

**THE RELATIONSHIP BETWEEN CREDIT RISK MANAGEMENT
PRACTICES AND PROFITABILITY OF MICRO FINANCE
INSTITUTIONS IN KENYA**

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DECLARATION

This research project is my original work and has not been presented for a degree in any other University.

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DEDICATION

*This is dedicated to the Almighty God for enabling me to complete this research. To my loving Dad the late **George Kibuttit Koech** and mum **Pauline**; they bore me, raised me, supported me, taught me, and loved me. To my siblings Caroline, Anthony, Oscar & Winnie for their encouragement and patience.*

ABSTRACT

The Kenya Government's move to regulate Microfinance Institutions (MFI's) was primarily to create an enabling environment for MFI's to maximize outreach on a sustainable basis so as to increase financial access by poor households, thus reducing the population without access to financial services in Kenya. All financial institutions should practice prudent lending in performance of their financial intermediation role to ensure that they avoid those serial borrowers who have no intention to repay putting their going concern in doubt. Risk exists as an integral part of financial services and should not be overlooked.

The primary objective of this Study was to determine the credit risk management practices employed by MFI's in Kenya. Secondly, to establish the relationship between Credit Risk Management (CRM) practices and overall profitability of MFI's in Kenya.

The study employed census survey methodology to explore the credit risk management practices employed by MFI's in the country and financial statements to find out the financial performance as measured by profitability. A researcher constructed questionnaire was administered to elicit responses from the microfinance institutions that are members of the Association of Microfinance Institutions (AMFI). Face-to-face interviews with executives of microfinance institutions were conducted to supplement the questionnaire and also for an in-depth understanding and analysis of certain key aspects of the research.

Findings of the study suggest that there is a significant relationship between the performance of the firms and the CRM practices employed. All the respondents have an idea about credit risk management practices though they have not adopted because of lack of resources, lack of acceptable industry models and human resistance.

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ABBREVIATIONS

AMFI	- Association of Micro Finance Institutions
BCBS	- Basel Committee on Banking Supervision
BIS	- Bank for International Settlement
CR	- Credit Risk
CRM	- Credit Risk Management
IAS	- International Accounting Standards
MFI's	- Micro Finance Institutions
NGO	- Non-Governmental Organizations
ROA	- Return on Assets
SME's	- Small and Medium Sized Enterprises

CHAPTER ONE

1.0 INTRODUCTION

1.1 Background of the Study

Risk exists as a part of an environment in which various organizations operate (Tchankova, 2002). Banking is a business mostly associated with credit risk because of its large exposure to uncertainty and huge considerations. Credit risk management is one of the most important practices to be used especially by MFI's, for getting assurance about the reliability of the operations and procedures being followed. In today's dynamic environment, all MFI's are exposed to a large number of risks such as credit risk, liquidity risk, foreign exchange risk, market risk and interest rate risk, among others – the risks which may create some source of threat for a bank's survival and success are concerned (Al-Tamimi and Al-Mazrooei, 2007). These risks have different impact on the performance of MFI's. Managing risk is one of the basic tasks to be done, once it has been identified and known. The risk and return are directly related to each other, which means that increasing one will subsequently increase the other and vice versa. And, effective credit risk management leads to more balanced trade-off between risk and reward, to realize a better position in the future (Fatemi and Fooladi, 2006).

Over the years, there have been an increased number of significant MFI problems in both matured and emerging economies, (Basel, 2004). Credit problems, especially weakness in Credit Risk Management (CRM), have been identified to be a part of the major reasons behind MFI difficulties. Loans constitute a large proportion of Credit Risk (CR) as they normally account for 10-15 times the equity of an MFI (Kitua, 1996). Thus, MFI business is likely to face difficulties when there is a slight deterioration in the quality of loans. Poor loan quality has its roots in the information processing mechanism. According to BrownBridge (1998) these problems are at their acute stage in developing countries. The problem often begins right at the loan application stage (Liuksila, 1996) and increases further at the loan approval, monitoring and controlling stages, especially when CRM guidelines in terms of policy and strategies/procedures for credit processing do not exist or weak or incomplete. The prime reason to adopt risk management practices is to avoid the probable failure in future. But, in realistic terms, risk management is clearly not free of cost. In fact, it is expensive in both resources and in institutional disruption. But the cost of delaying or avoiding proper risk

management can lead to some adverse results, like failure of a MFI and possibly failure of a MFI system (Meyer, 2000).

Persistent poverty and overcoming low levels of social and economic development around the globe are the greatest challenges facing the developing countries especially in the wake of the recent recession. Despite progress during the last three decades, witnessing a revolution in providing finance for alleviating poverty across the globe, the battle is far from won. Consequently, the issue of financial inclusion has emerged as a policy concern primarily to ensure provision of credit to small and medium enterprises that are normally denied access to credit mainstream financial institutions and markets. The emerging microfinance revolution with appropriate designed financial products and services enable the poor to expand and diversify their economic activities, increase their incomes and improve their social well-being (Ledgerwood, 1999). Micro finance institutions (MFI's) exist to serve this need.

Risk is an integral part of financial services. When financial institutions issue loans, there is a risk of borrower default. When banks collect deposits and lend them to other clients (i.e. conduct financial intermediation), they put clients' savings at risk. Any institution that conducts cash transactions or makes investments risks the loss of those funds. Development finance institutions should neither avoid risk (thus limiting their scope and impact) nor ignore risk. Like all financial institutions, microfinance institutions (MFI's) face risks that they must manage efficiently and effectively to be successful (Phillips, 1996). If the MFI does not manage its risks well, it will likely fail to meet its social and financial objective. When poorly managed risks begin to result in financial losses, donors, investors, lenders, borrowers and savers tend to lose confidence in the organization and funds begin to dry up. When funds dry up, an MFI is not able to meet its social objective of providing services to the poor and quickly goes out of business. Managing risk is a complex task for any financial organization, and increasingly important in a world where economic events and financial systems are linked. Global financial institutions and banking regulators have emphasized risk management as an essential element of long-term success. Rather than focusing on current or historical financial performance, management and regulators focus on an organization's ability to identify and manage future risks as the best predictor of long-term success. (Phillips, 1996)

The increased emphasis on risk management reflects a fundamental shift among bank managers and regulators to better anticipate risks, rather than just react to them. This approach emphasizes the importance of "self-supervision" and a proactive approach by board

members and managing directors to manage their financial institutions. Historically, banks have waited for external reviews by regulators to point out problems and risks, and then acted on those recommendations. In today's fast changing financial environment, regulators are often left analyzing the wreckage only after a bank has had a financial crisis (Phillips, 1996).

1.1.1 Micro Finance Institutions (MFI's)

Microfinance is a local process based on local institutions, increasingly from the private sector, that act as intermediaries collecting resources (savings, funds) and reallocating them (loans) in the same community of origin (Hulme and Mosley, 1996). MFI's are mainly from the non-bank sector and cover the financial market segment existing between the formal (commercial) bank system and the informal credit sector. The panorama of MFI's is highly diversified, including co-operatives, savings & loans institutions, village banks, credit associations, credit unions, non-governmental organizations (Otero and Rhyne, 1994).

MFI's engage in relatively small financial transactions to serve micro enterprises, including low-income households, small farmers and others who in general lack access to the banking system. In developing countries, the MSE sector employs over 500 million of the economically active population and only about 10 million of them have access to financial services from sources other than moneylenders (Otero and Rhyne, 1994). Improved access to sound financial services is a key factor in technology adoption and development. It enables entrepreneurs to manage risk and to freely invest in new innovative projects. By contrast, empirical evidence has shown that traditional subsidized credit programmes aiming to induce targeted entrepreneurs to engage in specific types of economic activity and to adopt specific technologies have generally failed.

The traditional model of considering credit just as an input needed to develop income-generating activities, frequently directed at a specific population segment and as a component of an integrated project, changed towards the support of financial decentralized institutions and the development of a local financial system (Otero and Rhyne, 1994). This change coincided with the move from a one-way flow of grant funds to project beneficiaries – finance as charity – to reciprocal contracts between institutions and clients who buy financial services – finance as business (Bennett and Cuevas, 1996). Risk management in many MFI's do not require formal collateral to access loans, instead they rely on special techniques to motivate repayments. In this case, peer group lending, joint liability and the prospect of

access to follow-on loans are the main incentives for better borrower performance. Additionally, group formation plays a pivotal role in reducing the cost of gathering creditworthiness information about clients and the feasibility of their projects (Hulme and Mosley, 1996).

As MFI's continue to grow and expand rapidly, serving more customers and attracting more mainstream investment capital and funds, they need to strengthen their internal capacity to identify and anticipate potential risks to avoid unexpected losses and surprises. Creating a risk management framework and culture within an MFI is the next step after mastering the fundamentals of individual risks, such as credit risk, interest rate risk, and liquidity risk, (Anita Campion, 2000). According to Anita, effective approaches to managing credit risk in MFI's include: Well-designed borrower screening, careful loan structuring, close monitoring, clear collection procedures, and active oversight by senior management. Delinquency is understood and addressed promptly to avoid its rapid spread and potential for significant loss, good portfolio reporting that accurately reflects the status and monthly trends in delinquency, including a portfolio-at-risk aging schedule and separate reports by loan product and a routine process for comparing concentrations of credit risk with the adequacy of loan loss reserves and detecting patterns.

Entrepreneurs invest in order to make profits. Profits are income for them. A business venture is considered to be successful when profits pour in. In case the investor is not able to get more than what he has invested in the venture, he ends up losing out money, and then he faces losses (Hulme and Mosley, 1996). The expected relationship between credit risk management practices and profitability will be that those MFI's with better practices will have a good performance and survive to the foreseeable future as found by Obiero (2002) in his research that many banks collapsed between 1984 and 2002 because of poor quality of lending.

