ratio of non-performing loan to total advances. This implies that as the process of loan appraisal is improved and done properly, the loan performance also improves. Proper loan appraisal will help identify and analyze loss exposures, use a combination of techniques to handle each exposure to ensure loan performance of any given portfolio. These findings are in agreement with literature by Rupp, (2002) whose work asserts that the appraisal technique process helps to identify and analyze loss exposures, and this leads to select control techniques to handle these exposures. Rupp's supports the above findings by stating that the control systems enhances management of outstanding risk assets, and enhances normal repayment which helps to monitor business risk. It is also in line with the work of Santomero, (1996), Barents PLC (1998), Bannet (1984) and Harrison (1996) who argue that the appraisal process helps to predict the credit worthiness of would be borrowers. Loan appraisal process looks at the 5Cs of credit as discussed by Pandey, (1997), Van Horne, (1998), Sinkey, (1998) and Allyn & Bacon (1996) will lead to formation of good loan portfolio.

##### 5.2.2 Examining the Relationship between Financial Viability, Financial Analysis and Loan Performance

The correlation test between financial viability, financial analysis and loan performance revealed a significant positive relationship between financial viability, financial analysis and the ratio of

provision to total advances, and ratio of non performing loans to total advances ( $r = 0.275, 0.275, P - \text{value} > 0.005$ ) respectively. This implies that whenever the project's financial viability improves, then loan performance will also improve. Similarly whenever the financial analysis of a given project is done properly, then this will lead to an improvement in the loan performance that is to say; an improvement in the ratios of non – performing loans to total advances and the ratio of provisions to total advances. The finding is supported by the work of Griffith, (1985) whose work reveal that use of such ratios help in judging the attractiveness or creditworthiness of a company and can enhance loan performance. Griffiths work points out that such ratio analysis will tell more about the profitability, capital and liquidity position of a given enterprises and these are important elements for an improvement in loan performance. It is also in line with the (ADB, 2003) -Asian Development Bank operations bank manual policy report where it is argued that as an integral part of project preparation, ADB requires the use of financial analysis and an assessment of the financial policies and the capacity of the financial management systems practiced or proposed by the borrower or executing agency to support project implementation and operation. When executing agencies maintain a financial management system that ensures accountability, efficiency, and solvency, loan performance will also be improved.

### **5.2.3 Examining the Relationship between Technical Feasibility and Loan Performance.**

There was a significant positive relationship between provision to total advances, and non – performing loans to total advances ratio ( $r = 0.398, 0.398 P < 0.001$ ) respectively. This implies that when there is technical change in form of new technology adoption which leads to productivity, the loan performance will also improve. This is in line with the work of Fria, (2002) who discusses that technologies produce impact on the production process, and being first to adopt a new and more efficient technique means being able to enjoy productivity gains before rivals and this has an implication on the efficiency in loan servicing.

### **5.2.4 Examining the Relationship between Credit Rating and Loan Performance.**

There was a significant positive relationship between credit rating and ratio of provisions to total advances, Non performing loan to total advances ratio ( $r = 0.352, 0.352, P = \text{value} < 0.05$ ) respectively. This implies that when the credit rating is improved, then loan performance also improves. It should be noted that credit rating summarizes risk of loss Treacy & Carey, (2000) and when loss is controlled, loan performance will also improve. It is supported by the work of Fernando et al (2004), who argued that ratings measure and reveal the long-term fundamental

credit strength of companies, that is to say their long-term ability and willingness to meet debt servicing obligations.

### **5.3 Examining the Relationship between other Risk Management Techniques and Loan Performance.**

This discussion is focused on objective two of the research which is to examine the relationship between other risk management techniques and loan performance.

#### **5.3.1 Examining the Relationship between Risk Transfer and Loan Performance**

There was a significant relationship between risk transfers with provisions to total advances, ( $r = 0.262$ ,  $P > 0.05$ ). This implies that when the process of risk transfer is improved through hedging, use of insurance firms to insure loans, and use of derivatives methods David Rule, (2001), the loan performance will also improve. This finding is also supported by Parsley 1996, McDermott 1977 and the Economist 2001, who argue that credit-derivative helps to hedge credit exposures and will realign the portfolios. It provides insurance against default that the value of the underlying asset.

#### **5.3.2 Examining the Relationship between Risk Diversification and Loan Performance.**

There was significant positive relationship between risk diversification with the ratio of provisions to total advances, and non – performing loans to total advances ( $r = 0.348$ ,  $0.348 P < 0.05$ ) respectively. The above result implies that when diversification of loan portfolio is improved then loan performance will also improve. Note that diversification of loan portfolio mean investing the loan portfolio in different sectors of the economy, or different region and this will control risk and lead to loan performance which is in line with the work of Brannan, (2000), who argued that diversification is the primary tool for lenders to control borrower risk and realize loan performance. This was also supported by Wilson, (1998), who advocates for diversification of loan portfolio across nations where the benefits are much stronger than they are when diversification occurs across sectors in a given economy.

