THE EFFECT OF NONPERFORMING LOANS ON THE FINANCIAL PERFORMANCE OF SAVINGS AND CREDIT CO-OPERATIVE SOCIETIES IN NAIROBI COUNTY, KENYA

BY

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A RESEARCH PROJECT SUBMITTED IN PARTIAL FUFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF MASTER OF BUSINESS ADMINISTRATION, SCHOOL OF BUSINESS, UNIVERSITY OF NAIROBI

SEPTEMBER 2014

DECLARATION

I declare that this project is my original work and has not been submitted for academic purposes in this or any other University.

Signed ……. Date……

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D61/70106/2009

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

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ACKNOWLEDGEMENTS

The long and challenging journey that has led to the successful completion of this MBA program would not have been without the incredible support and encouragement of many people I interacted with. First and foremost I am indebted to the almighty God for all the blessings he showered on me and for being with me throughout the study. I would also like to record my special thanks and utmost gratitude to my supervisor Mr. Herrick Ondigo as well as my moderator Dr. Josiah Aduda whose professional guidance and wisdom made it possible for me to successfully undertake and complete the study.

I am deeply grateful to my family, especially my sister Mary Owuor, brothers, Aggrey Mboya and Charles Oketch for the foundation they laid for me while commencing my professional career. Special appreciation also goes to my wife Jackline and children, Michael Edward and Marion Stacy for their encouragement, support and patience while undertaking this project.

Special thanks also goes to the management of all the SACCOs within Nairobi County for giving me access to their annual financial reports which enabled the collection of the required data. Finally may I also appreciate my employer Kenya Police Sacco Society Ltd for supporting my MBA program and giving me a chance to offer my skills in serving the members of the SACCO.

DEDICATION

This research project is dedicated to my beloved wife Jackline and children, Michael Edward and Marion Stacy for their love and moral support and also to my dear parents Mr. Edward Manyuanda and Mrs. Plista Manyuanda for the sacrifices they made in educating me.

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LIST OF ABBREVIATIONS

CBK	Central Bank of Kenya
FOSA	Front Office Savings Activity
GDP	Gross Domestic Product
KES	Kenya Shillings
NI	Net Income
NPLS	Nonperforming loans
ROA	Return on Assets
ROE	Return on Equity
ROS	Return on Sales
SACCOS	Savings and Credit Co-operative Societies
SASRA	SACCO Societies Regulatory Authority
SPSS	Statistical Package for Social Sciences
TA	Total Assets
USD	United States Dollars

ABSTRACT

Financial performance has received significant attention from scholars in the various areas of business and economics. It has also been the primary concern of business practitioners in all types of organizations since financial performance has implications to organization's health and ultimately its survival. High performance reflects management effectiveness and efficiency in making use of company's resources and this in turn contributes to the country's economy at large. Some of the factors affecting financial performance include; nonperforming loans, size of the organization, leverage and management efficiency.

The study made use of secondary data such as data on the levels of nonperforming loans, profitability of the SACCOs and provision for bad debts which was obtained from the annual financial statements of the SACCOs operating FOSAs within Nairobi County. Journals, books and other resource materials on nonperforming loans and financial performance were also used as well as review of related studies which was done to compare relevant information as regards the same. The study made use of regression analysis to establish the effect of nonperforming loans on the financial performance of SACCOs in Nairobi County.

The study findings illustrates that there is a strong relationship between return on assets and independent variables (firm size, leverage & nonperforming loans ratio). From the determination coefficients, it can be denoted that there is a strong relationship between dependent and independent variables given a coefficient of determination value of 0.630.

From the findings and conclusions, the study recommends that SACCOs should opt for equity financing instead of debt financing if it wants to improve on its leverage. This involves funding growth through retained earnings and issuing of shares. The study also recommends credit approval and monitoring procedures to be focused on the borrower's cash flow and ability to repay in an effort to improve the quality of the loan assets and mitigate future allowances for loan losses.Finally the study recommends that since most of the SACCOs lack the efficient risk management mechanism that will help eradicate or sieve out serial defaulters, they require referencing solution that will enable them submit and share data whilst processing their customers' credit application. This will help prevent borrowers with unsatisfactory credit record from accessing further credit from other unsuspecting lending institutions.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Extension of credit facilities is one of the major activities of all SACCOs as evidenced by the large proportion that loans constitute in the overall operating assets of these financial institutions. Healthy loan portfolios are therefore vital for SACCOs in view of their impact on Liquidity, lending capacity, earnings and profitability of the SACCOs (Mombo, 2013).

Some of the loans given out by the SACCOs unfortunately become nonperforming and eventually result in bad debts with adverse consequences for the overall financial performance of the institutions. Nonperforming loans in general terms refer to bad debts, whose recovery is highly doubtful because they are not being serviced as required (CBK, 1997). The issue of loan default (NPLs) is becoming an increasing problem that threatens the sustainability of SACCOs. NPLs are always a source of misery for lenders because if a SACCO has too much of it on its balance sheet, it can adversely affect its operations in terms of liquidity, profitability, debt- servicing capacity, Lending capacity and ability to raise additional capital.

1.1.1 Nonperforming loans

Greuning and Bratonovic (2000) describe nonperforming loans as those assets that are no longer generating income. Nonperforming loans as per the SACCO Act refers to all loans in the portfolio more than 90 days overdue on interest or principal repayments and are disclosed as supplemental financial statement information. In the resent past SACCOs in Kenya have experienced a rapid rise in the level of

nonperforming loans often leading to liquidity problems hence unplanned borrowing from banks at high interest rates, loss of trust in SACCOs by the members, high rate of loan loss provisioning hence less dividends to members and loss of elections by board members. The issue is so serious that the Kenya government decided to include treatment of nonperforming loans in the SACCO Act to guide SACCOs on provision and reporting of such items in the financial report.

Nonperforming loans ratio is measured by: value of nonperforming loans divided by the total value of the loan portfolio (including nonperforming loans before the deduction of specific loan-loss provisions). Higher delinquency ratios means that an organization is not recovering the loans given out as expected. For SACCOs the regulator SASRA has pegged a ratio of 5% as the maximum delinquency ratio that licensed SACCOs should hold at any time.

1.1.2 Financial Performance

Financial performance refers to the subjective measure of how well a firm can use assets from its primary mode of business and generate revenues. This term is also used as a general measure of a firm's overall financial health over a given period of time and can be used to compare similar firms across the same industry or to compare industries or sectors in aggregation. Financial performance is therefore a very important aspect of financial management and can thus not be ignored because it is central to the survival of any business enterprise. Without sound financial performance, a business organization may easily close down its operations (Mombo 2013).

