

**THE EFFECT OF LENDING TECHNOLOGIES ON THE  
FINANCIAL PERFORMANCE OF MICROFINANCE  
INSTITUTIONS IN NAIROBI COUNTY.**

**BY**

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## DECLARATION

This research project is my original work and has not been presented for presentation in any other university.

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This research project has been submitted for examination with my approval as the university supervisor.

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## **ACKNOWLEDGEMENT**

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## **DEDICATION**

This project is dedicated to my husband Tony Saina and my family who have unwaveringly supported me during the time I developed this paper. I love you all and my God's blessings be showered upon you all.

## **ABSTRACT**

Microfinance has been regarded as one of the most promising means to alleviate poverty around the world. As the Kenyan economy grows, the need of credit for individuals and small business expansion grows like wise. Microfinance Institutions have been lending to very few individuals and small medium enterprises while side lining the rest due to perceived risks in small business financing. The objective of the study was to determine the effect of Lending technologies on financial performance of Microfinance Institution in Nairobi.

The study adopted the Descriptive Design and applied both multiple regression models on both primary and secondary data to determine the effect of lending technologies on performance of Microfinance Institution in Nairobi. The Asset based lending, Financial statement lending, Small business rating system and Relationship lending were used as independent variables. Financial performance was used as dependent variable. The population of this study comprised of 30 Microfinance Institutions in Nairobi and data was analyzed using SPSS.

According to the regression equation established, taking all variables constant at zero, ratio of financial performance will be 0.063%. At 5% level of significance and 95% level of confidence, the researcher established that the collinearity statistics of asset based lending had a tolerance factor of 0.525, financial statement lending had tolerance factor of 0.484, small business rating system tolerance factor is 0.963 while growth in loan had a tolerance factor of 0.832 indicating that these variables affect the financial performance of Microfinance institutions in Nairobi.

Further study indicated that the study variables jointly influenced the financial performance with an adjusted R<sup>2</sup> of 0.207. This means that 20.7% of variation in the dependent variable in the regression model is due to independent variables while 61.3% are due to standard error of estimate. The F- Statistics of 0.141 was also significant. The model was therefore considered robust or fitted well to the actual data of the variables. There is need for the Government to initiates measures that will control the choice of lending technologies in Kenya. The study further recommends that there is need for the microfinance institutions to initiate policies that will control the type lending technology which is appropriate for them to operate efficiently.

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## **ABBREVIATIONS**

**AFMI:** Association of microfinance institutions

**GoK:** Government of Kenya

**MFIs:** Microfinance Institutions

**NGOs:** Non-governmental Organizations

**SMEs:** Small and Medium size enterprises

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## **CHAPTER ONE**

### **INTRODUCTION**

#### **1.1 Background of the Study**

Microfinance is the provision of financial services to the poor who do not have access to capital and financial services. Financial services include one or any combination of the following: lending, savings, insurance, pension/retirement and payment services. Microfinance institutions (MFIs) provide financial services to low-income clients who are not served by mainstream financial service providers (Mersland and Strom, 2009). Only a very small fraction of the world population have access to financial instruments, essentially because commercial banks perceive poor people as un-bankable due to their lack of collaterals. Many state programmes tried to alleviate poverty by providing the poorest of their societies with subsidized loans, yet these programmes were characterized by low efficiency, corruption and abysmal repayment rate (Agion and Morduch, 2003).

Microfinance institutions (MFIs) has rendered this (poverty alleviation) possible by developing innovative techniques, mechanisms and instruments unknown to commercial banks such as group lending, dynamic incentives, regular repayment schedules and other collateral substitutes (Khawari, 2004). The microfinance industry in Kenya has expanded greatly although the supply.

##### **1.1.1 Lending Technologies**

Banks lend to small businesses by means of a variety of technologies. Berger and Udell (2006) define a lending technology as a unique combination of primary

information source, screening and underwriting procedures, loan contract structure and monitoring strategies. As different banks use different lending technologies for any borrowing enterprise choosing the bank amounts to selecting the lending technology it will be facing.

Among the various lending technologies used to finance microfinance institutions, the literature has thus far focused on two classes: transaction-based lending technologies and relationship lending technologies. These two classes can be primarily distinguished by means of the type of information a bank uses in granting and monitoring the loan. Transaction-based lending technologies are typically based on hard quantitative information such as those derived from the borrowers' balance sheets or the collateral guarantees they offer, while instead relationship lending assigns a key role to soft information.

According to Berger and Udell (2002), small business lending by financial intermediaries can be categorized into at least eight main distinct lending technologies financial statement lending, asset based lending, small business credit scoring, factoring, fixed asset lending , leasing, trade credit and relationship lending. These technologies are deployed to address the types of problems that can lead to either credit rationing or 'over lending'. The first seven lending technologies are often referred to as transactional based lending under which lending decisions are based on hard information that is relatively easily available at the time of loan origination and does not rely on soft data gathered over the course of a relationship with the borrower.

The academic literature views the transaction lending technology as more desirable for relatively informational transparent firms, while judging the relationship lending technology to be more appropriate for comparatively opaque firms. Although this

classification is quite useful and interesting from a theoretical point of view, its validity has been questioned on empirical grounds. In fact, recent works criticized this point of view. Berger and Udell (2006) underline that many banks lend to opaque SMEs by means of transaction-based lending technologies, thereby dealing with information asymmetries by means of hard information. Indeed, where no detailed and trustworthy financial accounts are available, the large banks may often use other hard type information to assess the probability that the enterprise will repay the loans it is granted. This approach was tested by Uchida et al. (2006), investigating the choice of the lending technologies on data for Japan. They found complementarities among technologies.

According to the authors, this result suggests that the same bank, even though possibly preferring one of the various lending technologies, might be using also (some of) the other technologies at the same time. As with any global industry, microfinance needs accepted standards by which MFIs can be measured. Common standards allow for microfinance managers and board members to assess more accurately how their institution is performing. Institutions that apply industry standards are more transparent—it makes it harder to hide or obscure bad performance and easier to benchmark good performance. For MFIs, industry-wide standards can make reporting to donors, lenders, and investors easier to do if the recipients of the reports are also in agreement with the standards. Common standards provide the language that enables MFIs to communicate with other participants in the industry, whether they are down the street or across the ocean

### **1.1.2 Financial Performance**

According to Stoner (2003), financial performance in financial institutions refers to the ability to operate efficiently, profitability, survive grow and react to the environmental opportunities and threats. In agreement with this, Sollenberg & Anderson (1995) asserts that, performance is measured by how efficient the enterprise is in use of resources in achieving its objectives. Common examples of financial performance include operating income, earnings before interest and taxes, and net asset value. It is important to note that no one measure of financial performance should be taken on its own. Rather, a thorough assessment of a company's performance should take into account many different measures.

Financial performance analysis is the process of identifying the financial strengths and weaknesses of the firm by properly establishing the relationship between the items of balance sheet and profit and loss account. Quarden (2004) argued financial performance analysis helps in short-term and long term forecasting and growth can be identified with the help of financial performance analysis.

To establish financial performance analyst need to consider analyzing financial statement of the organization. The analysis of financial performance is a process of evaluating the relationship between the component parts of financial statement to obtain a better understanding of the firm's position and performance. This analysis can be undertaken by management of the firm or by parties outside the namely, owners, creditors, investors illustrated by Chenn (2011). financial performance measurement ratios such as asset utilization/efficiency ratios, deposit mobilization, loan performance, liquidity ratio, financial efficiency ratios, profitability ratios,

solvency ratios and coverage ratios to evaluate the bank's financial performance (Bekana, 2011).

Financial performance is an indicator of how profitable a company is relative to its total assets. It is measured by return on asset. ROA gives an idea as to how efficient management is at using its assets to generate earnings. The return on asset is company's net income divided by its average total assets, ROA is displayed as a percentage. Sometimes this is referred to as "return on investment".

The formula for return on assets is = 
$$\frac{\text{Net Income}}{\text{Total Average Asset}}$$

Return on asset formula looks at the ability of a company to utilize its assets to gain a net profit Kiarie (2011) observed. Net income in the numerator of the of the ROA formula can be found on an income statement. Average total asset on the denominator of the ROA formula is found on a company's balance sheet. The average of total assets should be used based on the period being evaluated.

### **1.1.3 Relationship between Lending and Financial Performance**

The technology solutions that lenders choose are vital to business growth. In today's complex lending environment, the balance between management and performance has never been more critical. Heavy compliance, digital-driven borrower decisions and rate changes generate urgency in the market. It is expected that the chosen lending technology significantly affects the association between loan pricing and customer profitability, and that firms classified into relationship lending technology do not demonstrate an association between loan pricing and customer profitability.



