THE EFFECT OF FOREIGN EXCHANGE RISK MANAGEMENT ON FINANCIAL PERFORMANCE OF MICROFINANCE INSTITUTIONS IN KENYA

BY

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DECLARATION

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

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

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DEDICATION

This project is specially dedicated to my Dad, Simon Nguro and Mum, Susan Gathoni. Without their encouragement, understanding, support and love, completion of this study could not have been possible.

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LIST OF ABBREVIATIONS

AMFI-Association of Microfinance Institutions of Kenya

CBK-Central Bank of Kenya

FERM-Foreign Exchange Risk Management

IFE-International Fisher Effect

MFI-Microfinance Institution

PPP-Purchasing Power Parity

ABSTRACT

Foreign exchange risk management is complex and requires a thorough understanding of the MFI's business needs, its internal and external environment and exposures to the financial markets. Although there is a growing literature linking foreign exchange risk management to company performance there is, equally, a growing diversity of results. The study thus sought to assess the effect of foreign exchange risk management on financial performance of MFIs in Kenya.

A descriptive study design was utilized to examine and explore descriptive characteristics of several variables of interest. The target population for this study constituted the 44 MFI's registered by the Association of Microfinance Institutions of Kenya. The primary data was collected from the MFI's by use of self-administered questionnaires to; loans officers/credit officers, accountants and treasury/risk managers. Secondary data was on the other hand requested for from individual MFI's records & publications. Multiple linear regression analysis was used to examine the magnitude of influence of the independent variable on the respective dependent variables.

It was found out that a strong positive relationship exists between financial performance in terms of ROA and use of forward contracts and options as foreign exchange risk management techniques. A positive relationship is further observed between ROA and all the other independent variables. It was also noted from the descriptive statistics that: CFOs define the foreign exchange management policies in most MFIs; the CEOs are in charge of the implementation of the foreign exchange risk management policies; and a relatively close frequency is observed in the measurements suggesting the possibility of foreign exchange risks and the degree of alertness towards countering the risks among the institutions.

The study recommends that MFIs should explore avenues to enhance capacities within them for managing foreign exchange risk. They should explore the route of continued education for those in workplaces through short term training that should be very practical oriented. The study also recommends that firms should look at instituting a sound risk management system and also needs to formulate their hedging strategy that suits their specific firm characteristics and exposures.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

It is widely acknowledged that microfinance—loans, savings and other financial services specially tailored to meet the needs of low-income clients—have enabled numerous families to lift themselves out of poverty. Yet, the promise of microfinance remains unrealized for most of the world's poor. Financing is a scarce factor for many poor people around the world who wish to improve their livelihood. In order for microfinance institutions (MFIs) to be able to help these people gain access to financial sources they need to be able to cover their costs and earn profits. It is hard for MFIs to achieve their goals if they are not performing well financially. If MFIs are to close the significant supply-demand gap, external financing sources will continue to be tapped for the foreseeable future, making currency risk management an important priority for MFIs and their investors. Donor agencies, local governments, and others are promoting competition and stressing financial sustainability as ways to maximize the breadth of outreach (Armendariz de Aghion&Morduch, 2004).

Despite the successes of many MFIs, millions of low-income individuals in developing countries still do not have access to financial services. High operating costs and capital constraints within the MFI industry have prevented MFIs from meeting the enormous demand. Additionally, Dehejia, Montgomery, and Morduch (2005) show that the demand for credit by the poor is NOT inelastic. The high interest rates charged may be limiting the ability of MFIs to serve poorer potential clients.

Hard currency loans constitute an important source of financing for the loan capital needs of microfinance institutions (MFIs). Although such loans may, in certain circumstances, appear to be a relatively cost-effective and easy source of funding, they also have the significant disadvantage of creating foreign exchange risk for those MFIs whose principal assets are microloans denominated in the local currency of the MFI's country of operation. Despite this, recent surveys indicate that few MFIs exposed to foreign exchange risk take effective steps to reduce that risk.

1.1.1 Foreign Exchange Risk Management

Foreign Exchange risk arises from the mismatch between the assets held by an MFI (denominated in the local currency of the MFI's country of operation) and the loans that fund its balance sheet (often denominated in USD or a stronger currency). An unexpected depreciation of the local currency against the USD can dramatically increase the cost of servicing debt relative to revenues. It can also negatively affect the creditworthiness of the MFI (hence the ability to raise new funds) and even generate a negative net income, with serious consequences for the long-term financial stability of the MFI. MFIs are particularly vulnerable to foreign exchange rate risk, since they operate in developing countries where the risk of currency depreciation is high.

Furthermore, extreme currency depreciation tends to be highly correlated with a general deterioration of local economic conditions, which can cause higher loan delinquencies and a reduction in profitability of financial activities.

Several studies have attempted to provide insight into the practices of foreign exchange risk management. Fatemi and Glaum (2000) found out that most of the

firms use derivative instruments for hedging purposes and that translation exposure was the foreign exchange exposure that most firms were greatly concerned with. Belk and Glaum (1990) found that companies were less concerned about the real impact of exchange rate changes on the competitive position of the companies. Bradley and Moles (2002) argued that there is a significant relationship between firm's exchange rate sensitivity and the degree to which it sells sources and funds itself internationally.

Like any other institution that has a cross-border obligation denominated in hard currency, MFIs also can be affected by convertibility and transfer risks. In both cases, the MFI may have the financial capacity to make its hard currency payments, but cannot do so because of national government restrictions or prohibitions on making foreign currency available for sale or transferring hard currency outside the country. These risks are known respectively as convertibility risk and as transfer (or remittance) risk. Organizations exposed to foreign exchange risk have three options. First, they can choose to do nothing about their exposure and accept the consequences of variations in currency values or the possibility that their government may impose restrictions on the availability or transfer of foreign currency. This is not a recommended path. Second, they can "hedge" against their exposure. For example, they can purchase a financial instrument that will protect the organization against the consequences of those adverse movements in foreign exchange rates. Finally, they can partially hedge against the risks, or limit their hard currency exposure to set levels.

1.1.1.1 Forward Contracts

An FX forward is an agreement to purchase or sell a set amount of a foreign currency at a specified price for settlement at a predetermined future date, or within a predetermined window of time. FX forwards help investors manage the risk inherent in currency markets by predetermining the rate and date on which they will purchase or sell a given amount of foreign exchange. The portfolio is thus protected against a possible negative currency move and there are no additional price complications in execution from doing a spot trade. Deliverable forwards are contracts that are settled with the physical delivery of the foreign currency. Non-deliverable forwards are cash-settled for the gain or loss on the value of the contract.

Bodnar and Richard (1998) indicate that the most frequently used method is forward exchange contract. With forwards, the firm can be fully hedged. However, some risks including settlement risk that exchange rate moves in the opposite direction as either forecast, and counter party risk which the other party is unable to perform on the contract, the high cost of forward contracts will sometimes prevent firms to exercise this tool to fully hedge their exposures.

1.1.1.2 Cross-Currency Swaps

Dawson et al (1994) define a swap as an exchange of liabilities denominated in a different currency involving two parties who agree to exchange specific amounts of two different currencies at the outset in their home currency. The two parties make periodic payments over time in accordance to predetermined rule to reflect differences in interest rates between the two currencies involved. A cross-currency swap is generally used at the start of a loan period. Cross currency swaps allow two

counterparties to exchange specific amounts of two different currencies at the outset and to make repayments over time. In a currency swap, interest payments in two currencies are exchanged over the life of the contract, and the principal amounts are repaid either at maturity or according to a predetermined amortization schedule.

Lel and Nianian (2007) outline that as a relative new financial derivative used to hedge foreign exchange exposure, currency swaps have a rapid development. Since its introduction on a global scale in early 1980's currency swap market has become one of the largest financial derivative markets in the world.

1.1.1.3 Options

An option is a unique financial instrument or contract that confers upon the holder or the buyer thereof the right, but not an obligation, to buy or sell an underlying asset, at a specified price, on or up to a specified date. In short, the option buyer can simply let the right lapse by not exercising it. On the other hand, if the option buyer chooses to exercise the right, the seller of the option has an obligation to perform the contract according to the agreed terms. The asset underlying a currency option can be a spot currency or a futures contract on a currency. An option on a spot currency gives the option buyer the right to buy or sell the said currency against another currency, while an option on a currency futures contract gives the option buyer the right to establish a long or short position in the relevant currency futures contract. Options on spot currencies are commonly available in the interbank over-the-counter markets, while those on currency futures are traded on exchanges.

