THE EFFECT OF COMPETITION ON FINANCIAL PERFORMANCE OF DEPOSIT TAKING MICROFINANCE INSTITUTIONS IN KENYA

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DECLARATION

This is Project is my original work and has not been presented for a degree in any other university.

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

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DEDICATION

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ABBREVIATIONS

CGAP - Consultative Group to Assist the Poor

DTMFIs - Deposit-Taking Microfinance Institutions

EVA – Economic Value Added

FINCA - Foundation for International Community Assistance

FSD - Financial Sector Deepening

FSS - Financial Self Sufficiency

GDP - Gross Domestic Product

HHI- Herfindahl-Hirschman index

KWFT - Kenya Women Finance Trust

MFIs - Microfinance institutions

MVA- Market Value Added

NGO - Non-Governmental Organization

ROA - Return On Assets

ABSTRACT

Over the last five years, the country has witnessed a tremendous increase in the number of the Deposit Taking Microfinance Institutions. The objective of this study was to find out whether there exists a relationship between competition and the financial performance of Deposit Taking Microfinance Institutions in Kenya. The study involved collecting secondary data from the individual Deposit Taking Microfinance Institutions and the Association of Microfinance Institutions in Kenya. Consequently data for nine DTMFIs was analyzed for five years (2010-2014) using multivariate regression model. The study found out that a strong relationship exists between competition and financial performance of DTMFIs. To test the significance of the findings, chi –square test was done. The research recommends that DTMFIs should judiciously venture into innovative products to improve their financial performance since it has a positive effect on their financial performance and also recommends for income source diversification.

CHAPTER ONE: INTRODUCTION

1.0 Background of the Study

Microfinance institutions (MFIs) in sub-Saharan Africa include a broad range of diverse and geographically dispersed institutions that offer financial services to low-income clients: non-governmental organizations (NGOs), non-bank financial institutions, cooperatives, rural banks, savings and postal financial institutions, and an increasing number of commercial banks (Nyaga, 2008).

A profitable microfinance industry is vital in maintaining a stable micro-banking system. Low profitability weakens the capacity of DTMFIs to absorb negative shocks, which subsequently affect Microfinance institutions solvency. Profitability of DTMFIs is determined by the way they are run given the environment in which they operate, risk management capabilities, their competitive strategies, quality of their management and levels of capitalization (Laffont and Guessan, 2000).

In the early years of the development of microfinance, the idea of providing microloans to the poor as a way to alleviate poverty mainly appealed to and attracted social investors and non-government organizations (NGOs). Yet, over the years microfinance has proven to be a successful, and even profitable, model of financial intermediation. This has attracted increasing interest from commercially oriented providers of microfinance, among which are also (international) commercial banks. Profit-oriented MFIs thus have become increasingly important, which according to some observers has also led to a change in focus of microfinance from being socially-oriented "poverty lending" approach – focusing on reducing poverty through providing financial services and funded mainly by donors,

government subsidies and other concessional funds – to an institution-oriented "financial systems" approach – focusing on commercially viable financial intermediation to the poor with an emphasis on institutional financial self-sufficiency (CGAP, 2001; Hulme and Arun, 2009; Cull et al. , 2009a).

Increased competition among DTMFIs is one of the outcomes following the increasing role of profit-oriented institutions and the change of status by NGOs from non-profit to profit making (commercialized) institutions.

1.1.1 Competition

Before the commercialization of the microfinance business, many MFIs were operating as monopolists. Monopolistic market power has been associated with allocative and technical inefficiencies, leading to welfare losses. Moreover, it does not provide incentives to invest in efficient technology and introduce new products (CGAP, 2001; McIntosh et al. 2005).

While East Africa is at an earlier stage of competition, the major urban centers of Uganda and Kenya are becoming saturated by competition among numerous MFIs. Markets for the more wealthy borrowers that were previously dominated by grant-funded, socially motivated lenders are now being contested by private institutions (Kaffu and Mutesasira, 2003).

With increased micro-finance penetration, many countries are witnessing an increase in competition among micro-finance institutions, with many areas being served by multiple DTMFIs. This increase in competition can be problematic on several grounds. One of the central concerns has to do with the impact of increased competition on borrower targeting. For example, Olivares-Polanco (2005) finds that competition worsens poverty outreach in a

cross-sectional study of 28 Latin American DTMFIs. Rhyne and Christen (1999) also report that increased MFI competition has worsened outreach. They mention that typically while the poorest clients would need loans of $300, Paraguayan microfinanciers were lending $1,200 and targeting the not so poor. Out of a sample of 17 Latin American DTMFIs, only 2 served very poor clients.

On the other hand, Nagarajan (2001) finds that the spurt in competition between DTMFIs in the Central Asian and Eastern European countries has actually improved targeting of the poor, particularly in Bosnia and Herzegovina. She mentions that the increase in such competition in Bosnia spurred two major MFIs, Prizma and Mikra, to move "downmarket" and make the decision to specialize in very poor rural clients. While the empirical evidence is mixed, it does suggest that competition may worsen borrower targeting in some cases which in the long run affects the financial performance of the DTMFI.

Another area of concern is the presence of double-dipping, i.e. borrowers taking loans from several DTMFIs. Empirical studies (for example, McIntosh, de Janvry and Sadoulet, 2005) confirm the importance of double-dipping. It is of course clear that such multiple lending can weaken repayment discipline, with the borrowers using loans from one DTMFI to repay another. This in turn leads to poor financial performance by the DTMFI (Srinivasan, 2009).

1.1.2 Financial Performance

Jacobson (1999) defines financial performance as measuring the results of a firm's policies and operations in monetary terms and results are reflected in the firm's return on investment, return on assets and value added. It is essentially the action of achieving in relation to predetermined goals and objectives.

According to Stoner (2003), financial performance in financial institutions refers to the ability to operate efficiently, profitably, 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 uses its resources in achieving its objectives. Common examples of tools 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, the analyst needs 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 use 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".

ROA formula looks at the ability of a company to utilize its assets to gain a net profit. Net income in the numerator 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.

Many scholars like (Bacidore et al 1997, David et al 2008 and Louis, 1996) have developed independently the measures of financial performance any modern firm can adapt. Profit describes how much wealth your company has created (profit) or consumed (loss) over a certain period of time. These figures are reflected in the profit and loss account of the firm. Four useful measures of a firm’s profitability are the rate of return on the firm’s assets (ROA), rate of return on the firm’s equity (ROE) operating profit margin and net firm income. A full measurement of profit must take into account owner’s compensation.

Louis (1996) also puts forward two measures of financial performance that are being applied in modern businesses today i.e. Market value added (MVA) and Economic value added (EVA). MVA assesses the effect of managerial actions on shareholder wealth from the

organization's inception while EVA assesses managerial effectiveness in a given year. Unlike traditional profitability measures, MVA and EVA measures take into account the cost of equity capital.

Bacidore, et al (1997) also contends that, getting on top of financial measures of your financial performance is an important part of running a growing business and put forward three key accounting ratios that measure financial performance which include: liquidity ratios, which tell you about your ability to meet your short-term financial obligations; efficiency ratios, which tell you how well you are using your business assets; and Gearing ratios, which tell you how sustainable your exposure to long-term debt is.

1.1.3 Competition and Financial Performance of Deposit Taking Microfinance Institutions

During the last three decades, the microfinance industry has been growing at a significant rate and in several countries it has become an important sub-sector of the formal financial markets. Especially during the past few years the growth of microfinance has been unprecedented: during 2006-2008 annual growth rates amounted to 70-100 percent for a number of countries (Sinah, 2010). The number of microfinance service providers has also increased considerably. With the growth of the industry and the saturation of markets, increased competition has been documented in many countries (Porteous, 2006).