The expectations are consistent with the basic idea in relationship banking that a small number of firms provide the majority of customer profitability (Bharath et al. 2007). Furthermore, the concentration of borrowing at one microfinance would increase the loan prices for a group of firms. From a bank's perspective this can be seen as a well-developed relationship in which a firm is locked into a relationship suffering from high external financing costs. In this kind of setting these firms may have high switching costs or other important reasons for the continuity of a lending relationship.

Baas and Schrooten (2006) showed that there is a close theoretical linkage between the lending technique of a bank and the interest rate offered to a firm. Recently, Berger and Udell (2006) conceptualized SME credit availability issues and proposed that different lending technologies have important effects on credit availability. They argued that the commonly used framework in SME financing is oversimplified and unsuitable for opaque SMEs.

They also list trade credit as an important source of financing. However, they stated that trade credit could be classified either a transactions based or a relationship based technology. Uchida et al. (2006) examined different lending technologies and the extent to which they are used and what determines the choice of each technology. They found that these lending technologies are often used in tandem and are highly complementary. A specific detail in their survey was that transaction technologies are based on hard information about whether the financial statements are audited or not.

Information verifiability, bank organization, bank competition and the bank-firm relationship have been examined in Kano et al. (2006). Specifically, Kano et al. (2006) compared financial statement lending and relationship lending technologies in

Japanese SMEs. They pointed out that information verifiability was a distinctive trait of the lending technologies.

#### **1.1.4 Microfinance Institutions in Nairobi County**

Kenya microfinance industry can be characterized as growing and liberalized industry with the support of the technology. The presence of the technology in the Kenyan banking sector has created deference as well as accommodating creativity and innovativeness in the industry. Historically, the sector was dominated by major international banks such as Barclays and standard chartered whom they had located their business in major towns and their main customer was the government and corporate institutions. This made it difficult for other stakeholders to be able to access banking services and mostly small scale business holders and employed citizens (Ngugi, 2012).

The majority of Kenya's population (87 per cent) uses no formal financial services, but instead relies on cooperative lending societies and other forms of informal savings and credit. The size of the informal financial sector in Kenya suggests a significant opportunity to extend formal financial services to many of those currently excluded from the financial mainstream. At the same time, subjecting Kenya's microfinance sector to the same prudential regulations as commercial banks may limit its ability to serve low-income, marginalized segments of the market.

Most lenders are not using credit scoring for assessing the credit risk of SMEs. Two of the larger international banks have developed their own internal models that build on expertise and models from other countries. One other large domestic bank is developing a scorecard customized to its customer base. We found that there is

demand for the benefits of scoring among SME lenders, but there are also several major constraints to the widespread use of credit scoring: There is a lack of licensed credit bureaus, a lack of mandatory reporting of positive and negative credit performance information, and a lack of standardized collections and calculations of key financial data, all of which impede the development of a generic, pooled-data scoring model that could be used by all lenders

The Kenyan economy has profited from the microfinance sector over years seen increased participation and competition among multinational and indigenous banks that either state or privately owned.

Although it is difficult to disentangle the effect of regulatory supervision from other, more ubiquitous market forces on the performance of Kenyan MFIs, data from other countries offer some evidence of positive effect. Uganda's experience with regulation of microfinance depository institutions (MDIs) suggests that asset quality of regulated MDIs, particularly with respect to portfolio at risk shares, improved steadily in the years following regulation, and that capital adequacy ratios have remained well above minimum standards.

## **1.2 Research Problem**

According to Stein 2002 and BU06. An investigation of lending technology choice could provide a useful reference point for banks when they consider the appropriateness of different lending technologies in different lending situations and when they try to innovate new loan products. Policy implications may also stem from such an investigation such as if SME lending by small banks is technologically different from that by large banks, it may be advisable to promote the small bank

sector through legal, regulatory or tax initiatives. However, mostly due to the lack of appropriate data, our knowledge of how lenders choose lending technologies in Japan and elsewhere is extremely to provide useful implications.

Berger and Udell (2006) reject this conventional view and argue that most of the transaction-based lending technologies can be used to lend to opaque SMEs, based on available hard information on specific aspects of the firm. However, this alternative has not been tested empirically. Scott (2006) advance that small firm credit decisions are often made on the basis of hard information that is easily quantifiable such as audited financial statements, credit bureau information, or owner tax returns, and non-financial or soft information, which is difficult to quantify, such as an assessment of the owners character. According to Cole et al (2004), without the soft information, many small firms could be denied credit because of their limited operating history or incomplete financial statements, especially for proprietorships or family owned firms.

These studies give valuable insight into aspects of lending methodologies for SMEs and lending infrastructure in the development countries. None of them addresses the issue of a preferred lending technology in developing African countries where small businesses are informationally opaque. Notwithstanding a rapidly expanding academic and empirical literature on banking and the role of SMEs in economic development, little is known about the lending methodologies and Bank loan accessibility for small businesses that have an opacity problem in Kenya. For instance, do majority of microfinance institutions in Kenya rely on hard or soft information when advancing credit to SMEs that lack tangible collateral, have limited operating history with inexperienced or unprofessional management and incomplete or unreliable financial statement?

The Kenyan economy has benefited from the microfinance institutions .There is an important role for donors, investors, industry groups, and government in strengthening the capacity and sustainability of the sector through broad adoption of industry best practices, improved operations and financial accounting standards, better transparency, and sector-wide facilitation of learning and leadership. Improving performance on all these dimensions will enable established MFIs to access external financing and begin to close the capital gap that constrains the microfinance sector. This study intended to establish if the lending techniques adopted by the microfinance institutions that participate in this niche are uniform across the peer groups. The study undertook to answer the question: Which are the preferred lending technologies for microfinance institutions in Kenya?

### **1.3 Research Objective**

To establish the relationship of microfinance lending technologies on financial performance in the case of micro finance institutions in Nairobi County

### **1.4 Value of the Study**

Small business owners; Small business owners would understand the microfinance requirements of them for developing sustainable financial relationship. Microfinance institutions; It is a challenge for microfinance institutions to address the policy areas that may lead to credit rationing or credit market failures. The Government and Policy makers; the study will be significant to the government efforts towards financial deepening. Scholars and future researchers; the study will be referral material for future research initiative on related studies on microfinance financing.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

Microfinance is the provision of financial services to low-income clients, including consumers and the self-employed, who traditionally lack access to banking and related services (Christen, 1995). Mature microfinance institutions (MFIs) provide products, such as housing loans, insurance, and pension. Microfinance can also be combined with the provision of social and business development services, such as literacy training, education on health issues, training on financial management or accounting (Murdoch, 1999).

Microfinance enables clients to protect, diversify and increase their income, as well as to accumulate assets, reducing their vulnerability to income and consumption shocks (Robinson, 2002). Microfinance services are provided by microfinance institutions (MFIs). MFIs range from non-governmental organizations (NGOs) to regulated financial institutions such as non-bank financial institutions, commercial banks, credit unions and state banks (Christen, 2000).

#### **2.2 Theoretical Review**

The mainstream literature generally distinguishes two ways in which SMEs are financed by banks, depending on the type of information which is exchanged between the firm and the bank. A *transactional lending* technology refers to a bank-firm relationship in which the bank obtains from the borrowing firm “hard” type information that is quantitative in nature and so easily transferable. At the other

extreme, a relationship lending technology hinges on “soft” information, qualitative information and normally obtained via long-term informal/personal interaction and is, thus, much more difficult to transfer.

Although, recently, part of the literature has analyzed transactional lending technologies, academics devote more attention to relationship lending. This is considered the most appropriate technology to lend to firms with significant informational asymmetries, as a tighter bank-firm relationship can help overcome those informational asymmetries, improving the efficiency of the bank’s allocation of loans. Boot (2000) holds that relationship banking centers around two critical dimensions: the extraction of proprietary information from the borrower by the lender and the occurrence of multiple interactions between the two parties.

Lending technologies can be distinguished based on different dimensions such as the Primary source of information, screening and underwriting policies/procedures, structure of the loan contracts, and monitoring strategies and mechanisms (Berger and Udell 2006, hereafter BU06). Among others, two main lending technologies used to finance small- and medium-sized enterprises (SMEs) can be primarily distinguished by the type of information that a bank uses in granting and monitoring the loan.

### **2.2.1 Credit Accessibility**

Research on small and medium enterprises finance suffers from the problem that the lending technologies are usually not identified. This makes it difficult to test theories that relate financial structures to credit availability for different types of borrowers and to make policy assessments of which financial structures function best in supplying funds to creditworthy transparent and opaque SMEs. The limited findings

from studies that identify lending technologies suggest that significant variation in the deployment of these technologies exists.