1.2 Statement of the Problem

The 2008 global financial crisis exposed inherent weaknesses in the risk management system: poor infrastructures, desperate systems and processes, fragmented decision-making, inadequate forecasting and a dearth of cohesive reporting, among others. The impact of these flaws on many institutions shocked the industry. As a result, there has been a seismic shift in attitude toward risk management. (Ernst and Young, 2010)

In 2005, the United Nations General Assembly adopted this year as the International Year of Microcredit (United Nations, 2006) to highlight the discussion of microcredit as a tool for development. Today, there are still a number of regions where microfinance is still in its development stage and faces a number of challenges in effectively serving its clients and contributing to regional prosperity. In Kenya where 80% of the populations do not operate bank accounts, the Government initiated policy reforms in the financial sector. One of these reforms was the enactment of a Microfinance Act. The Microfinance Act, enacted in 2006, laid the legal and regulatory framework for the licensing and supervision of deposit taking microfinance institutions.

Additionally managers may, at times, engage in risk management practices at the expense of shareholders in sharp contrast to the goal of maximization of shareholders wealth. Subjective decision making by senior management of the commercial banks may lead to problems associated with credit. This includes extending credit to companies they own or are affiliated, to personal friends, to persons with a reputation for non financial acumen, to meet personal agenda, such as cultivating a special relationship with celebrities or well connected individuals, and finally lend for the sake of obtaining a set target, paying no regard to the qualities of the lender. A solution to this may be the use of tested lending techniques and especially qualitative ones, which filter out subjectivity (Gruening, et.al., 1998)

Well run microfinance institutions (MFI's) make better use of scarce funds by providing better financial services and reaching more poor clients. Although the literature on microfinance is significant and growing, very few studies explore the relationship between MFI growth and performance and their credit risk management practices. So far, studies have focused mainly on the impact that MFI's have on borrowers (Aghion and Morduch, 2000).

Despite all the models and controls put in place by financial institutions in measuring credit risk, the level of non performing loans has continued to increase, thus posing a great danger to the financial system in Kenya. Externalization of risk by transferring it to customers for instance through high interest rates to price for risk would suggest that MFI's would make little effort to appraise loan applications further increasing the non performing loans portfolio, Omagwa (2005). There's need to determine whether the sociological institutional approach to lending will provide remedy to the Kenyan financial institutions.

There are local studies that have been done in Kenya regarding risk management. Omagwa (2005) did foreign exchange risk management practices by foreign owned commercial banks

in Kenya and found out that the responding banks employed both conventional and bank-specific foreign exchange risk management practices. Most banks considered credit/default risk to be the most critical of all financial risks though empirical evidence shows that foreign exchange risk is the most critical risk for most firms. A strong majority of the banks did not find the Kenyan currency market to be information efficient: speculation and forecasting techniques were extensively used by most of them.

Yussuf (2005) did a survey of operational risks management practices by commercial banks in Kenya and found out that the main types of operational risks experienced by most of the commercial banks in Kenya are human risks, process risks and external risks. It was noted that the main causes of operational risks were identified as frauds by outsiders, frauds by employees, corporate culture and the organizational structure. Most of the banks have operational risks management departments which investigate cases of frauds that have already taken place and not necessarily to manage the operational risks.

Mwirigi (2006) did an assessment of credit risk management techniques adopted by micro finance institutions in Kenya and found out that a significant number of respondents have credit risk management policies as a basis for objective credit risk appraisal and that they involved their employees in developing the credit risk management policies. Most of the institutions used the credit manual to sensitize their employees about credit risk management, most institutions have distinctive separate departments where micro credit activities are organized, an indication of growth in the development of micro credit institutions in the country, most of the institutions work with preset targets that are closely monitored and that micro credit departments had specific credit officers and that a majority of the institutions that as early as one late repayment, a loanee was considered a defaulter and thus collection efforts were intensified.

In a study on banking regulation and its adequacy in preventing bank failure Obiero (2002) found that out of the 39 banks, which failed during the period 1984 and 2002, 37.8% collapsed mainly due to poor quality of lending. Though most banks claim to have clear and sound lending policies, the reality is that they have been quite reckless in their lending activities. Coupled with this, is the immense pressure particularly on government controlled banks to lend to politically connected individuals and institutions regardless of their credit showed that the greatest precipitator of the banking crisis in the late 1980s and the 1990s were bad corporate governance and poor quality of loan assets

As observed above, none of the studies have looked at the relationship between credit risk management practices and profitability of MFI's. Little is known therefore if this relationship actually exist and therefore the need to conduct this research.

1.3 Objectives of the Study

1. To determine the credit risk management practices employed by MFI's in Kenya.
2. To establish the relationship between credit risk management practices and overall profitability of MFI's in Kenya.

1.4 Significance of the Study

The research is useful to the management of MFI's in identifying the impact of risks on their performance. It also assists MFI's to see the need to establish formal risk management practices within its ranks.

To academicians the study provides a useful basis upon which further studies on risk management in the financial sector could be conducted.

The Central Bank of Kenya is the country's financial regulator. The study explores some of the risk management practices that have not been adopted by the local MFI's. This provides an insight to the regulator, with a view to address the identified challenges and provide workable strategies and intervention mechanisms to enhance capabilities in their oversight role.

Business executives and the General Public will increase their knowledge on microfinance industry from this study.

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Introduction

This chapter is concerned with the review of literature related to the study. It gives an overview of financial intermediary theories, empirical review, regulating MFI's, effective approaches to managing credit risk in MFI's, importance of risk management to MFI's, obstacles to risk management and also chapter conclusion.

2.2 Theories of Financial Intermediaries

Traditional theories of intermediation are based on transaction costs, and asymmetric information, Diamond and Dybvig (1983). They are designed to account for institutions which take deposits or issue insurance policies and channel funds to firms. However, in recent decades there have been significant changes. Although transaction costs and asymmetric information have declined, intermediation has increased.

The informational asymmetries generate market imperfections, i.e. deviations from the neoclassical framework. Many of these imperfections lead to specific forms of transaction costs. Financial intermediaries appear to overcome these costs, at least partially. (Pyle 1971) interpreted financial intermediaries as information sharing coalitions. Another approach is based on Diamond and Dybvig (1983) they said banks are considered as coalitions of depositors that provide households with insurance against idiosyncratic shocks that adversely affect their liquidity position. Diamond shows that these intermediary coalitions can achieve economies of scale and also act as delegated monitors on behalf of ultimate savers. Monitoring will involve increasing returns to scale, which implies that specializing may be attractive. Individual households will delegate the monitoring activity to such a specialist, i.e. to the financial intermediary. The households will put their deposits with the intermediary. They may withdraw the deposits in order to discipline the intermediary in his monitoring function. Furthermore, they will positively value the intermediary's involvement in the ultimate investment (Hart, 1995).

The relevant transaction costs consist of search, verification, monitoring and enforcement costs, Benston and Smith (1976). Here, the financial intermediaries act as coalitions of

individual lenders or borrowers who exploit economies of scale or scope in the transaction technology. The notion of transaction costs encompasses not only exchange or monetary transaction costs but also search costs and monitoring and auditing costs, Benston and Smith (1976). Here, the role of the financial intermediaries is to transform particular financial claims into other types of claims (so-called qualitative asset transformation). As such, they offer liquidity (Pyle, 1971) and diversification opportunities, Hellwig (1991). The provision of liquidity is a key function for savers and investors and increasingly for corporate customers, whereas the provision of diversification increasingly is being appreciated in personal and institutional financing.

The third approach is based on the regulation of money production and of saving in and financing of the economy, Guttentag and Lindsay, (1968). Regulation affects solvency and liquidity with the financial institution. According to Diamond and Rajan (2000) bank capital affects bank safety, the bank's ability to refinance, and the bank's ability to extract repayment from borrowers or its willingness to liquidate them. The activities of the intermediaries inherently "ask for regulation". This is because they, the banks in particular, by the way and the art of their activities are inherently insolvent and illiquid. Regulation however, may also generate rents for the regulated financial intermediaries, since it may hamper market entry as well as exit. So, there is a true dynamic relationship between regulation and financial production.

According to Diamond and Rajan (2000) financial intermediaries are active because market imperfections prevent savers and investors from trading directly with each other in an optimal way. The most important market imperfections are the informational asymmetries between savers and investors. Financial intermediaries, banks specifically, fill – as agents and as delegated monitor's information gaps between ultimate savers and investors. This is because they have a comparative informational advantage over ultimate savers and investors. They screen and monitor investors on behalf of savers. This is their basic function, which justifies the transaction costs they charge to parties. They also bridge the maturity mismatch between savers and investors and facilitate payments between economic parties by providing a payment, settlement and clearing system. Consequently, they engage in qualitative asset transformation activities. To ensure the sustainability of financial intermediation, safety and soundness regulation has to be put in place. Regulation also provides the basis for the intermediaries to enact in the production of their monetary services.

2.3 Empirical Studies

According to Hassan (2009), Credit risk arises from uncertainty in a given counterparty's ability to meet its obligations. The increasing variety in the types of counterparties (from individuals to sovereign governments) and the ever-expanding variety in the forms of obligations (from auto loans to complex derivatives transactions) has meant that credit risk management has jumped to the forefront of risk management activities carried out by firms in the financial services industry. Effective system that ensures repayment of loans by borrowers is critical in dealing with asymmetric information problems and in reducing the level of loan losses, thus the long-term success of any banking organization (IAIS, 2003). Effective CRM involves establishing an appropriate CR environment; operating under a sound credit granting process; maintaining an appropriate credit administration that involves monitoring process as well as adequate controls over CR (Greuning and Bratanovic, 2003). It requires top management to ensure that there are proper and clear guidelines in managing CR, i.e. all guidelines are properly communicated throughout the organization; and that everybody involved in CRM understand them.

Loans that constitute a large proportion of the assets in most banks' portfolios are relatively illiquid and exhibit the highest credit risk (Koch and MacDonald, 2000). The theory of asymmetric information argues that it may be impossible to distinguish good borrowers from bad borrowers (Auronen, 2003), which may result in adverse selection and moral hazard problems. The very existence of MFI's is often interpreted in terms of its superior ability to overcome three basic problems of information asymmetry, namely *ex ante*, *interim* and *ex post* (Uyemura and Deventer, 1993). The management of CR in banking industry follows the process of risk identification, measurement, assessment, monitoring and control. It involves identification of potential risk factors, estimate their consequences, monitor activities exposed to the identified risk factors and put in place control measures to prevent or reduce the undesirable effects. This process is applied within the strategic and operational framework of the bank.