Marshal (1997) examined the extent of derivatives and the reasons for their use by carrying out surveys in 250 large UK companies. They found a wide spread use of both forwards and options (96% and 59% respectively). They pointed out that comparing to the primary reason for the use of forwards were company policy, commercial reasons and risk aversions, a good understating of instrument, and price were prominent. While the primary reason to use options was company management.

1.1.1.4 Leading and Lagging

This involves delaying the original payment but within a company's divisions or subsidiaries. If the currency of a subsidiary is sought to appreciate, it may accelerate its payment (leading) and realize the payment before the currency appreciates. The reverse is true if a currency is expected to depreciate, then the company will delay its payment (lagging). However, the first should only take into account the gain or loss from the currency but also the cost for increasing or decreasing the liquidity. According to Abor (2005), a lead strategy, involves attempting to collect foreign currency receivables only when a foreign currency is expected to depreciate and paying foreign currency payables before they are due when a currency is expected to appreciate. On the other hand a lag strategy involves delaying collection of foreign currency receivables if that currency is expected to appreciate and delaying payables if the currency is expected to depreciate.

1.1.1.5 Netting

This is the reduction in the number of transactions that a firm needs to make in order to cover an exposure. It requires the firm to have a centralized organization of its cash management. The centralization means that the companies collect foreign currency

cash flows between subsidiaries and groups them together as inflows and outflows in the same currency. The objective of netting is to save transaction costs by netting off intercompany balances before arranging payment. This is where multinational groups engage in intergroup trading i.e. related companies located in different countries trade with one another. The advantages are: reduction in foreign exchange purchase costs, commission, selling and buying rates, and less loss in interest from having money in transit. Loss due to netting positions by swap dealers can be as little as10% for agricultural commodities and quite large for energy and metals (CFTC, 2009).

1.1.1.6 Price Adjustments

Involves changing prices in different manners. When the local currency of a subsidiary is devaluating, the subsidiary can increase the price, so as to cancel the effect of devaluation. This technique is particularly used in countries where devaluation is high and where derivative markets are efficient. However, as a disadvantage of this method, prices cannot be raised without any consideration about competitors because if prices increase too much the client will choose an equivalent cheaper product/service from a competitor. Flexibility may be exhibited in the ability to pass through changes in the price of inputs or in the general level of prices to consumers through frequent price adjustments (Jacque &Lorange, 1984).

1.1.2 Financial Performance

The firm's debt ratio is the proportion of the firm's debt in relation to the total equity finance in the company's capital structure (McMenamin, 1999). This key ratio is famously known as an indicator of the company's long term solvency position and

also indicator of the financial risk position of the company. It's obtained by dividing the total company debt with the total shareholders' funds.

Gross profit is the difference between revenue and cost of goods sold. Gross Margin is the ratio of gross profit to revenue. Depends on situation or decision analyzed both or one of these two performance indicators can be more suitable. For merchandising decisions in company with large assortment of products gross profit expressed in money terms needs to be used when measuring financial result on the level of all product assortments or on the level of big product group. This allows seeing what the overall financial result without digging into details is.

Gross profits are the cleanest accounting measure of true economic profitability. The farther down the income statement one goes, the more polluted profitability measures become, and the less related they are to true economic profitability. For example, a firm that has both lower production costs and higher sales than its competitors is unambiguously more profitable. Even so, it can easily have lower earnings than its competitors.

The Return on Assets ratio (ROA), also called return on investment, is an important profitability ratio because it measures the efficiency with which the company is managing its investment in assets and using them to generate profit. It measures the amount of profit earned relative to the firm's level of investment in total assets. The return on assets ratio is related to the asset management category of financial ratios. The calculation for the return on assets ratio is: Net Income/Total Assets (Brealey, Richard A., Myers, Steward C. and Allan, Franklin 2008). In MIX definition the return on asset ratio is: (Net Operating Income – Taxes) / Average Assets. The higher

the percentage, the better, as a high percentage means that the company is succeeding in using its assets to generate sales.

1.1.3 Effect of Foreign Exchange Risk Management on Financial Performance

Although there is a growing literature linking foreign exchange risk management to company performance there is, equally, a growing diversity of results. The diversity of results can be partly explained by differences in the theoretical perspectives applied, selected research methodologies, measurement of performance and conflicting views on general employee involvement in decision making and, in part, to the contextual nature of the individual firm.

Even studies based on the integrative models of employee involvement; incorporating different theoretical perspectives and various employee attributes, provide inconclusive results, suggesting that currency risk management has, at least, an indirect effect on company performance (Adler and Dumas, 2010).

Previous research studies have provided a link between currency risk management and firm performance (See Duangploy*et al.,* 2008); (Ankrom, 2007) with very little conclusive results.

Others (Lee, 2010) have shown that firms that have robust currency risk management frameworks have higher firm performance. The main characteristics of good risk management identified in these studies include; leadership of the risk team, adequate compensation of the risk team and compliance with laws & best practice. There is a view that companies with risk management departments are better corporate performers. In recent times on the contrary, emphasis has geared towards general employee training in currency risk management. Dufey,

(2005) contend that risk management departments without well trained personnel to man the departments are less effective and the company will many a time be prone to such currency risks.

The use of foreign exchange management strategies results in reduced foreign exchange exposure hence minimal losses. According to Carter et al. (2003) changes in exchange rate can influence a firms current and future expected cash flows and ultimately, stock prices. The direction and magnitude of changes in exchange rate on firms value are a function of a firm's corporate hedging policy which indicates whether the firm utilizes operational hedges and financial hedges to manage currency exposure and the structure of its foreign currency cash flows. Stacy and Williamson, (2010) examine risk management and performance in a sample of firms in 14 companies listed on the Johannesburg stock exchange. They find that better risk management is associated with better performance in the form of Tobin's q and ROA.

1.1.4 Microfinance Institutions in Kenya

Microfinance refers to giving poor and low income people with no access to financial services through the ordinary formal financial sector the provision of different types of small-scale financial services. The fundamental services that the MFIs provide are the same that conventional financial institutions offer to their clients; the only difference is the scale and method of service delivery (Ledgerwood, 1999).

The Kenya microfinance sector consists of a large number of competing institutions which vary in formality, commercial orientation, professionalism, visibility, size, geographical coverage etc. These institutions range from informal organizations e.g

Rotating Savings and Credit Associations (ROSCAs), Financial Services Associations (FSAs), Savings and Credit Cooperative Societies (SACCOs), Microfinance NGOs, to commercial banks (AlekeDondo, 2003)

Here is a definition of microfinance used by Gateway (2012) that I will use throughout this thesis: "*Microfinance is often defined as financial services for poor and low-income clients offered by different types of service provider"* (Gateway, 2012). Some MFIs also provide enterprise development services, such as skills training and social services, these are not included in this definition, and it only focuses on the financial side of microfinance, which I also will do in this thesis. There have been a huge growth in the microfinance industry for over a decade, but there is still a long way to go, it only reaches a small percentage of its potential market worldwide (Ledgerwood& White, 2006). Microfinance can be a powerful instrument against poverty, but it is only when supply meets demand that the poor people can find their way out of poverty (Helms, 2006). According to the most recent estimates microfinance has reached one hundred and fifty million individuals worldwide (Armendariz&Labie, 2011). Still 90 percent of the population of the developing world does not have access to formal sector financial services (Robinson, 2001).

Omino (2005) puts emphasis on sound development of microfinance institutions as vital ingredients for investments, employment and to spur the economic growth. As a result of their flexibility and the way they operate, they are exposed to various risks which include financial risks, foreign exchange risks, operational risks and strategic risks. And as competition increases and the sector mature, MFIs are faced with numerous risks as highlighted above and the sector must mitigate the risks in order to sustain the business and remain relevant in the long run (Omino, 2005).

Given the ever dynamic and challenging business environment, a Micro Finance Institution (MFI) is bound to be exposed to various risks. The problem is that Micro Finance Institutions that do not adapt and/or institutionalize financial risk management strategies are likely to witness poor growth patterns compared with those that adapt financial risk management strategies. The threat that MFIs may experience stunted growth or collapse as a result of poor financial risk management is not without any basis. The threat is so real such that some well- known MFIs have collapsed in the past. In 2005, for example, government regulators in Kenya closed Akiba Micro Finance on the grounds that it had unlawfully taken customers deposits and reneged on the repayments (Ellis et al, 2007). The report by the Task force on Pyramid Schemes (2008) was formed to investigate the collapse of pyramid schemes in Kenya (pyramids are a form of microfinance). The taskforce found that Kenyans lost more than Sh34 billion to schemes such as Developing Enterprise Community Initiative (DECI).