The effects of a nation's lending infrastructure on SME credit availability through determining the feasibility and profitability of deploying the different lending technologies is particularly under-researched in the literature. This infrastructure includes the information environment, the legal, judicial, and bankruptcy environments, the social environment, and the tax and regulatory environments in which financial institutions operate in a given nation. Lending infrastructures are quite heterogeneous across nations. We show how a nation's lending infrastructure affects the extent to which each of the individual lending technologies are employed in financing SMEs.

Fair access to credit and banking services are a ladder to development and poverty reduction the world over. Access to bank account gives an individual greater control and security over their money and a loan from a credit organization can be vital in promoting enterprise development (DFID, 2007). Beck *et al* (2005); Love (2003) concur that most developing countries have failed to achieve sustained economic growth during recent decades despite significant macroeconomic reforms, an end to state domination of the economy and increased global trade. They assert that one of the reasons why economic prosperity has remained elusive throughout the developing world is a widespread lack of access to credit for individuals and business. Financing constraints make it very difficult for entrepreneurs to launch new businesses and for existing businesses to grow and expand, especially small businesses which comprise the main source of employment for developing countries.



A large number of Kenyans derive their livelihood from the small medium enterprises. Therefore the development of this sector represents an important means of creating employment. During the past 15 years microfinance has gained enough support from both the Government of Kenya (GoK) and International Donors to be considered an industry in itself. An estimated USD 80 Million has been received by the micro-finance industry in Kenya thus far. In the early 1990s, the GoK established a Structural Adjustment Program that liberalized the economy and caused the GoK to support micro-enterprises to counter possible negative effects of this liberalization. Kenya was interested in supporting entrepreneurial development, hastening economic growth, and creating employment opportunities that were all considered to be hindered by lack of credit, and limited access to financial services in rural areas.

FSD partners with organizations that provide savings and loans programs, marketing and business development assistance, and strategic advice to communities, groups, and individuals. These organizations reach underserved populations that the government and large banks have forgotten. Interns and volunteers conduct research and/or implement project work that directly addresses income generation and savings for a wide variety of populations. By working with FSD, you will gain hands on experience with small business development at the grassroots level, empowering community members with the tools and resources needed to reduce poverty.

The reason for lack of credit for formal enterprise is difficulties in loan administration like screening and monitoring, high transaction costs, and the risk of default. Credit markets are characterized by information asymmetry, agency problems and poor contract enforcement mechanisms (Aryeetey, 1996). The fact that predicting how well

a startup business will perform, or if in fact it will survive, is difficult, and is offered as one of the main reasons why banks are skeptical of their small business clientele.

Collateral is commonly used as a mechanism reducing both the screening and the enforcement problems. The existence of screening function of collateral is supported by empirical study by Machauer and Weber (1998) and by empirical evidence and experiments reported by Capra et al. (2001). Collateral debt can be viewed as a mechanism to reveal the information concealed ex ante from the lender. It can be used also as a credit enhancement or credit risk transfer mechanism from the lender to the borrower. If the borrower cannot or would not pay back the loan, collateral would be the compensation. However, poor and self-employed people have little or no physical and livelihood assets or stable source of income that can be secured by a bank as collateral.

The high transaction costs associated with the small loans is also a main barriers preventing traditional banking system from serving poor rural households. Actually, the process of lending a loan entails many bureaucratic procedures, which lead to extra transaction costs. This transaction costs have a large fixed-cost component regardless of the size of the loan. Thus, the costs for the bank to lend multitude loans of small amount of money to a multitude of borrowers are much higher compared to lower transaction costs for offering larger loans to fewer borrowers. Generally, poor borrowers are more likely to apply for loans of small sizes, and thus the lender's transaction costs increase. Giné et al. (2010) mentioned that moral hazard and adverse selection, coupled with small transaction sizes, together restrict the possibilities for banks to lend profitably to poor customers. Many economic works on microfinance focus on the incentives induced by joint liability in group lending contracts and nearly

all authors have proven that group lending enforces joint liability mechanisms, involves borrowers in sharing information and then reduces asymmetric information (Besley and Coate, 1995; Ghatak, 1999; Kono and Takahashi, 2010; Stiglitz, 1990; Van Tassel, 1999). Zeller (1998) uses information on 168 credit groups in Madagascar and shows that the group effectively generates insurance, transfer screening and monitoring costs from the bank to borrowers, providing an effective way for MFIs to overcome adverse selection, moral hazard, and enforcement problems, which leads to a better repayment performance. On theoretical ground and drawing on contract theory, group lending is an innovative credit contract that essentially allows the poor borrowers to act as guarantors for each other. In a group lending contract, borrowers are required to form groups and the entire group is responsible for repaying the loan of any member who is unable to pay. Each borrower obtains a loan for her individual project but the liability is joint. This joint-liability induces group members to self-select each other and provides incentive for peer monitoring, such each borrower in the group will have information about the other's actions. Hence, it is believed that this interdependence between borrowers helps mitigate problems caused by adverse selection and moral hazard and therefore contributes significantly in obtaining high repayment rates.

### **2.2.1 Credit Risk Assessment**

Credit risk evaluation is the process through which a bank assesses the creditworthiness of prospective loan that exposes the financial institutions to credit risk. The credit analysis ultimately results in an estimation of the likelihood of customer default. Outside microfinance, to optimize the credit decision. Evidence regarding the better credit risk assessment approaches in individual lending in MFI is

divergent and the literature highlights two main approaches: Judgmental and Statistical forecasting methods. According to Agier and Szafarz (2012), adverse selection is the main problem faced by the lending industry including microcredit institutions and in order to tackle this problem.

Despite innovation in the financial services sector, credit risk is still the major single cause of MFIs failures. Butterworths (1990) asserts that effective risk management, from the view point of the financial institutions, is the key to the future success in banking and therefore these institutions should focus on professional management risk. The successful financial institutions are, and will increasingly be those that develop focused strategies, lower their overhead ratios, ingeniously exploit their advantages and know how to calculate their risk. The goal of credit risk management is to maximize financial institutions risk-adjusted returns by maintaining credit risk exposure within acceptable parameters. Financial institutions need to manage the credit risk inherent in the entire portfolio as well as the risk in individual credits transactions. The effective management of credit risk is a critical component of a comprehensive approach to risk management and essential to the long term success of any financing organization (Sinkley, 1992)

### **2.2.3 Financial Institution Structure and Lending**

There are a number of reasons why large institutions may have comparative advantages in employing transactions lending technologies which are based on hard information and small institutions may have comparative advantages in using the relationship lending technology which is based on soft information. Large institutions may be able to take advantage of economies of scale in the processing of hard

information, but be relatively poor at processing soft information because it is difficult to quantify and transmit through the communication channels of large organizations (Stein 2002).

Under relationship lending, there may be agency problems created within the financial institution because the loan officer that has direct contact over time with the SME is the repository of soft information that cannot be easily communicated to the management or owners of the financial institution. This may give comparative advantages in relationship lending to small institutions with lower agency costs within the institution because they typically have less separation between ownership and management and fewer overall layers of management ( Berger and Udell 2002). Finally, it is often argued that large institutions are relatively disadvantaged at relationship lending to SMEs because of organizational diseconomies with also providing transactions loans and other wholesale services to large corporate customers (Williamson 1967, 1988).

The indirect effects of the lending infrastructure on SME credit availability may occur through regulations that constrain the potential financial institution structure, preventing institutions from capitalizing on their comparative advantages in the different lending technologies. We include here any government policies that affect entry of different types of financial institutions, their market shares, their abilities to compete, their corporate governance structure, and so forth. In many parts of the world, the removal of geographic and product restrictions has resulted in significant consolidation within the banking industry and between banks and other types of financial institutions. Such as the EU and the U.S. In the EU, the single banking license and other parts of the Single Market Programme appeared to spur considerable

financial institution consolidation within nations, although less activity than expected across international borders within the EU.

In the U.S. the removal of state geographic restrictions and Riegle-Neal Act clearly led to considerable consolidation within the U.S. banking industry, although the Gramm-Leach-Bliley Act did not appear to result in much additional consolidation between banking organizations and other types of financial institutions. The effects of bank size structure on SME credit availability are ambiguous. Government policies that restrict foreign entry may have larger effects on SME credit availability. Other research has also found that regulatory restrictions on the entry of foreign banks may be more strongly linked to bank performance than the market presence of foreign-owned banks (Levine 2003), which may suggest these restrictions have particularly strong effects on competition, with potential consequences for SME customers.