#### **5.3.3 Examining the Relationship between Risk Retention and Loan Performance**

There was a significant positive relationship between risk retention with provision to total advances, non- performing loans to total advances ( $r = 0.400$ ,  $0.400 P < 0.01$ ) respectively. This implies that whenever there is an improvement in the risk retention, then loan performance will also improve. This finding is in line with Sanderson, (1991) who argue that knowing the right amount of risk to retain promotes financial efficiency and improves loan performance.

#### **5.4 Conclusions**

The study focused on examining the relationship between loan appraisal, credit rating, technical feasibility, financial viability, risk transfer, risk diversification, risk retention to loan performance. The above elements form a credit risk management.

##### **Findings revealed the following:**

That loan appraisal was significant and positively related to loan performance. This brings forth the importance of loan appraisal in ensuring effective performance of loans.

Credit rating was significantly and positively related to loan performance. This signifies the importance of establishing an internal credit rating system to summarize risk of losses inherent in loans

The relationship between technical feasibility and loan performance was positive. However, the magnitude of relationship was not strong which meant that technical change or technological change is an important factor that contributes to increased productivity but has a slight contribution to loan performance.

Financial viability was positively and significant related to loan performance. This signifies the importance of lending to entities with strong financial base.

The relationship between risk transfers was significant and positive and this signifies the need for banks to use insurance firms to take on risk in form of insurance covers for loans.

Risk diversification was significantly and positively related to loan performance. The need for diversifying loan portfolio to different sectors, region is necessary

The relationship between risk retention and loan performance was significant and positive and this signifies the need to limit amount of risk that bank take on their loan portfolio.

Therefore, the study holds that credit risk management in the two banks has a significant and positive relationship to loan performance.

#### **5.5. Recommendations**

Considering that there is a significant positive relationship between loan appraisal and loan performance, it is important for the bank to formulate an appraisal process/ procedures, format that details ways of capturing all the credit risk. The appraisal process should identify and analyze all loss exposures, and measure such loss exposures. This should guide in selection of technique or



combination of techniques to handle each exposure. The appraisal process should capture key issues like the capital adequacy, capacity of the applicant, value of the collateral, and repayment history.

From the findings, financial viability had a significant positive relationship with loan performance. In development financing, it is important for all the executing agencies to lend to entities with sound and stable financial positions. Such entities should be maintaining sound financial management systems that ensure accountability, efficiency, and solvency. It is also important to make a detailed assessment of financial viability through use of tools like ratio analysis to judge the attractiveness and creditworthiness, liquidity levels, efficiency, profitability, leverage of a given company before financing.

The significant and positive relationship between technical feasibility and loan performance indicate that it is critical for the bank to keep a look at the technology and production process of a given project both in the short and in the long term before financing. Technical change will always impact on the production process, and can bring about efficient techniques of production which impacts on efficiency.

Since credit rating had a significant positive relationship with loan performance, it is important that while assessing projects, internal credit rating should be part and partial of the appraisal process. Technical staff should be trained to be able to conceptualize, design, and male operational an internal credit rating system that suits the banks' operations to control risk exposures.

Considering that there is a significant positive relationship between risk transfer and loan performance, banks should increase use of insurance firms in a bid to transfer or share risk in case of default. It is also important for the bank to start practicing advanced hedging methods for example use of derivative products like swaps, option, and futures. Derivatives provide insurance or protection against an event (default) that changes the value of the underlying asset (loan).

From the findings, risk diversification has a positive relation with loan performance. Diversification of loan portfolio should be part and partial of banks policy in a bid to Spread risk. Loan portfolio should be invested in different sectors, regions. Diversification should also be done across nations where the benefits are much stronger than when diversification occurs across sectors.

The significant positive relationship between risk retention and loan performance indicate that risk retention analysis should be never an ending process as banks constantly decide how much risk to retain. Hence use of credit rating models should continuously be applied. This helps to ascertain how much interest rate to charge for a given loan as it summarize and quantify risk in a given loan portfolio.

### **5.6 Areas for Further Research**

The study was only focused on microfinance institutions in Uganda. However, it could be expanded to cover other commercial banks in Uganda. The study also majoréd on establishing the relationship between credit risk management and loan performance. This should also be widenéd to establish the relationship between risk management and performance of microfinance institutions.

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**APPENDICES**  
**APPENDIX I: RESEARCH QUESTIONNAIRES**

Dear respondent,

My name is **Maniriho Samson** a student at Kampala International University carrying out study on “Credit risk Management and Loan Performance of Microfinance Institutions; A case of Pride Microfinance, Kabalagala.” You are among those who have been selected to participate in this study. Your co-operation will be highly appreciated. All information obtained as a result of your response to the questionnaire will be used only for the study and will be kept confidential.

Let me take this opportunity to thank you in advance for your co-operation.

**PART A: BACKGROUND INFORMATION**

Please fill in truthfully as you can Use tick or fill in box where necessary.