1.2 Research Problem

Foreign exchange risk management is complex and requires a thorough understanding of the MFI's business needs, its internal and external environment and exposures to the financial markets. Foreign exchange risk hedging needs to be tailored around the MFI mission and vision statements, operational infrastructure, risk exposure and risk appetite. Consequently, there are no 'one size fits all' solutions. Challenges abound as microfinance institutions commit themselves to improving risk management practices (Institute of International Finance – IIF). The large percentage of the unbanked economically active people in Kenya has triggered the proliferation of both officially

and non-officially recognized microfinance institutions providing financial services such as savings, loans and remittances as well as other social intermediation services to millions of Kenyans all over the country. However essential these institutions are - giving their quest to liberate people from financial insecurity- its clientele is so massive that a collapse or mismanagement of these institutions can deal a hefty economic shock to millions of people in the country.

The microfinance industry in Kenya is characterized by numerous teething problems. These emanate from their calibre of target customers and the seemingly liberal and/or informal system of operations. The rapid increase in private sector, international investment in microfinance, plus a dose of common sense, makes foreign currency risk management an important topic for microfinance lenders and borrowers. Seventy percent of cross-border, fixed-income investments are denominated in foreign currencies (meaning currencies other than the currencies in which the MFIs are operating), leaving MFIs with significant foreign exchange exposure. During the most recent global financial crisis, some MFIs that depend on foreign currency-denominated debt have suffered heavy foreign exchange losses that threaten their overall viability (Littlefield and Kneiding 2009).

According to Njunge (2012) in a study on a survey of the foreign exchange rate risk management practices adopted by MFI's in Kenya, he concludes that there were various foreign exchange risk management practices adopted by micro finance institutions in Kenya. These included price adjustment, delay of payment when foreign currency was strong and delay accelerate when weak, forward covers, use of swaps, Netting and price negotiation. The least used methods of foreign risk

management were prepayment/Advance payment and buying and saving currency in advance. Oduori (2012) while focusing on the strategies used by MFI's in combating emerging operational, strategic and credit risks revealed that most of the MFI's used loan securitization as a strategy to manage these risks.

These previous studies have focused on the practices adopted by MFIs in managing foreign exchange risk without relating these management practices to an MFI's financial performance. With increased foreign donor funding to MFIs, the fluctuations in exchange rates tend to pose significant foreign exchange risk hence the management of the foreign exchange risk ultimately affects the financial performance of the MFI. The following research question therefore guided this study: what is the effect of foreign exchange risk management on financial performance of MFIs in Kenya?

1.3 Objectives of the study

1. To establish the different modes of foreign exchange risk management
2. To assess the effect of foreign exchange risk management on financial performance of MFIs in Kenya.

1.4 Value of the Study

The study will enrich Treasury/Risk managers with knowledge on risk management especially techniques associated with foreign exchange risk management within the Kenyan Microfinance industry. Most Treasury Managers of banks, insurance companies and other financial institutions will use the findings in the enforcement of such foreign exchange risk management policies in such organizations. The literature,

study findings and recommendations will supplement the existing body of knowledge on microfinance foreign exchange risk management.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter highlights the importance of foreign exchange risk management, various categories of currency risks and various techniques used to manage foreign exchange risks as advanced by a number of scholars. The chapter also focuses on review of empirical studies, general literature review, and theoretical framework and finally the conclusions from literature review are presented.

2.2 Review of Theories

There are various theories that suggest the irrelevance of managing the risk of change in exchange rates. These theories suggest that changes in exchange rates are evened out in some form or the other.

2.2.1 International Fisher Effect

This model was developed by Irving Fisher in his book The Theory of Interest (1930). It uses market interest rates rather than inflation rates to explain why exchange rates change over time. The International Fisher effect states that exchange rates changes are balance out by interest rate changes. The Fisher theory simply argues that real interest rates across countries was equal due to the possibility of arbitrage opportunities between financial markets which generally occurs in the form of capital flows. Real interest rate equality implies that the country with the higher interest rate should also have a higher inflation rate which, in turn, makes the real value of the country's currency decrease over time. The relationship between relative interest rates and foreign exchange rates is explained within the interest rate theory of exchange

rate expectations. Nominal interest rate differentials between two countries tend to reflect exchange rate fluctuations. Giddy (1977) called this the international Fisher effect, a close relationship to the Fisher effect, a phenomenon observed by Irving Fisher (1896). If the international Fisher effect holds, interest rates in appreciating currencies tend to be low enough, and in depreciating currencies high enough, to offset expected currency gains and losses.

The International Fisher Effect (IFE) theory suggests that foreign currencies with relatively high interest rates will tend to depreciate because the high nominal interest rates reflect expected rate of inflation (Madura, 2010). Does the interest rate differential actually help predict future currency movement? Available evidence is mixed as in the case of PPP theory. In the long-run, a relationship between interest rate differentials and subsequent changes in spot exchange rate seems to exist but with considerable deviations in the short run (Hill, 2004). The international Fisher effect is known not to be a good predictor of short-run changes in spot exchange rates (Cumby and Obstfeld, 1981).

2.2.2 Purchasing Power Parity

The Purchasing Power Parity (PPP) was first developed by the Swedish economist Gustav Cassel in 1920s to examine the relationship between the exchange rates of different countries. The PPP holds if and when exchange rates move to offset the inflation rate differentials between two countries. The PPP is also defined as the basis of the “law of one price” which asserts that the exchange rate between two currencies should be equal to the ratio of the price level of identical goods and services in the two countries. The Purchasing Power Parity (PPP) theorem explains the relationship

between relative prices of goods and exchange rates. The PPP theorem propounds that under a floating exchange regime, a relative change in purchasing power parity for any pair of currency calculated as a price ratio of traded goods would tend to be approximated by a change in the equilibrium rate of exchange between these two currencies (Shapiro and Rutenberg, 1976).

According to the PPP, increase in the price level of a country will cause depreciation of its exchange rate relative to other countries, thereby keeping the relative price of identical goods the same across countries. This theory suggests that exchange rate changes were offset by relative price indices/inflation since the Law of One Price should hold. PPP follows from the law of one price, which states that in competitive markets, identical goods will sell for identical prices when valued in the same currency. It relates to an individual product and its generalization is the absolute version of PPP. Relative PPP relates to changes in prices and exchange rates, rather than on absolute price levels. It states that change in exchange rates is proportional to the change in the ratio of the two nations' price levels, structural relationships remaining unchanged.

The assumptions for PPP to hold are that goods are identical, all goods are tradable, there are no transportation costs, information gaps, taxes, tariffs, or restrictions of trade, and exchange rates are influenced only by relative inflation rates. Due to these restrictive assumptions and empirical violation of the law of one price which is the building block of PPP, monetary models of exchange rate determination was adopted. Since currencies are considered assets, exchange rates are asset prices that adjust to equilibrate international trade in financial assets. Like other asset prices, exchange

rates are determined by expectations about the future. Since currencies are treated as assets this approach is called the asset approach.

2.3 Determinants of Financial Performance

The Anglo-Saxon principle on corporate governance focuses on maximizing shareholder value. This principle provides a conceptual and operational framework for evaluating business performance. The value of shareholders, defined as market value of a company is dependent on several factors: the current profitability of the company, its risks, and its economic growth essential for future company earnings. All of these are major factors influencing the market value of a company. Other studies (Brief & Lawson, 1992; and Peasnell, 1996) argue the opposite, that financial indicators based on accounting information are sufficient in order to determine the value for shareholders. A study conducted by Javed and Iqbal (2007) explored impact of corporate governance on firm performance by creating indices for board characteristics, transparency and disclosure, and shareholder and ownership characteristics. Results of the study indicate a significant relation between indices and performance except for transparency and disclosure. Another recent research conducted by Yasser et al. (2011), tested for board characteristics, also support the previous findings.

A company's financial performance is directly influenced by its market position. Profitability can be decomposed into its main components: net turnover and net profit margin. Ross et al. (1996) argues that both can influence the profitability of a company one time. If a high turnover means better use of assets owned by the company and therefore better efficiency, a higher profit margin means that the entity

has substantial market power. Risk and growth are two other important factors influencing a firm's financial performance. Since market value is conditioned by the company's results, the level of risk exposure can cause changes in its market value.

Economic growth is another component that helps to achieve a better position on the financial markets, because market value also takes into consideration expected future profits. The size of the company can have a positive effect on financial performance because larger firms can use this advantage to get some financial benefits in business relations. Large companies have easier access to the most important factors of production, including human resources. Also, large organizations often get cheaper funding. The main objective of the company has evolved over time; the need for short term profit is replaced by the need for long-term growth of the company (sustainable growth). Therefore, a sustainable growth rate higher than 1 would have a positive impact on performance. For the companies listed at the stock exchange, its ability to distribute dividends is a proof of stability. However, until now there is no proof of a link between this factor and profitability, since profits can be used for purposes other than to distribute dividends (Ross et al.,1996).