There have been various measures of financial performance. For example return on sales (ROS) reveals how much a company earns in relation to its sales, return on assets (ROA) determines an organization's ability to make use of its assets and return on equity (ROE) reveals what return investors take for their investments. The advantages of financial measures are the easiness of calculation and that definitions are agreed worldwide. Traditionally, the success of a manufacturing system or company has been evaluated by the use of financial measures (Tangen, 2003)

The liquidity measures determine the ability of the business to meet its financial obligations as and when they fall due without disrupting any of its activities. These measures usually rely on the relationship between assets and liabilities of the organization. Liquidity can be analyzed both structurally and operationally. Structural liquidity refers to balance sheet measures of the relationship between assets and liabilities i.e. the current ratio while operational liquidity refers to cash flow measures.

According to the SASRA regulatory requirements licensed deposit taking SACCOs are expected to maintain a liquidity ratio of not less than 15%. Another type of measure is the solvency measure which basically determines the amount of borrowed capital used in business relative to the owner’s equity capital invested in the business. Solvency measures thus provide an indication of the firm’s ability to repay all its debts if all the assets were sold.

1.1.3 Effect of Nonperforming loans on Financial Performance

Nonperforming loans have an effect on the financial performance of Institutions because loans are assets that need to generate returns for an organization and when

loans given out are not recovered together with interest then it implies that more resources will need to be committed towards provision for nonperforming loans and additional costs was used in financing recovery efforts. These costs and provisions consume a huge portion of the profits earned by SACCOs thereby retarding their financial performance Mombo (2013). The level of nonperforming loans in an organization determines how profitable that organization was. Mombo (2013) confirms that nonperforming loans in deposit taking microfinance institutions account for the greatest percentage of the variance in the profitability of these institutions.

Mwangi (2012) observed that there is an inverse relationship between the amounts of nonperforming loans and the financial performance. He further noted that when nonperforming loans are high, the financial performance measured by return on assets is low. The reverse also happens when nonperforming loans are low.

1.1.4 SACCOs in Nairobi County

A co-operative society is an autonomous association of persons united voluntarily to meet their common economic and social needs through a jointly owned and democratically controlled enterprise or business (PROCAUSER Africa, 2012). Co-operatives are divided into two broad categories.

There are the financial co-operatives (Savings & Credit Co-operative Societies – SACCOs) and the non-financial co-operatives (including farm produce and other commodities co-operatives, housing, transport, and investment co-operatives). The general objective of these organizations is to protect the economic interests and general welfare of members in accordance with cooperative values and principles.

As at 31st December 2013 the number of SACCOs in Nairobi County stood at 1,325, out of these 43 operate FOSAs and are therefore licensed and regulated by SASRA while the rest are supervised by the Ministry of Industrialization and Enterprise Development. SACCOs in Nairobi County just like their counterparts across the world predominantly rely on advance of credit to their members as the primary business accounting for over 90% of their income. Members contribute deposits on a monthly basis and the accumulated deposits enable the members to qualify for loans which are calculated using the formular of the accumulated deposits times three. Loans given out are secured using the member's shares and guarantors however sometimes the loans advanced are not recovered as expected giving rise to what is called nonperforming loans.

SACCOs in Nairobi County have witnessed significant growth over the past few years compared to other counties in the country. This growth is partly attributable to the early adoption of the SACCO Societies Act of 2008 that placed licensing, supervision, and deposit taking under the umbrella of the SACCO Societies Regulatory Authority (SASRA). These prudential regulations have played a major role in stimulating growth and development in the SACCO sector. This study concentrates on deposit taking (FOSA operating SACCOs) in Nairobi County.

1.2 Research Problem

The subject of financial performance has received significant attention from scholars in the various areas of business and economics. It has also been the primary concern of business practitioners in all types of organizations since financial performance has implications to organization's health and ultimately its survival. High performance

reflects management effectiveness and efficiency in making use of company's resources and this in turn contributes to the country's economy at large. Some of the factors affecting financial performance includes; nonperforming loans, size of the organization, leverage and management efficiency. In Kenya the SACCO movement has undergone some changes in the last five years which saw the introduction of the SACCO Societies Act 2008 to license and regulate the operations of SACCOs. The movement faces a number of challenges key among them being nonperforming loans.

Various researchers have conducted studies on NPLs as follows: Kabiru (2002) The relationship between risk management and the level of NPLs in Kenya, Kalani (2004) The causes of NPLs, Kanyiri (2005) Strategic responses of commercial banks in Kenya to the challenge of NPLs, Mathara (2007) The response of National bank of Kenya to the challenge of NPLs and Mombo (2013) The effect of nonperforming loans on the financial performance of deposit taking microfinance institutions in Kenya. The studies conclusively established that NPLs were a problem to the government, the banking industry and that nonperforming loans affect the financial performance of organizations. NPLs thus require adequate response from affected institutions in order to manage and minimize their impact.To the knowledge of the researcher no research has been conducted on the effects of nonperforming loans on the financial performance of SACCOs in Kenya yet the sector has a high growth rate and contributes significantly to the Kenyan economy. The research therefore intends to fill the knowledge gap by investigating the effects of NPLs on the financial performance of deposit taking SACCOs in Nairobi County. The research question is; what is the effect of the nonperforming loans on the financial performance of SACCOs in Nairobi County?

1.3 Research Objective

To establish the effect of nonperforming loans on the financial performance of SACCOs in Nairobi County.

1.4 Value of the Study

The findings of this study will be useful to SACCOs within Nairobi County in evaluating how effective their approach to managing NPLs has been. This will enable them to identify the gaps in their management of NPLs and adjust accordingly.

The study will also be useful to other researchers and scholars for reference purposes and as a source of secondary data on investigation of the effect of NPLs on the financial performance of SACCOs.

Last but not least, the study will be useful to the various government agencies involved in the regulation of the SACCOs such as SASRA in Kenya in enhancing the various measures they have put in place to ensure compliance to loan asset reporting and provisioning.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

Literature review involved examination of books, magazines, journals and past studies that have been done on nonperforming loans and their effect on financial performance of organizations as well as the various theories that support the study. Among the issues discussed include the theoretical foundations, the empirical literature both foreign and local and the summary of the literature review.