**1. Gender:**

a) Male

b) Female

**2. Age of the respondent**

a) 15-30 years

b) 31-40 years

c) 41-50 years

d) 51-and above

**3. Marital status**

a) Married

b) Single

c) Widow (er)

d) Separated

**4. Level of Educated**

a) Certificate

b) diploma

c) Degree

d) Masters

Others (specify).....

**5. Period of service in the company (years)**

- a) Less than a Year
- b) 1-5 years
- c) 6-10 years
- d) 11 and above

**6. Department of operation**

- a) Accounting Department
- b) Human Resource Department
- c) Procurement Department
- d) Sales and Marketing Department

Others (specify).....

**SECTION B: The Level Of Credit Risk Management And Loan Performance Of Microfinance Institutions.**

7. Is there any role played credit risk management and loan performance towards microfinance institutions?

- a) Yes
- b) No

8. a) If yes, explain the role

.....

b) If no, explain why

.....

9. Do you understand the term credit risk management?

- a) Yes
- b) No

10. Is there any role played by credit risk management in the loan performance of microfinance institutions?

- a) Yes
- b) No

12. If yes, which one of the following best reflects the role played by credit risk management in the loan performance of microfinance institutions?

- a) Improved communication
- b) Accountability
- c) Financial control of inputs
- d) Planning and coordination

13. Which other roles do you think Credit Risk Management plays in the performance of microfinance institutions?

.....

**SECTION C: Credit Risk Management As A Measure Of Loan Performance Of Microfinance Institutions In Uganda.**

14. Is Credit Risk Management a measure of loan performance of microfinance institutions in Uganda?

a). Yes

b). No

14. How does Credit Risk Management influence the loan performance of microfinance institutions?

.....

15. Is there a relationship between credit risk management and the loan performance of microfinance institutions?

a). Yes

b). No

16. Explain how Credit Risk Management influences loan performance of microfinance institutions.

.....  
.....

17. If yes, explain the relationship between Credit Risk Management and loan performance in microfinance institutions in Uganda.

.....  
.....

## SECTION D: LEVEL OF CREDIT RISK MANAGEMENT AND LOAN PERFORMANCE

Please respond to the following scale to indicate your level of agreement or disagreement with the following statements: (1=Strongly Agree, 2=Agree, 3=Not Sure, 4=Disagree, 5=Strongly Agree).

	<b>CREDIT RISK MANAGEMENT</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
1.	The bank has a risk management policy					
2.	The bank has pre-set concentration limits in every sector					
3.	The bank quickly responds to market changes					
4.	We use risk based pricing in our loan portfolio					
5.	We periodically assess credit quality of our loan portfolio					
	<b>RISK RETENTION</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
1.	Retention is only used to cover a small proportion of loss					
2.	Loss that is covered by retention is about 5% of loan portfolio					
3.	We prefer covering loss from bank resources					
4.	We have widely used risk retention to know how much that exist in our loan portfolio					
5.	We constantly carry our risk retention reviews					
	<b>RISK TRANSFER</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
1.	Our loan portfolio is fully insured					
2.	Clients are requested to provide financial guarantees					
3.	Our loans are guaranteed with fixed deposits					
4.	We also consider debentures as loans guarantee					
5.	We participate in loan portfolio hedging against risk					
	<b>APPRAISAL</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
1.	We demand for a business plan from all clients/ borrowers					
2.	We analyze the business plan to identify risk exposure					
3.	We consider professionalism in the respective business					
4.	We look at relevant experience of the loan applicants					
5.	We consider cash flow projections of a given project before we finance it					
	<b>FINANCIAL VIABILITY AND ANALYSIS.</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>

1.	We request for past financial reports from all clients					
2.	We look the quality of financial report presented					
3.	We demand for audited financial reports					
4.	We analyze financial reports					
5.	We calculate ratio analysis for profitability, efficiency, leverage					
	<b>TECHNICAL FEASIBILITY</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
1.	We finance projects with potential market/ trade					
2.	We look at consumption behaviors of the market					
3.	We look at the marketing strategy of loan applicants					
4.	We finance projects that use appropriate technology					
5.	We have qualified staff to assess the level of technology.					
	<b>SECTION IV. CREDIT RATING</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
1.	The bank has an internal credit rating system.					
2.	We do credit rating on all projects					
3.	I participate in the design of the credit rating system					
4.	The bank quantifies risk through credit rating					
5.	We base our rating on financial reports					

**THANK YOU FOR YOUR RESPONSE**

**APPENDIX II: BUDGET**

<b>NO.</b>	<b>ITEM</b>	<b>AMOUNT (shs)</b>
1.	Photocopy/printing	50,000/=
2.	Transport	20,000/=
3.	Internet charges	20,000/=
4.	Meals and refreshments	20,000/=
5.	Consultation	40,000/=
6.	Airtime	30,000/=
7.	Miscellaneous	20,000/=
	<b>TOTAL</b>	<b>200,000/=</b>

**APPENDIX III: TIME FRAMEWORK**

No.	Activity	May 2019	June 2019	July 2019	Aug 2019
1	Topic approval				
2	Capturing information data				
3	Writing a proposal and approval				
4	Final submission				