Competition in microfinance sector started in the last decade in some countries such as Bolivia, Nicaragua, Bangladesh and Uganda (Rhyne and Otero, 2006). In other developing countries such as India, it has just started. The rapid growth of microfinance movement by

socially committed non-profit institutions has proved that the poor are bankable. Realizing this fact, profits maximizing formal lending institutions have started to penetrate into this market (Pagano, 2009).

Competition between microfinance institutions in developing countries has increased dramatically in the last decade (McIntosh and Wydick, 2005). Further, greater bank penetration in the overall economy is associated with micro banks pushing toward poorer markets, as reflected in smaller average loans sizes and greater outreach to women (Cull, et al. 2009). Now it is the global scenario that non-profit organizations are facing competition from profit driven lenders. This has made the socially motivated non-profit lenders re-think about their strategies of reaching the poor.

Increased competition among DTMFIs may contribute to well-functioning markets, protection of consumers, promotion of allocative and technical efficiency, and the provision of incentives to develop new products (Motta, 2004). In particular, it may stimulate them to reduce costs and increase the efficiency of their operations by improving the quality of their services in order to retain clients. Moreover, competitive pressure from banks may stimulate DTMFIs to diversify their financial services to keep clients or attract new ones. In particular, it may stimulate DTMFIs to venture into other areas like demand deposits and insurance.

Competition regulation in the microfinance market is all but nonexistent. The general impact of the new law on competition has been positive, as it did not create new barriers to entry, but removed some of the existing barriers by introducing a lower tier. Competition has increased in the savings business in particular, while most practitioners believe that customers have in general become more demanding as they have more choice. The current implementation of a

credit reference system will increase competition further. An area of concern is the Government‘s efforts to increase access through the roll-out of massive subsidised credit programmes.

The literature on the consequences of increased competition for financial institutions is ambiguous. On the one hand, it has been pointed out that a competitive environment may contribute to lowering production costs and lower prices of goods and services. Moreover, it may also encourage the development of new products and efficient technologies (Motta, 2004). Similar benefits of competition may be expected with respect to microfinance.

Based on these arguments, it may be argued that increased competition in the DTMFIs business is expected to be beneficial as it results in lower costs and interest rates, improved and new financial product designs and better customer services. Moreover, with respect to outreach, it is argued that financially sustainable DTMFIs are better able to cross-subsidize loans to poorer clients. Thus, competition may also support improving outreach.

On the other hand, however, several authors have pointed out that competition in the financial/banking sector may have adverse effects, as it may lead to lower borrower selection standards, to weakening of bank-customer relationships and to multiple loan-taking and high defaults (see, e.g. Stiglitz, 2000; McIntosh and Wydick, 2005).

1.1.4 Deposit Taking Microfinance Institutions in Kenya

Microfinance is the provision of a broad range of financial services such as deposits, loans, payment services, money transfers, and insurance to poor and low-income households and, their micro enterprises (Ledgerwood, 1999; Wright, 1999; Christen and Rosenberg, 2000). Microfinance, therefore, encompasses microcredit, micro savings and micro insurance (Roth, 2002). Deposit Taking Micro financing Institutions mainly focus their services on taking deposits from customers and lending to their clients.

In the 2000's, the microfinance sector witnessed emergence of large number of MFIs with some transforming to commercial banks and deposit taking microfinance institutions (DTMFI's). The focus of these institutions gradually shifted from emphases on the very poor to the enterprise poor as demands on these institutions to be become financially sustainable increased. The Microfinance Act 2006 became operational in May 2008. The Act empowered the Central Bank of Kenya (CBK) to license and supervises deposit taking microfinance institutions.

During the last two decades, banks focusing on microfinance have entered the market through a green fielding strategy (e.g. Co-operative Bank) or an institutional transformation approach. Equity Bank and Family Bank have transformed from building societies and K-Rep Bank from an MFI NGO. These institutions offer fully-fledged banking services to micro and SME clients. A high number of NGO MFIs are also serving the same market segment. The NGO MFIs considered various possibilities of expanding their businesses but they were not allowed to collect deposits and therefore had to rely either on expensive funding sources (borrowings) or unreliable subsidies and grants. These commercial banks, along with a wide

variety of registered microfinance institutions, savings and credit cooperatives, and NGOs, make up Kenya's microfinance industry (Srinivasan, 2007).

By December 2010, the CBK had licensed Faulu Kenya, Kenya Women Finance Trust (KWFT), SMEP, UWEZO and REMU as DTMFIs to conduct nationwide deposit taking microfinance business (CBK, 2007).Currently, the Central Bank of Kenya has licensed 12 Deposit Taking MFIs in Kenya with an additional 7 DTMFIs namely; Rafiki, Century, Choice, Caritas, U& I, Daraja, Sumac DTMFI. The influx of these DTMFIs has brought about a lot of competition in the microfinance industry in Kenya. This, together with other reasons, can contribute to poor financial performance of the DTMFIs in Kenya.

1.2 Research Problem

According to Motta (2004) competition in the microfinance industry increases the welfare of consumers by promoting productive efficiency such as lower production costs and lower interest rates. Competition also encourages the development of new products and efficient technologies which subsequently influence the financial performance of microfinance institutions.

However, from an economic perspective competition means more firms are competing for a limited market share and thus having to adjust ever closer to the needs of the customers as well as lowering prices down to a point where marginal revenue equals marginal cost. However, in most places the increase in competition among MFIs has not only brought benefits such as better access and lower interest-rates, but has also introduced problems (Armendariz de Aghion & Morduch, 2004). These adverse effects fall back not only on the MFIs, which are struggling to maintain their performance level, but also on the clients who face problems in repaying back their loans.

Srinivasan (2009) also indicates that intense competition lowers borrower selection standards, weakens relationships with customers and leads to multiple loan-taking thus high defaults. According to Bikker & Haaf (2002), 25% of borrowers in microfinance institutions take loans from six or more different financial institutions which eventually lead to repayment crisis in the microfinance industry. Repayment crisis subsequently lead to liquidity problems which negatively influence the operational and financial performance of microfinance institutions.

Several research studies have been conducted on competition in the microfinance industry in Kenya. For instance, Nyaga (2008) conducted a study on the nature of competition within micro finance industry in Kenya; Mutua (2011) did a study on the linkages between micro finance institution and commercial banks in Kenya.; Mbogo (2009) conducted a study on the factors Influencing Product Innovation in Micro Finance Institutions in Kenya: A Case Study of MFIs Registered with the Association of Microfinance Institutions.

Globally, Cull et al.(2009) did a study on 'microfinance meets the market'; McIntosh and Wydick (2005) did a study on competition and microfinance; Vogelgesang (2003) conducted a study on microfinance in times of crisis: the effects of competition, rising indebtedness and economic crisis on repayment behaviour; and, Navajas, Conning and Gonzalez-Vega (2003) did a study on lending technologies, competition and consolidation in the market for microfinance in Bolivia.

However, none of the studies focussed on the effect of competition on the financial performance of DTMFIs in Kenya. It is in this light that the researcher seeks to fill the

existing gap in this area of study by answering the question: How does competition affect the financial performance of deposit taking MFIs in Kenya?

1.3 Research Objective

To investigate the effects of competition on the financial performance of deposit taking microfinance institutions in Kenya.

1.4 Value of the Study

With the growth of the industry and the saturation of markets, increased competition has been documented in many countries. These recent developments do raise the question 'what impact increased competition has on the financial performance of DTMFIs'. Research on this issue is therefore important, especially because many countries and organizations have started integrating microfinance into their poverty alleviation strategy. Understanding the effects of competition can guide the design of policies which ensure benefits for the poor and sustainability for the DTMFIs, as much as possible. This study shall be of importance to the following parties;

i. Researchers and students pursuing postgraduate studies in Finance and Economics will find it useful in their quest to understand effect of competition in DTMFIs performance.
ii. Consultants in the area of MFI will find this report useful in providing appropriate, feasible and informed advice to their clients on the area of DTMFIs and their performance.
iii. The management of the DTMFIs as it will enable them to design policies that lead to the sustainability of their organizations.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter reviews the relevant literature in the area of study. It includes theoretical framework, the determinants of financial performance of DTMFIs, the empirical studies related to this study, and the summary of literature review.