2.2 Theoretical Review

Several theories have been advanced that seek to explain financial performance and nonperforming loans as discussed below:

2.2.1 The Stakeholder Theory

The stakeholder theory developed by Freeman (1984) is based on the argument that apart from the shareholders, there are several agents who are affected by the actions and decisions taken by SACCOs. Stakeholders are parties that have an interest in an enterprise or project and include investors (shareholders), employees, customers, suppliers, government and communities at large.

Stakeholder theory asserts that SACCOs have a social responsibility that requires them to consider the interest of all parties affected by their actions. A stakeholder-based performance measure challenges managers to examine more broadly the value their firms are creating from the perspective of the stakeholders who are involved in creating it. It therefore gives managers the information they need to engage

stakeholders where they are and enhance managerial ability to use such insights to create more value. At its core, this perspective is about creating a higher level of well-being for the stakeholders involved in a system of value creation led by the firm.

Stakeholder theory has been a subject of investigation by a number of people. Jensen (2001) provides a comprehensive review of corporate governance, with a particular focus on stakeholder theory. The authors note the presence of many parties interested in the well-being of the firm and that these parties often have competing interests. On one hand are the shareholders who may welcome investments in high yielding but risky projects. This may not go well with the credit providers especially when the company is in the verge of bankruptcy.

2.2.2 The Stewardship Theory

Stewardship Theory developed by Donaldson and Davis (1991 & 1993) is a new perspective to understand the existing relationships between ownership and management of the company. Its main purpose is to address the underlying agency theory assumption that there exists a tension between the risk propensity of principals and their agents whereby agents focus their actions upon mitigating their personal risks at the expense of the principal Mombo (2013).

The agency theory suggests that the owners must recognize this tension and prevent agent activity related to moral hazard by monitoring managers and developing mechanisms that align the interests of the agents with principals and prevent opportunistic actions by agents Arthurs (2003).

Stewardship theory has been introduced as a means of defining relationships based upon other behavioral premises, it defines situations in which managers are not motivated by individual goals, but rather are stewards whose motives are aligned with the objectives of their principals. This underlying assumption of commonality between managers and owners runs counter to the assumption of the individualistic, self serving, opportunists that organizational economists have offered as the model of firm management in a market system Arthurs (2003).

2.2.3 The Financial Accelerator Theory

The financial accelerator theory developed by Bernanke and Gertler (1989) seeks to explain how small economic shocks have relatively large effects on the lending and borrowing activities. It relies on the interplay between economic agents' net worth and the external finance premium that arises due to asymmetric information between lenders and borrowers. Where economic agents' net worth is defined as the sum of liquid assets plus collateral value of illiquid assets less outstanding obligations and the external finance premium is defined as the difference between the cost of funds raised externally and opportunity costs internal to the firm (Bernanke, Gertler and Gilchrist, 1999)

The theory argues that the less the amount of his own wealth the borrower contributes to the project, the more his interests will diverge from the interests of the supplier of the external funds. Borrowers was more eager to undertake riskier projects. That is, projects that have a high probability of large return, but also those offering low returns. From the borrower's perspective these projects are preferred since the firms' losses in the cases when the project's return is low are limited to zero by legal regulation.

From the lenders' point of view, these projects are unfavorable since they bear all, or most of, the costs in the case of low project returns. The theory further indicates that due to economic shocks, the borrowers may not have the ability to borrow and are likely to avoid repayment of their loans.

2.3 Determinants of Financial Performance of SACCOs

A number of factors influence the financial performance of organizations including nonperforming loans, the size of the organization and leverage.

2.3.1 Nonperforming loans

Nonperforming loans affect the profits of institutions because of the huge amounts of provision for loan loss that ultimately reduces distributable profits. Lending is one of the main activities of SACCOs and any other financial institution in Kenya as evidenced by the size of loans that form SACCO assets and the annual substantial increase in the amount of credit granted to borrowers in the country. Loan portfolio is naturally the largest asset and the largest source of income for SACCOs. In view of the significant contribution of loans to the financial health of SACCOs through interest income generated, these assets are considered the most important assets of SACCOs. As a result of SACCOs and financial institutions business, they expose themselves to the risks of default from loan borrowers.

When the level of nonperforming loans is high, the assets provisions made are not adequate protection against default risk. Mombo (2013) found out that nonperforming loans in deposit taking microfinance institutions in Kenya accounted for the greatest percentage of the variance in profitability of these institutions. Studies have also showed that nonperforming loans can fuel banking crisis and result in the collapse of institutions and have repercussions in the entire economy.

Kane and Rice (2001) stated that at the peak of the financial crisis in Benin, 80% of total bank loans portfolio which was about 17% of GDP was nonperforming in the late twentieth century.

2.3.2 Size

The size of the firm affects its financial performance in many ways. Large firms can exploit economies of scale and scope and thus being more efficient compared to small firms. In addition, small firms may have less power than large firms hence they may find it difficult to compete with the large firms particularly in highly competitive markets. Previous studies on bankruptcy models indicate that larger SACCOs are more solvent than the smaller ones even if the numerical values of their financial ratios are the same (Beaver, 1966). This implies that the probability of failure is more likely to strike a smaller company in recessionary times. Empirical evidence supports this view (Mitchell, 1994).

Smaller SACCOs tend to experience higher volatility in their rate of return than their larger counterparts (Baumol, 1962). This implies uneven comparison and unfair predictions or results that are generated when comparing different asset size SACCOs with the same financial ratios (Beaver, 1966). Earlier research papers such as Sharma and Kesner, (1996) Mitchell, (1994) strongly support the effect of firm size on business survival and variance in operating performance. They argue that firm size is a basis of competitive advantage in the sense that larger SACCOs tend to be more efficient than their smaller counterparts and have better resources to survive economic downturns. Opler and Titman (1993) argue that lost sales in the time of financial distress are not only a function of leverage but also a function of the firm's size.

For instance small SACCOs tend to have higher volatility of earnings in the sense that they are more affected by the competitor and customer driven losses in sales (Opler and Titman, 1993). On the contrary larger firms tend to be disciplined by manager driven reductions in sales and could well benefit from an event of financial distress caused by the economic contraction (Titman and Wessel, 1988).The size of a firm can be measured using the asset base, branch network, number of employees and membership (for SACCOs). For this research asset base was used as the measure for size.