Ownership structure of firm is also found to have a great impact on the performance. The phenomenon has been empirically tested on various occasions that internal ownership results in long-term firm performance (Reddy, 2010). And concentrated ownerships and institutional ownerships lead to better control and monitoring of the board of directors and somehow force them to undertake profitable projects to ensure future earnings (Bhagat and Bolton, 2008). However small shareholdings by public do not support long-term plans, these owners are mostly interested in the short-term

profits and not the overall growth of the company and same is the case for small or no internal ownership. So, the ownership structure should be carefully balanced for a firm to perform well. Certain firm characteristics are associated with high performance of firm. These include size (Love and Rachinsky, 2007), growth rate, dividends, liquidity (Gurbuz et al., 2010) and sales (Forbes, 2002). The forms that have better growth rate can afford better machinery, and then gradually the assets and size of the firm will increase. Large firms attract better managers and workers who in turn contribute to the performance of the firm. So, both firm and its people support each other's goals.

2.4 Review of Empirical Studies

Griffin and Stulz (2001) find the effect of exchange rate shocks is minimal in explaining relative US industry financial performance and is even smaller in other countries that are more open to trade finding that industry effects are more significant than exchange rate effects. While there may be some differences in empirical findings, as Marston (2001) shows, foreign exchange exposure most likely depends on the competitive structure in an industry.

It is widely believed that changes in exchange rates have important implications for financial decision-making and for the profitability of firms. One of the central motivations for the creation of the euro was to eliminate exchange rate risk to enable European firms to operate free from the uncertainties of changes in relative prices resulting from exchange rate movements. At the macro level, there is evidence that the creation of such currency unions results in a dramatic increase in bilateral trade (Frankel and Rose, 2002). But do changes in exchange rates have measurable effects

on firms? The existing literature on the relationship between international stock prices (at the industry or firm level) and exchange rates finds only weak evidence of systematic exchange rate exposure (Doidge et al., 2003; Griffin and Stulz, 2001, two recent studies). This is particularly true in studies of US firm share values and exchange rates.

Bhatia (2004) made research on mitigating currency risk for investing in microfinance institutions in developing countries found that there is a clear trade-off for investors mitigating currency risk in least developed countries in the form of contract fees for the benefit of protection against currency fluctuations. The best financial instrument for investors interested in MFI's is currency options.

Hudon (2006) in his study of subsidies and financial performances of the microfinance institutions stated that financial institutions including MFI's still exhibit better management ratings. The technical, organizational and communication competencies of the top managers are the most important management dimensions to explain all financial results. Under this dimension of management, the professional skills of top managers must be emphasized. Therefore the institutions were effective in risk management performance.

Ahmed (2007) in the study of microfinance: realizing the social role of Islamic finance examined that the MFI has to create various reserves to cover various risks arising due to the nature of its assets and liabilities since it positively contributes to risk management in microfinance. Some observations and suggestions stated that risk management has become more important now and its importance will continue to

grow in the future. Factors such as the increasing competition in markets and the integration of new technology into the industry further reinforce the importance of risk management in MFI's. However, it is disturbing to note that systematic risk management is still not as widespread as it should be.

2.5 Summary of Literature Review

In Kenya, despite its adverse effects on cash inflows and outflows, Foreign Exchange Risk Management (FERM) is a somewhat new phenomenon. As such, few studies have been carried out in that area especially in the Microfinance industry. In countries, where studies on the impact of FERM on financial performance have been carried out, researchers have used a diversity of methods to justify existence of a link between the two variables. Though foreign exchange risk management is considered to involve a set of complex indicators which face substantial measurement error due to the complex nature of the interaction between risk management variables and performance indicators, the purpose of this research is to examine the influence of selected foreign exchange risk management strategies, namely the use of forward contracts, cross-currency swaps, options, leading and lagging, netting and price adjustments on the MFI's financial performance.

Three general conclusions can be drawn from the literature review of foreign exchange risk and MFIs. First, MFIs need additional funding to meet demand, and debt capital is the most likely source for this funding. Second, foreign exchange rate risk is significant, and though it is only one factor in a decision to lend to an MFI, it is a strong deterrent. Finally, the existing foreign exchange risk management practices are prohibitively expensive, either to the client or the institution.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The methodology used answers the different modes of foreign exchange risk management and the relationship between foreign exchange risk management and MFI financial performance.

This study explains the study design adopted, study population, sample selection, data source, research instruments used in the study, variable measurement , validity and reliability test, data processing, presentation and analysis and ethical consideration made during data collection.

3.2 Research Design

In (Leedy and Ormrod, 2005) a research design is a comprehensive plan that involves highlighting all the methods that was utilized in the collection and analysis of data. The research design is also in line with the research objectives and study questions. The primary focus of the study was to examine the impact of Foreign Exchange Risk Management on an MFI's financial performance over time.

A descriptive study design was utilized to examine and explore descriptive characteristics of several variables of interest. This is very important in examining how the selected MFI's managed foreign exchange risk. Again, the second research question that involves examination of the degree of financial performance also needs a descriptive research design. The survey design was opted to investigate and describe foreign exchange risk management practices of the MFI's. Since the sample size is relatively small, self-administered questionnaires were used to collect relevant data

pertaining to FERM and MFI performance. As mentioned in (Zikmund, 2002), use of a survey technique ensured quick, efficient and accurate means of obtaining data about the sample considered.

3.3 Population

Population is the entire groups or individual, events or objects having common characteristics about which the researcher wishes to make generations, international statistic indicate the likelihood that what was true of the sample is also true or the population from which is drawn. When the target population is similar the researcher has more confidence making generalization.

The target population for this study constituted the 44 registered MFIs from the Association of Microfinance Institutions of Kenya (AMFI).Thus a census study of all the 44 registered MFI's was conducted. (Appendix II)

3.4 Data Collection

Primary data was collected from the MFI's by use of self-administered questionnaires to; loans officers/credit officers, accountants and treasury/risk managers.

Secondary data was obtained from individual MFI's records & publications. This was mainly for analyzing foreign exchange risk and financial performance of MFI's. Data from the annual reports was collected over a period of time covering 5 years (i.e from 2008 to 2012).

3.4.1 Data Validity and Reliability

Reliability is defined as the degree to which measures are free from error and therefore yield consistent results and applies to a measure when similar results

obtained over time and across situations. When the outcome of a measuring process is reproducible, the measuring instrument is reliable.

3.5 Data Analysis

An analytical method involves utilization of the right analytical tools to address each research question in the study. Care is taken as the choice of a wrong analytic technique could lead to wrong conclusions. The study involved an assessment of foreign exchange risk management strategies (descriptive) and establishedthe relationship between foreign exchange risk management and MFI financial performance of the selected MFI's. Data collected from the survey was sorted, edited and corded to have the required quality and accuracy. It was then entered into SPSS for generation of frequency tables, charts, correlations and regressions.

Multiple linear regression analysis was used to examine the magnitude of influence of the independent variable on the respective dependent variables. The regression model is a multivariate model stating the MFI's ROA as a function of the selected foreign exchange risk management practices.

3.5.1 Analytical Model

The regression function that includes the dependent variable and independent variables can be written as;

$$Y = \propto + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \varepsilon$$

Where;

Y= ROA of the MFI's which is a profitability measure is the value of the dependent variable.

X_1= forward contracts

X_2=cross-currency swaps

X_3=options

X_4=leading and lagging

X_5=netting

X_6=price adjustments

ε=Error term

The independent variablesX_1, X_2, X_3, X_4, X_5, and X_6 are the foreign exchange risk management techniques used for this study which was operationalized and measured using the various questions posted to the respondents in the questionnaire. The amounts quoted by the respondents in the questionnaire for each of the hedging techniques will thus be used.

The strength of the model was measured using the t-test because the sample size is small. The level of significance of a t-test compares the means of two samples. Thus, the t-test compares the actual difference between two means in relation to the variation in the data which is expressed as the standard deviation of the difference between the means.