2.2 Theoretical Review

The following is a discussion of the theories of competition and how they relate to the performance of DTMFIs. The theories under discussion include the neoclassical theory (perfect competition), the comparative advantage theory, monopolistic competition, and oligopolistic competition.

2.2.1 Neoclassical Theory (Perfect Competition)

Perfect competition implies existence of numerous small firms in every industry, with each producing a single product in the quantity dictated by its most efficient plant size. Perfect competition is built around the following foregoing premises. As to consumer behavior, the theory assumes that demand is homogenous for every industry's product though consumers are allowed to prefer different quantities of each industry's product (heterogeneity across generic products), their tastes and preferences are assumed to be identical with respect to desired product features and characteristics (homogenous within industries). Consumers are also assumed to have perfect information, which is costless to them, and prices of all products. Consumer motivation, one dimension of human motivation, is self interest or utility maximization (Etzioni, 1988).

The firm's objective is profit maximization or wealth maximization. Acting under conditions of perfect and costless information, neoclassical theory focuses on the firm producing a single product using the resources of capital, labour, and land. These "factors of production" are assumed to be homogenous and perfectly mobile; that is, each unit of labour or capital equipment is assumed to be identical with other units and can "flow" from firm to firm without restrictions. The role of management is to respond to changes in the environment by determining the quantity of product to produce and implementing a production function that is identical across all firms in each industry (Stigler, 2008).

There are implications of perfect competition for quality improvement. No firm in perfect competition would or could incur the extra expense of producing a product with a quality level higher than the standard product because the homogenous demand assumption implies that it could not charge a higher price. Moreover, if a firm did produce a higher quality product and received a higher price for it, then this again could be interpreted as market imperfection that moves the market away from the ideal state of equilibrium (Heyne, et al).

2.2.2 Comparative Advantage Theory of Competition

The theory views industry demand as significantly heterogeneous and dynamic (Alderson 1957; Dickson 1992). Consumers' tastes and preferences within a generic product class not only differ greatly as to desired product features and characteristics, but they are always changing. Secondly, Consumers have imperfect information concerning products that might match their tastes and preferences, and obtaining such information is costly in terms of both time and money. Third, in their roles as both consumers of products and managers of firms, humans are motivated by constrained self-interest seeking. The premise draws on Etzioni's (1988) argument that people have two irreducible sources of valuation: pleasure and morality.

Because people do pursue pleasure and avoid pain, pleasure explains much behavior. Fourth, the firm's primary objective is superior financial performance, which, consistent with Austrian Economics (Jacobsen 1992), it pursues under conditions of imperfect (and often costly to obtain) information about customers and competitors. This view is parallel to Porter's view (1991) who identifies firm success as "superior and sustainable performance, relative to the world's best rivals."

Because all firms seek superior financial performance, competitors of a firm having a comparative advantage will attempt to neutralize their rival's advantage by obtaining the same value-producing resource. If the resource is mobile then it will be acquired by competitors, and the comparative advantage is neutralized quickly and effectively. Competition, then, consists of the constant struggle among firms for a comparative advantage in resources that will yield a marketplace position of competitive advantage, and, thereby, superior financial performance (Barney, 1991).

Once a firm's comparative advantage in resources enables it to achieve superior financial performance through a position of competitive advantage in some market segment or segments, competitors attempt to neutralize and/or leapfrog the advantaged firm through acquisition, imitation, substitution or major innovation. The comparative advantage theory of competition is, therefore, inherently dynamic. Disequilibrium, not equilibrium, is therefore the norm, in the sense of a normal state of affairs. It is also the norm in the sense of a preferred state of affairs (Barney, 1991).

2.2.3 Monopolistic Competition

Monopolistic competition is a type of imperfect competition such that many firms sell products that are differentiated from one another (e.g. by branding or quality) and hence are not perfect substitutes. In monopolistic competition, a firm takes the prices charged by its rivals as given and ignores the impact of its own prices on the prices of other firms. In the presence of coercive government, monopolistic competition will fall into government-granted monopoly. Unlike perfect competition, the firm maintains spare capacity (Krugman & Obstfield, 2008).

Monopolistically competitive markets have the following characteristics: First, there are many producers and many consumers in the market, and no business has total control over the market price. Secondly, consumers perceive that there are non-price differences among the competitors' products. Thirdly, there are few barriers to entry and exit. Fourthly, Producers have a degree of control over price (Krugman & Obstfield, 2008).

The long-run characteristics of a monopolistically competitive market are almost the same as a perfectly competitive market. Two differences between the two are that monopolistic competition produces heterogeneous products and that monopolistic competition involves a great deal of non-price competition, which is based on subtle product differentiation. A firm making profits in the short run will nonetheless only break even in the long run because demand will decrease and average total cost will increase. Therefore in the long run, a monopolistically competitive firm will make zero economic profit. This illustrates the amount of influence the firm has over the market; because of brand loyalty, it can raise its prices without losing all of its customers. This means that an individual firm's demand curve is downward sloping, in contrast to perfect competition, which has a perfectly elastic demand schedule (Krugman & Obstfield, 2008).

2.2.4 Oligopolistic Competition

An oligopoly is a market form in which a market or industry is dominated by a small number of sellers (oligopolists). Oligopolies can result from various forms of collusion which reduce competition and lead to higher prices for consumers. With few sellers, each oligopolist is likely to be aware of the actions of the others. The decisions of one firm therefore influence and are influenced by the decisions of other firms. Strategic planning by oligopolists needs to take into account the likely responses of the other market participants (Melvin & Boyes, 2002).

Oligopolistic competition can give rise to a wide range of different outcomes. The firms may employ restrictive trade practices (collusion, market sharing etc.) to raise prices and restrict production in much the same way as a monopoly. In other situations, competition between sellers in an oligopoly can be fierce, with relatively low prices and high production. This could lead to an efficient outcome approaching perfect competition (Melvin & Boyes, 2002).

2.3 Determinants of Financial Performance of Deposit Taking Microfinance Institutions

The consequences of increased competition for financial institutions are ambiguous. On the one hand, it has been pointed out that a competitive environment may contribute to lowering production costs and lower prices of goods and services. Moreover, it may also encourage the development of new products and efficient technologies (Motta, 2004). Similar benefits of competition may be expected with respect to microfinance. On the other hand, it has been pointed out that competition in the financial/banking sector may have adverse effects, as it

may lead to lower borrower selection standards, to weakening of bank-customer relationships and to multiple loan-taking and high defaults which lead to poor financial performance of DTMFIs (Stiglitz, 2000; McIntosh and Wydick, 2005).

Apart from competition, the other determinants of financial performance of DTMFIs are: Information asymmetry; Clients' changing behavior; and, borrower over-indebtedness.

2.3.1 Information Asymmetry

Different degrees of information-sharing affect enforcement costs, reputation, double-dipping, and financial deepening. They have implications on repayment performance and dropout rates. The sharing of 'negative' information means mutual reporting of defaulters while the sharing of 'positive' information functions like a credit bureau, giving comprehensive, updated information on the total level of indebtedness of a customer seeking a new loan.

Besley and Coate (1995) show how joint liability can help lenders in markets without observable lending histories overcome information problems, but also that such contracts remain vulnerable to strategic behaviour by the entire lending group. The implication is that increased competition could lead to a higher incidence of group default. Marquez (2002) highlights the fact that competition lowers the screening ability of the incumbent bank, thus increasing the share of low quality borrowers among clients. Petersen and Rajan (1998), finds out that competition weakens the long-term relationship between a lender and his clients, thus reducing the lender's incentives to provide insurance in response to shocks. Both circumstances would lead to lower repayment rates. Hoff and Stiglitz (1998) examines the role that multiple uncollateralized lenders will play in reducing each other's abilities to use

dynamic incentives effectively. In the absence of a negative information-sharing network, there is bound to be a fall in repayment and an increase in dropout from the incumbent lender as competition rises.