Finally, government policies with respect to state ownership of financial institutions clearly have important effects on credit availability. Choices to start a state-owned institution, take over a private institution, or privatize an existing state-owned institution may be viewed as regulatory changes to the financial institution structure. State-ownership is generally found to have significant negative effects on SME credit availability.

Government policies that restrict foreign entry may have larger effects on SME credit availability; larger market shares for foreign-owned banks are often associated with greater SME credit availability in developing nations. Other research has also found that regulatory restrictions on the entry of foreign banks may be more strongly linked

to bank performance than the market presence of foreign-owned banks (Levine 2003), which may suggest these restrictions have particularly strong effects on competition, with potential consequences for SME customers.

Finally, government policies with respect to state ownership of financial institutions clearly have important effects on credit availability. Choices to start a state-owned institution, take over a private institution, or privatize an existing state-owned institution may be viewed as regulatory changes to the financial institution structure. State-ownership is generally found to have significant negative effects on SME credit availability.

### **2.3. Determinants of Financial Performance in Microfinance Institution**

The various factors identified to influence performance are;

#### **2.3.1 Transaction-based Lending Technologies**

Transaction-based lending technologies are primarily based on borrowers' hard quantitative information, such as the strength of the financial statement or the value of their assets, which are relatively easy to document and transfer. Transaction-based lending has been viewed in academic literature as best-suited for relatively large and transparent borrowers. Berger and Udell (2006) classify six transaction-based lending technologies: financial statement lending, small business credit scoring, asset-based lending, factoring, fixed-asset lending, and leasing.

### **2.3.1.1 Financial Statement Lending and Leasing**

Berger and Udell (2002) advance that financial statement lending places most of its emphasis on evaluating information from the firm's financial statements. The decision to lend and the terms of the loan contract are principally based on the strength of the balance sheet and income statements. Financial statement lending is best suited for relatively transparent firms with certified audited financial statements.

This type of lending technology is best suited for firms with a high degree of transparency with certified audited financial statements. Because these types of loans require provision of financial condition clauses in advance, borrowers must have strong financial conditions as reflected in the financial ratios calculated from these statements (Berger and Udell, 2002).

At the turn of the century, ratio analysis was in its embryonic state. It began with the development of a single ratio, the current ratio, for a single purpose the evaluation of credit worthiness. Today ratio analysis involves the use of several ratios by a variety of users including credit lenders, credit rating agencies, investors and management (Beaver, 1966)

Leasing involves the purchase of fixed assets by a "lender" known as a lessor. Leasing is a very common method of financing equipment, motor vehicles, and real estate in many countries by both banks and other institutions. The lessor purchases the fixed assets and then simultaneously enters into a rental contract with the lessee that specifies the payment schedule. The contract often contains an option whereby the lessee can purchase the assets at the end of the lease at a pre-specified price. Leasing is a transactions technology because underwriting is substantially based on hard



information about the value of the underlying asset, analogous to asset-based lending, factoring, and fixed-asset lending.

### **2.3.2.2 Small Business Credit Scoring and Fixed Asset Lending**

Small business credit scoring is a transactions technology based primarily on hard information about the SME's owner as well as the firm. The owner information is primarily personal consumer data obtained from consumer credit bureaus. This is combined with data on the SME collected by the financial institution and often from commercial credit bureaus. The data are entered into a loan performance prediction model, which yields a score, or summary statistic for the loan. The models are usually designed for credits up to \$250,000, but many institutions use them only for credits up to \$100,000. The technology is relatively new it was not widely used in the U.S. until the mid-1990s.

This technology may be applied to very opaque SMEs, given that much of the information is based on the personal history of the owner, rather than the SME. Consistent with this opacity, recent research finds that this technology is associated with credits under \$100,000 that are rated as relatively risky, have high interest rates, and are often located outside of the banks' local markets (Frame, Padhi, and Woosley 2004). In some cases, the technologies may be most efficiently deployed in a particular organizational form or unit that is dedicated to that technology. The unit may be an entire financial institution such as a leasing company offering only business leases, or a separate department, division, or subsidiary such as asset-based lending department of a commercial bank or finance company.

Fixed-asset lending technologies involve lending against assets that are long-lived and are not sold in the normal course of business such as equipment, motor vehicles, or real estate. Like asset-based lending which is based on accounts receivable and inventory, the underlying assets in fixed-asset lending are pledged to the lender as collateral. However, unlike accounts receivable and inventory, the pledged assets are virtually always uniquely identified by a serial number or a deed. The long life and unique identification of fixed assets leads to very different underwriting processes, contract structures, and monitoring mechanisms. At the underwriting stage, the focus is on assessing the market value of the asset for equipment and real estate; this is often in the form of a formal appraisal. The contract structure typically specifies an initial loan to value ratio less than one. It also typically involves setting a loan amortization schedule with a final maturity less than the lifespan of the asset. The schedule insures that the ratio of the outstanding loan balance to the liquidation value of the asset is less than one over the life of the loan. This contract structure also feeds back to the underwriting process, where the primary financial analysis focuses on coverage ratios that measure a firm's ability to meet the amortization schedule such as debt service. Unlike monitoring asset-based loans, the existence of collateral is not problematic in fixed-asset lending.

The borrower can only sell a fixed asset by transfer of title, which can only occur if the lender agrees to "Reverse factoring" is a recent innovation that has been applied in developing economies. Under reverse factoring, a factor enters into an agreement with a large company that is purchasing goods from a large number of small suppliers. The factor agrees to finance any of the receivables of this large company generated by invoices from these small suppliers. Reverse factoring differs from conventional

factoring in that the primary business arrangement is between the seller of the goods and the factor, as opposed to the supplier of the goods and the factor (Klapper 2005).

In SME lending, fixed-asset lending can be associated with personal assets provided by the firm's owner as well as the firm's assets. A common example is an entrepreneur pledging a personal residence as collateral for a business loan.

### **2.3.2.3 Asset-based Lending and Factoring**

Asset-based lending is a transactions lending technology in which financial institutions address the opacity problem by focusing on a subset of the firm's assets, which are pledged as collateral, as the primary source of repayment. This technology provides working capital financing secured primarily by accounts receivable and inventory. The amount of credit extended is linked on a formula basis using hard data to a dynamically managed estimation of the liquidation value of the assets used as collateral. The value of collateral is assessed daily in the case of accounts receivable, and typically weekly or monthly for inventory, and linked to the size of the credit available, so that the liquidation value of the collateral always exceeds the credit exposure (Udell 2004).

The use of collateral itself, however, does not distinguish asset-based lending from the other lending technologies. The pledging of accounts receivable and inventory is often associated with financial statement lending, relationship lending, and credit scoring, where collateral is used a secondary source of repayment. Under asset-based lending, in contrast, the extension of credit is primarily based on the value of the collateral, rather than the overall creditworthiness of the firm.

Factoring involves the purchase of accounts receivable by a “lender” known as a factor. As in asset-based lending, factoring focuses on the value of an underlying asset, rather than the overall value/risk of the firm. Factoring is similar to asset-based lending, but there are three important distinctions. First, factoring only involves the financing of accounts receivable, unlike asset-based lending which also involves financing inventory. Second, under factoring, the underlying asset is sold to the “lender.” Third, factoring is essentially, (Berger and Udell 2006) for more details on small business credit scoring and its effects on credit availability.

There is relatively little empirical evidence on asset-based finance. One study finds evidence consistent with practitioner and conventional wisdom that asset-based finance is associated with riskier borrowers (Klapper 1998).

Another study of very large credits finds evidence that commercial finance company credits are riskier than commercial bank but did not find evidence of associating opacity with asset-based lending using standard opacity measures (Carey, Post, and Sharpe 1998). For the least creditworthy asset-based borrowers, lenders often establish special checking accounts into which all collections of receivables must be deposited, reducing potential diversion of these funds by the borrower (Mester, Nakamura, and Renault 2004). In addition, monitoring cash flows on deposit accounts may provide valuable hard information that may be used in conjunction with any of the lending technologies, provided that all the firms’ checking accounts are consolidated at the lending institution (Nakamura 1993). A bundle of three financial services: a financing component, a credit component and a collections component.

Under most factoring arrangements, the borrower outsources its credit and collections activities in addition to obtaining financing. Factoring is a transactions technology

because the underwriting process based on hard information about the value of a borrower's accounts receivable. Factoring addresses the opacity problem by focusing primarily on the quality of the obligor, rather than the borrower.

### **2.3.2 Relationship Lending**

Relationship lending is extended primarily based on borrowers' soft qualitative information, such as the entrepreneurs' characteristics including skill and integrity, which are difficult to verify. Relationship lending has been viewed as best-suited for small and opaque SMEs.