2.3.3 Leverage

Leverage occurs when firms borrow money to finance the purchase of assets. The other way to purchase assets is through use of owner funds or equity. Leverage is not necessarily a bad thing as it can be useful to fund company growth and development through the purchase of assets. However if the company has too much borrowing, it may not be able to pay back all of its debts.

Debt leverage is measured by the ratio of total debt to equity (debt/equity). It shows the degree to which a business is utilizing borrowed money. SACCOs that are highly leveraged may be at risk of bankruptcy if they are unable to make payments on their debt they may also be unable to find new lenders in the future. The trade-off theory (TO) (Bradley, Jarrell and Kim, 1984; Harris and Raviv, 1991) suggests that every firm has a specific optimal debt-to-equity ratio determined by balancing the present value of expected marginal benefits of leverage (ex. tax savings due to paid interests) against the present value of expected marginal costs of leverage.

2.4 Empirical Review

This section presents a discussion on the relevant literature reviewed both foreign and local which has a bearing on the effects of nonperforming loans on the financial performance of organizations.

2.4.1 International Evidence

Bernstein (1996) conducted a study on the effect of nonperforming loans on financial performance. The study involved a regression analysis of nonperforming loans as independent variable and operational costs as the dependent variable. The study reveals that the level of nonperforming loans is a significant determinant of the bank costs as well as the estimates of scale economies in banking. His study further reveals that the cost curves of banks with high levels of NPLs have the standard U-shape with the optimal point while on the other hand banks with low levels of NPLs do not exhibit the same characteristics. Their cost curves show that scale economies increase continuously with the bank size. Mombo (2013)

Kwack (2000) looked at the relationship between the Asian financial crisis and the weakness of financial institutions, as well the levels of international interest rates, short term debt, excessive lending and current account deficits. He conducted empirical analyses between 1995 and 1997 in seven Asian countries of Indonesia, Taiwan, Philippines, Korea, Malaysia, Singapore and Thailand. His study revealed that the 3 - month LIBOR interest rate, the nonperforming loan rates and corporate leverage ratio were very significant in explaining the Asian financial crisis.

Quigley (2001) suggests that real estate markets played a very important role in explaining the Asian financial crisis. He points out the increasing supply of office space, the high ratio of asset prices to market rents, the high growth rate of bank credit, the relative size of real estate sector and the relative weight of real estate among nonperforming assets as indicators of an upcoming crisis. His study indicates that the percentage of real estate bank loans in Taiwan stood at the range of 35 to 45% with an average Moody's rating of D. The study further shows that the bank intermediation ratio stood at 1.46 and the average exposure to real estate as a percentage of GNP stood at 58%. His findings also show that when real estate is the only form of collateral, there is strong incentive for investors to buy into an appreciating market in order to borrow funds to expand. A study carried out by Arko (2012) to establish the causes and impact of NPLs on the operations of Microfinance institutions in Ghana revealed that NPLs adversely affect the financial performance of firms in terms of profitability, liquidity and market appeal. His study further revealed that among the factors that accounted for the incidence of NPLs was in effective monitoring of loans.

Fawad and Taqadus (2013) also conducted a study to investigate the explanatory power of bank specific variables as determinants of nonperforming loans in Pakistan banking sector. Their study involved usage of 6 years panel data (2006-2011) of 30 banks in Pakistan. The study concluded that NPLs affects the bank's financial performance. They further suggested that the bank supervisors must include level of loan losses, quality of borrowers and credit risk with cost efficiency to measure the bank performance. Their study attributed rise in levels of nonperforming loans to bank's internal inefficiency.

2.4.2 Local Evidence

Locally a number of studies have also been conducted to establish the effect of nonperforming loans on the financial performance of firms. Kabiru (2002) carried out a study to establish the relationship between credit risk assessment practice and the level of nonperforming loans in Kenya. His study revealed that government owned banks had asset quality ratio of 30% above the industry average of 28%. This was attributed to the high levels of NPLs. By contrast three major foreign owned banks had an asset quality of less than 10%. Ultimately he concluded that banks that use qualitative credit assessment methods had higher incidences of NPLs as compared to those that used quantitative methods.

Kalani (2004) in his study conducted to establish the causes of nonperforming loans in commercial banks in Kenya argued that some bank factors that related to risk management structures put in place by banks were to blame for NPLs. These bank factors include lax procedures used in credit assessment, negligence in monitoring NPLs, insider loans, lack of trained personnel and aggressive credit collection methods.

Another study conducted by Kanyiri (2005) revealed that some banks faced the challenge of declining profitability as a result of provisioning of bad debts. Consequently they responded by strict monitoring of new lending to identify weaknesses early for corrective measures and thorough review of financial information submitted by borrowers before lending.

Mathara (2007) in a study to establish the response by National bank of Kenya to the challenge of NPLs found both external and internal factors causing NPLs in the Kenyan banks. The external factors she found were economic downturn that prevailed in the 1990s, government interference on lending and debt collection, inflationary tendencies, limited supervision by the Central bank of Kenya, poor and inadequate government monetary policies and unsupportive judicial system. The internal factors included poor management, poor credit risk management practices, use of qualitative method of loan appraisal, poor monitoring and evaluation systems, lack of adequate credit policy guidelines and lack of a defined loan portfolio. Wanjira (2010) conducted a study on the relationship between nonperforming loans management practices and financial performance of commercial banks in Kenya. Her study focused on establishing how the financial performance of commercial banks is affected by the nonperforming loans management practices adopted by these commercial banks. The study used both primary and secondary data. Secondary data was obtained from the audited financial statements of the 46 commercial banks in Kenya. The study revealed that the type of nonperforming loans management practices adopted by commercial banks determine their financial performance.

Mwangi (2012) carried out a study on the effect of nonperforming loans on the financial performance of commercial banks in Kenya. The study aimed at establishing how nonperforming loans portfolio impacted on the financial profitability of commercial banks in Kenya. The study focused on all the 46 commercial banks in Kenya for the period 2005 – 2011. Secondary data was obtained from the banks relating to two variables; Return on assets (ROA) which were the dependent variable and NPL which was the independent variable. The study adopted simple linear

regression model of the form Y = a+bx to establish the effect of nonperforming loans on commercial banks financial performance. The results obtained from the study confirm that during the earlier years of the study, there was a high amount of NPLs resulting to a very low ROA. Later years however showed a different trend where ROA was higher and NPLs were low.

A similar study conducted by Mombo (2013) to establish the effect of nonperforming loans on the financial performance of deposit taking microfinance institutions in Kenya revealed that NPLs and operating expenses explained more than half of the variance in the profitability of the microfinance institutions.