2.3.2 Clients' Changing Behaviour

With a market, that is reaching saturation, increasing competition leads to lenders changing their behavior. DTMFIs try to maintain their customer base and decrease their costs by lowering lending standards or decreasing screening efforts. This results in higher risk borrowers and thus leads to a decline in repayment and higher default rates. Furthermore, over-aggressive marketing such as pressuring borrowers to take out a new loan after they have just paid off an old one adds to the risk (Schicks and Rosenberg, 2011).

DTMFIs decrease their screening efforts and start to relax their lending standards when they are confronted with severe competition. Increasing loan sizes without sufficient investigation of client's ability to repay puts the borrowers at risk. Other problems arise from a lack of clear and accurate information about loan costs and terms, the use of over-aggressive collection practices and inflexible loan products (Schicks and Rosenberg, 2011).

Recent debates address the issue whether it is unduly risky to lend to borrowers for consumption rather than investment related reasons (Schicks and Rosenberg, 2011). The consequences for the borrowers can be drastic. Major effects may include reduced consumption levels, downward spirals of ever- increasing debt, late fees and a loss of creditworthiness. Sometimes sociological or psychological effects are even more severe such as peer pressure or a loss of social position and negative effects on mental and physical health. In extreme cases borrowers' desperation can even lead to suicide (Rosenberg and Schicks, 2011).

2.3.3 Borrower Over-indebtedness

The rising level of competition implies a higher debt level among DTMFIs clients, which seems to have a direct impact on their economic and social wellbeing. Schicks and Rosenberg (2011) examine conceptual issues and limited empirical evidence about over-indebtedness in the microcredit market. They found that increasing competition has adverse effects on clients and can eventually lead to borrower over- indebtedness. This often implies a further impoverishment and increased vulnerability of borrowers (Schicks and Rosenberg 2011).

Behavioral economics (Kahnemann & Tversky 1979) found that biases, such as an "over-confidentiality bias" or a "hyperbolic discounting", which means discounting the future too strongly and putting too much weight on the present, can lead to borrowers making bad decisions like taking more debt than is good for them. Borrowers tend to take too much debt and thus fall into serious repayment problems.

2.4 Empirical Studies

This section examines the literature related to the subject of the study which is based on global view and the local view. The review entails studies that have been conducted in relation to the effect of competition on performance of DTMFIs with aspects from different regions to give an overview of the situation in different parts of the world.

2.4.1 Global Studies

Navajas et al (2003) studied competition in the Bolivian microfinance market by focusing on two major players (Caja Los Andes and Bancosol), who collectively share around 40% market share. The study employed data on 239 borrowers from Bancosol and 128 from Los Andes, based on a research project conducted in Bolivia in the late 1995. In order to better

understand the dynamics of contract choice and competition in this market, they developed a theoretical model to explain the behavior of competing lenders faced with both moral hazard and adverse selection problems in a pool of heterogeneous borrowers. Their empirical results showed that profitable, wealthier clients of BancoSol switched to Caja Los Andes. They also indicated that this shift of profitable clients worsened the quality of the portfolio of incumbent socially-motivated MFIs. Thus, it could be inferred that competition causes productive clients to withdraw from socially-motivated MFIs, leading to a decline in their profitability and cross-subsidization. However, in their studies, the overall effect of competition was said to be ambiguous. On one hand, it leads to innovation thereby allowing MFIs to expand outreach. On the other hand, it reduces the ability of lenders to cross-subsidize less profitable smaller loans.

McIntosh et al (2004) studied 780 groups of the FINCA organization in Uganda, between 1998 and 2002 to analyze the impact that rising competition had on lending institutions. The researchers used three measures of competition: presence, number, and proximity of the closest competitor. In their 5-year period study, they examined the geographical placement decisions of competitors. More precisely, how borrowers responded to competition between different lenders. They found that the entrance of competing lenders and the absence of formal information sharing mechanism on credit histories of clients induced deterioration in repayment performance. More so, a deterioration in repayment performance decreases savings deposits among borrowers. According to them, these phenomena are consistent with a model of competition whereby customers do not abandon a given lender but rather go in for multiple-loan contracting. Faced with such a situation, those lending institutions see their level of savings reduced because clients are forced to share their scare resources among the microfinance institutions from whom they borrowed.

Roy Mersland and R. Øystein (2007) studied the effect of board characteristics, ownership type, competition and regulation on MFI's outreach and its financial performance between 2000 and 2006. Based on a dataset of 226 rated MFIs from 57 countries, they found that industry competition was a major driver of financial performance. Higher competition was an explicative factor of low portfolio yield, which meant that competition among MFIs bring lower interest rates to clients, but also lowers return on assets (ROA) of MFIs.

A study on the effect of competition on MFIs was made by Hermes, Lensink & Meesters (2008) who examined the correlation between MFI's outreach and efficiency and uncovered a negative relationship. Their findings indicate that with a commercialization of the industry, which more competition implies, MFIs become more concerned with their financial efficiency. This in turn might cause them to turn their back on the poor and less profitable customers. However, the study also showed that a more diversified portfolio of products, such as savings and insurance compared to the traditional loans only, will be offered, which is positive for clients.

Kai Hisako (2009) conducted an empirical analysis to assess the relationship between competition, financial self sufficiency (FSS) and wide outreach of socially motivated MFIs. The data for the analysis, obtained from the Microfinance Information exchange (MIX), comprised unbalanced panel data for 450 socially-motivated MFIs from 71 countries between 2003 and 2006. The empirical results showed that MFIs cope with the negative effect of competition not by reducing FSS but by limiting wide outreach. Thus, it was concluded that MFIs do not increase external subsidy, but exclude the poorest borrowers as competition

intensifies. However, the more MFIs have experience, the less wide outreach is reduced by competition.

Cull et al. (2009b) investigated the performance of MFIs under the pressure of competition from formal banks, measuring competitive pressure by using bank penetration variables such as the number of bank branches per capita and per square kilometer. The dataset they used consisted of 342 MFIs located in 38 developing countries. Their results showed that MFIs faced with high competition tend to reduce the breadth of outreach but will focus more on the depth of outreach, i.e., more loans to women borrowers and smaller loans.

A Study by Dzene Richman and Aseidu K. (2010) investigated the impact of competition on the sustainability of MFIs in Ghana, using a short panel data of 72 microfinance institutions for a 5 year period. Data for the study was collected through an annual survey of these institutions between 2003 and 2007. The 79 MFIs were sampled randomly from a list of over 150 registered MFIs of the Ghanaian microfinance market as at 2007. Competition was measured by applying the Herfindahl-Hirschman Index (HHI), based on the top 4 MFIs in the industry. Using two (2) measures of sustainability: operational self sufficiency (OSS) which measures operational efficiency and subsidy dependency index (SDI) which measures financial efficiency, two regression models were specified to assess the implication of growth in competition and women share of total borrowers after controlling for management efficiency indicators, macroeconomic indicators and other firm and industry level variables. The study found that industry competition increases sustainability of MFIs and reduces the dependency rate on donor subsidy or assistance. Thus, growing competition in the sector enhances overall efficiency, encourages innovation and reduces average operational cost of firms in the microfinance industry and more so, lowers the repayment risk.

However, the effect on other performance indicators, such as profitability, appeared to be weak. Both Hermes et al. (2009) and Cull et al. (2009b) used country-level measures of competition, rather than measures reflecting competition at the institutional level.