The assessment of borrowers can be performed through the use of qualitative as well as quantitative techniques. One major challenge of using qualitative models is their subjective nature (Bryant, 1999). However, borrowers attributes assessed through qualitative models can be assigned numbers with the sum of the values compared to a threshold. This technique is termed as "credit scoring" (Heffernan, 1996). The technique cannot only minimize processing costs but also reduce subjective judgments and possible biases (Derban *et al.*,

2005). The rating systems if meaningful should signal changes in expected level of loan loss (Santomero, 1997). Chijoriga (1997) concluded that quantitative models make it possible to, among others, numerically establish which factors are important in explaining default risk, evaluate the relative degree of importance of the factors, improve the pricing of default risk, be more able to screen out bad loan applicants and be in a better position to calculate any reserve needed to meet expected future loan losses.

Tools like covenants, collateral, credit rationing, loan securitization and loan syndication have been used by banks in the developing world in controlling credit losses (Hugh, 2001). It has also been observed that high-quality CRM staffs are critical to ensure that the depth of knowledge and judgment needed is always available, thus successfully managing the CR in the commercial banks (Wyman, 1999). Jeremy and Stein (1999) observed that computers are useful in credit analysis, monitoring and control, as they make it easy to keep track on trend of credits within the portfolio. Marphatia and Tiwari (2004) argued that risk management is primarily about people how they think and how they interact with one another. Technology is just a tool; in the wrong hands it is useless. This stresses further the critical importance of qualified staff in managing CR.

2.4 The Case for Regulating MFI's

In general, although the regulation and supervision of MFI's is a relatively new field, much of the present literature is devoted to a few cases of MFI's in Latin America and Asia (Berenbach and Churchill, 1997; McGuire *et al.*, 1998). Admittedly, the growing interest in the supervision and regulation of MFI's has been fuelled by a number of factors, and Christen and Rosenburg (2000) identify, at least three of these factors. They argue that first, NGOs engaged in micro-finance activities would like to attain regulatory recognition in order to access public deposits and donor credit lines and, further, that MFI practitioner's view regulatory recognition as a reputation enhancing mechanism. Second, regulators and government agencies are concerned with the weak governance structures and business practices of some MFI's which, for example, charge surprisingly high interest rates (Christen and Rosenburg, 2000). The State and some donors as well, view these rates as exploitative and, hence, the need to establish a regulatory regime under which loans can be prudently provided to the poor. The third argument is that regulation of MFI's could serve as a means for the State to clamp down on troublesome foreign NGOs or other groups that it would like to control more tightly. Indeed, there are some countries where the regulation and supervision of certain NGOs (or MFI's) are not done on prudential grounds. For example, as McGuire *et*

al. (1998) observe, in Bangladesh and India, all NGOs that receive foreign donations are required to register with the NGO Affairs Bureau and the Ministry of Home Affairs, respectively. The discretion granted to these public bodies in authorizing the receipt of foreign donations creates delays, uncertainties and frustration for the NGOs (McGuire *et al.*, 1998).

2.4.1 The Bank for International Settlement (BIS) and the Basel Accords:

The Bank for International Settlements (BIS) is an international organization which fosters international monetary and financial cooperation and serves as a bank for central banks.

The BIS fulfils this mandate by acting as a forum to promote discussion and policy analysis among central banks and within the international financial community. It also acts as a centre for economic and monetary research, a prime counterparty for central banks in their financial transactions and an agent or trustee in connection with international financial operations

The BIS' main role is in setting capital adequacy requirements. From an international point of view, ensuring capital adequacy is the most important problem between central banks, as speculative lending based on inadequate underlying capital and widely varying liability rules causes economic crises as "bad money drives out good" (Achou & Tenguh, 2008 quoting Gresham's Law). The BIS sets "requirements on two categories of capital, Tier 1 capital and Total capital. Tier 1 capital is the book value of its stock plus retained earnings while tier 2 capital is loan loss reserves plus subordinated debt.

Total capital is the sum of Tier 1 and Tier 2. Tier 1 capital must be at least 4% of total risk-weighted assets. Total capital must be at least 8% of total risk-weighted assets. When a bank creates a deposit to fund a loan, its assets and liabilities increase equally, with no increase in equity. That causes its capital ratio to drop. Thus the capital requirement limits the total amount of credit that a bank may issue. It is important to note that the capital requirement applies to assets while the bank reserve requirement applies to liabilities." (Achou & Tenguh, 2008).

The Basel Accord(s) or Basle Accord(s) refers to the banking supervision accords (recommendations on banking laws and regulations). Globalization and the increased integration of the financial markets across countries prompted the regulators and supervisors of the banking systems, to form standardized, cross-jurisdictional banking regulations. The major event that led to the formation of the Basel Committee which resulted in the Basel

Accords I and II on banking supervision by the group of ten nations, was the liquidation of the German Harstatt Bank in 1974, under the auspices of Bank of International Settlement (BIS). The theoretical reason for holding capital is that it should provide protection against unexpected losses. Most central banks follow the Bank of International Settlements (BIS) guidelines in setting formulae for asset risk weights.

A good definition of Tier I capital is that it includes equity capital and disclosed reserves, where equity capital includes instruments that can't be redeemed at the option of the holder (meaning that the owner of the shares cannot decide on his own that he wants to withdraw the money he invested and so cannot leave the bank without the risk coverage). Reserves are, as they are held by the bank, by their nature not an amount of money on which anybody but the bank can have an influence on (www.wikipedia.org borrowed from www.bis.org).

Tier 1 capital is also seen as a metric of a bank's ability to sustain future losses.

Tier 2 capital is a measure of a bank's financial strength with regard to the second most reliable form of financial capital, from a regulator's point of view.

2.4.2 A Deeper Look into Basel II

The Accord requires banks to hold capital equivalent to 80% of Risk weighted value of Assets. Basel I was adopted by many countries, however, it had a number of flaws. For instance it was risk insensitive, it did not differentiate between credit risk and other types of risk, and it can easily be circumvented by regulatory arbitrage. The “capital economizing efforts” the banks were resulted in holding the lower quality assets on their balance sheet and off-loading their high quality (less risky) assets. (Chami, Khan, Sharma, 2003). On the other hand during the same period financial innovations in the form of derivatives and securitization played an important role in the decline of traditional banking. This had important implications for the future of banking industry and created new challenges for regulators. It was recognized that Basel I has outlived its usefulness for the complex financial innovations driven by new technologies. (Fakhar, 2005) To address these limitations, the Basel Committee on banking supervision (BCBS) formalized Basel II in June 1999, in consultative paper and put forward a three pillar approach to regulating banks. The purpose of the agreement is to improve on the earlier rules by making the risk measurement more accurate and comprehensive. Later on, two more consultation papers CP2 in January 2001 and CP3 in April 2003 were published after incorporating the comments and suggestions of

end users and supervisors. The final version of New Capital Adequacy framework (Basel II) was released in June 2004.

2.4.3 Important Features of Basel II:

The Basel II Capital Accord is not a treaty. It is based on consensus building approach to enhance the interaction between supervisors and the end users aiming to align bank's capital with their basic risk profiles. It also aims to give impetus to development of a sound risk management system. And in this way, it leads to more efficient, equitable and prudent allocation of financial resources.

The new capital framework is built on three naturally reinforcing pillars;

The First Pillar: Regulations – aligns the minimum capital requirements more closely with bank's actual underlying risk (Caruana, 2006). It develops the capital allocation methodology by covering three major components of risk that bank faces; credit risk; market risk and operational risk. As such the first pillar is similar to the existing Basel I capital adequacy requirement with the changes made in the calculation method for risk weighted averages.

These are two approaches to measuring credit risk – a Standardized Approach and Internal Rating Based Approach (IRB). The first approach is more likely to be used by the banks who are engaged in less complex form of credit operations and deals with less sophisticated financial transactions. This option is more suitable to small banks that cannot develop their own technical models to evaluate credit risk. External Rating Agency provides this evaluation using six risk weights set by the committee. On the other hand, under the IRB approach, the amount of capital that a bank will have to hold against a given exposure will be function of the estimated credit risk of that exposure.

Four parameters are used to predetermine the estimated credit risk. They are:

1. Probability of Default (PD)
2. Loss given default, (LGD)
3. Exposure at default (EAD) and
4. Maturity (M)

With the application of this approach, the banks would be able to absorb the unexpected credit loss at 99.90% confidence level statistically. Banks operating under the “Advanced” variant of the IRB approach will be responsible for providing all four of this parameter themselves based on their own internal models. Banks operating under “Foundation” variant of the IRB Approach will be responsible only for providing the PD parameter, with the other three parameters to be set externally by the Basel committee (Kashyap and Stein, 2004). The risks which are not captured in Pillar I are covered in Pillar II.

The Second Pillar: Supervision – addresses the need of “effective supervisory review” by allowing the supervisors to evaluate a bank’s assessment of its own risk and determine whether that assessment seems reasonable. (Caruana, 2006). Pillar II provides implicit incentives to the banks to develop their own internal models for risk evaluation. The role of supervisors in this complex Basel II regulatory framework is to verify that Banks hold enough capital to cover their actual risk profiles.

The Third Pillar: Market Discipline – ensures that effective market discipline provides an extra set of eyes besides the supervisor. The aim of this pillar is to enhance market discipline through greater disclosure by banks. The market also requires instruments (e.g., equity or subordinated debt.) which serve as a means of disseminating the market’s evaluation of financial institutions, and as a vehicle for rewarding well run entities. (Chami, Khan, Sharma, 2003). A special feature of new regulation is that retail credit and loans to SMEs will receive a different treatment than corporate loans and will require less regulatory capital for given default probabilities. (Jacobson, Linde’, Roszbach, 2004). It is designed in such a way as to provide options for banks and banking system worldwide.