2.5 Summary of Literature Review

From the literature that has been reviewed, it is evident that nonperforming loans affect a number of financial institutions including commercial banks, microfinance institutions and SACCOs. It is also clear that nonperforming loans have also been associated with the global financial crises including the 2008 financial meltdown that saw the dwindling of property values. It is however evident that most of the studies have focused on the commercial banks and microfinance institutions leaving out the SACCOs.

Nonperforming loans and their effect on the financial performance of SACCOs have not featured in any of the studies reviewed. This leaves a gap that needs to be filled. SACCOs play a very vital role in the financial intermediation in the Kenyan economy and their uniqueness in operations in regards to use of guarantor ship as the only loan security reinforces the need for e research to be conducted. This study will therefore focus on filling this gap.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter outlines the methods that were adopted in investigating the effects of nonperforming loans on the financial performance of SACCOs in Nairobi County. It also explains the research instruments that were used in conducting the study. It is thus organized under the following sub sections: Research design, Target population, Data collection and Data analysis.

3.2 Research Design

This study adopted descriptive design. According to Kombo and Tromp (2006), descriptive research is the description of the state of affairs as it exists. They further point out that descriptive studies are not only restricted to fact findings but may often result in the formulation of important principles of knowledge and solution to significant problems.

They involve measurement, classification, analysis, comparison and interpretation of data. The aim of the study was to examine the effects of nonperforming loans on the financial performance of SACCOs in Nairobi County, Kenya. This method is preferred because the research was extensive; covering several SACCOs and it also enabled rapid data collection.

3.3 Target Population

The study area was the County of Nairobi, Kenya and the unit of analysis was the various SACCOs operating in the said region. There are 1,325 SACCOs in Nairobi County, out of which only 43 operate FOSAs (SASRA, 2013). The target population for this study consisted of all the 43 deposits taking SACCOs operating FOSAs in

Nairobi County. Target population is defined as "population from which we would want to collect data if we were conducting a complete census rather than a sample survey (Greenm, Camilli & Elmore, 2006). The researcher used Census because there are 43 SACCOs with FOSAs in Nairobi County (SASRA, 2013) and all the 43 SACCOs participated in the study. (Appendix II)

The choice of SACCOs operating FOSAs was guided by the fact that they are large in their operations and being regulated by SASRA, their reporting framework is similar and can thus be easily comparable. In addition it was easy for the researcher to obtain published financial reports.

3.4 Data Collection

The study made use of secondary data. Secondary data such as data on the levels of nonperforming loans, profitability of the SACCOs and provision for bad debts was obtained from the annual financial statements of the 43 SACCOs operating FOSAs within Nairobi County, journals, books and other resource materials on nonperforming loans and financial performance were also used. Lastly review of related studies was also done to compare relevant information as regards the same.

The researcher employed the services of a research assistant to collect the audited financial statements for four years that is from the year licensing of the SACCOs began 2010 to the year 2013 from the 43 SACCOs. To ensure that all the data was collected, follow up was made through phone calls and e - mails to the respective SACCOs.

3.5 Data Analysis

The study made use of regression analysis to determine the effect of nonperforming loans on the financial performance of SACCOs in Nairobi County. Multiple linear regression models were applied.

3.5.1 Analytical Model

The study used multiple linear regression models which was also successfully used by Mwangi (2012) to establish the relationship between nonperforming loans and financial performance.

The following model was used in conducting regression analysis:

$Y = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \varepsilon$

Where,

Y = Firms financial performance as measured by Return on Assets (ROA) = NI/TA

β_0 = Constant or intercept- defines value of asset without inclusion of predictor variables

$\beta_1 - \beta_3$ = Regression coefficients; that is the rate of change of dependent variable as a function of changes in the independent variable.

x_1 = Nonperforming loans ratio as measured by nonperforming loans / total value of the loan portfolio.

x_2 = Leverage as measured by the ratio of Total Debt To Equity (debt/equity)

x_3 = Firm Size as measured by (the natural logarithm of asset base)

ε = The "error" term reflecting other factors that influence financial performance.

The choice of ROA as the preferred financial performance measure was guided by the fact that it clearly brings out the ability of an organization in utilizing its assets. Additionally, it's easy to calculate and its definition is agreed worldwide.

3.5.2 Test of Significance

The test of significance was conducted using regression analysis and this was expected to yield coefficient of determination (R –square), analysis of variance (ANOVA), t – tests and f – tests.

Coefficient of determination (R – square) was used to establish the variance in the dependent variable resulting from the changes in the independent variables; ANOVA was used to determine whether there are significant differences between the dependent and the independent variables, f-tests was used to test the overall significance of the regression model while the t-test was used to test the significance of the independent variables in the model.

CHAPTER FOUR

DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

This chapter presents analysis and findings of the research on the effect of nonperforming loans on the financial performance of Savings and Credit Co-Operative Societies in Nairobi County. The data was collected from 40 SACCOs.

The data was collected from the SACCOs financial statements and consisted of total value of the total loans and advances, total asset value, total liability, total equity, net profit, and nonperforming loans. The study used both descriptive and inferential statistics to analyze the data found.

4.2 Descriptive Statistics

The data collected was used to compute the SACCOs' profitability (financial performance) as the ratio of net profit to total asset value or return on assets, leverage as a ratio of total liability to total assets, nonperforming loans ratio as measured by the ratio of total nonperforming loans to total value of the loan portfolio and advances.

Firm size as measured by the natural logarithm of total asset structure of the SACCO. Table 4.1 presents the descriptive statics and the distribution of the data on the average values of nonperforming loans ratio, total debt to equity (leverage), return on assets and firm size. Table 4.1 shows that the SACCOs financial performance as measured by ROA had a mean of 3.015 and standard deviation (STDEV) of 2.036. This signifies that on average, every KES.100 of the value invested in asset by the SACCOs generated KES.3.015 of net profits. However, other SACCOs made losses

of KES.-2.98 per KES.100 invested in assets. The skewness value was -.423 and kurtosis was .781, this point at negatively skewed and low peaked distribution.