CHAPTER FOUR

DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

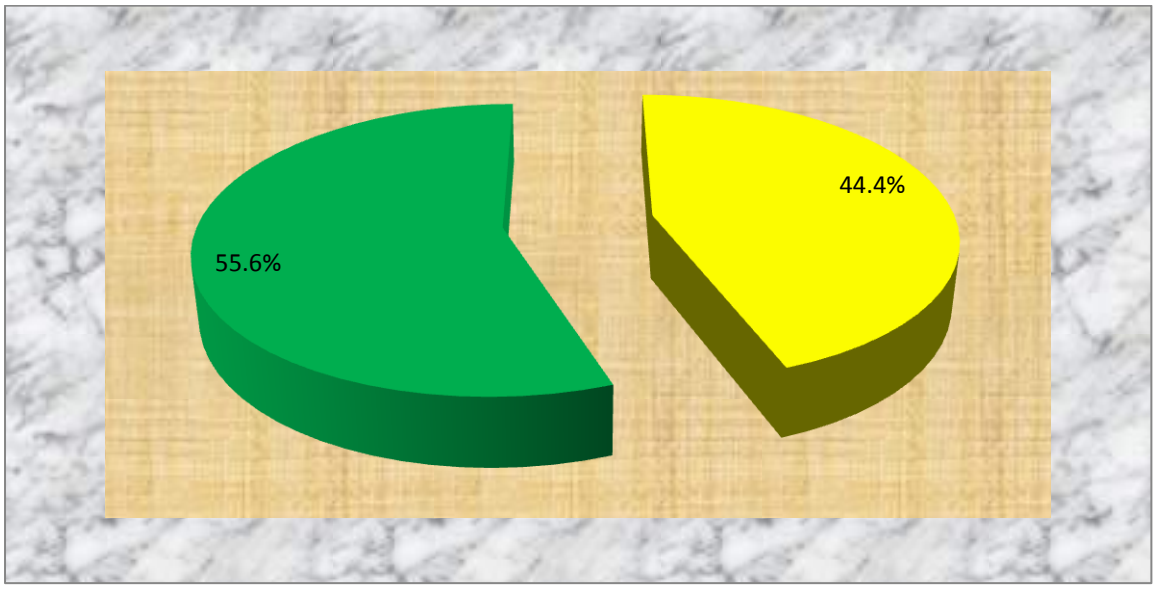
In this chapter, the study provided two types of data analysis; namely descriptive analysis and inferential analysis. The descriptive analysis helps the study to describe the relevant aspects of the phenomena under consideration and provide detailed information about each relevant variable. For the inferential analysis, the panel data regression analysis was used. While the Pearson correlation measures the degree of association between variables under consideration, the regression estimates the relationship between foreign exchange risk management and financial performance of microfinance institutions in Kenya. Furthermore, in examining if the foreign exchange risk management is significantly different from that of MFIs' financial performance, the Chi-Square Test statistics was used.

4.2 Findings

4.2.1Risk management

The study first sought to establish whether respondents had a separate risk management department. 24 (55.6%) respondents affirmed to the question, suggesting that only 24 of the registered MFIs indeed had the department. Figure 4.1 below illustrates the findings.

Figure 4.1 Whether respondents have a separate risk management department



Source; Research Findings

Only a small fraction of the registered MFIs are seen to have a separate risk management department. This could be reflective of the level of establishment of respective MFIs as to have a separate risk management department. This is expected to have bearing on the individual institutions' financial performance.

4.2.2 Factors affecting Choice to Hedge Foreign Exchange Risk

Respondents were asked to list and explain the possible factors affecting a firm's decision to hedge against foreign currency risk. Four main factors were pointed out as hereby presented.

Firm size: Firm size acts as a proxy for the cost of hedging or economies of scale. Risk management involves fixed costs of setting up of computer systems and training/hiring of personnel in foreign exchange management. Moreover, large firms might be considered as more creditworthy counterparties for forward or swap transactions, thus further reducing their cost of hedging.

Leverage: According to the risk management literature, firms with high leverage have greater incentive to engage in hedging because doing so reduces the probability, and thus the expected cost of financial distress. Highly levered firms avoid foreign debt as a means to hedge and use derivatives.

Liquidity and profitability: Firms with highly liquid assets or high profitability have less incentive to engage in hedging because they are exposed to a lower probability of financial distress.

Sales growth: Sales growth is a factor determining decision to hedge as opportunities are more likely to be affected by the underinvestment problem. For these firms, hedging will reduce the probability of having to rely on external financing, which is costly for information asymmetry reasons, and thus enable them to enjoy uninterrupted high growth.

4.2.3 Foreign Exchange Risk Assessment

On a five-point likert scale (1 = Strongly agree, 2 = Agree, 3 = Neutral, 4 = Disagree, 4 = Strongly disagree), the study sought to determine the levels of agreement among respondents with statements posed by the researcher regarding foreign exchange risk quantification. The means and standard deviations generated from the responses are provided in table 4.1 below.

Table 4.1 Descriptive Statistics on Foreign Exchange Risk Quantification

Statement	N	Mean	SD
The firm often carries out foreign exchange exposure in different currencies	44	1.73	.428
The firm sets extensive budgeting systems to handle currency risk projections	44	2.61	.547
The firm purchases exchange rate forecasts from the foreign exchange Advisory services to make its own forecasts	44	3.25	.476
We have an up-to-date system that helps to handle currency risk projections	44	1.18	.553
There are revenue projections incorporating foreign exchange rate movements in this firm	44	3.21	.502

Source: Research Findings

The study established overall high agreement levels among respondents on the questions posed, suggesting the levels of servicing requirements on foreign currency debt obligations which would be expected to rise dramatically for local currency operators if there is depreciation or devaluation of the local currency. Likewise, gains result if the reverse were true. High scores from the findings were recorded to statements that 'the firm often carries out foreign exchange exposure projections in different currencies' scoring a mean of 1.73 and a standard deviation of 0.428 and that 'we have an up-to-date system that helps to handle currency risk projections' having a mean of 1.18 and standard deviation of 0.553.

Table 4.2 Descriptive Statistics on Foreign Exchange Risk Reduction and Control

Statement	N	Mean	SD
We minimize exposure through early payments of foreign currencies before they are due.	44	2.46	.509
If possible, we do delay foreign currency payments to a later date (lagging)	44	2.74	.583
We also match costs with revenues denominated in similar currencies to reduce the impact (matching strategy)	44	1.83	.406
At times we also forego foreign currency denominated financing if its anticipated that exchange rates was volatile later	44	2.15	.562
We request our bankers to reconsider their positions in case of adverse foreign exchange risk exposures	44	1.42	.494

Source: Research Findings

Results in the table above provide the various strategies to address the foreign exchange risk problem broadly involving three tracks: action by individual banks to control their Foreign Exchange Risk exposures; action by industry groups to provide risk-reducing services for settling Foreign Exchange trades; and action by central banks to induce private sector progress on the previous two tracks. High scores in agreement were recorded for the matching strategy with a mean of 1.83 and standard deviation of 0.406 and the request to bankers to reconsider their positions in case of adverse foreign exchange risk exposures scoring a mean of 1.42 and standard deviation of 0.494.

Table 4.3 Descriptive Statistics on Foreign Exchange Risk Retention

Statement	N	Mean	SD
At times, we retain foreign exchange risk whenever the potential cost due to exchange rate movements is small relative to company profits	44	3.31	.473
We at times also retain foreign exchange risk when the exchange rate movement is in our favor	44	3.27	.556
Sometimes we contain the risk because other currency risk management strategies are somewhat expensive	44	3.44	.451
We can also retain the risk when there is virtually no option	44	2.23	.588

Source: Research Findings

Respondents appear neutral to most of the questions posed as presented in the findings in table 4.3 above. Notable agreements are observed with the statements that the MFIs can also retain the risk when there is virtually no option with mean 2.23 and standard deviation .588. The neutral responses suggest some level of indifferentness with foreign exchange risk retention regardless of the state of affairs. This underscores the commitment among financial institutions to avert risks at all cost.

4.2.4 Regression Analysis

To establish the relationship between foreign exchange risk management and financial performance of Micro Finance Institutions in Kenya, a multiple regression analysis was conducted. The regression model was as follows: $ROA = \alpha + \beta_1$ (Forward contracts) $+ \beta_2$ (cross-currency swaps)$+\beta_3$ (options) $+\beta_4$ (leading and lagging) $+ \beta_5$ netting$+ \beta_6$ (price adjustments) $+ \varepsilon$

Regression analysis also produced correlation, coefficient of determination and analysis of variance (ANOVA). Correlation sought to show the nature of relationship between dependent and independent variables and coefficient of determination showed the strength of the relationship. Analysis of variance was done to show whether there is a significant mean difference between dependent and independent variables. The ANOVA was conducted at 95% confidence level.