Basel II addresses the issue emerging from the divergence between regulatory capital requirements and accurate economic capital calculations. Compared to Basel I, the Basel II is considered to be highly complex, more risk sensitive and comprehensive. Therefore, its effective implementation requires complete understanding by the supervisor and end users on the issues, challenges and impact on their respective countries. The New Capital Accord is not mandatory for the member countries of the BCBS. However, there was consensus among member countries to adopt Basel II standardized approach by the end of 2006 and advance approaches by 2007. Among Non Member countries, it was expected to be adopted in 2008 onwards.

2.5 Credit Risk Management in MFI’s

According to Nabil, (2000) if the MFI does not manage its risks well, it will likely fail to meet its social and financial objectives. When poorly managed risks begin to result in financial losses, donors, investors, lenders, borrowers and savers tend to lose confidence in the organization and funds begin to dry up. When funds dry up, an MFI is not able to meet its social objective of providing services to the poor and quickly goes out of business. Managing risk is a complex task for any financial organization, and increasingly important in a world where economic events and financial systems are linked (Carmichael & Pomerleano, 2002). Global financial institutions and banking regulators have emphasized risk management as an essential element of long-term success. (Chan & October (1997) observe that rather than focusing on current or historical financial performance, management and regulators now focus on an organization's ability to identify and manage future risks as the best predictor of long-term success. For the financial institutions, effective risk management has several benefits:

Early warning system for potential problems: A systematic process for evaluating and measuring risk identifies problems early on, before they become larger problems or drain management time and resources. Less time fixing problems means more time for production and growth. (Phillips, Susan. February 1996).

More efficient resource allocation (capital and cash): A good risk management framework allows management to quantitatively measure risk and fine-tune capital allocation and liquidity needs to match the on and off balance sheet risks faced by the institution, and to evaluate the impact of potential shocks to the financial system or institution. Effective treasury management becomes more important as MFI's seek to maximize earnings from their investment portfolios while minimizing the risk of loss (Chan & October, 1997).

Better information on potential consequences, both positive and negative. A proactive and forward-thinking organizational culture will help managers identify and assess new market opportunities, foster continuous improvement of existing operations, and more effectively align performance incentives with the organization's strategic goals.

According to Nabil (2000), the increased emphasis on risk management reflects a fundamental shift among bank managers and regulators to better anticipate risks, rather than just react to them. This approach emphasizes the importance of "self-supervision" and a proactive approach by board members and managing directors to manage their financial institutions. Historically, banks have waited for external reviews by regulators to point out

problems and risks, and then acted on those recommendations. In today's fast changing financial environment, regulators are often left analyzing the wreckage only after a bank has had a financial crisis.

For MFI's, better internal risk management yields similar benefits. As MFI's continue to grow and expand rapidly, serving more customers and attracting more main stream investment capital and funds, they need to strengthen their internal capacity to identify and anticipate potential risks to avoid unexpected losses and surprises (Carmichael & Pomerleano, 2002). Creating a risk management framework and culture within an MFI is the next step after mastering the fundamentals of individual risks, such as credit risk, liquidity risk (Christen & Rosenberg 2000). Further, more clarity about the roles and responsibilities of managers and board members in risk management helps build stronger institutions.

According to Simonson et al (1989), a sound credit policy would help improve prudential oversight of asset quality, establish a set of minimum standards, and to apply a common language and methodology (assessment risk, pricing, documentation, securities, authorization and ethics), for measurement and reporting of non-performing assets, loan classification and provisioning. The credit policy should set out the bank's lending philosophy and specific procedures and means of monitoring the lending activity.

2.6 Effective Approaches to Managing Credit Risk in MFI's

2.6.1 Screening of Borrowers

Considerations that form the basis for sound CRM system include: policy and strategies (guidelines) that clearly outline the scope and allocation of an MFI's credit facilities and the manner in which a credit portfolio is managed, i.e. how loans are originated, appraised, supervised and collected (Greuning and Bratanovic, 2003). Screening borrowers is an activity that has widely been recommended by, among others, Derban *et al.* (2005). The recommendation has been widely put to use in the banking sector in the form of credit assessment. According to the asymmetric information theory, a collection of reliable information from prospective borrowers becomes critical in accomplishing effective screening.

2.6.2 Credit Scoring

The assessment of borrowers can be performed through the use of qualitative as well as quantitative techniques. One major challenge of using qualitative models is their subjective

nature (Chijoriga, 1997). However, borrowers attributes assessed through qualitative models can be assigned numbers with the sum of the values compared to a threshold. This technique is termed as “credit scoring” (Heffernan, 1996). The technique cannot only minimize processing costs but also reduce subjective judgments and possible biases (Derban *et al.*, 2005). The rating systems if meaningful should signal changes in expected level of loan loss (Santomero, 1997). Chijoriga (1997) concluded that quantitative models make it possible to, among others, numerically establish which factors are important in explaining default risk, evaluate the relative degree of importance of the factors, improve the pricing of default risk, be more able to screen out bad loan applicants and be in a better position to calculate any reserve needed to meet expected future loan losses.

2.6.3 Monitoring of Borrowers

Clear established process for approving new credits and extending the existing credits has been observed to be very important while managing CR (Heffernan, 1996). Further, monitoring of borrowers is very important as current and potential exposures change with both the passage of time and the movements in the underlying variables (Mwisho, 2001), and also very important in dealing with moral hazard problem (Derban ,Binner and Mullineux, 2005). Monitoring involves, among others, creating a partnership with borrowers whereby a lender is seen to make frequent contacts with borrowers, creating an environment that the bank can be seen as a solver of problems and trusted adviser; develop the culture of being supportive to borrowers whenever they are recognized to be in difficulties and are striving to deal with the situation; monitoring the flow of borrower's business through the bank's account; regular review of the borrower's reports as well as an on-site visit; updating borrowers credit files and periodically reviewing the borrowers rating assigned at the time the credit was granted (Mwisho, 2001).

2.6.4 Credit Risk Environment

Effective CRM involves establishing an appropriate CR environment; operating under a sound credit granting process; maintaining an appropriate credit administration that involves monitoring process as well as adequate controls over CR (Greuning and Bratanovic, 2003). It requires top management to ensure that there are proper and clear guidelines in managing CR, i.e. all guidelines are properly communicated throughout the organization; and that everybody involved in CRM understand them. The importance of a “credit culture” in minimizing problems and increasing operational efficiencies cannot be overstated. MFI

senior managers need to set up systems that compel and offer incentives to loan officers to prevent, disclose, and respond to problem loans quickly, so as to limit potential credit-related losses.

2.6.5 Covenants

A clause in a loan agreement written to protect the lender's claim by keeping the borrower's financial position approximately the same as it was at the time the loan agreement was made, (Campbell,2004). According to Hugh, 2001, covenants have been used by banks in the developing world in controlling credit losses. It has also been observed that high-quality CRM staffs are critical to ensure that the depth of knowledge and judgment needed is always available, thus successfully managing the CR, (Wyman, 1999). Donaldson (1994) observed that computers are useful in credit analysis, monitoring and control, as they make it easy to keep track on trend of credits within the portfolio. Marphatia and Tiwari (2004) argued that risk management is primarily about people – how they think and how they interact with one another. Technology is just a tool; in the wrong hands it is useless. This stresses further the critical importance of qualified staff in managing Credit Risk.

2.6.6 Collateral

In lending agreements, collateral is a borrower's pledge of specific property to a lender, to secure repayment of a loan. The collateral serves as protection for a lender against a borrower's default - that is, any borrower failing to pay the principal and interest under the terms of a loan obligation. If a borrower does default on a loan (due to insolvency or other event), that borrower forfeits (gives up) the property pledged as collateral - and the lender then becomes the owner of the collateral (Sheffrin 2003).

2.6.7 Credit Rationing

This is a partial or complete limitation on borrowing, even when a borrower is willing to accept the terms of the lender. It is the process of making credit less easily available or subject to high interest rates. Banks provide risky loans to firms which have superior information regarding the quality of their projects. Due to asymmetric information the banks face the risk of adverse selection. Credit Value-at-Risk, CVaR regulation counters the problem of low quality, i.e. high risk, loans and therefore reduces the risk of the bank. (Stiglitz and Weiss, 1981).

2.6.8 Stepped Lending

A means of extending credit, usually in the form of small loans with no collateral, to nontraditional borrowers such as the poor in rural or undeveloped areas (Wyman, 1999). The process by which borrowers who repay loans on time are eligible for increasingly larger loans. Stepped lending keeps initial risk at a minimum while allowing micro entrepreneurs to grow their businesses and increase their incomes.

2.6.9 Loan Securitization

Securitization is a structured finance process that distributes risk by aggregating assets in a pool (often by selling assets to a special purpose utility) then issuing new securities backed by the assets and their cash flows. The securities are sold to investors who share the risk and reward from those assets, (Wyman, 1999). Securitization is designed to reduce the risk of bankruptcy and thereby obtain lower interest rates from potential lenders. A credit directive is also sometimes used to change the credit quality of the underlying portfolio so that it will be acceptable to the final investors, (IAS, 2003).

2.6.10 Allocation of Capital

Several risk-adjusted performance measures have been proposed (Heffernan, 1996; Kealhofer, 2003). The measures, however, focus on risk-return trade-off, i.e. measuring the risk inherent in each activity or product and charge it accordingly for the capital required to support it. This does not solve the issue of recovering loanable amount. Effective system that ensures repayment of loans by borrowers is critical in dealing with asymmetric information problems and in reducing the level of loan losses, thus the long-term success of any banking organization (Basel, 1999).

2.7 Importance of Risk Management to MFI's

Risk is the possibility of an adverse event occurring and its potential for negative implications to the MFI. Risk management is the process of managing the probability or the severity of the adverse event to an acceptable range or within limits set by the MFI (Almeyda, 1998).

As MFI's play an increasingly important role in local financial economies and compete for customers and resources, the rewards of good performance and costs of poor performance are rising. According to Furash (1994), those MFI's that manage risk effectively – creating the systematic approach that applies across product lines and activities and considers the aggregate impact or probability of risks – are less likely to be surprised by unexpected losses

(down-side risk) and more likely to build market credibility and capitalize on new opportunities (up-side risk).