Nonperforming Loans Ratio had an average value of 6.562, standard deviation of 5.271, Skewness value of 1.780 and kurtosis value of 4.901. This depicts a positively skewed and high peaked distribution. Total debt to equity ratio had a mean value of 84.36, standard deviation value of 4.981, skewness value of -1.480 and kurtosis of 2.603. Firm size had a mean of KES.4,750,281 with a maximum and minimum values of KES.27,146,680 and KES.225,960 respectively. The skewness value was 1.934 and kurtosis of 3.433. This point to a relatively normally distributed data.

Table 4.1: Descriptive Statistics

	Return On Assets	**Nonperforming Loans Ratio**	**Total Debt To Equity (Leverage)**	**Firm Size**
Mean	3.0150	6.5625	84.3560	4,750,281
Std. Deviation	2.03638	5.27138	4.98100	6,229,980
Skewness	-.423	1.780	-1.480	1.934
Std. Error of Skewness	.374	.374	.374	.374
Kurtosis	.781	4.901	2.603	3.433
Std. Error of Kurtosis	.733	.733	.733	.733
Minimum	-2.98	0.00	67.53	225,960
Maximum	6.88	27.45	90.89	27,146,680

Source: Research Findings

4.3 Inferential Analysis

The study conducted inferential analysis using Pearson correlation coefficient, ANOVA and regression analysis. ANOVA was used to test the hypothesis that the means among independent (factors) and dependent variables (return on assets) are equal, and to show the significance of the association between the two. Correlation coefficient was used to test linear dependence (association) between return on assets and the individual independent variables (nonperforming loans ratio, total debt to equity (leverage), firm size).

Regression analysis was used to measure the relationship between individual independent variables and the dependent variable when they act together. The regression analysis was of the form:

$$\mathbf{ROA = \beta_0 + \beta_1 (NPR) + \beta_2(LEV) + \beta_3 log(SIZ) + \varepsilon}$$

Whereby ROA is return on assets as a measure of profitability, NPR is nonperforming loans ratio, and SIZ is firm size; β_0 is the regressions constant, β_1, β_2, β_3 are the model coefficients while ε is the model significance produced from the ANOVA statistics (f-significance).

4.3.1 Correlation Results

The study sought to establish the association between individual independent variables and return on assets as a measure of profitability. The result is presented in Table 4.2 below:

Table 4.2: Correlation Matrix

		Return On Assets	Nonperforming Loans Ratio	Total Debt To Equity (Leverage)
Nonperforming Loans Ratio	Pearson Correlation	-.566**	1	
	Sig. (2-tailed)	.000		
Total Debt To Equity (Leverage)	Pearson Correlation	-.342	-.136**	1
	Sig. (2-tailed)	.015	.005	
Firm Size	Pearson Correlation	.516**	-.145**	.173*
	Sig. (2-tailed)	.001	.000	.018
	N	40	40	40

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

Source: Research Findings

The results show that there is a good, negative and significant relationship between nonperforming loans ratio and financial performance as measured by ROA ($R = -0.566$; $p < 0.001$). There was a moderate but negative relationship between total debt to equity as a measure of leverage and financial performance given an R value of -0.342. This was significant at 95% confidence level; $p = 0.015$. The study also found a good, positive and significant relationship between firm size and financial performance ($R = 0.516$; $p = 0.001$).

4.3.2 Goodness of Fit Statistics

The study sought to determine the goodness of fit for the regression analysis using the correlation coefficient between the overall independent variables and financial performance and the coefficient of determination from the same. Coefficient of determination established the strength of the relationship between the two.

Table 4.3: Goodness of Fit Statistics

R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
.794[a]	.630	.599	1.28879	2.083

a. Predictors: (Constant), Firm Size, Total Debt to Equity (Leverage), Nonperforming Loans Ratio

b. Dependent Variable: Return on Assets

Source: Research Findings

Table 4.3 illustrates the strength of the relationship between return on assets and independent variables (firm size, total debt to equity (leverage), nonperforming loans ratio). From the determination coefficients, it can be denoted that there is a strong relationship between dependent and independent variables given a R^2 value (coefficient of determination) of 0.630.

There was very good linear relationship between financial performance and nonperforming loans given a correlation coefficient of 0.794. Read together with the coefficient of determination, it can be deduced that 63% of the changes in SACCOs' return on assets is brought about by firm size, total debt to equity (leverage) and nonperforming loans ratio. The study also used Durbin Watson (DW) test to check that the residuals of the models were not auto correlated since independence of the residuals is one of the basic hypotheses of regression analysis. Being that the DW statistics were close to the prescribed value of 2.0 (that is, 2.083) for residual independence, it can be concluded that there was no autocorrelation. From the finding

of the study in the above table, the following regression equations were established by the study:

Table 4.4: Regression Analysis - 2005

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	14.181	4.687		3.026	.005
Nonperforming Loans Ratio	-.229	.049	-.592	-4.676	.000
Total Debt To Equity (Leverage)	-.230	.047	-.563	-4.918	.000
Firm Size	1.529	.466	.403	3.284	.002

a. Dependent Variable: Return On Assets

Source: Research Findings

The established regression equation was:

Return on Asset = 14.181 - 0.229*Nonperforming Loans Ratio - 0.230*Leverage + 1.529*Firm Size $p < 0.001$

From the finding in the above table the study found that holding nonperforming loans ratio, total debt to equity (leverage) and firm size constant leverage was 14.181. The study also found that a unit increase in nonperforming loans ratio while holding total debt to equity (leverage) and firm size constant will lead to an increase in leverage by 0.229, a unit decrease in profitability as measured by returns on assets.

Holding nonperforming loans ratio and firm size constant while increasing leverage by a unit will lead to a 0.230 decrease in profitability. However, a unit increase in firm size of the SACCO will cause a 1.529 increase in profitability. The t-significance

values showed that nonperforming loan ratios and leverage were both significant ($p < 0.001$) at 95% confidence level. Firm size was also significant given a p value of 0.002.

Table 4.5: Analysis of Variance

	Sum of Squares	df	Mean Square	F	Sig.
Regression	101.931	3	33.977	20.456	.000b
Residual	59.796	36	1.661		
Total	161.727	39			

a. Dependent Variable: Return On Assets

b. Predictors: (Constant), Firm Size, Total Debt to Equity (Leverage), Nonperforming Loans Ratio

Source: Research Findings

Analysis of Variance (ANOVA) was used to make simultaneous comparisons between two or more means; thus, testing whether a significant relation exists between variables (dependent and independent variables). This helps in bringing out the significance of the regression model. The ANOVA results presented in Table 4.5 shows that the regression model used in the study has a margin of error of less than 0.001 ($p < .001$). This indicates that the model has a probability of less than 0.1% of giving false prediction. The t-significance presented in Table 4.6 also shows a high margin of error in using the model coefficients.