Table 4.4Model Goodness of Fit

R	R^2	Adjusted R^2	Std. Error of the Estimate
0.854	0.692	0.571	0.070132

a. Predictors: (Constant), Forward contracts, Cross-currency swaps, Options, Leading and lagging, Price adjustments

b. Dependent Variable: ROA

Regression analysis was used to establish the relationship between ROA and the factors that affects variables. The results showed a correlation value (R) of 0.854 which depicts that there is a good linear dependence of ROA on forward contracts, cross-currency swaps, options, leading and lagging and price adjustments.

Table 4.5 Analysis of Variance (ANOVA)

	Sum of Squares	Df	Mean Square	F	Sig
Regression	`5.243	3	2.367	4.896	.045(a)
Residual	16.501	12	.536		
Total	21.744	15			

a Predictors: (Constant), Forward Contracts, Cross-currency swaps, Options, Leading and lagging, Netting, Price adjustments

b Dependent Variable: Return on Assets (ROA)

ANOVA statistics was conducted to determine the differences in the means of the dependent and independent variables thus show whether a relationship exists between the two. The p-value of 0.045 implies that ROA has a significant joint relationship with forward contracts, cross-currency swaps, options, leading and lagging and price adjustments which is significant at 5 percent level of significance. This also depicted the significance of the regression analysis done at 95% confidence level.

Table 4.6Regression Coefficient Results

	Unstandardized Coefficients		**Standardized Coefficients**	**T**	**Sig.**
	B	**Std. Error**	**Beta**		
(Constant)	2.547	3.017		1.465	.124
Forward contracts	1.632	.687	.324	2.476	.021
Cross-currency swaps	0.538	.645	.301	2.132	.039
Options	1.304	.813	.076	.564	.043
Leading and lagging	0.698	.026	.687	1.398	.031
Netting	0.514	.011	.507	1.324	.029
Price adjustments	0.423	.712	.089	1.098	.101

a. Dependent Variable: ROA

From the data in the above table, forward contracts and options are seen to be strongly and positively correlated with ROA. A positive relationship is further observed

between ROA and all the other independent variables. The established regression equation was:

$$\mathbf{Y = 2.547 + 1.632X_1 + 0.538X_2 + 1.304X_3 + 0.698X_4 + 0.514X_5 + 0.423X_6}$$

In the model it can be seen that taking the independent variables' value at zero, the ROA would be 2.547.

4.3 Interpretation of Findings

Regression analysis was conducted to empirically determine whether independent variables were a significant determinant of financial performance. Regression results indicate that the goodness of fit for the regression between independent variables and financial performance is satisfactory. An R squared of 0.692 indicates that 69.2% of the variances in return on assets are explained by the variances in the independent variables. This also implies that 30.8% of the variances in financial performance cannot be explained by the independent variables and is actually attributed to variables not included in the model.

ANOVA statistics indicate that the overall model was significant. This was supported by an F statistic of 4.896 and a p value of 0.045. The reported probability was less than the conventional probability of 0.05 (5%) significance level. The ANOVA results imply that the independent variables are good joint predictors of financial performance. The ANOVA results also indicate that predicting financial performance through independent variable yields better results than predicting financial performance through the mean.

The effect of the use of forward contracts in the management of foreign exchange risk on the MFIs financial performance is positive and significant (b1=1.632, p value=0.021). This implies the use of forward contracts leads to an increase in return on assets by 1.632 units. The relationship is significant because the p value of 0.021 is less than the critical p value of 0.05.

The effect of the use of cross-currency swaps in the management of foreign exchange risk on the MFIs financial performance is positive and significant (b1=0.538, p value=0.039). This implies the use of cross-currency swaps leads to an increase in return on assets by 0.538 units. The relationship is significant because the p value of 0.039 is less than the critical p value of 0.05.

The effect of the use of options in the management of foreign exchange risk on the MFIs financial performance is positive and significant (b1=1.304, p value=0.043). This implies the use of options leads to an increase in return on assets by 1.304 units. The relationship is significant because the p value of 0.043 is less than the critical p value of 0.05.

The effect of the use of leading and lagging in the management of foreign exchange risk on the MFIs financial performance is positive and significant (b1=0.698, p value=0.031). This implies the use of leading and lagging leads to an increase in return on assets by 0.698 units. The relationship is significant because the p value of 0.031 is less than the critical p value of 0.05.

The effect of the use of netting in the management of foreign exchange risk on the MFIs financial performance is positive and significant (b1=0.514, p value=0.029). This implies the use of netting leads to an increase in return on assets by 0.514 units. The relationship is significant because the p value of 0.029 is less than the critical p value of 0.05.

The effect of the use of price adjustments in the management of foreign exchange risk on the MFIs financial performance is positive but not significant (b1=0.423, p value=0.101). This implies the use of price adjustments leads to an increase in return on assets by 0.423 units. The relationship is not significant because the p value of 0.101 is greater than the critical p value of 0.05.This could be attributable to the fact that it causes the least effect on the financial performance as compared to the other techniques.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This study identified the registered MFIs in Kenya as the study subjects. Questionnaires were administered to the registered MFIs. Respondents were informed that responses to the questionnaires were to be confidential and identities of respondents and their firms would not be revealed. From the analysis and data collected, the following discussions, conclusion and recommendations were made. The responses were based on the objectives of the study. The researcher intended to establish the effect of foreign exchange risk management on financial performance of MFIs in Kenya.

5.2 Summary

This section of the study provides a summary of major findings during the course of the research, taking into account key factors outlined by respondents to sample questionnaires distributed to the population under study.

Most MFIs were found to have the CFOs define the foreign exchange management as represented by the highest mean. The second highest mean was recorded by the 'none of the above' option. In most MFIs, the CEO was the officer in charge of the implementation of the foreign exchange risk management policy, as indicated by the highest mean. Most institutions were further found to measure their foreign exchange risk exposure on a quarterly basis. A second lot of institutions conduct their measurement on a monthly basis.

The most common foreign exchange risk reduction strategies among the institutions from the findings are Forward contracts and Options. Most institutions hedge between

40 - 60% of their exchange rate. A close second hedge between 0 – 20% and 20 – 40%. On foreign exchange risk quantification, high scores from the findings were recorded to statements that ‘the firm often carries out foreign exchange exposure projections in different currencies’ and that ‘we have an up-to-date system that helps to handle currency risk projections.

On foreign exchange risk reduction and control, the various strategies to address the foreign exchange risk problem were provided broadly involving three tracks: action by individual banks to control their foreign exchange risk exposures; action by industry groups to provide risk-reducing services for settling foreign exchange trades; and action by central banks to induce private sector progress on the previous two tracks. High scores in agreement were recorded for the matching strategy and the request to bankers to reconsider their positions in case of adverse foreign exchange risk exposures. Respondents appear neutral to most of the questions posed on foreign exchange risk retention. Notable agreements are observed with the statements that the MFIs can also retain the risk when there is virtually no option.

Inferential statistics by regression analysis show that forward contracts and options are seen to be strongly and positively correlated with ROA.A positive relationship is further observed between ROA and all the other independent variables. The regression results show that, when forward contracts, cross-currency swaps, options, leading and lagging and price adjustments values are zero, ROA value would be positive.

5.3 Conclusion

The study investigated the effect of foreign exchange risk management on financial performance of Microfinance Institutions in Kenya and it can be concluded that a strong positive relationship exists between ROA and forward contracts and between ROA and options. This therefore means that MFIs who managed their foreign exchange by use of forward contracts and options had better financial performance in terms of ROA.

It can also be concluded from the descriptive statistics that: CFOs define the foreign exchange management policies in most MFIs; the CEOs are in charge of the implementation of the foreign exchange risk management policies; there is a relatively close frequency is observed in the measurements suggesting the possibility of foreign exchange risks and the degree of alertness towards countering the risks among the institutions; all the hedging instruments are applied among the MFIs; only a few institutions hedge over 60% of their foreign exchange values. The hedging ratios are of significance to investors in future contracts, as it will help to identify and minimize risks.

5.4 Recommendations for Policy

From the findings of this research, the study recommends that MFIs should explore avenues to enhance capacities within them for managing foreign exchange risk. They should explore the route of continued education for those in workplaces through short term training that should be very practical oriented. This could involve professional organizations for finance specialists, accountants and consultants. Such training should ideally be out of site because of the need to meet participants from diverse

businesses and orientations for training and assessment to avoid internal interruptions. These trainings should not only cover foreign exchange risk alone but rather could be preceded by introductory contents on the practical market challenges facing the MFI industry. As found out in this study, the exchange rate risk faced by firms forms a significant component of their risk profile. It is therefore imperative that MFIs and generally all firms in Kenya with and without international operations effectively manage their risk to minimize their losses to exchange rate risk. In an increasingly globalizing economy, domestic corporations, their suppliers, and their customers are not insulated from the effects of international economic cycles, currency movements, and global competition.