The core of risk management is making educated decisions about how much risk to tolerate, how to mitigate those that cannot be tolerated, and how to manage the real risks that are part of the business (Chan and October 1997). For MFI's that evaluate their performance on both financial and social objectives, those decisions can be more challenging than for an institution driven solely by profit. According to Champion and Frankiewicz (1999), a risk management framework allows senior managers and directors to make conscious decisions about risk, to identify the most cost-effective approaches to manage those risks, and to cultivate an internal culture that rewards good risk management without discouraging risk-taking.

More sophisticated approaches to risk management are important to MFI's for several reasons. Many MFI's have grown rapidly, serving more customers and larger geographic areas, and offering a wider range of financial services and products. Their internal risk management systems are often a step or two behind the scale and scope of their activities. Second, to fuel their lending growth, MFI's increasingly rely on market-driven sources of funds, whether from outside investors or from local deposits and member savings. Preserving access to those funding sources will require maintaining good financial performance and avoiding unexpected losses. Third, the organizational structures and operating environments of MFI's can provide unique challenges. They may be very decentralized or too centralized (both can be a risk), tend to be labour and transaction intensive, have concentration risk in certain regions or sectors (e.g., agriculture) due to their mission, and often operate in volatile and less mature financial markets (Churchill 1997). Finally, MFI's are striving for financial viability through cost-effective and efficient operations, making effective risk management essential to achieving better capital and cash management without undue risk.

As MFI's begin to expand into new business lines, including insurance and voluntary savings products, and seek to raise money from traditional financial markets, it will become a necessity for them to behave as mainstream financial players, and manage risk as such. Regulators of commercially chartered MFI's enforce certain standards. Non-regulatory bodies representing investors and donors also have a vested interest in better risk management within the industry to protect their investments. The most successful MFI's are those that focus not only on their current performance and financial condition, but also on the

risk management systems that will allow them to prepare for expected and unexpected risks in the future (Greuning *et.al.*, 1998).

2.8 Obstacles to Risk Management

There are several reasons that microfinance institutions have not thoroughly integrated risk management into their culture and operations. The primary reason has been a lack of a framework and understanding of the need to do so. Successful microfinance institutions often become overconfident of their future based on their past successes. However, few microfinance institutions have been in existence for more than ten years. This short-time frame is inadequate to assess an MFI's long-term ability to survive and respond appropriately to changing risk environments over time, (Chijoriga, 1997).

Few MFI's employ a comprehensive approach to risk management, seldom integrating risk management strategies in all areas of operations and in the organizational culture. Since effective risk management begins at the top of the organizational chart, the board must play an active role in communicating the importance of risk management to the rest of the institution. Therefore, the real starting point for effective risk management is for the MFI to have an active and effective board of directors. Instead of encouraging all MFI's to enter new niches and explore new products, donors should focus their efforts on those institutions that have demonstrated effective risk management strategies in the provision of traditional microfinance services, (Wyman, 1999).

While regulators increasingly apply a risk management approach to regulation and supervision of financial institutions, few understand how risk management of MFI's is different from that of traditional financial institutions. In some cases, regulators will need to apply more conservative policies to microfinance institutions. For example, given the shorter-term nature of microfinance loans, more aggressive provisioning policies are usually necessary. In other cases, regulators should adjust their policies to better fit the realities of MFI's. In the risk weighting of assets, for example, regulators should factor in the effectiveness of collateral substitutes to mitigate credit risk based on the portfolio's overall performance, (Almeyda, 1998).

2.9 Chapter Conclusion

The reviewed literature found out that a regulatory framework that is not specific to the unique situation of the microfinance institutions may hinder the effectiveness of these

institutions to carry out their activities. The literature also confirms that there are a number of credit risk management practices and that regulation is shifting towards aligning banks capital with basic risk profiles. Risk Management is proving to be a precondition for successful financial liberalization and financial institutions are mainly faced with credit risk; loans are the largest and most obvious source of this type of risk.

As observed in the literature previous studies have dwelt more on risk management within commercial banks and not MFI's, and non have brought out the relationship between risk and profitability. There is therefore need to determine whether this relationship exists since as stated by Hulme and Mosley, 1996 entrepreneurs invest in order to make profits, a business venture is considered to be successful when profits pour in. This study therefore seeks to find out whether there is a relationship between credit risk management practices employed by the MFI's and profitability.

CHAPTER THREE

3.0 RESEARCH METHODOLOGY

3.1 Introduction

This chapter outlines the method used in the study and adopts the following structure: research design, population, population description, data collection methods, and data analysis and methods. The purpose of the study was to establish the relationship between Credit Risk Management practices and profitability of MFI's in Kenya.

3.2 Research Design

Different research designs can be conveniently categorized as; exploratory research design, descriptive research design and hypothesis-testing research design. An exploratory survey was employed in carrying out this study. Churchill (1991) wrote that exploratory studies are important in increasing the researcher's familiarity with the problem, in gathering information about practical problems, clarifying concepts, in formulating a problem for more precise investigation and establishing priority for further research. Exploratory research is characterized by its flexibility with respect to the way it is used to gain insight and develop hypothesis. The method was also used since it allows for the much needed flexibility required to obtain useful data for analysis and interpretation. A survey is most applicable in this research because as opposed to Financial performance figures which can be adopted from books of accounts, there are no published risk management practices. It was therefore prudent to survey all the MFI's to know which practices they have adopted.

3.3 Population

A census survey was conducted on all the Micro Finance Institutions operating in the country as at 30th June 2010 as per the Association of Micro-Finance institutions (AMFI). This is a member institution that was registered in 1999 under the Societies Act by the leading microfinance institutions in Kenya with a view to build capacity of the microfinance industry in Kenya. AMFI presently has 43 member institutions (Provided in appendix III) including four banks and two insurance companies. Three of the banks, the two insurance companies and one credit service was out of scope in this research since their accounts are consolidated and hence do not reflect the performance of the micro finance unit. The MFI's were analyzed separately to find out how they are affected by the credit risk management practices. The

study targeted individuals in these organizations charged with the responsibilities of implementing credit risk policies.

3.4 Data Collection

The study used both Primary and Secondary data. Primary data was collected using a structured questionnaire (Appendix II) served on respondents and by conducting interviews with the MFI managers. The first stage entailed completion of the Questionnaires administered to the 37 microfinance institutions. The Questionnaire used consisted of three sections. Section A had general information about the organization and the respondent. Section B examined the general awareness and perceptions of the interviewee on CRM practices while section C had more organization specific information on credit risk management practices employed.

Secondary data was obtained from the financial statements of the MFI's included in the sample.

3.5 Data Analysis and Presentation

The data was analyzed using Statistical Package for Social Sciences (SPSS) version 14 and content analysis to assist in summarizing the findings. This was applied to examine and compare the impact of the independent variables on the dependent variable. Data was analyzed using simple linear regression analysis. A credit risk practices index was prepared for each MFI on risk identification and risk approach adopted. The percentages obtained were then ranked into quartiles with the first quartile rated poor, second quartile average, third quartile good and the fourth quartile as the best. The ranking of each MFI based on credit risk management practices it adopts was then compared with its financial performance using the simple linear regression model. The data was then presented in form of graphs and pie charts to show the different quartile segments.

ROA was used to measure the profitability of the MFI's as it measures the return on the assets used by the MFI's to generate its profit.

Return on Assets (ROA) = Net Income / Total Assets. An indicator of how profitable a company is relative to its total assets. ROA gives an idea as to how efficient management is at using its assets to generate earnings.

It measures return earned by a company on its assets. The higher the ratio the more income is raised by a given level of assets. Return on assets is an indicator of how profitable a company is before leverage, and is compared with companies in the same industry. It is a common figure used for comparing performance of financial institutions, because the majority of their assets will have a carrying value close to their actual market value.

Net profit when used couldn't give a correct indication of the financial performance since there can be a higher profit made with a higher amount of capital invested and vice versa. Since MFI's are not listed in the stock exchange it is impossible to use market based measures like capitalization as there are no share prices. Accounting based measures will there be used to give a good performance measure.

The regression model to be used will be of the functional form;

$$Y = B_0 + B_1 * X_1$$

Where:

Y is the dependent variable - MFI's Profitability

B₀ is the constant

B₁ is the regression coefficient

Profitability is the dependent variable as measured by ROA.

X₁ will represent the credit risk management practices as measured by; Capital allocation, Credit risk environment, Screening of borrowers, Credit scoring, Monitoring of borrowers, setting covenants and collaterals, Credit rationing, Stepped lending and Loan Securitization.

A regression model with variables from all MFI's will be run. Tests of significance will then be done to determine whether the effect of credit risk management practices on performance is significant.

CHAPTER FOUR

4.0 DATA ANALYSIS, FINDINGS AND DISCUSSIONS

4.1 Introduction

The research objective was to establish the relationship between credit risk management practices and profitability of MFI's in Kenya. This chapter presents the analysis and findings with regard to the objective and discussion of the same. The findings are presented in percentages and frequency distributions, mean and standard deviations.

4.2 Characteristics of the Respondents

A total of 37 questionnaires were issued out. The completed questionnaires were edited for completeness and consistency. Of the 37 questionnaires issued, 24 were returned. This represented a response rate of 64.9%.

4.3 Level of Awareness on Credit Risk Management

4.3.1 Knowledge of Credit Risk Management

	Frequency	Percent (%)	Cumulative Percent (%)
Yes	24	100	100
No	0	0	
Total	24	100	100

Table 1 – Knowledge of Credit Risk Management

The analysis in table 4.1 shows that all (100%) of the respondents have heard about credit risk management before and therefore they may have put place measures to combat credit risk.