Table 4.6: Collinearity Statistics

Variables	Tolerance	VIF
Nonperforming Loans Ratio	.640	1.562
Total Debt To Equity (Leverage)	.784	1.276
Firm Size	.681	1.469

Source: Research Findings

Variance Inflation Factors (VIF) shows that there is lack of multicollinearity amongst the independent variables as the VIF values were below the critical value of 10. Nonperforming Loans Ratio 1.562, total debt to equity ratio 1.276 and firm size 1.469. Tolerance statistics were above 0.1: Nonperforming Loans Ratio 0.640, total debt to equity ratio 0.784 and firm size 0.681. As stated by Studenmund (2006), the variance (the square of the estimate's standard deviation) of an estimated regression coefficient is increased because of collinearity. This depicts lack of collinearity problems in the model.

4.4 Interpretation of the Findings

The study findings illustrates that there exists a strong relationship between return on assets and independent variables (firm size, total debt to equity (leverage), nonperforming loans ratio). From the determination coefficients, it can be denoted that there is a strong relationship between dependent and independent variables given a R^2 value (coefficient of determination) of 0.630.The study also found a very good linear relationship between financial performance and nonperforming loans given a

correlation coefficient of 0.794. Read together with the coefficient of determination, it can be deduced that 63% of the changes in SACCOs' return on assets is brought about by firm size, total debt to equity (leverage) and nonperforming loans ratio.

From the findings and conclusions, the study recommends that in order for SACCOs to check on its leverage status it must check the source of finance to its growth as firms might increase their size and growth while overstretching its debt capacity. The study also suggests that SACCOs should opt for equity financing instead of debt financing if it wants to improve on its leverage. This involves funding growth through retained earnings and issuing of shares. Credit approval and monitoring procedures should focus on the borrower's cash flow and ability to repay in an effort to improve the quality of our loan assets and mitigate future allowances for loan losses.

The findings have some policy implications. Given the adverse effect of NPLs on the SACCO financial performance and overall macroeconomic health, there is merit to strengthen supervision to prevent a sharp buildup of NPLs in the future, including by ensuring that SACCOs avoid excessive lending, maintaining high credit standards, and limiting lending to un-hedged borrowers. Beyond this, high levels of NPLs pose a burden on the economy and this calls for the need for a swift, but orderly, clean-up of supervision of lending. Most of the SACCOs lack the efficient risk management mechanism that will help eradicate or sieve out serial defaulters, to effectively lock out these serial defaulters, SACCOs requires referencing solution that will enable them submit and share data whilst processing their customers' credit application. This will help prevent borrowers with unsatisfactory credit record from accessing further credit from other unsuspecting lending institutions.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents discussions of the key findings presented in chapter four, conclusions drawn based on such findings and recommendations there-to. This chapter is thus structured into summary, conclusion, recommendations for policy, limitations of the study and areas for further studies.

5.2 Summary

The descriptive statistics from the dataset used by the study indicates that on average, the SACCOs had a leverage value of 84.35 with minimum of 67.53 and 90.89 as the maximum. This indicates that most SACCOs were highly levered and had low asset values to cover debt. On profitability, nonperforming loans ratio, and firm size, the study obtained mean values of 3.015, 6.5625 and KES.4,750,281 respectively. On profitability, this showed that on average every shilling held in assets produced a net profit of 0.0301. On the nonperforming loans ratio, the study established that every Kenya shilling lent as loans and advances attracted a default rate of KES.0.0656.

The regression equation that relate to profitability of the SACCOs to nonperforming loans ratio, leverage and firm size, established a negative relationships in Nonperforming Loans Ratio (β_1 = -.229; $p < .001$) and Leverage (β_2 = -0.230; $p < 0.001$). Size of the SACCO had a positive relationship with profitability (β_3 = 1.529; $p = 0.002$). There is a good, negative and significant relationship between nonperforming loans ratio and financial performance. There was a moderate but negative relationship between leverage and financial performance. A good, positive

and significant relationship was established between firm size and financial performance.

5.3 Conclusion

From the study's findings, the researcher conclude that factors such as leverage, nonperforming loans, and size determines the profitability of SACCOs. Nonperforming loans ratio has negative effect on SACCOs' profitability as loans are assets that need to generate returns and when loans given out are not recovered together with interest then it implies that more resources will need to be committed towards provision for nonperforming loans and additional costs will be used in financing recovery efforts. Besides, loans constitute the bulk of SACCOs' assets and nonperforming loans negate their asset quality.

Profitability in SACCOs would lead to a low leverage (capital structure) of such firms. It is theorized that highly profitable SACCOs would use their revenues or earnings to finance growth and operations than the less profitable ones. This therefore eliminates the need for external funding resulting in low leverage. This is justified by the negative linear relationship.

The study concludes that growth of SACCOs would lead to a high performance given positive correlation. SACCOs with high growth propensity tend to use funds to invest in income generating assets. This is consistent with the predictions of the trade-off theory which suggests that large firms have easier access to external fund for funding assets and investments than small firms. Furthermore, large firms also have lower agency costs of debt, for example, relatively lower monitoring costs because of less volatile cash flow and easy access to capital markets. Smaller firms on the other hand

find it relatively more costly to resolve information asymmetries with lenders, thus, present lower debt ratios.

5.4 Recommendations for Policy

From the findings and conclusions, the study recommends that SACCOs should opt for equity financing instead of debt financing if it wants to improve on its leverage. This involves funding growth through retained earnings and issuing of shares. The study also recommends that credit approval and monitoring procedures should focus on the borrower's cash flow and ability to repay in an effort to improve the quality of the loan assets and mitigate future allowances for loan losses.

The findings have some policy implications. Given the adverse effect of NPLs on the SACCO financial performance and overall macroeconomic health, there is merit to strengthen supervision to prevent a sharp buildup of NPLs in the future, including by ensuring that SACCOs avoid excessive lending, maintaining high credit standards, and limiting lending to un-hedged borrowers. Beyond this, high levels of NPLs pose a burden on the economy and this calls for the need for a swift but orderly clean-up of supervision of lending.

Most of the SACCOs lack the efficient risk management mechanism that will help eradicate or sieve out serial defaulters. To effectively lock out these serial defaulters, SACCOs requires referencing solution that will enable them submit and share data whilst processing their customers' credit application. This will help prevent borrowers with unsatisfactory credit record from accessing further credit from other unsuspecting lending institutions.