2.4.2 Local Studies.

Mugo (2010) asserted that most Micro Finance Institutions (MFIs) have innovated new services like mobile banking, business accounts, SME loans, school fee loans, financial trainings and partnerships. Other Micro Finance Institutions (MFIs) have networked their offices, opened new branches and innovated new products in a bid to grow their firms. Besides, there was strong positive correlation between financial growth and reason like addressing clients' needs, clients' retention and reducing transaction time.

Munyiri (2010) in a study on the Factors Influencing the growth of MFI in Kenya found out that over 70% of the MFIs were donor dependent and over 40% would not do without borrowings from other financial institutions. The study revealed that, a significant proportion of microfinance institutions were not certain when they would start the process of complying with the microfinance institutions regulatory framework that is currently in force in Kenya. Over 60% of the clients' dropout was necessitated by the microfinance institutions' products and services inability to satisfy clients' needs. Need to purchase urgent business stock stood out as the most prevalent unmet need. Over 70% of the MFIs had undergraduate degree as the lowest education level for their senior managers. About75% had their managers having gone through micro-financing trainings and leadership development programs. However, lack of credit facilities for managers wishing to further their studies was conspicuous.

Kombo et al. (2010) asserted that strategic risk, credit risk and liquidity risk are the most frequent risks; whereas reputation and subsidy dependence risks occur at a very low incidence for Micro Finance Institutions (MFIs) located in Kisii area. The authors argue that to tone down these risks, the Micro Finance Institutions (MFIs) employ various management strategies, which include risk avoidance, transferring of risk and mitigating risks and also regard mitigation of risks as the most effective risk management strategy.

Mokoro et al. (et al. (2010) in an investigation of the various challenges facing the transition of informal MFIs into formal MFIs recognize the existence of risks emanating from both the external and internal stakeholders.

Maina (2011), economic factors could be contributing to the growth of MFls in Nyeri Central District including low annual turnover hence no enough funds for the high number of borrowers, low number of savers and high number of defaulters. It was also found out that all the MFls are using technology. However, most of the MFls' technology is not up to date. The challenges related to ICT included resistance to change among the employees, lack of funds to finance newer technology, and lack of technical skills to handle new technology. MFls may not fully benefit from technology when it is not up to date. The purpose of this study was to estimate the impact of investment in ICT on performance and growth of microfinance institutions. Efficiency change (performance) was used as measure of growth.

Mbogo (2009) conducted a study on the factors influencing product innovation in micro finance institutions in Kenya. Nyaga (2008) conducted a study on the nature of competition within micro finance industry in Kenya and, Mutua (2011) did a study on the linkages between micro finance institutions and commercial banks in Kenya.

2.5 Summary of Literature Review

This discussion examined the relationship between competition and microfinance. Contrary to conventional economic theory, which highlights the benefits of competition for the consumer, the empirical and theoretical literature finds adverse effects in the case of microfinance, especially for the clients but also the institutions themselves.

Overall, there exists evidence that intense competition leads to a lower performance of MFIs. Several factors are responsible for this development: Information asymmetries, the lowering of lending standards or the acceptance of higher risk borrowers are just some examples. Also borrowers changing behavior adds to the problem. They may lack financial literacy and make bad decisions. Higher competition also leads to a shift to the more profitable segment of the market, and thus leaving the poorest and neediest on the sideline. Most customers, especially the poorest, are falling into double dipping, taking out multiple loans, increasing their repayment constraints (as found by McIntosh & Wydick 2005, Vogelgesang 2003, Mersland & Strøm 2007, Navajas et al 2003, McIntosh et al 2005, Assefa et al 2010 in different studies with various settings). This also causes the balance sheets of the institutions to deteriorate.

There is immense literature on competition in microfinance institutions. Globally, Cull et al.,(2009) did a study on microfinance meets the market; McIntosh and Wydick (2005) did a study on competition and microfinance; Vogelgesang (2003) conducted a study on microfinance in times of crisis: the effects of competition, rising indebtedness and economic crisis on repayment behaviour and, Navajas, Conning and Gonzalez-Vega (2003) did a study on lending technologies, competition and consolidation in the market for microfinance in Bolivia.

In Kenya, Mbogo (2009) conducted a study on the factors influencing product innovation in micro finance institutions in Kenya. Nyaga (2008) conducted a study on the nature of competition within micro finance industry in Kenya and, Mutua (2011) did a study on the linkages between micro finance institutions and commercial banks in Kenya. However, none of these studies focused on the effect of competition on the loan performance of deposit taking microfinance institutions in Kenya. In addition, none of these studies focused on net interest margin, bank concentration (Herfindahl-Hirschman Index), DTMFI's number of branches, and DTMFI's advertising costs which will be the variables in this study.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents a detailed descriptions of the methodology used in the study. It includes research design, target population, data collection, validity and reliability, and data analysis methods.

3.2 Research Design

A descriptive study research design was employed to investigate the effect of competition on the financial performance of DTMFIs in Kenya. Descriptive studies are usually the best methods for collecting information that demonstrate relationships and describe the world as it exists. According to Shields (2003), a descriptive study is a research strategy, an empirical inquiry that investigates a phenomenon within its real-life context. It aims at describing the effect causation in order to find underlying principal characteristics of a group and focuses its attention on the objectives of the study (Shields, 2013). In this study, a descriptive survey was employed to collect the required information from the population targeted after which the data collected was analyzed using quantitative methods to establish the causation factor of the financial performance of DTMFIs in Kenya.

3.3 Population

Populations involve all elements, individuals, or units that meet the selection criteria for a group to be studied, and from which a representative sample is taken for detailed examination (Mugenda and Mugenda, 2003). The population consisted of 12 Deposit Taking Microfinance Institutions licensed by the Central Bank of Kenya (CBK, 2014). The study adopted a census approach where all the 12 DTMFIs were subjects of the study.

3.4 Data Collection

Secondary data was used to ensure that the study is accurate and reliable. Secondary data was collected from the bank's annual reports and financial statements to evaluate the effect of competition on the financial performance of DTMFIs. The study used financial statements which were obtained from the individual DTMFIs or from the Association of Microfinance Institutions in Kenya (AMFI). The study used secondary data sources for a period of 5 years from (2010 -2014).

3.5 Validity and Reliability

Secondary data from the individual DTMFIs and AMFI were reviewed for completeness and consistency in order to carry out statistical analysis. According to Mugenda (2003), data must be cleaned, coded and properly analyzed in order to obtain a meaningful report. The data collected was sorted and organized before analysis using Statistical Packages for Social Sciences (SPSS).

3.6 Data Analysis

Under data analysis, we discuss the data analysis techniques that were used and the statistical test of significance.

3.6.1 Data Analysis Techniques

Both descriptive and inferential methods were used in analyzing the data. These include; measures of central tendency (mean, median, mode), measures of dispersion (range, variance, standard deviation), and measures of relations and associations (correlation and regression).

A multiple regression model was employed so as to establish the relationship between the variables of the study and financial performance of DTMFIs. According to Mogull and Robert (2004), a multiple regression allows simultaneous investigation of the effect of two or more variables. The dependent variable of the study was financial performance while the independent/predictor variables were net interest margin, bank concentration (Herfindahl-Hirschman index), DTMFI's number of branches, and DTMFI's advertising costs. The significance of each independent variable was tested at a confidence level of 95%.

The algebraic expression of multiple regression model of the form below was applied;

Financial performance =*f* (competition)

The study used the model below to achieve the objective of this study:

$$\mathbf{Y=\alpha+\beta_1X_1+\beta_2X_2+\beta_3X_3+\beta_4X_4+\varepsilon}$$

α= Constant Term which defines the financial performance without inclusion of independent variables

Y= is the dependent variable, and was measured by the return on Assets (ROA) ratio.

β_1= coefficient for individual influence of Net Interest Margin on financial performance of DTMFIs.

β_2= coefficient for individual influence of Bank Concentration on financial performance of DTMFIs.