Berger and Udell (1995) study the importance of relationships in the extension of credit to small firms. They find that small firms with longer banking relationship borrow at lower interest rates and are less likely to pledge collateral than are other small forms. This effect appears to be both economically and statistically significant. Previous research has suggested that effective management of a relationship can affect customer perceptions of quality and service (Ennew and Binks, 1999). Long term clients in banking provide higher return with less risk and the banks greater knowledge of an existing client can result in creating and marketing a wider offering of financial services (SHELL, 1996)

### **2.3.3 Macro Environmental Factors**

There are conflicting views on how macro environmental factors affect financial performance of MFIs and this study hoped to contribute to the debate. This research was based on the financial systems approach to microfinance and Swaziland Development Finance Corporation (FINCORP) was selected as a case study since it is the largest and only for-profit MFI in Swaziland. The financial performance of

FINCORP between 2001 and 2011 was not impressive compared to other (MFIs) in Africa and this research sought to ascertain if macro environmental factors could explain the status quo, with institutional characteristics controlled. The study used both descriptive and explanatory research designs. FINCORP was purposively selected for the census survey wherein perceptions of all board members, members of the executive management, middle management, credit officers and finance officers were gathered through a questionnaire. An impressive 84% response rate was achieved. Descriptive, correlation and regression analysis were conducted with the aid of the statistical package for social sciences (SPSS). The absence of a regulatory framework for microfinance and competition from commercial banks were found to be significant determinants of financial performance of FINCORP, with beta coefficients of 0.19 and 0.22 and p values were 0.41 and 0.45, respectively. The ownership of the government in microfinance, economic and demographic and social variables were found to have insignificant effect on financial performance of FINCORP. It was recommended that if this sector is to be regulated in future, caution must be exercised to ensure that industry growth potential is not retarded

## **2.4 Empirical Studies**

Empirical research on accounting and finance has analyzed ratings from different points of view. Rating agencies claim that they do not only examine financial statements, but that they also use qualitative information. Pioneer works from Horrigan (1966), Pogue and Soldofsky (1969), Pinches and Mingo (1973), and Kaplan and Urwitz (1979) investigated the determinants of bond ratings. They specially studied the usefulness of financial information for predicting ratings. They

perform several statistical multivariate techniques to study the relationship between accounting information and the rating assigned.

Most recent works in this field concentrate on more specific issues of the rating process. Poon (2003) finds that unsolicited ratings present worse assessments than solicited ones. Morgan (2002) examines the banks' opacity from the lack of consensus among main rating agencies.

Another related line of research studies the rating of financial institutions in developing countries. Ferri et al. (2001) examine the behavior of issuer ratings in developing countries, and find that bank and corporate ratings appear to be strongly related in an asymmetric way with changes in sovereign ratings. Bongini et al. (2002) study the power of credit ratings to predict bank insolvency in these countries.

Academic research analyzing financial information issued from MFIs is still scarce. Gutiérrez-Nieto et al. (2006) studied financial efficiency from a sample of Latin-American MFIs, using the Data Envelopment Analysis technique. An overall ranking of MFIs was obtained in terms of how they make use of inputs and outputs. Such efficiency rankings can be used by MFIs to highlight their reliability to potential funds suppliers. One of the seminal studies using empirical data of MFIs rating is Hartarska (2005). She finds that external governance mechanisms such as auditing, rating, and regulation, have a limited impact on outreach and sustainability of microfinance institutions. More research and better data is needed to ensure that strong organizations direct scarce resources to the entrepreneurial poor. DTECONZ 2006

The empirical research tried to test the results derived from the theoretical models. In particular, several papers have analyzed in various countries the impact “relationship lending” has on the financing of SMEs. For the US, various studies used data from the National Survey of Small Business Finance. Among these, Berger and Udell (1995) show that a longer bank-firm relationship lowers the cost of credit and reduces also the requirements of collateral guarantees. Cole (1998) finds that a lender is less likely to grant credit to a firm if the customer relationship has lasted for one year or less, or if the firm deals with other financial counterparts. On data for Italy, Angelini et al. (1998) find that the intensity of “relationship banking” reduces the probability that borrowing firms will be rationed, even though the lending rates charged by the banks tend to increase as the bank-firm relationship lengthens. For Belgian enterprises, Degryse and Van Cayseele (2000) detect the impact relationship banking along two different dimensions: borrowing rates increase as the bank-firm relationship lengthens, while borrowing rates decrease when the scope of the bank-firm relationship defined as the purchase of additional information intensive services increases.

Recently, both the theoretical and the empirical strands of the literature analyze also the transaction-based lending technologies. Often, the literature has used the transaction lending label for any type of loan based on information that is easily verifiable by outsiders. Instead now some authors underline that transaction lending is not a single homogeneous lending technology but should be separated into a number of distinct transaction technologies used by financial institutions. Berger and Udell (2006) suggest that transaction technologies include financial statement lending, small business credit scoring, asset-based lending, factoring, fixed-asset lending, and leasing. The authors briefly define and describe each of the lending technologies,



highlight its distinguishing features, and show how the technology addresses the opacity problem. Each technology is distinguished by a unique combination of the primary source of information, screening and underwriting policies/procedures, structure of the loan contracts, and monitoring strategies and mechanisms.

Also the empirical literature tries to explain the characteristics of each technology. A number of studies focus on each individual technology in isolation. Berger and Udell (2006) study credit scoring and Udell (2004) asset-based lending. However, most of these studies focus on one lending technology only disregarding the other technologies.

Differently from these studies, Uchida et al. (2006), utilizing survey micro-data on Japanese SMEs, tested the importance of the various “lending technologies” proposed by Berger and Udell (2006). Specifically, they consider four lending technologies: financial statement lending, real estate lending, other fixed-asset lending, and relationship lending. Using the responding firm’s answer to the question as to which were – in the firm’s own view – the criteria followed by its main bank to grant its loans, the authors created a distinct index for each of those four lending technologies. Analyzing econometrically the determinants of each index, the authors find there is complementarity among the indices of the four technologies. This result suggests that the bank, though possibly preferring one of them, might be using also the other lending technologies in unison.

Although the literature generally distinguishes the lending technologies on the basis of the type of information which is exchanged between the firm and the bank, some contributions have explored the distinction between soft and hard information. The distinction has not often been explicitly stated and, even when it has been, the

definition has been incomplete. For this reason some authors try to study in detail what is meant by hard and soft information. According to Petersen (2004) hard information is quantitative, easy to store and transmit in impersonal ways, and its content is independent of the collection process. Instead, soft information is qualitative, often communicated in text, and so not easy to store. Also, soft information contents depend on the collector of the information. This is why soft information is gathered personally and the decision maker is the same person as the information collector. That's why, according to Stein (2002), smaller less hierarchical banks are better able to use soft information in their decisions.

This distinction derives from the idea that there are two types of production functions using distinct inputs: hard and soft information. However, the nature of information is not exogenously fixed. In fact, the lenders practices recently show us that it may be possible to change the nature of information. The development of credit scoring is a typical example of the lenders' ability to harden soft information.

Agarwal and Hauswald (2006) verify the conjecture in Petersen and Rajan (2002) that technological progress in the form of credit scoring allows banks to overcome distance-related limits to lending through the hardening of soft information. Berger and Udell (2007), using a survey conducted by the Federal Reserve Bank of Atlanta in 1998, show that banks tend to use the credit scoring technology in very different ways to achieve quite different objectives. In some cases, banks use "rules" to automatically accept or reject credit applicants and to set credit terms based on purchased credit scores. Other institutions use more of their own "discretion" by adding credit scores to information gathered through one or more of the other lending technologies (i.e. relationship lending). The motives for these banks are likely to reduce opacity problems and set the credit terms more accurately to reduce future credit losses. Some contributions suggest that

“discretion” banks are successful in lowering the reported risk and lengthening the maturity of their small business credits. Finally, Albareto et al. (2008), reporting the results of an Italian survey conducted by the Bank of Italy in 2007, illustrate that medium and large banks do use soft information (like qualitative information on the firm’s governance) in their credit scoring models.

## **2.5 Summary of the Literature Review**

The literature review has looked at how several lending technologies affect the performance of the microfinance institution. Various studies have been conducted on lending technologies. Berger and Udell (2005) emphasized oh how financial institutions structure and lending infrastructure may affect the performance in financial institution through use of different technologies. They show that lending technologies vary significantly across the world and evidence is strong that large and foreign banks have a comparative advantage in transactional lending and small banks are disadvantaged in lending relationship.