5.5 Study Limitations

The main limitation of the study was the inability to include all SACCOs, that is licenced and non licenced SACCOs. The study focused entirely on the FOSA operating SACCOs within Nairobi County. The results of the study therefore may not necessarily reflect the true position for the non FOSA operating SACCOs due to the differences in their supervision and reporting.

The time period captured in the study was also limited to the time licensing of SACCOs commenced that is (2010 – 2013). This meant that only data for 4 years was used. While all the data collected was used in the analysis, the limited period of time can portentially affect the interpretation of the findings.

The change of the constitution of Kenya and the introduction of the county governments as well as the move towards having one regulator for the financial sector may have an impact on the operations of the SACCOs in the near future. This study considered the regulatory requirements as set by the current regulator for SACCOs (SASRA).

Another limitation is that because of time and resources, the study only considered three independent variables that is nonperforming loans, leverage and size as determinants of financial performance. Other factors which equally affect financial performance such as management efficiency and operating expenses should in future be considered.

5.6 Areas for Further Studies

The study suggests that further studies should be conducted on other factors that would determine the financial performance and loan defaults of SACCOs like free cash flows (liquidity), earnings volatility and SACCO outreach. Furthermore, external factors such as tax rates, regulations, inter-enterprise debt can also form grounds for further studies.

The study also suggests that a study can be conducted exclusively on determinants of nonperforming loans in SACCOs so as to nip the problem in the bud owing to the negative established effect on performance.

There are also certain limitations of this study that can be solved by further research, Such as by expanding the sample size to include non licensed SACCOs and SACCOs outside Nairobi County.

There is also need to carry out a comparative study with other countries' SACCOs to establish the similarities and differences that exist as far as the effect of nonperforming loans on the financial performance of SACCOs in such countries and those in Kenya is concerned.

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APPENDICES

Appendix I: Letter of Introduction

UNIVERSITY OF NAIROBI
SCHOOL OF BUSINESS
MBA PROGRAMME

Telephone: 020-2059162
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P.O. Box 30197
Nairobi, Kenya

DATE.....

TO WHOM IT MAY CONCERN

The bearer of this letter ....MOSES ORWE MANYUANDA

Registration No.....D61/70106/2009.....

is a bona fide continuing student in the Master of Business Administration (MBA) degree program in this University.

He/she is required to submit as part of his/her coursework assessment a research project report on a management problem. We would like the students to do their projects on real problems affecting firms in Kenya. We would, therefore, appreciate your assistance to enable him/her collect data in your organization.

The results of the report will be used solely for academic purposes and a copy of the same will be availed to the interviewed organizations on request.

Thank you.

PATRICK NYABUTO
MBA ADMINISTRATOR
SCHOOL OF BUSINESS

UNIVERSITY OF NAIROBI
01 SEP 2014
P.O. Box 30197 - 00100 NAIROBI

Appendix II: Descriptive Data

SACCO	Return On Assets	Nonperforming Loans Ratio	Total Debt To Equity (Leverage)	Firm Size
United Nations Sacco Ltd	4.57	7.53	85.92	7.427102
Hazina Sacco Sociey Ltd	6.56	4.21	79.48	7.22354
Elimu Sacco Society Ltd	3.89	4.83	85.87	7.223431
Kenversity Sacco Society Ltd	5.55	1.45	86.00	7.219425
Afya Sacco Society Ltd	2.64	2.28	89.67	7.104401
Ufundi Sacco Society Ltd	6.34	5.28	83.60	7.252128
Airport Sacco Society Ltd	4.22	3.44	85.54	6.875067
Wanandege Sacco Society Ltd	3.56	4.04	88.81	6.942845
Transcom Sacco Society Ltd	4.22	1.27	86.04	6.933623
Nation Staff Sacco Society Ltd	5.02	1.80	81.53	6.865976
Chai(Ktda) Sacco Society Ltd	6.88	0.57	78.02	6.814367
Ardhi Sacco Society Ltd	2.63	2.43	90.89	6.518037
Ufanisi Sacco Society Ltd	1.45	2.14	87.88	6.530897
Maisha Bora Sacco Society Ltd	4.39	4.11	86.63	6.559154
Chuna Sacco Society Ltd	3.18	6.92	84.90	6.823852
Nafaka Sacco Society Ltd	2.76	3.30	88.61	6.552924
Kenpipe Sacco Society Ltd	2.39	6.87	84.67	6.50246
Nacico Sacco Society Ltd	5.88	4.60	85.76	6.412447
Sheria Sacco Society Ltd	-2.98	11.66	88.83	6.415612
Wanaanga Sacco Society Ltd	2.67	8.43	85.68	6.394759

Nassefu Sacco Society Ltd	3.93	2.11	85.04	6.346553
Miliki Sacco Society Ltd	3.49	4.08	81.87	6.127682
Ukulima Sacco Society Ltd	0.20	10.96	89.39	6.104869
Harambee Sacco Society Ltd	-0.41	11.43	90.35	6.023904
Asili Sacco Society Ltd	0.75	3.58	86.79	6.064049
Teleposta Sacco Society Ltd	1.41	13.27	86.34	6.063587
Kenya Police Sacco Society Ltd	1.68	5.68	86.26	6.27853
Magereza Sacco Society Ltd	3.23	3.74	86.28	6.029371
Mwito Sacco Society Ltd	2.66	6.67	90.16	5.972972
Jamii Sacco Society Ltd	1.98	10.66	88.25	5.972078
Fundilima Sacco Society Ltd	4.50	0.00	81.88	5.907146
Mwalimu Sacco Society Ltd	3.68	3.26	85.20	5.948967
Safaricom Sacco Society Ltd	1.51	13.12	84.99	5.961598
Kenya Bankers Sacco Ltd	3.29	14.64	72.83	5.799332
Stima Sacco Society Ltd	2.71	12.85	82.51	5.715336
Naku Sacco Society Ltd	5.17	4.79	81.89	5.784789
Kingdom Sacco Society Ltd	0.54	10.25	81.23	5.724526
Ukristo Na Ufanisi Sacco Ltd	2.30	12.18	74.64	5.696859
Tembo Sacco Society Ltd	1.99	4.62	76.48	5.659414
Wananchi Sacco Society Ltd	0.17	27.45	67.53	5.343889

Source: Research Findings