4.3.2 Participation in Credit Risk Management Study

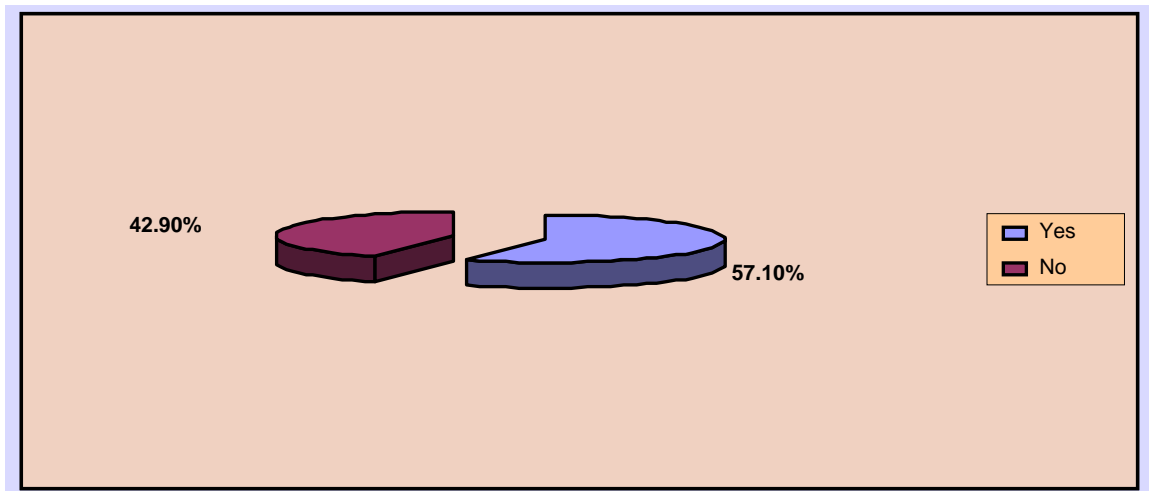


Figure 1 - Participation in Credit Risk Management Study

The findings above regarding respondents' participation in credit risk management practices study indicates that 57.1% of the respondents have participated while 42.9% have not participated. Although majority of the respondents have participated in CRM study, the proportion of those who have not participated is high thus they may not know exactly how the MFI's uses the practices to protect themselves.

4.3.3 Credit Risk Management Description

	Frequency	Percent (%)	Cumulative Percent (%)
CRM equals efficient resource allocation	7	29.2	29.2
CRM is about allocating identified risks to the party best suited to manage them	8	33.3	62.5
CRM is about allocating risks to the contractor	2	8.3	70.8
CRM is about defining responsibility for risks in contract document	5	20.9	91.7
CRM is about obtaining insurance for identified risk	2	8.3	100.0
Total	24	100	

Table 2 - Credit Risk Management Description

The description of CRM according to the respondents varied, 33.3% of the respondents said that CRM is about allocating identified risks to the party best suited to manage them, 29.2% said it equals efficient resource allocation, 20.8% said it's about defining responsibility for risks in contract document while 8.3% said it's about allocating risks to the contractor and the other 8.3% said it's about obtaining insurance for identified risk. The description of CRM by the respondents' variation could be attributed to the understanding of CRM.

4.3.4 Credit Risk Management Level of Importance

The respondents were to give their opinion on the level of importance MFI's attaches to CRM. The range was 'not at all' (1) to 'very important' (4). The scores of not important at all and not very important have been taken to present a variable which had mean score less than 2. The score of very important and important have been taken to represent a variable which had a mean score of above 2.

	Mean	Std. Deviation
Risk identification	3.4643	.7445
Analysis of identified risks	3.1786	.7228
Formulation of risk response measures	3.4286	.6341

Table 3- CRM Level of Importance

The findings above show that all the factors had a mean ranking of above 2. A standard deviation of >0.7 implies a significant difference on the impact of the variable among respondents. These factors describe instances where the level of importance is very important and their importance rating (mean 3.4643 for risk identification, 3.4286 for formulation of risk response measures and 3.1786 for analysis of identified risks) indicate the factors are very important. However there was a high degree of variation among respondents, an indication that some factors are not very important. This is indicated by standard deviation of 0.7445, 0.6341 and 0.7228 for risk identification, formulation of risk response measures and for analysis of identified risks.

4.4 Organizational Profile on Credit Risk Management

4.4.1 Credit Risk Management Approach Adopted by Organizations

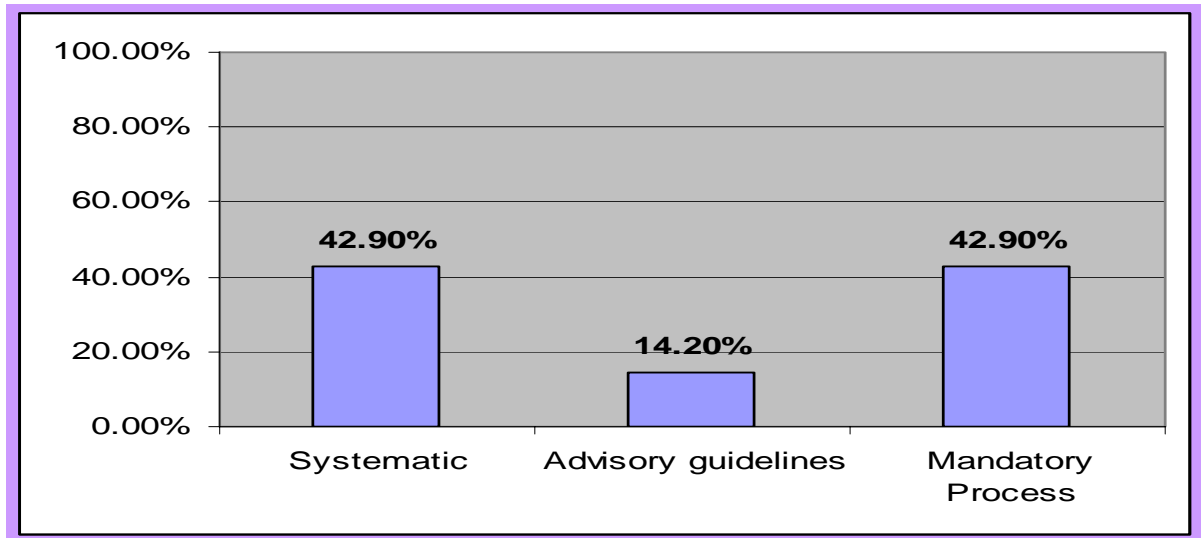


Figure 2 - CRM Approach Adopted by Organizations

The analysis above shows that 42.9% of the respondents said their organization adopted a systematic approach to CRM, 42.9% also said their organization adopted a mandatory process while 14.2% said they adopted advisory guidelines. The adoption of CRM by an organization depends on the clients the MFI's deals with and their potentiality to default thus the approach used by the MFI's differs.

4.4.2 Risk Identification during Lending Process

	Frequency	Percent (%)	Cumulative Percent (%)
All departments	2	8.3	8.3
By a group of persons from risk dept.	13	54.2	62.5
One or two persons within the organization	3	12.5	75.0
Bank officials with consultants	4	16.6	91.6
Brainstorming	1	4.2	95.8
Engaging consultants	1	4.2	100
Total	24	100	

Table 4 – Risk Identification during Lending Process

The findings on risk identification during lending process shows that majority of the respondents 54.2% said that risk is identified by a group of persons from the risk department, 16.6% said its identified by bank officials with consultants, 12.5% said its identified by one or two persons within the organization, 8.3% said its all departments which identifies the risk while 4.2% said its during brainstorming session and the other 4.2% said its through consultants engagement. Risk identification should be dealt with during the entire duration so that risk can be detected at any stage and not a specific date.

4.4.3 Factors Preventing Application of Credit Risk Management in Lending

	Frequency	Percent (%)	Cumulative Percent (%)
Difficulty in seeing benefits	1	4.2	4.2
Human/organization resistance	4	16.6	20.8
Lack of accepted industry model for analysis	9	37.5	58.3
Lack of dedicated resources	3	12.5	70.8
Lack of time	5	20.8	91.6
Lack of familiarity with techniques	2	8.4	100
Total	24	100	

Table 5- Factors Preventing Application of Credit Risk Management in Lending

The findings indicates that CRM cannot be applied in lending due to several factors and it was found out that 37.5% of the respondents said CRM lack accepted industry model for analysis, 20.8% CRM lack of time, 16.6% of the respondents said there is some human/organization resistance, 12.5% said its due to lack of dedicated resources and the other 8.4% of the respondents said it lacked familiarity with techniques while 4.2% of the respondents said CRM is not used due to difficulty in seeing benefits. The adoption of CRM is clearly not free of cost and therefore these factors pose a challenge to organizations as they try to adopt CRM practices in their organizations.

4.5 Quartiles

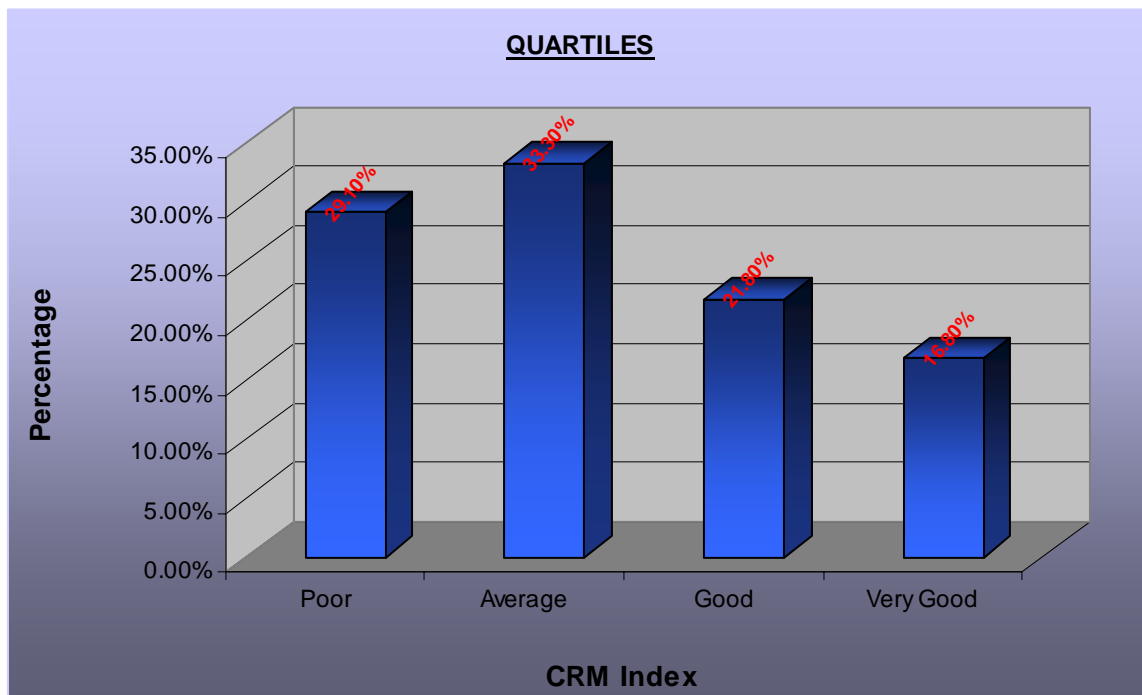


Figure 3 - Quartiles

The findings indicates that 29.1% of the MFI's had poor CRM index, 33.3% had average CRM index, 20.8% had its CRM practice index rated good while 16.8% of the MFI's had their CRM index rated very good. The analysis shows that majority of the MFI's are rated average in terms of the number of CRM practices that they adopt. They therefore have room to incorporate more in order to guard themselves against credit risk and its multiplier effects.