A closely related issue that has also not been empirically tested is whether lending technologies are substitutes or complements of each other. Lending technologies are not necessarily mutually exclusive. Commercial lenders may provide SMEs with credit using a combination of lending technologies although BU06 argue that overall credit underwriting may focus on one primary lending technology.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter presents the methods that were used to execute the study and this included the research design, the population, sampling design, data collection methods, procedures and Data analysis.

#### **3.2 Research design**

A census study design was used in this study. Unlike in experimental design where elements of study are in controlled environments, the census was advantageous in this case since the elements studied cannot be put in a controlled environment for them to be observed.

#### **3.3 Population**

The target population of interest was all registered microfinance institutions in Nairobi County registered with Kenya's Association of Microfinance Institutions (AMFI). The population of thirty microfinance institutions was deemed as small enough to accommodate a census study and give a clearer picture of the findings. The study was carried out in Nairobi. Nairobi was chosen as the area of study since the microfinance institutions have their head office in Nairobi and the credit operations are mainly situated in the head office where the researcher could reach conveniently.

### **3.4 Sample**

A Sample is a collection of observations representing only a portion of the population. thirty microfinance institutions was sampled using stratified random sampling technique which is a two-step process. First the target population is portioned into strata then elements are selected from every stratum by simple random sampling.

### **3.5 Data Collection**

The names and addresses of microfinance institutions in Kenya were obtained from the Association of microfinance institutions (AFMI). Data was collected from primary sources through a structured questionnaire, self-administered to the credit functions of the thirty microfinance institutions using face to face interviews. The respondents were the credit managers, credit analysts, business bankers and relationship mangers of the various microfinance institutions. Face to face interviews are considered appropriate because it will give the researcher an opportunity to interact with the respondent and get an optimal response rate while allowing for review of the questionnaire for completeness in responses at the end of each session. Secondary information was obtained to reinforce collected data through desk research on review of microfinance institution credit policy documents, brochures, credit proposals and relevant literature from the libraries and the various microfinance lending rates, credit policies and advanced products designed for small business owners.

### **3.6 Data Analysis**

The collected data was thoroughly examined and checked for completeness and comprehensibility. Quantitative data was analyzed using descriptive statistics. Descriptive Statistics such as frequency distributions and percentage change was used

to collate the frequency of the responses with the help of the Microsoft excel worksheet. Likert item responses were analyzed using the SPSS that enables the use of quantitative analysis. Multiple regression model was used to test the significance of the influence of the independent variables on the dependent variable. The regression model below assisted in analysis of data;

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + e$$

Y= ROA is the return on assets which is a dependent variable and a proxy to measure financial performance.

X1, x2, x3, and x4 are the proxy to measure lending technologies.

X1 - Asset based lending (*Part c question 3*)

X2 -Financial statement lending (*Part c question 6*)

X3 – Small business credit scoring (*Part c question 8*)

X4- - Relationship lending (*Part c question 9*)

*e* is the error model

$\alpha$ ,  $\beta_1$ ,  $\beta_2$ ,  $\beta_3$ ,  $\beta_4$  are constants which will show the relationship between performance, lending technologies.

### **3.6.1 Test of Significance**

The study will use coefficient of determination to determine whether the model is a good predictor. Analysis of variance will be to show the relationship between the

independent variables and financial performance of microfinance institutions in Nairobi County.

## CHAPTER FOUR

### DATA ANALYSIS, RESULTS AND DISCUSSION

#### 4.1 Introduction

This chapter presents the analysis of the data collected and interpreted on the lending technologies adopted by microfinance institutions that are operating in Nairobi Kenya.

##### 4.1.1 Data Collected and Analyzed

Data was collected from 22 microfinance institutions Nairobi. The questionnaire was self-administered. The data was collected from business bankers, relationship Manager, credit managers, credit analyst and other bank officials charged with credit administration responsibilities at the banks. The microfinance institutions that did not respond gave reasons that only senior officers of the institution could authorize release of the information and they were out of the office on official duties. Other institutions feared releasing information due to competitive reasons. The data was analyzed using descriptive analysis, correlation analysis and multiple linear regressions to answer the research objective using SPSS.

**Table 4.1 Overview of data collected**

<b>Institutions</b>	<b>Number of institutions</b>	<b>Population ( t )</b>	<b>Administered questionnaires ( r )</b>	<b>Non response error ( t-r )</b>
Microfinance institutions	30	30	22	8
<b>Total</b>	<b>30</b>	<b>30</b>	<b>22</b>	<b>10</b>



Key: t=population; r=administered questionnaires; t-r= Non – response error

(26.67%)

Source: Research Data

Out of 30 questionnaires that were administered, 22 were dully filled and returned. This represents response rate of 73%, which is considered significant enough to provide a basis for valid and reliable conclusions with regards to lending technologies techniques adopted by microfinance institutions in Nairobi. This is well explained in table 4.1 above.

## **4.2 Descriptive Statistics**

The result (Table 4.2) shows that a total of 22 occurrences of each variable were used in the study. The result indicates that the overall average ratio of financial performance of microfinance institution in Nairobi under the study was -0.00577%, asset based lending was 1.05%, the financial statement lending was 1.09% , for small business rating system was 1.09 and relationship lending was 1.43%. All the series have a coefficient of kurtosis of greater than 3 against the standard value of 3 for a normal distribution. The findings therefore show features of non-normality which is common in financial time series data.

The results (Table 4.2) also indicate the minimum and maximum of each variable in the period under consideration. The standard deviations from means of ratio of financial performance, asset based lending, financial statement lending, small business rating system and relationship lending were 0.055, 0.213, 0.294, 0.294 and 0.507 respectively.

**Table 4.2 Descriptive Statistics**

Descriptive Statistics										
	N	Minimum	Maximum	Mean	Std. Deviation	Variance	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Financial performance	22	-.2100	.0550	-.005773	.0545081	.003	-2.699	.491	9.338	.953
Asset based lending	22	1	2	1.05	.213	.045	4.690	.491	22.000	.953
Financial statement lending	22	1	2	1.09	.294	.087	3.059	.491	8.085	.953
Small business rating system	22	1	2	1.09	.294	.087	3.059	.491	8.085	.953
Relationship lending	21	1	2	1.43	.507	.257	.311	.501	-2.115	.972
Valid N (listwise)	21									

Source: SPSS Spread sheet

### 4.3 Correlation Analysis Results

Table 4.3 shows the correlation results for dependent and independent variables. The results indicate that ratio of financial performance of microfinance institutions are positively correlated with asset based lending (1). The study (Table 4.3) also revealed that ratio of financial performance of Microfinance institution is negatively correlated with real interest rate (-0.468) and annual average inflation (-0.013).

The results (Table 4.3) also indicate the correlation relationship between the independent variables. Asset based lending had strong negative correlation(-0.153) with financial statement lending (-0.067), negative correlation with relationship lending (0.78) and weak negative correlation with small business rating system (-0.07). Further the finding indicates that inflation rate and growth in loan are positively correlated (0.089).

**Table 4.3: Correlation Statistics for the Variables**

		<b>Correlations</b>				
		Financial performance	Asset based lending	Financial statement lending	Small business rating system	Relationship lending
Financial performance	Pearson Correlation	1	-.153	-.067	-.070	-.078
	Sig. (2-tailed)		.498	.768	.758	.736
	N	22	22	22	22	21
Asset based lending	Pearson Correlation	-.153	1	.690	-.069	.258
	Sig. (2-tailed)	.498		.000	.760	.258
	N	22	22	22	22	21
Financial statement lending	Pearson Correlation	-.067	.690	1	-.100	.375
	Sig. (2-tailed)	.768	.000		.658	.094
	N	22	22	22	22	21
Small business rating system	Pearson Correlation	-.070	-.069	-.100	1	-.194
	Sig. (2-tailed)	.758	.760	.658		.400
	N	22	22	22	22	21
Relationship lending	Pearson Correlation	-.078	.258	.375	-.194	1
	Sig. (2-tailed)	.736	.258	.094	.400	
	N	21	21	21	21	21

Source: Research data

#### **4.4 Regression Analysis Results**

The causes of non-performing loan in commercial banks in Kenya were investigated using multiple linear regressions. The results are presented in Table 4.3 below. The study established the economic model as follows:

$$Y=0.063-0.203+0.092x_2-0.066x_3-0.073x_4$$

According to the regression equation established, taking all variables constant at zero, ratio of financial performance will be 0.063%. At 5% level of significance and 95% level of confidence, the researcher established that the collinearity statistics of asset

based lending had a tolerance factor of 0.525, financial statement lending had tolerance factor of 0.484, small business rating system tolerance factor is 0.963 while growth in loan had a tolerance factor of 0.832 indicating that these variables affect the financial performance of Microfinance institutions in Nairobi.