β_3= coefficient for individual influence of number of branches on financial performance of DTMFIs.

β_4 =coefficient for individual influence of advertising costs on financial performance of DTMFIs.

X_1 = Net Interest Margin/ Total Assets of a DTMFI. Net interest margin is equal to net interest income (interest income-interest expense) divided by interest bearing assets.

X_2 = Each DTMFI's market share, squared and summed to give the HHI. Higher value indicates higher bank concentration.

X_3 = Each DTMFI's number of branches.

X_4 = Each DTMFI's advertising expenditure.

ε = Error term within a confidence interval of 5% will be used.

Additional determinants of financial performance are interest rates, portfolio quality, financial efficiency, and DTMFIs' geographical locations.

3.6.2 Tests of Significance

The significance of the model was tested using Correlation coefficient (R) and the coefficient of determination (R^2) at 95% confidence interval. Chi-square test was done to test the significance and reliability of the developed model. Chi-square test was used to determine the significance of the regression while the coefficient of determination, R^2, establishes how much variation in dependent variable is explained by independent variables. This was done at 5% significance level. Correlation analysis was done to find the direction of the relationship between ROA and the independent variables.

CHAPTER FOUR

DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

This chapter presents analysis, findings and discussion of the study as set out in the research objective and research methodology. The study aimed at establishing the relationship between competition and the financial performance of DTMFIs. The data was gathered exclusively from the secondary source which was the Association of Microfinance Institutions records.

4.2 Descriptive Statistics

Figure 4.1 presents the descriptive analysis of the variables of the study. The data collected on the financial performance measured by ROA which as per the study depends on net interest margin, concentration (HHI), number of branches, and advertising was analyzed to give the mean values for the entire period under study as well as their standard deviations. It represents the variables of 12 DTMFIs operating in Kenya whose financial results were available for the years 2010-2014.

Figure 4.1 Descriptive Statistics

	Mean	Std. deviation
ROA	.1532	.1602
Net Interest Margin	1.2937	.47602
Concentration	4,749.43	714.60
Advertisement	131,976.20	31,184.55
Number of Branches	9.6490	1.43796

According to the results in figure 4.1, the average financial performance was obtained to be 0.1532 (15.32%) with a standard deviation of 0.1602. This shows that for the entire period studied, the DTMFI's financial performance can be summarized as 15.32% as the standard deviation value obtained was very small indicating a small deviation of the individual values. Also, the net interest margin, concentration (HHI), advertising, and number of branches were summarized to be 1.2937, 4,749.43, 131,976.20 and 9.6490 respectively. The standard deviations for all the factors above indicate small variations of the individual yearly data values from the mean value. Thus, these values can be relied on as representative of the financial performance of the DTMFIs.

4.3 Correlation Analysis

To evaluate the association between the variables, the data collected was analyzed to generate the Pearson correlation coefficient which gives tests the presence of association between the variables. The significance level was set at 5% with a 2-tailed test. The results are therefore as presented in figure 4.2 below.

Figure 4.2: Correlation Table

	ROA	Net Interest Margin	Concentration (HHI)	Advertising	Number of Branches
ROA	1				
Net Interest Margin	.941*	1			
Concentration	.912*	.432	1		
Advertising	.815*	.201	.590	1	
Number of Branches	.787*	.518	.216	.571	1

From the figure, all the factors have a positive correlation with the dependent variable.
This indicates that, competition between the DTMFIs has a positive association with their financial performance.

The strength of the association is measured based on the Pearson's correlation scale where a value in the interval 0.0-0.3 is an indication of no correlation, 0.3-0.5 is a weak correlation, 0.5-0.7 is a fair correlation and a correlation value in the interval 0.7 and 1 is an indication of a strong correlation. A correlation value of 1 indicates a presence of a perfect association between the variables. The magnitude of the association (+ or -) indicates the nature of association (positive or negative association).

Based on these intervals, the table illustrates that, net interest margin and the financial performance has a correlation coefficient of 0.941. This is an indication of a strong and positive association between net interest margin and financial performance. Also, concentration and the financial performance of MFIs have a strong positive correlation. This is according to the obtained coefficient of 0.912 indicating that the two variables are strongly associated.

Advertising and financial performance indicated a correlation coefficient of 0.815
which is a strong and positive correlation. Also, number of branches is positively and strongly correlated with financial performance as it had a coefficient 0.787 respectively.
Testing the significance of the association at 5% level with a 2-tailed test, all the independent variables and the dependent variable were found to have a statistically significant association (i.e. with a p-values of less than 0.025) as given by the significance sign (*) in the correlation values.

4.4 Regression Analysis and Hypotheses Testing

The objective of this study was to establish the effect of competition on the financial performance of DTMFIs. To accomplish this, the study conducted a regression analysis which gives the relationship between the measures of independent variables (net interest margin, concentration (HHI), advertising, number of branches) and financial performance of the DTMFIs as measured by ROA.

The results present the regression model summary which gives the coefficient of determination showing the extent to which the predictor variables influences the dependent variable, and the analysis of variance which determines the reliability of the model developed in explaining the relationship and the regression coefficients in figure 4.3 which gives the coefficient explaining the extent at which the independent variables influence the dependent variable.

4.4.1 Model Summary

Figure 4.3 gives the regression model summary results. It presents the R value which is the measure of association between the dependent and the independent variables, the R^2 which is the coefficient of determination measuring the extent at which the independent variables influence the dependent variable, as well as the adjusted R^2 which measures the reliability of the regression results.

Figure 4.3: Regression Model Summary

Model	R	R square	Adjusted R^2	Std. Error of the Estimate
1	.949[a]	.901	.802	4.04917

(a) Predictors: constant, net interest margin, concentration (HHI), advertising, no. of branches

Coefficient of determination explains the percentage of variation in the dependent variable that is explained by the independent variables. It explains the extent to which changes in the dependent variable can be explained by the change in the independent variables.

From the analysis, the independent variables (net interest margin, concentration (HHI), advertising, number of branches) in this study contributed to 90.1% of the variation in the financial performance as explained by R^2 of 0.901.

The variation due to the studied variables (90.1%) is very high and therefore can be relied on to explain the changes in the financial performance of the DTMFIs in Kenya. The results obtained are also reliable as given by the adjusted R^2 value of 0.802 which explains that the study results are 80.2% reliable and therefore the regression model developed can be relied on to explain the trends in the financial performance of DTMFIs.

4.4.2 Regression Coefficients

In order to answer the proposed model for the relationship between financial performance and the independent variables, the regression coefficients were calculated and presented in figure 4.4. These with their significance values (also given in the figure) measures the influence of each independent variable to the financial performance of the DTMFIs

(dependent variable) and the effect that would occur to the financial performance in an attempt to changing (increasing/decreasing) the variables.

Figure 4.4: Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. error	Beta	T	Sig.
1	Constant	6.859	8.653		.793	.472
	Net interest Margin	0.001	.000	.623	2.052	.009
	Concentration (HHI)	-.002	.002	-.028	-.126	.906
	Advertising	-.114	.044	-.489	-2.615	.049
	No. of Branches	-.024	.000	-.522	1.945	.024

(a) Dependent variable- Financial performance

The researcher conducted a regression analysis so as to determine the relationship between financial performance and the independent variables. The regression equation was:

$$\mathbf{Y = 6.859 + 0.001X_1 - 0.002X_2 – 0.114X_3 -0.024X_4 + 4.049}$$

From the regression model obtained above, holding all the other factors constant, the financial performance will be Ksh.6.859 billion. A unit change in the net interest margin, holding all other things constant, will change performance by Ksh.0.001 billion. A unit change in the concentration, holding all other things constant, will change the performance by Ksh.-0.002 billion. A unit change in advertising, holding all other things constant, will change the performance by Ksh.-0.144 billion. A unit change in number of branches, holding all other things constant, will change the performance by Ksh.-0.024 billion.