4.6 Regression equation

From table 4.5 below, the established linear regression equation becomes:

$$Y = 0.704 + 1.256 X_1$$

Where:

Constant = 0.704 shows that if at any given time credit risk management practices was non existent, then the level of the firms performance will be 0.704.

$X_1 = 1.256$. This shows that one unit change in the credit risk management practices increase the ROA performance of the company by 1.256.

	Un-standardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.704	.329		1.857	.074
Credit Risk Management Practices	1.256	.367		3.142	.004

Table 6 - Coefficients of regression equation

3. Dependent Variable: Firms' performance as measured by ROA

Since there is one variable that can vary independently, the degree of freedom taken is 1. At 95% confidence level, the critical t is 2.132. The t - statistic of the credit risk management practice variables is greater than 2.132 and hence this coefficient is significant. This further means that there is a significant relationship between the performance of the firm and the CRM practices of the firm.

4.7 Strength of the Model

The squared multiple R value of .72 in table 4.6 below indicates that the independent variable X1 explains 72 % of the total variation in the dependent variable (firms' performance). This means that 28% of the changes in the dependent variable are explained by other factors outside the independent variable.

R	R ²	Adjusted R ²	Std. Error of the Estimate	R Square Change	F Change	Sig. F Change
.849	.72	.771	.4543	.72	27.053	.000

Table 7 - Summary of the Model

Predictors: (Constant), Firms' credit risk management practices

Dependent Variable: Firms performance as measured by ROA

The F value of 27.053 from the model is higher than the critical value at 1% significance level of 4.51 and 2.92 at 5% significance level. This implies that with a null hypothesis that the dependent variable is not influenced by the independent variables; the null hypothesis can

be rejected. With the rejection of the null hypothesis, it means that the accuracy of the model is high.

CHAPTER FIVE

5.0 SUMMARY, CONCLUSIONS, POLICY RECOMMENDATIONS, LIMITATIONS OF THE STUDY AND SUGGESTIONS FOR FURTHER STUDY

5.1 Summary

The study showed that all the MFI's have heard of credit risk management practices which they considered extremely important since it gives assurance about the reliability of the operations and procedures being followed. Majority of the respondents have participated in the study of CRM and therefore they understand the benefits of having such measures in place. Description of CRM depends on the MFI's understanding based on the usage of the practice in their organization as some MFI's describe it as being equal to efficient resource allocation, as being about allocating identified risks to the party best suited to manage them, as being about allocating risks to the contractor, as being about defining responsibility for risks in contract document and being about obtaining insurance for identified risk.

The level of importance MFI's attaches to CRM differs with organizations but all of them agrees that CRM assists in risk identification, analysis of identified risks and formulation of risk response measures. The findings indicate that MFI's adopts different CRM approaches which include systematic, mandatory process and advisory guidelines. This approach emphasizes the importance of self-supervision and a proactive approach by board members and managing directors to manage their financial institutions.

It was apparent that identification of risk occurs at different stages of lending and by different members and therefore screening of the whole transaction should be a continuous process so that in case the risk could not be detected by one individual it is then detected by the others. The adoption of CRM practices by the MFI's is hindered by several factors which includes human/organization resistance, lack of accepted industry model for analysis, lack of dedicated resources, lack of time and lack of familiarity with techniques thus managing risk is a complex task for any financial organization, and increasingly important in a world where economic events and financial systems are linked. In fact the adoption of CRM is expensive in both resources and in institutional disruption. The findings confirmed that there is a relationship between credit risk management practices and profitability since the t- statistic of

the credit risk management practice variables is greater than 2.132 and hence this coefficient is significant. The finding also indicates that there are some other factors which affects the performance of the MFI's which are outside the credit risk management practices.

5.2 Conclusion

From the research findings and the answers to the research questions, some conclusions can be, made about the study.

Credit risk management is one of the most important practices to be used especially by MFI's, for getting assurance about the reliability of the operations and procedures being followed and therefore the level of understanding of CRM in the MFI's is high and thus they understand the benefits of the practice. There is need however to ensure that all the MFI employees are included in the study of the CRM so that all employees are aware of the practice which their organization uses and incase of labor turnover the MFI does not suffer losses to due lack of knowledge management. The use CRM practice enables an organization to identify the risk, analyze and formulate response strategies thus the level of importance the MFI's attaches CRM in their organizations is very high as these will reduce the losses which they could have suffered if they had not adopted the practices.

The adoption of CRM approach depended with the MFI, however the identification of the approach either being systematic, mandatory or advisory guidelines shows that the MFI's follows the approach which matches the risks which they are exposed to when carrying out their activities. Risk identification should not be a one off thing as some risks could be hard to detect or overlooked by those tasked to identify them and therefore it should be a continuous process which is carried out at different places and by different individuals. The application of CRM in the MFI's has various challenges which need the organization to ensure that they tackle so that the application of CRM practice in their organization becomes successful. The MFI's should put in place mechanism which will ensure that they adopt one if not all credit risk management practices since they have an effect on the performance of the MFI's and also they should investigate the other factors to establish which ones are they so that they can mitigate themselves against losses occurring from the factors which the findings indicated that they are outside the CRM.

5.3 Recommendations

The following recommendations are given to both the policy makers and researchers;

These study findings indicate that the adoption of credit risk management practices by MFI's requires long term commitment which is expensive and requires use of resources. Microfinance institutions will need support in areas such as accounting and control systems, financial management, product development and human resource development.

It is important to strengthen dialogue between the regulatory body and practitioners to enhance the understanding of the regulatory framework. It does not make sense to give an institution, two set of licenses, one for commercial banking and another for microfinance. This is an issue that could complicate the role of the regulator as it could lead to regulatory arbitrage by the commercial banks. The law should be amended to explicitly disallow banks from setting up subsidiary companies to carry out microfinance business. The banks should be encouraged to carry out microfinance business as a segment of the operations of the commercial banks to prevent malpractices like regulatory arbitrage. There are also few opportunities to learn about current microfinance operations and innovations in Kenya leading to a shortage of trained personnel.

On the factors preventing application of CRM in lending from the questionnaire, responses were inclined more on the lack of accepted industry models for analysis, human resistance, lack of familiarity with techniques and lack of time. The lack of qualified personnel and training resources will have a continuing negative effect on the ability of the microfinance institutions to extend and improve their' operations in an efficient and effective manner in the years to come. This study therefore, recommends development of a microfinance training curriculum that could assist in preparing qualified personnel for work in microfinance institutions. This curriculum should encompass the foundations of microfinance as well as awareness of current innovations and "Best Practice" thinking.

Across the country, microfinance institutions serve the lower segment of the citizenry whose plight warrants an intervention strategy from the policy perspectives of the government. Effective regulation and supervision of microfinance institutions safeguard the stability of the sector and protect the savings deposits of the depositors. Microfinance supervision ensures that the sector may not negatively affect the integrity of the Financial Sector and hence contributing to safeguarding of the whole economy. Supervision in Kenya will include determining risks faced by MFI's and also ensuring regulatory compliance by MFI's. Although the assets of MFI's may be low by comparison to that of commercial banks, microfinance institutions have the capacity to serve larger numbers of small depositors and as

such should be regulated and supervised. The supervision of MFI's is being handled by a division within the bank supervision department. However, this study recommends that the regulatory authority should supervise microfinance institutions through a specialised unit trained in their nature, risks and methodologies.

5.4 Limitations of the study

Micro Finance Institutions by their very nature are not quoted in the stock exchange. It was therefore difficult accessing secondary data for computation of ROA since the information is not in the public domain and is considered confidential.

Financial statements of only one year have been factored in the study for computation of ROA. This was the period when the country's economy was growing between 1.6 per cent in 2008 to 2.6 per cent in 2009. Other factors that could have an effect on ROA include; legal, environmental, social, technological, and political. The outcome could therefore be different if financial information for other periods were used.

5.5 Suggestions for further Research

Further research on the possible impact of the commercial banks in microfinance should be undertaken. With the setting up of microfinance subsidiaries by the traditional commercial banks, research could be conducted on the impact this development is likely to have on the MF sector.

This research also recommends that research be undertaken to find out whether subjecting the microfinance institutions to the regulatory oversight of the Central Bank will hinder the innovativeness of this sector.

A similar research to be undertaken after two years' time to find out whether MFI's will have adopted the more sophisticated CRM practices like stepped lending and credit rationing which were not identified by most of them in the questionnaire. There will also be need to know what percentage change in Return on Assets is explained by CRM practices.

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APPENDIX I

LETTER OF INTRODUCTION

RE: INTRODUCTION OF MR ROBERT BUTTIT WHO IS MY STUDENT

Kindly assist the above named student with information regarding his study. He is pursuing a Masters Degree at the University of Nairobi and this research is a requirement towards partial fulfillment of the course.