**Table 4.4: Regression Results for Dependent and Independent Variables**

		Coefficients <sup>a</sup>									
		Unstandardized Coefficients		Standardized Coefficients			Correlations			Collinearity Statistics	
Model		B	Std. Error	Beta	t	Sig.	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	.060	.103		.580	.570					
	Asset based lending	-.052	.087	-.203	-.600	.557	-.155	-.148	-.147	.525	1.905
	Financial statement lending	.017	.066	.092	.262	.797	-.070	.065	.064	.484	2.068
	Small business rating system	-.017	.064	-.066	-.264	.795	-.049	-.066	-.065	.963	1.039
	Relationship lending	-.008	.030	-.073	-.272	.789	-.078	-.068	-.067	.832	1.202

Source: Research data

#### 4.4.1 Robustness of the Study Model

This entailed testing the ‘goodness of fit’ of the model to the actual data and the extent to which the independent variables explained the variation in the dependent

variables. Table 4.5 shows that the adjusted R2, which is the coefficient of determination measuring the proportion of variation in financial statement of microfinance institutions in Nairobi is -0.207 indicating that about -20.7%% of variation in the dependent variable in the regression model are due to independent variables. While 0.0613 are due standard error of the estimate.

**Table 4.5: Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.184 <sup>a</sup>	.034	-.207	.0612983

a. Predictors: (Constant), Relationship lending, Small business rating system, Asset based lending, Financial statement lending

#### 4.4.2 ANOVA Model Analysis

Table 4.5 shows that the F-statistics is 0.141 and is significant at 0.964. Thus the independent variables in the model jointly influence financial performance in Microfinance institutions in Nairobi. The model was therefore considered robust or fitted well to the actual data of the variables.

**Table 4.6: ANOVA Model Analysis**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.002	4	.001	.141	.964 <sup>a</sup>
	Residual	.060	16	.004		
	Total	.062	20			

a. Predictors: (Constant), Relationship lending, Small business rating system, Asset based lending, Financial statement lending  
b. Dependent Variable: Financial performance

## 4.5: Summary and Interpretation of Findings

From Table 4.3 above, the study found that there is negative relationship between the ratio of financial performance and asset based lending of (-0.203). This means that when asset based lending increases by 1%, financial performance changes by 0.203%. The results are consistent with correlation analysis which indicated a negative correlation exists between the two variables.

The results also established that the ratio of financial performance and financial statement lending have positive impact with each other of 0.092. This implies that when the financial statement lending increases by one unit it will impact the ratio of financial performance by -0.092. This is consistent with the correlation which indicated a positive correlation between the two variables.

The results established that the financial performance and small business rating system had a negative impact in that a unit change in small business rating system will lead to a -0.066 impact on the ratio of financial performance. And also established that the financial performance and relationship lending had a negative impact in that a unit change in growth in loans will lead to a -0.073 impact on the ratio of financial performance.

The regression equation established, taking all variables constant at zero, ratio of financial performance will be 0.063%. At 5% level of significance and 95% level of confidence, the researcher established that the collinearity statistics of asset based lending had a tolerance factor of 0.525, financial statement lending had tolerance factor of 0.484, small business rating system tolerance factor is 0.963 while growth in

loan had a tolerance factor of 0.832 indicating that these variables affect the financial performance of Microfinance institutions in Nairobi. The F-statistics is 0.141 and is significant at 0.964. Thus the independent variables in the model jointly influence financial performance in Microfinance institutions in Nairobi. The model was therefore considered robust or fitted well to the actual data of the variables.

## CHAPTER FIVE

### SUMMARY, CONCLUSION AND RECOMMENDATIONS

#### 5.1 Introduction

This chapter presents the summary of the study, conclusion, recommendations, limitations of the study and suggestions for further research.

#### 5.2 Summary of Findings and Discussions

The study adopted the Descriptive Design and applied both multiple regression models on primary and secondary data to determine the relationship between lending relationship on performance of microfinance institution in Kenya. Financial performance was used as dependent variable. The population of this study comprised of 30 microfinance institutions in Nairobi and data was analysed using SPSS.

The studies revealed that financial performance of Microfinance institutions in Nairobi are negatively correlated with asset based lending (-0.153). The study also found that financial performance are negatively correlated with financial statement lending (-0.067), it is negatively correlated with small business rating system (-0.070) and relationship lending (-0.078) respectively.

The study revealed that correlation relationship between the independent variables asset based lending had strong positive correlation with financial statement lending (0.690) weak negative correlation with small business rating system (-.069) and a



positive correlation with relationship lending (0.258). The studies indicated that financial statement lending and small business rating system are negatively correlated (-0.100). The studies established asset based lending had a tolerance factor of 0.525, financial statement lending had tolerance factor of 0.484, small business rating system lending had tolerance factor of 0.963 while relationship lending had a tolerance factor of 0.832 at 5% Level of significance and 95% Level of confidence, indicating that these variables affect the financial performance of microfinance institutions in Nairobi.

Further the study indicated that the study variables jointly influenced the financial performance with an adjusted R2 of 0.207. This means that 20.7% of variation in the dependent variable in the regression model is due to independent variables while 61.3% are due to standard error of estimate. The F- Statistics of 0.141 was also significant. The model was therefore considered robust or fitted well to the actual data of the variables.

### **5.3 Conclusion**

The study concludes that the independent variables considered in the study jointly caused the financial performance of Microfinance institutions in Nairobi. The study also found that the financial performances were positively correlated to the lending technologies.

The study concludes that financial performance is negatively correlated with real interest rate and growth rate in loans. The objective of the study, which was to determine the effect of lending technologies on financial performance of microfinance institutions in Nairobi County, was therefore met.

The study concluded there is a strong negative correlation relationship between the independent variables. Asset based lending had a strong negative correlation with financial statement lending, negative correlation with relationship lending and weak negative correlation with small business rating system. Further the study concluded that inflation rate and growth in loan are positively correlated.

A review of the related literature revealed a general consensus from the theoretical and empirical studies that there is indeed a relationship between lending technologies affecting the financial performance of Microfinance institutions.

#### **5.4 Limitations of the study**

This study was limited to four variables as the causes of financial Performance in Microfinance institutions in Nairobi. The interpretation of these results as concerns to the effect lending technologies on financial performance should be restricted to variables under study. Lending technologies in microfinance institutions has not been studied extensively hence there is scarcity of research materials.

Since the main purpose of this study was to determine the effect Lending technologies on financial performance of Microfinance institutions in Nairobi, Most microfinance institutions have considered some information sensitive and confidential and thus the

researcher had to convince them that the purpose of information is for academic research only and may not be used for any other intentions. The findings of this study may not also be generalized to all Microfinance institutions but can be used as a reference to microfinance institutions in developing countries since they face almost the same challenges due to the same prevailing economic situations as opposed to Microfinance institutions in developed countries

The third limitation relates to study population. The study covered Association of microfinance institutions in Kenya and did not consider other financial institutions across all sectors so as to provide a more broad based analysis. The study was limited to establishing the effect of lending technologies on financial performance of Microfinance Institution in Nairobi. Few studies have been done on effect and management of lending technologies on financial performance in Kenya.

Lastly, this descriptive and correlation study relied on secondary data which had already been compiled by the AMFI. Data were used as they were obtained and the researcher had no means of verifying for the validity of the data which were assumed to be accurate for the purpose of this study. The study results are therefore subject to the validity of the data.

## **5.5 Recommendations**

### **5.5.1 Policy Recommendations for Policy makers**

The study recommends that in order for the Microfinance institutions in Kenya to improve, there is need for the Government to initiates measures that will control the lending technologies used in Kenya.

The study also recommends that there is also need for the Association of Microfinance Institutions to control the technologies used in Kenya as there is some evidence to suggest that use of proper lending technologies will lead to better financial performance in Kenya. The study further recommends that there is need for the Microfinance institutions to initiate policies that will control the amount of use of lending technologies they have.

### **5.5.2 Suggestion for Further Research**

There is need for further studies to carry out similar study for a longer time period. A similar study should also be carried out on the effect of lending technologies on success of micro businesses in microfinance institutions in Kenya.

Further research should be done on the employees of microfinance especially the managers and the credit department to understand the knowledge they have in regards to the various lending technology and how they are applying it in the day to day operations of the microfinance institutions in Kenya.