This implied that net interest margin had the highest influence on the performance followed by advertising and then concentration. The obtained regression equation further implied that there was a direct relationship between the financial performance and the net interest margin, while there was an inverse relationship between the financial performance and concentration, advertising, and number of branches.

The analysis was undertaken at 5% significance level. The criteria for comparing whether the predictor variables were significant in the model was through comparing obtained p-value and $\alpha = 0.05$. If the p-value was less than α, then the predictor variable was significant, otherwise it was not. Net interest margin, advertising, and number of branches were significant in the model as their respective p-values were 0.009, 0.049, and 0.024 which are below the threshold of 0.05. However, the other variable (concentration) was insignificant in the model.

4.4.3 Test of Significance

The significance of the relationship between the dependent and the independent variables in this study was tested at 5% confidence level using a chi-square test. The critical significance value at this level was set at 0.025 in a 2-tailed test. Thus, with a significant value below this value (0.025), the results reveal the significance of the relationship. The chi-square test results for the significance of the relationship between financial performance and the independent variables are as presented in figure 4.5.

Figure 4.5 chi-square test for the relationship between the variables

	Value	d.f	Sig. 2-sided
Pearson chi-square	22.120[a]	84	.021
Likelihood ratio	11.012	84	.001
Linear by linear association	3.471	1	.006
N of valid cases	43		

Based on the table results, the significance test results indicate a Pearson chi-square value of 22.120 with 84 degrees of freedom at 5% confidence level. The significance value is 0.021 which is less than the critical value (0.025) in a 2-tailed test. Thus, based on these results there is a statistically significant relationship between the financial performance and the independent variables.

4.5 Discussion of Research Findings

In line with the findings obtained in this study, a correlation coefficient of 0.949 was obtained which according to the Pearson correlation scale is in the interval 0.7- 1.0 indicating presence of a strong correlation. The reliability of the results was confirmed as the R Square was obtained to have a high percentage showing that these variables can be relied on to explain the variability in the dependent variable. Thus, it is apparent that the level of competition in the deposit taking microfinance sector associates positively with the financial performance of these institutions. Thus, the more investments towards addressing competition, the better the returns of the institution's financial portfolio.

The analysis of variance table (F-test) results indicated that the obtained model is statistically significant and therefore can be relied to explain the interrelationships between financial

performance and its determinants (competition). This therefore explains that, the level at which an organization sets its innovative measure to curb competition determines its competitiveness.

The correlation matrix for the three variables shows that there are good correlations between individual independent variables and DTMs' financial performance as measured by ROA.

From the regression results, net interest margin (p = .009) was found to be significant in explaining DTMFI's financial performance (ROA) better than concentration (p = .906), advertising (p = .049) and number of branches. Concentration, advertising and number of branches led to negative financial performance.

To test the significance of the findings, Chi-square test was done. A p-value of 0.021 was registered indicating that the relationship was significant since the value is below the recommended value of 0.025 or less. Pearson correlation analysis established that net interest margin was positively related to financial performance while the other variables had a negative relation.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents a summary of the research findings presented in chapter four above. The conclusion drawn from the findings of the study are also presented in this chapter. Besides, the chapter presents recommendations and areas for further study.

5.2 Summary

The main objective of the study was to establish the effect of competition on the financial performance of deposit taking micro finance institutions in Kenya. In order to fulfill the main objective, the study established the relationship between the four variables i.e. net interest margin, concentration, advertising cost and number of branches for the deposit taking microfinance in Kenya. The regression results indicated the relationship between competition and the financial performance of the DTMFIs.

The study findings illustrated that, 8.3% of DTMFIs have between 10 and 20 branches in different parts of the country, 16.6% have more than 20 branches and 75.1% have less than 10 branches across the country. This gives the MFIs' banking networks across the nation which implies their competitiveness with other financial institutions.

The association between the level of competition as indicated by the networking of the banks through saturation and DTMFIs' financial performance was tested at 5% level with a 2-tailed test. The findings revealed that, the two variables are positively and strongly correlated with a

correlation of 0.787. This association was also found to be significant as the p-value indicates at 5% level.

Testing the correlation between concentration and DTMFIs' financial performance, the study found out that, there is a strong and positive association between concentration and financial performance of DTMFIs. The significant value for the association is 0.011 testing at 5% level with a 2-tailed test, thus the association between the variables is strong and statistically significant.

The regression test findings indicated that, holding other factors constant, the independent variables of the study, contributes to 90.1% of the variation in the financial performance of DTMFI's in Kenya. Findings also illustrate that, the regression model developed in the study is statistically significant in predicting financial performance of MFIs. The model coefficients were found to be significant testing at a 5% level.

5.3 Conclusion

While initially established as regional monopolies, competition has been rising rapidly among microfinance lenders as the industry comes of age. The study obtained significant results which answered the research questions that the study sought to answer thus meeting its objective. Based on these findings therefore, the researcher makes conclusions which are as presented below;

As in other industries, the degree of competition in the deposit taking micro-financial sector can matter for the efficiency of the production of financial services, the quality of financial products and the degree of innovation in the sector. From the findings, increased competition

in the sector leads to lower costs and enhanced efficiency. The competitiveness of microfinance systems relates positively to the number of branches
(networks) established in the country.

Competition is of great essence in the micro financial system. The findings then proved that competition contributes to greater productivity in the micro financial system. Competition allows the customers a choice of the most affordable source of credit.

In conclusion, the results of this paper are quite encouraging for the long-term future of the microfinance movement. It would appear that the more dire theoretical predictions on the consequences of rising competition are not borne out, even in an environment with no formal sharing of information.

Given the strong downward pressure on interest rates engendered by competition, as well as the effect of deeper credit markets, there is cause for hope. Improved mechanisms for the sharing of information on client indebtedness levels should be able to overcome problems associated with improper assessment of risk under multiple loan-taking, thus addressing the major adverse effect of Competition.

5.4 Recommendations

With reference to the findings and conclusions made in this study, the researcher makes policy recommendations which can be adopted for betterment of the micro-financial sector's performance, as explained below.

The results on the competition influence on the financial performance of DTMFIs suggest that competition policy in the financial sector is more complicated than perhaps thought. In

part, this may be because financial services industries have been undergoing rapid changes, triggered by deregulation and technological advances. Thus, to ensure competitiveness of the sector, policies should be implemented which foster innovation in the products being offered to the customers, and those that shall ensure fair competition to the young micro finance institutions hence facilitating their growth. Therefore, developing proper competitiveness tests and methodologies will remain an important area of research and policy focus.

5.5 Limitations of the Study

Not all the institutions approached were positively willing to provide the data (information) requested due to internal restrictions by their management on private and confidential information. Others took too long to respond to the request for financial statements. Although the researcher assured the respondents that their confidence and privacy will be maintained, some respondents were not free to give some information due to fear of reprimand from the management.

5.6 Suggestions for Further Research

More research is clearly needed on the topic of microfinance institutions' concentration and competition which shall cover a significant number of microfinance institutions in different regions of the country.

One useful direction for future research is likely to be additional focus on developing (young) micro financial institutions and their problems of credit availability, their contribution to economic growth, and financial stability.

Along these lines, more detailed analyses of how regulatory and supervisory policies influence their performance and overall economic performance may provide policymakers with considerably improved information for formulating the sector policies.