To facilitate the completion of the study we kindly request you to take about 15 minutes to complete the attached questionnaire. It asks questions about the institutions credit risk management practices. Based on your experience and knowledge, please indicate the most appropriate response.

Confidentiality

Please note that the study will be conducted for academic purposes only and the information provided will be treated in strict confidence. Strict ethical principles will be observed to ensure confidentiality. The responses you provide in this questionnaire are completely confidential. The study outcomes and report will not include reference to any individuals or organizations.

In order to ensure a comprehensive analysis of the findings, it is important that each questionnaire be completed and returned. We also request that the questionnaire be completed by a senior level management member of staff in your organization. As a sign of our appreciation for your participation, a generic overview of the findings will be made available to you at your request.

In case of any questions, please do not hesitate to contact the undersigned or Mr. Robert Buttitt telephone number 0722280739 or 020-3267235 or email at kbuttitt@yahoo.co.uk .

I appreciate your invaluable contribution.

Yours Sincerely,

MOHAMED N. MWACHITI

DEPARTMENT OF FINANCE & ACCOUNTING

APPENDIX II

QUESTIONNAIRE

A. General information

Name of the Organization (Optional): _____

Your functional position: _____

Total work experience: _____

Length of time with the company: _____

Contact information: _____

Others, please specify: _____

B. Level of awareness on CRM

1. Have you ever heard of the term “Credit Risk Management (CRM)”? (Please tick)

Yes No

2. Have you ever participated in a CRM Study? (Please tick)

Yes No

3. In your opinion which of the following statements **best describe** CRM (Please tick all that apply)

- CRM equals efficient resource allocation
- CRM is about allocating identified risks to the party best suited to manage them
- CRM is about allocating risks to the contractor
- CRM is about defining responsibility for risks in
- A contract document
- CRM is about obtaining insurance for identified
- Risk
- Other (Please state)

4. On a scale of 1-4 where **4 is 'very important', 3 is 'important' 2 is 'not very important' and 1 'not important at all'**, indicate the level of importance you feel your institution attaches to the following aspects of CRM. (Indicate score for each)

	1	2	3	4
Risk identification	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Analysis of identified risks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Formulation of risk response measures	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

C. More information on Respective MFI's

5. How would you describe the CRM approach adopted by your institution? {Select the most appropriate response(s)}

Systematic	<input type="checkbox"/>	Mandatory Process	<input type="checkbox"/>
Advisory guide-lines	<input type="checkbox"/>	No Formal Process	<input type="checkbox"/>

6. In which of the following ways are risks identified during lending process at your institution? {Select the most appropriate response(s)}

All departments in their joint meetings	
By a group of persons from the risk department	
One or two persons within the organization	
Bank officials together with consultants	
Brainstorming	
Engaging Consultants	
Other (Please state).....	

7. Which of the following Risk Management practices is employed by your organization (Please tick all that apply)

Screening of borrowers	
Credit scoring	
Monitoring & Control of borrowers	
Setting up lending covenants	
Credit Rationing	
Allocation of capital to different economy sectors	
Stepped Lending	
Loan Securitization	
Collateralization	
Other (Please state).....	

8. The following statements describe the main factors preventing application of CRM in lending {Select the most appropriate response(s)}

Difficulty in seeing the benefits	
Human/ organization resistance	
Lack of accepted industry model for analysis	
Lack of dedicated resources	
Lack of time	
Lack of familiarity with techniques	
Other (Please state).....	

APPENDIX III

LIST OF MICRO FINANCE INSTITUTIONS (AMFI KENYA – ADOPTED)

1. AAR Credit Services

Nairobi
P.O Box 41766 GPO
TEL: 2715319

2. Adok Timo

Kisumu City
Sifa House, Ground Floor, Mission Road
Off Kakamega Road

Tel: 057 2025570
P.O. Box 3650-40100

3. Agakhan Foundation

Mpaka plaza, Westlands 3rd floor
P.O Box 13149-00100, Nairobi
Tel: 4451349/6/8
Fax: 4451349

4. Barclays Bank of Kenya Ltd

Microfinance Department
Market Branch 3rd Floor
P.O Box 30120-00100
Nairobi, Kenya

5. Biashara Factors Limited

Plot No. 47, Rhapta Road,

Westlands

6. BIMAS

BIMAS Complex
P.O BOX 2299 Embu
TEL: 068-31645
Fax: 068-31573

7. Blue Limited

Chester House, Koinange Street,

Nairobi

8. Canyon Rural Credit Limited

Studio House, 3rd Floor
P.O Box 46532 - 00100, Nairobi
Tel: 2711475, 2043407, 2725024

9. Chartis Insurance

Chartis House, Eden Square Complex,

P.O Box 49460 - 00100,
Nairobi.
Tel: 020-3676901/0720854979
Fax: 020-3676001

10. CIC Insurance

Nairobi
CIC Plaza, Mara Road
P.O Box 59485-00200,
Nairobi
Tel:2823000
Fax: 2823333

11. Co-operative Bank

Co-operative Bank House
P.O BOX 48231-00100, Nairobi

Tel: 3276210

Fax: 249480

12. Elite Microfinance

Mombasa

P.O Box 2111 Mombasa

TeL: 041-5486771

Fax: 5486767

13. Equity Bank

NHIF Building Upper Hill

P.O Box 75104-00200 Nairobi

Tel: 27366620/17

14. Faulu Kenya DTM Limited

Ngong Lane, Off Ngong Road

P.O Box 60240 - 00200 Nairobi

Tel: 3877290/3872184/4

Fax: 3867504/3874857

15. Fusion Capital Ltd

View Park Towers 10th Floor

Tel: 247538/218223

Fax: 219738

16. Greenland Fedha Limited

KTDA Farmers building

Nairobi

17. Jamii Bora

Industrial Area

P.O Box 2704-00202 Nairobi

Tel: 2034514/3/2/2034543

18. Jitegemee Credit Scheme

KCB Plaza Jogoo Road
P.O Box 46514, Nairobi
Tel: 535866/552169

19. Jitegemee Trust

Lenana Road Roshan Maer Place
P.O Box 21768-00505 Nairobi
Tel: 3874693/3872998
Fax: 561120

20. Juhudi Kilimo Company Limited

P.O Box 10528 - 00100, Nairobi Kenya
Tel: 020 3906000
K-Rep Centre, Wood Avenue

21. K-rep Bank Ltd

Opposite Precious Blood Girls Sec School.
P.O Box 25363-00603 Nairobi
Tel : 3871511
Fax : 3873178

22. K-rep Development Agency

Next to Kileleshwa Police station
P.O Box 39312 Nairobi
Tel: 4343495/4343493

23. KADET

Capital Hill Towers
P.O Box 1676-00200 Nairobi
Tel: 2731954/87
Fax: 2731955

24. Kenya Eclof

Rhapta Road, Plot No.47 next to Liza Apartments

P.O Box 34889 Nairobi

Tel: 254-020-4453947, 4453948

Cell: 0721344699

Fax: 254-020-4454006

25. Kenya Entrepreneur Empowerment Foundation (KEEF)

Mapa House, 3rd Floor, Kiambu road

P.O Box 648, Kiambu

Tel: 020 3535617

Tel: 020 2046423

Tel: 061 214611

26. Kenya Post Office Savings Bank

Post Bank House Banda Street

P.O Box 30311-00100

Nairobi

Tel: 229551-6

Fax: 229186

27. Kenya Women Finance Trust

Muchai Drive Off Ngong Road

P.O Box 55919 Nairobi

Tel 2712903/2712823

Fax 2723303

28. MIC Microcredit limited

1st Floor, Ojijo Plaza

Ojijo Road - Parklands

P.O Box 7650-00100, Nairobi Kenya

29. Micro Africa

Off Lenana Road
P.O Box 52926 Nairobi
Tel: 2727373
Fax: 2721745

30. Molyn Credit Limited

Bruce House, 9th Floor, Standard Street
P.O Box 10144 - 00100, Nairobi, Kenya
Tel: 020 - 310726

31. OIKO CREDIT

Methodist Ministries centre, Oloitoktok Rd.
2nd Floor
P. O. Box 30328-00100
Nairobi, Kenya

32. Opportunity International

Oginga Odinga Street
P.O BOX 6711-40103 Kisumu
Tel: 057-2021211/2034849
Fax: 057-21680

33. Pamoja Women Development Programme

Telephones +254 66 202 2205
Fax +254 66 224 55

34. Renewable Energy Technology Assistance Programme (RETAP)

Westlands, Waumini House
Eastern Wing, 1st Floor,
P.O Box 28201 - 00200, Nairobi Kenya
Tel: 020 3002344 / 2033867 / 4454306

35. Rupia Limited

View Park Towers, 10th Floor
P.O Box 2987 - 00200, Nairobi
Tel: 020 - 2251389 / 2229178

36. Select Management Services Limited

James Ouma / Wayne Faulds

37. SISDO

Ngong Lane, off Ngong Road
P.O Box 76622-00508 Nairobi
Tel : 3870280
Fax: 3871531

38. SMEP

Kirichwa Road Off Argwings Kodhek Road
P.O Box 64063 Nairobi
Tel: 3870162/3861927
Fax: 3870191

39. Swiss Contact

Nairobi
Westlands, Vanguard House, 6th Floor,
P.O Box 47996,00100,
Nairobi.
Tel: 4445284
Fax: 4445315

40. Taifa Option Microfinance

P.O Box 727 - Ruiru Kenya
Tel: 067-5855169
Fax: 067-5854016
Cell: 0725-315978 / 0724-705854

41. U & I Microfinance Limited

Arrow House, Koinange street, Nairobi

P.O Box 15825 - 00100

Tel: 020 - 2367388 / 0713 112791

42. WEEC

Kiserian Off Magadi Road.

P.O Box 486 Kiserian

Tel: 045-25226

43. Yehu Enterprises Support Services

Kwale District

P.O Box 82120 Nairobi

Tel: 041-224406