The study investigated the effect of lending technologies on the financial performance of Microfinance institutions in Nairobi. The financial Industry in Kenya however is comprised of various other financial institutions which differ in their way of management and have different setting. This warrants the need for another study to generalize the findings of all the financial institutions in Kenya. The Study therefore recommends another study be done with an aim to investigate the causes of Lending technologies of Financial Institutions in Kenya.

The study also applied only four independent variables in determining the results, a further study can be carried out by including more independent variables to the regression model. The study further recommends that a study to be carried out to determine the causes and management lending technologies on Performance of Microfinance institutions in Kenya.

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## **APPENDICES**

### **APPENDIX 1: LIST OF MICRO FINANCE INSTITUTIONS IN NAIROBI**

1. AAR Credit Services
2. BIMAS
3. ECLOF Kenya
4. UNAITAS
5. Faulu Kenya DTM
6. Greenland Fedha
7. Jamii Bora Bank
8. Jitegemea Credit Scheme
9. Juhudi Kilimo
10. Kenya Agency for the Development of Enterprise and Technology (KADET)
11. Kenya Entrepreneurship Empowerment Foundation (KEEF)
12. Kenya Post Office Savings Bank (Postbank)
13. K-REP Bank
14. Kenya Women Finance Trust Limited (KWFT)
15. Microafrica Kenya Ltd
16. Modyn Credit Ltd
17. Musoni Kenya Ltd
18. Opportunity Kenya
19. Pamoja Women Development Programme (PAWDEP)
20. Platinum Credit

21. Rafiki DTM
22. Remu DTM Limited
23. SISDO
24. SMEP DTM
25. SUMAC DTM Limited
26. Taifa Option Microfinance Limited
27. UWEZO DTM
28. Yehu
29. Youth Initiatives-Kenya (YIKE)
30. Pioneer FSA

**APPENDIX II:  
QUESTIONNAIRE:**

**PART A.**

**General Information**

**Please tick or fill as appropriate**

1. Name.....(Optional)
2. Institution Name .....(Optional)
3. Department.....
4. Please indicate your Job Title.  
Business banker   
Relationship Manager/ Officer   
Credit Manager   
Credit Analyst   
Any Other (Specify).....

**PART B.**

**Microfinance Institutions Characteristics**

**Please Tick as appropriate**

**1. How do you classify your Financial Institution?**

- Formal Lenders
- Semi – Formal lenders
- Informal lenders

**2. For how long has your institution operated in Kenya?**

- Less than five years
- 5 - 15years
- 16 - 30years
- 30 years and above

**3. How many branches do you have?**

- Less than five branches
- 5 - 15 branches
- 16 branches and above

**4. To which of the following category of borrowers do you lend money?**

- Consumers only
- Business only
- Both of the above
- Other (specify)

**5. If you lend to Business as above, which business types do you lend to?**

- Medium – sized firms
- Small - sized firms
- Micro enterprises

**6. Which of these firms is likely to qualify for a loan at your institution?**

- Those with existing relationship with the institution
- Those with existing relationship with any other institution
- Any entrepreneur meeting the criteria
- Any other category.....  
.....

**7. How many years ago did your microfinance institution venture into lending to micro, small and medium firms?**

- Less than five years
- 5 – 15 years
- 16 – 30 years
- Over 30 years

**8. Does your institution have specific micro credit policies different from other institutions?**

- Yes
- No

**9. How is the interest rate on small business loans compared to individual loans?**

- Lower
- Same
- Higher

**10. How is the interest rate applied on small business loans arrive at?**

- Fixed by the bank management ()
- Negotiated with the customer ()
- Pegged on the value of the collateral ()
- Any other (specify).....
- .....

**PART C.**

**Lending technologies**

**Please Tick as appropriate**

**1. Who are involved in credit risk assessment in your Institution?**

	Least involved		Most involved		
	1	2	3	4	5
General manager/Managing director	( )	( )	( )	( )	( )
Branch manager	( )	( )	( )	( )	( )
Credit manager / Head of credit	( )	( )	( )	( )	( )
Credit committee	( )	( )	( )	( )	( )
Credit Analyst	( )	( )	( )	( )	( )
Relationship manager	( )	( )	( )	( )	( )
Any other (Specify).....					
.....					

**2. Which, among the following, factors do you consider in establishing a credit control policy?**

	Least involved		Most involved		
	1	2	3	4	5
Existing credit policy	( )	( )	( )	( )	( )
Overhead costs	( )	( )	( )	( )	( )

The state of the economy ( ) ( ) ( ) ( ) ( )

Any other Specify.....

**3. Which of the following documents are required for processing an application for a small business loan?**

	Not Required	Least Required			Most Required
	1	2	3	4	5
Historical cash flow	( )	( )	( )	( )	( )
Projected cash flow	( )	( )	( )	( )	( )
Personal financial statements	( )	( )	( )	( )	( )
Business plan/ profile	( )	( )	( )	( )	( )
Audited financial statements	( )	( )	( )	( )	( )
Management accounts	( )	( )	( )	( )	( )
Aging list of debtors	( )	( )	( )	( )	( )
Aging list of creditors	( )	( )	( )	( )	( )
Income/VAT tax return	( )	( )	( )	( )	( )
One year bank statements	( )	( )	( )	( )	( )
Other loan offer letters	( )	( )	( )	( )	( )
Business licenses/ Permits	( )	( )	( )	( )	( )
Utility bills/ Lease agreements	( )	( )	( )	( )	( )
Certificates of registration	( )	( )	( )	( )	( )
CRB/ Reference bureau search	( )	( )	( )	( )	( )
Identification document	( )	( )	( )	( )	( )
Proposed collateral ownership Documents	( )	( )	( )	( )	( )
Valuation report of proposed collateral	( )	( )	( )	( )	( )
Proof of historical income to bank	( )	( )	( )	( )	( )
Letter of introduction from known customer	( )	( )	( )	( )	( )
Any other (specify).....	( )	( )	( )	( )	( )



.....  
.....

**4. If collateral is required above, which of the following are deemed as collateral in your bank?**

- Personal guarantees of friends and relatives ()
- Legal pledge over term deposits ()
- Legal pledge treasury bills/ bonds ()
- Legal pledge over shares ()
- Legal assignment over assignment ()
- Motor vehicle logbooks ()
- Any other (specify)..... ()

.....

**5. Does your institution offer the following to micro, small and medium sized firms?**

	<b>Yes</b>	<b>No</b>
Hire purchase	()	()
Invoice discounting	()	()
Debt/ Account receivable factoring	()	()
Finance lease on capital	()	()
Mortgage on real estate	()	()

**6. Does your microfinance institution undertake financial statement analysis of potential borrowers?**

Yes

No

**a) If yes as above, to what extent are the following ratios considered?**

	Least considered		Most considered		
	1	2	3	4	5
Debt equity ratio	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Current ratio	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Inventory turnover	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Account receivable turnover	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Accounts payable turnover	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Net trade cycle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Profit margins	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Return on Total asset	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Return on Equity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Return on capital	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Return on capital employed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Break even as percentage of sales	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Debt service ratio	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Any other (specify).....					
.....					

**7. Does your bank subject small business borrowers to a rating system for approval and pricing?**

- Yes
- No

**a) If yes as above, how was the rating system acquired?**

- Developed internally
- Developed from the head office
- Purchased from a vendor
- Any other (specify).....
- .....

**b) What weighting does the following variable have in your bank credit score?**

	Least Weight		Moderate Weight		Highest Weight
	1	2	3	4	5
General business standing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Management expertise	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Competitive advantage of the borrower	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Industry growth	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Credit history promoters	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Financial statements availability	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Debt service	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
External reports	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Business account conduct	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Operating margins	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Business capitalization	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Liquidity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Collateral or secondary sources	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Security cover	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Repayment period	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Any other (Specify).....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

.....

**8. Does your institution have a small business relationship department?**

Yes

No

**a) To what extent is the relationship team involved in the following?**

	Least developed		Most developed		
Marketing/ sales	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Loan proposal preparation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Financial analysis	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Customer site visit	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Loan monitoring	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Collateral documentation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Problem asset monitoring	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Any other (Specify).....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

.....

**b.)When does your institution decide that a client has defaulted on loan repayment?**

	Less influence		Most influence		
	1	2	3	4	5
One late payment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Two late payments	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Three late payments	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Four late payments	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Five late payments	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Any other (Specify).....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**c.)How does the institution deal with clients who are difficult to repay?**

	Least done		Most done		
Use auctioneers to recover Debt	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sell of their property	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Issue a demand letter	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Leave them alone to decide when to pay	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Write off debt as bad debt	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Write off interest & allow them to pay Principal	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Any other (specify) .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**\*\*THANK YOU FOR YOUR TIMEAND SUPPORT\*\***