Derivative use for hedging is on the increase due to the increased global linkages and volatile exchange rates. The study also recommends that firms should look at instituting a sound risk management system and also needs to formulate their hedging strategy that suits their specific firm characteristics and exposures. Before choosing a method for mitigating currency risk, a borrower or lender should assess its tolerance for variability in earnings and adopt a strategy for managing currency risk consistent with its overall risk policy. An example of a Foreign Exchange Risk Management Policy may be to set a maximum numerical limit on the level of depreciation or devaluation in the exchange rate that could be absorbed by the MFI's equity.

5.5 Limitations of the Study

This research experienced numerous hindrances as some MFIs were very reluctant to provide some information claiming they could not provide sensitive information.

Because of the work engagement of most respondents, it was cumbersome to access them since most of them were usually busy on other assignments and it took a lot of time and patience by the researcher to get their audience. Some of the privately owned MFIs were unable to share information with the researcher since the authority had to come from the owners/directors who were not available at the time of visit.

5.6 Suggestions for Further Research

This study suggests that empirical studies need to be undertaken within the context of the development of capital markets in foreign exchange risk hedging by firms. This could be through the introduction of derivative instruments such as futures contracts, interest rate swaps, exchange rate swaps and their role in foreign exchange risk mitigation.

Another important extension of this study is to replicate this research to similar developing nations, and more importantly conduct comparative country studies. This will either validate or not validate the findings and hence give it a universal face. In the process, other important findings may be unraveled given the changes that are taking place globally.

Additionally, it would be ideal to research on how foreign exchange risk management compares to other risk management, specifically credit risk management and financial risk management to the financial performance of financial institutions in Kenya.

REFERENCES

Abor, J. (2005).Managing foreign exchange risk among Ghanaian firms. *Journal of Risk Finance* volume 6 number 4, pp.306-318.

Adler, C. and Dumas, F. (2010). Does Fuel Hedging Make Economic Sense? The Case of the US Airline Industry. Financial Management 35, 53-86

Ahmed, H. (2007). *Waqf-Based Microfinance: Realizing the Social Role of Islamic Finance*. Paper presented at the International Seminar on "Integrating *Awqaf* in the Islamic Financial Sector".

Ankrom, J. (2007). Corporate Financing and Investment Decisions When Firms Have Information that Investors Do not Have". *Journal of Financial Economics* 13, 187-221.

Armendariz, B., &Morduch, J. (2004). "Microfinance: Where Do We Stand?" In *Financial Development and Economic Growth* (p. 135-148). New York, NY: Palgrave Macmillan.

Armendariz, B., &Labie, M. (2011).*The Handbook of microfinance*. Singapore: World Scientific Publishing Co.

Belk, P.A Glaum (1990). The management of Foreign Exchange Risk in UK Multinationals; An Empirical Investigation. Accounting and Business Research, Vol.21 (pp.3-13)

Belk, B. and Glaum, I. (2007). Risk management practices of German Firms .*Journal of Managerial Finance,* Volume 26 Number 3.

Bhagat S, Bolton B (2008).Corporate governance and firm performance. J. Corporate Finance. 14:257-273

Bhatia, R. (2004). Mitigating Currency Risk for Investing in Microfinance Institutions in Developing Countries. Social Enterprise Associates.

Bodnar, G.M. and Richard C. (1998).A Simple Model of Foreign Exchange Exposure. *Wharton/CIBC Survey of Risk Management by US Non-Financial Firms,* Vol.8 No.3 (pp 15-20).

Bradley, K, and Moles,P (2000). Management Strategic Exchange Rate Exposures: Evidence from UK Firms. University of Edinburgh Management School; Scotland.

Brealey, Richard A., Myers, Steward C. and Allan, Franklin. (2008). *Principles of corporate finance* (9th edition ed.) McGraw-Hill. REF ID: 27

Brief, R., Lawson, R. *The role of the accounting rate of return in financial statement analysis",*1992.

Carter D.A, Pantzalis, C and Simkins, B.J (2003).Firm wide Risk Management of Foreign Exchange Exposure by U.S. Multinational Corporations Version of April 28, 2003.

CFTC. (2009). *Staff Report on Commodity Swap Dealers and Index Traders with Commission Recommendations.* U.S. Commodity Futures Trading Commission.

Collier.K. and Davis, O. (2009).“The Effect of Foreign Currency Hedging on the Probability ofFinancial Distress”.SSRN working paper.

Copeland, L. (2005), “*Exchange Rates and International Finance”,* 4th edition, Gate, Pearson Education; Edinburgh.

Cumby, R.E. and M. Obstfeld. “A note on Exchange Rate Expectations- and Nominal Interest Differentials: A Test of the Fisher Hypothesis.” *Journal of Finance* (June 1981), pp 697 703.

Dawson, Alex J.D and Rodney, William H (1994).The usage of exchange rate hedging techniques by UK property companies. *Journal of property finance,* vol. 5, No. 4 (pp. 56-67).MCB University press.

Dehejia, R., Montgomery, H., &Morduch, J. (2005). “Do Interest Rates Matter? Credit Demand in the Dhaka Slums.” (New York University Working Paper)

Dhanani, Z. and Groves, V. (2007).“Foreign exchange risk and the cross-section of stock returns”. Journal of International Money and Finance 27, 1074-1097

Duangploy, T. Salini, E. Hanadan, W and Wallace, A. (2008). The management of strategic exchange risk: evidence from corporate practices. Accounting and Business Research,275–290.

Dufey, A. (2005). Exchange rate economic exposure when market share matters and hedging using currency options. Management International Review, 67–84.

Eitemann, T. (2006). Foreign Exchange Risk Management Practices and Products Used by Australian Firms, in: *Journal of International Business Studies*, Vol. 24, No. 3, pp. 557-573.

Ellis, A., Cutura, J. N., Dione, I. Gillson, C., Manuel and Thongori, J. (2007).*Gender and Economic Growth in Kenya, Unleashing the Power of Women,* The International Bank for Reconstruction and Development/World Bank, Washington DC

Fatemi, A and Glaum, M. (2000). Risk Management Practices of German Firms. International Management, vol 26, Number 3.

Forbes KJ (2002). How do large depreciations affect firm performance? Palgrave Macmillan 49(1):214-238.

Gateway,M. (2012). What is Microfinance? Retrieved 05.04, 2012, from http://www.microfinancegateway.org/p/site/m/template.rc/1.26.12263/#1

Giddy. C. and Dufey, J. (2007).“Commercial Bank Risk: Market, Interest Rate, and ForeignExchange”, Journal of Financial Research, 17(4), 585-96.

Giddy, I.H. (1977). Exchange Risk Whose view?, Financial Management, Summer (pp. 23-33).

Gurbuz AO, Aybars A, Kutlu O (2010). Corporate governance and financial performance with a perspective on institutional ownership: empirical evidence from Turkey. J. Appl. Manage. Account. Res. 8:21-38.

Hill, Charles W.L. “International Business Competing in the Global Market Place”. *McGraw-Hill College*; 5 edition (January 2004).

Jacque,Laurent L.,& Peter Lorange.(1984). Hyperinflation and global strategic management. *Columbia Journal of World Business*, 19(2): 68-75.

Javed AY, Iqbal R (2007). The relationship between corporate governance indicators and firm value: A case study of Karachi stock exchange. MRPA Paper No.225, available at http://mpra.ub.uni-muenchen.de/2225.

Ledgerwood, J. (1999). Microfinance handbook: an institutional and financial perspective (pp. xvi, 286 s.).

Ledgerwood, J., & White, V. (2006). Transforming microfinance institutions: providing full financial services to the poor (pp. xlviii, 517).

Leedy, P.D. and Ormond, J.E. (2005). Practical research: Planning and design. 8th Ed. PearsonMerrill Prentice Hall.

Lee, C. (2010). Corporate diversification and firm performance. *Journal of political economy* 102, 1248-1280.

Lee, F., Marshall, A., Szto, Y., Tang, J., 2001. The practice of financial risk management: an international comparison. Thunderbird International Business Review, 365–378.

Lel, L and Nianian M, (2007). "Foreign Exchange Risk Management in Multinationals; An Empirical Investigation on China, Japan and US."

Lessard, W. (2007). The practice of financial risk management: an international comparison. Thunderbird International Business Review, 365–378.

Love I, Rachinsky A (2007). Corporate governance, ownership and bank performance in emerging markets: evidence from Russia and Ukraine.