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APPENDICES

APPENDIX 1: LICENSED DEPOSIT TAKING MICROFINANCE INSTITUTIONS IN KENYA

TABLE 1: LICENSED DEPOSIT TAKING MICROFINANC INSTITUTIONS IN KENYA

No.	INSTITUTION	BRANCHES	WEBSITE
1.	CHOICE MICROFINANCE BANK LTD.	1	www.choicemfb.com
2.	FAULU MICROFINANCE BANK LTD.	32	www.faulukenya.com
3.	KENYA WOMEN MICROFINANCE BANK LTD.	29	www.kwftdtm.com
4.	DARAJA MICROFINANCE BANK LTD.	1	www.darajabank.co.ke
5.	SMEP MICROFINANCE BANK LTD.	7	www.smep.co.ke
6.	REMU MICROFINANCE BANK LTD.	3	www.remultd.co.ke
7.	RAFIKI MICROFINANCE BANK LTD.	17	www.rafiki.co.ke
8.	UWEZO MICROFINANCE BANK LTD.	2	www.uwezodtm.com
9.	CENTURY MICROFINANCE BANK LTD.	1	www.century.co.ke
10.	SUMAC MICROFINANCE BANK LTD.		www.sumacdtm.co.ke
11.	CARITAS MICROFINANCE BANK LTD.		www.caritas-mfb.co.ke
12.	U&I MICROFINANCE BANK LTD.		

APPENDIX 2: NET INTEREST INCOME Kshs. ‘000

TABLE 2 NET INTEREST INCOME Kshs. ‘000

DTMFI	**2010**	**2011**	**2012**	**2013**	**2014**
KWFT	4,095,175	4,005,619	4,875,630	5,000,325	5,078,665
FAULU	655,626	998,499	1,108,415	1,402,825	2,276,904
RAFIKI	10,525	13,539	41,860	82,873	101,348
SMEP	307,925	463,702	501,669	440,740	456,369
REMU	20,329	31,342	28,765	50,239	102,135
UWEZO	10,822	13,287	18,875	41,458	90,435
CHOICE	-	-		5,128	8,501
DARAJA	-	-		1,178	5,345
CENTURY	-	-		3,250	6,156
SUMAC	-	-		8,090	12,435
U % I	-	-		7,980	11,550
CARITAS	-	-		4,590	8,150
TOTAL	**5,100,402**	**5,525,988**	**6,575,214**	**7,048,676**	**8,157,993**

APPENDIX 3: INTEREST BEARING ASSETS Kshs. '000

TABLE 3: INTEREST BEARING ASSETS Kshs. '000

DTMFI	**2010**	**2011**	**2012**	**2013**	**2014**
KWFT	14,500,635	14,285,190	16,950,350	17,325,550	21,671,619
FAULU	3,344,144	3,900,778	6,197,971	9,696,328	17,032,394
RAFIKI	298,355	357,997	500,124	799,451	1,089, 498
SMEP	1,249, 675	1,924,620	2,076,130	2,104,322	1,944,321
REMU	178,345	349,560	500,175	800, 432	998,487
UWEZO	130,876	200,459	309,150	480,350	605, 350
CHOICE	-	-	-	25,500	40,900
DARAJA	-	-	-	10,350	30,890
CENTURY	-	-	-	21,450	40,780
SUMAC	-	-	-	69,500	109,545
U % I	-	-	-	61,899	105,500
CARITAS	-	-	-	23,000	65,000
TOTAL	**19,702,030**	**21,018,604**	**26,533,900**	**31,418,132**	**43,734,284**

APPENDIX 4: NET INTEREST MARGIN

TABLE 4: NET INTEREST MARGIN

DTMFI	**2010**	**2011**	**2012**	**2013**	**2014**
KWFT	0.28	0.28	0.2876	0.2886	0.2343
FAULU	0.199	0.26	0.178	0.144	0.13
RAFIKI	0.035	0.038	0.084	0.104	0.093
SMEP	0.246	0.24	0.241	0.209	0.234
REMU	0.113	0.09	0.057	0.063	0.102
UWEZO	0.083	0.066	0.061	0.086	0.149
CHOICE				0.201	0.208
DARAJA				0.114	0.173
CENTURY				0.151	0.151
SUMAC				0.116	0.114
U % I				0.129	0.11
CARITAS				0.20	0.125
TOTAL	**.956**	**.974**	**.9086**	**1.8056**	**1.8233**

APPENDIX 5: TOTAL ASSETS Kshs. '000

TABLE 5: TOTAL ASSETS Kshs. '000

DTMFI	**2010**	**2011**	**2012**	**2013**	**2014**
KWFT	18,960,300	17,060,500	20,360,100	21,750,620	26,964,912
FAULU	4,307,180	5,140,576	7,637,676	12,419,216	20,319,958
RAFIKI	300,470	440,661	605,445	890,230	978,345
SMEP	1,003,670	1,998,220	2,289,510	2,490,447	2,378,138
REMU	220,674	498,675	602,560	940,768	1,110,900
UWEZO	160,326	250,323	388,745	551,276	701,564
CHOICE	-	-	-	30,235	49,702
DARAJA	-	-	-	14,675	38,900
CENTURY	-	-	-	26,190	45,320
SUMAC	-	-	-	78,560	121,740
U % I	-	-	-	70,350	120,890
CARITAS	-	-	-	29,599	89,130
TOTAL	**24,952,620**	**25,380,955**	**31,884,036**	**39,292,166**	**52,919,499**

APPENDIX 6: PROFIT BEFORE TAX Kshs. '000

TABLE 6: PROFIT BEFORE TAX Kshs. '000

DTMFI	**2010**	**2011**	**2012**	**2013**	**2014**
KWFT	345,370	330,565	400,831	420,975	474,446
FAULU	(49,154)	2,085	58,294	165,682	298,946
RAFIKI	3,560	(15,362)	2,891	20,563	53,765
SMEP	17,903	25,895	53,074	5,451	(97,021)
REMU	2,096	5,788	10,650	17,566	20,543
UWEZO	1,098	3,170	7,029	20,786	60,545
CHOICE	-	-	-	991	2,134
DARAJA	-	-	-	(275)	1,354
CENTURY	-	-	-	1,003	2,271
SUMAC	-	-	-	2,575	4,129
U % I	-	-	-	1,890	2,501
CARITAS	-	-	-	1,533	3,009
TOTAL	**320,873**	**352,141**	**532,769**	**658,740**	**826,622**

APPENDIX 7: RETURN ON ASSETS Kshs. ‘000

TABLE 7: RETURN ON ASSETS Kshs. ‘000

DTMFI	**2010**	**2011**	**2012**	**2013**	**2014**
KWFT	0.018	0.019	0.0197	0.0194	0.0176
FAULU	-0.0114	0.000	0.007	0.01334	0.0147
RAFIKI	0.0118	-0.0348	0.0047	0.023	0.0549
SMEP	0.0178	0.0129	0.023	0.002	-0.040
REMU	0.009	0.016	0.0176	0.0187	0.0185
UWEZO	0.007	0.0127	0.018	0.0377	0.0863
CHOICE				0.0327	0.0429
DARAJA				-0.0187	0.0348
CENTURY				0.038	0.050
SUMAC				0.0327	0.0339
U % I				0.0268	0.0207
CARITAS				0.052	0.033
TOTAL	**0.00522**	**0.0258**	**0.09**	**0.27764**	**0.3673**

APPENDIX 8: HERFINDAHL-HIRSCHMAN INDEX

TABLE 8: HERFINDAHL-HIRSCHMAN INDEX

DTMFI	**2010**	**2011**	**2012**	**2013**	**2014**
KWFT	5,776	4,517	4,077	3,063	2,596
FAULU	29.90	410	573.6	998.56	1,474.33
RAFIKI	1.44	3.014	3.602	5.13	3.415
SMEP	16.16	61.94	51.55	40.17	20.16
REMU	0.77	3.8416	3.568	5.71	4.405
UWEZO	0.0036	0.972	1.4859	1.96	1.7556
CHOICE	-	-	-	0.0049	0.0087
DARAJA	-			0.0009	0.0049
CENTURY	-			0.004356	0.0073
SUMAC	-			0.0396	0.0529
U % I	-			0.032	0.0519
CARITAS	-			0.00567	0.028
TOTAL	**5,824.27**	**4,997.25**	**4,710.8**	**4,114.62**	**4,100.22**