Madura, Jeff. "International Financial Management", 10th Edition, *South-Western College Publishing* (2010)

Mark Hudon, 2006.Appraising the Poverty Outreach of Microfinance.

McMenamin, J., (1999). Financial Management: an introduction, London, Routledge

Miller, V. and Reuer, G. (2009). The management of foreign exchange risk in UK multinationals: an empirical investigation. Accounting and Business Research 21, 3–13.

Njunge, G.T., (2012). A survey of the foreign exchange rate risk management practices adopted by microfinance institutions in Kenya. MBA Thesis at the University of Nairobi

Oduori, C.A., (2012) A survey of strategies used by microfinance institutions in combating emerging operational, strategic and credit risks.MBA Thesis at the University of Nairobi.

Omino G. (2005). *Regulation and supervision of Microfinance Institutions in Kenya*. Central Bank of Kenya.

Peasnell, K. V. *Using accounting data to measure the economic performance of firms"*, Journal of Accounting and Public Policy, 1996

Quian, A. (2009). The management of strategic exchange risk: evidence from corporate practices. Accounting and Business Research, 275–290.

Reddy K (2010). The relationship between corporate governance practices and financial performance in New Zealand: An empirical investigation. The University of Waikato.

Robinson, M. S. (2001). *The microfinance revolution*. Washington, D.C.: World Bank.

Ross, S.A., Westerfield, R.W., Jaffe, J. *"Corporate Finance"*. Boston, MA, Ediţia 4, 1996

Shapiro, A., &Rutenberg, D. (1976). Managing Exchange Risks in a Floating World, Financial Management, Summer (pp. 48-58). Shapiro,

Soenen, D. (2009). "Exchange rate exposure and industry characteristics: Evidence from Canada, Japan, and the USA". *Journal of International Money and Finance* 12, 29-45.

Stacy, O. M. and Williamson, R. G. (2010); Exchange rate exposure, use of foreign currency derivatives and corporate performance: a case of selected financial institutions in South Africa, University of South Africa Business School. South Africa.

Srinivasulu, F. (2009). Why do firms raise foreign currency denominated debt? Evidence from Finland. European Financial Management, 481–496.

Werner, S., Brouthers, L., Brouthers, K., 1996. International risk and perceived environmental uncertainty: the dimensionality and internal consistency of Miller's measure. *Journal of International Business Studies,* 571–592.

Yasser QR, Entebang H, Abu Mansur S (2011). Corporate governance and firm performance in Pakistan: the case of Karachi stock exchange (KSE)-30. J. Econ. Int. Finance. 3(8):482-491.

Zikmund, W.G. (2002). Business Research Methods (4th ed.) South-Western College Publishers.

Zimmer, B. and Vu, X. (2007).Foreign exchange risk management—the paradox. Managerial Finance, 5–24.

APPENDICES

Appendix I: Questionnaire

A. INSTITUTION INFORMATION

Please indicate:

- Name of your organization…….
- Location of the main office……....

B. MANAGEMENT OF FOREIGN EXCHANGE RISK

1. Do you have a separate risk management department? Yes { } No { }
2. Who defines the foreign exchange risk management policy?
    - Chief Executive Officer (CEO) [ ]
    - Chief Finance Officer (CFO) [ ]
    - Treasury manager [ ]
    - Senior Accountant [ ]
    - None of the above [ ]
3. Who implements the policy?
    - Chief Executive Officer (CEO) [ ]
    - Chief Finance Officer (CFO) [ ]
    - Treasury manager [ ]
    - Senior Accountant [ ]
    - None of the above [ ]
4. How often does the company measure foreign exchange rate exposure?
    - Daily [ ]

- Weekly [ ]
- Monthly [ ]
- Quarterly [ ]
- Semiannually [ ]
- Annually [ ]
- Rarely [ ]

5. What kind of hedging instruments/techniques is the firm using to manage foreign exchange risk
    - Forward contracts [ ]
    - Cross-currency swaps [ ]
    - Options [ ]
    - Leading and Lagging [ ]
    - Netting [ ]
    - Price Adjustment [ ]
6. For each of the hedging instruments kindly indicate the amount hedged in KES

Instrument/technique	Year 2008	Year 2009	Year 2010	Year 2011	Year 2012
• Forward contract	-------	---------	---------	---------	---------
• Cross-currency swaps	-----	---------	---------	---------	---------
• Options	---------	--------	---------	---------	---------
• Leading and Lagging	-------	--------	---------	---------	--------
• Netting	--------	--------	---------	---------	--------
• Price Adjustments	------	-------	---------	---------	--------

7. What percentage of exchange rate exposure is the institution hedging

0 – 20% [ ] 40 -60% [ ] 80 – 100% [ ]

20 – 40% [ ] 60 – 80% [ ]

C. FACTORS AFFECTING CHOICE TO HEDGE FOREIGN EXCHANGE RISK

Please list and explain the factors that you think can affect a firm's decision to hedge against foreign currency risk?

1. ----------
2. ----------
3. ----------
4. ----------
5. ----------
6. ----------
7. ----------

D. FOREIGN EXCHANGE RISK ASSESSMENT

Please make your assertion as regards the level of agreement or disagreement about the following.

Foreign Exchange Risk Quantification	**Strongly Agree**	**Agree**	**Neutral**	**Disagree**	**Strongly Disagree**
The firm often carries out foreign exchange exposure projections in different currencies					
The firm sets extensive budgeting systems to handle currency risk projections					

The firm purchases exchange rate forecasts from the foreign exchange advisory services to make its own forecasts					
We have an up-to-date system that helps to handle currency risk projections					
There are revenue projections incorporating foreign exchange rate movements in this firm.					
Foreign Exchange Risk Reduction and Control	**Strongly Agree**	**Agree**	**Neutral**	**Disagree**	**Strongly Disagree**
We minimize exposure through early payments of foreign currencies before they are due.					
If possible, we do delay foreign currency payments to a later date (lagging)					
We also match costs with revenues denominated in similar currencies to reduce the impact (matching strategy)					
At times we also forego foreign currency denominated financing if its anticipated that exchange rates was volatile later					
We request our bankers to reconsider their positions in case of adverse foreign exchange risk exposures.					

Foreign Exchange Risk Retention	**Strongly Agree**	**Agree**	**Neutral**	**Disagree**	**Strongly Disagree**
At times, we retain foreign exchange risk whenever the potential cost due to exchange rate movements is small relative to company profits					
We at times also retain foreign exchange risk when the exchange rate movement is in our favor					
Sometimes we contain the risk because other currency risk management strategies are somewhat expensive					
We can also retain the risk when there is virtually no option					

Appendix II: List of MFIs in Kenya as at 30th August 2013

1. AAR Credit Services
2. ACDF
3. AdokTimo
4. BFDP
5. Bimas
6. Blue Limited
7. Century DTM
8. DRC Microfinance
9. Eb-F
10. Faulu DTM
11. Fusion Capital Ltd
12. Greenland Fedha
13. Jitegemea Credit Scheme
14. JuhudiKilimo
15. KADET
16. KEEF
17. Kenya Ecumenical Church Loan Fund (ECLOF)
18. KPOSB
19. KWFT DTM
20. MakaoMashinani
21. MCL
22. Microensure Advisory Services
23. Micro Kenya
24. Musoni

25. Opportunity Kenya
26. PAWDEP
27. Platinum Credit
28. Rafiki DTM
29. RAFODE
30. Remu
31. Riverbank
32. SEED
33. SISDO
34. SMEP DTM
35. Springboard Capital
36. Sumac DTM
37. Taifa
38. U & I DTM
39. UBK
40. Ufanisi-AFR
41. Uwezo
42. WEEC
43. Yehu Microfinance
44. YIKE

Source; AMFI-Kenya

Appendix III: Introductory Letter

Mwangi William Gideon

University of Nairobi

P.O Box 30197

Nairobi.

Dear Sir/Madam,

RE: REQUEST FOR RESEARCH INFORMATION

I am a post graduate student in the School of Business, University of Nairobi and in partial fulfillment of a Masters of Science in Finance degree, I intend to carry out research in the Microfinance Industry in Kenya in a project that seeks to establish the Effect of Foreign Exchange Risk Management on the Financial Performance of MFIs in Kenya.

As a fulfillment to the study information requirements, I request to collect primary data from your organization. The information requested is needed purely for academic purposes and will be treated with high confidence.

I would be most grateful if you can allow me access to relevant information regarding this study. Any additional information you might consider necessary for the study is most welcome. The findings will be availed upon request.

Thank you.

Yours Sincerely

Mwangi William Gideon