

**FIRM CHARACTERISTICS AND PROFITABILITY OF DEPOSIT TAKING
SAVINGS AND CREDIT COOPERATIVE SOCIETIES IN NAIROBI CITY
COUNTY, KENYA**

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DECLARATION

Declaration by the Student

I declare that this research is my original work and has not been submitted for an award of a degree in any other University for examination purposes.

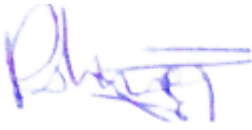
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DEDICATION

My project report is dedicated to my beloved family members (parents and siblings) for their unwavering support throughout the research period, encouragement and prayers, May God bless them.

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First, I am grateful to God almighty, for He has given me the ability to write and without Whose grace I would not have come this far. Second, I express gratitude to my supervisor, Dr Peter Ng'anga's advice, immense support constructive criticism and guidance has enabled me to get to this far. Thirdly I'm very grateful to my family and my friends especially Nelson Macharia, Loise Njeri and Margret Wanjiku for their support and the ideas they unswervingly provided to see me this far. My appreciation also goes to my fellow students for having been so instrumental and helpful in development of this work by way of sharing through discussion groups, May God bless them.

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ABBREVIATIONS AND ACRONYMS

CA	Capitals Adequacy
CBK	Central Bank of Kenya
DTS	Deposit Taking SACCOs
FC	Firm Characteristics
ROA	Return on Asset
ROE	Return on equity
SACCOS	Savings and Credit Cooperative Societies
SASRA	SACCO Societies Regulatory Authority

OPERATIONAL DEFINITION OF TERMS

Capital Adequacy	Minimum amount of capital which SACCOs are required to hold for purposes of safeguarding them against adverse shocks as per the SASRA regulations.
Liquidity	This refers to when SACCOs are able to fulfill their short term obligations when they surface.
Profitability	This is the ability of SACCOs to generate income on their assets. Profitability in this study was measured using return on assets.
Sacco Characteristics	Internal components of a SACCO that are being controlled by management of SACCOs. The SACCO characteristics for this research were size, liquidity and capital adequacy.
Sacco Size	This is the total assets of a SACCO. For the purposes of this research, SACCO size was assessed by natural logs.

ABSTRACT

Over the years, the continuous growth and development of saving and credit cooperative societies has been beneficial but also costly. New developments are requiring diverse resources to continue supporting growth. Notably, Millions of people across Kenya have been able to access formal financial services from saving and credit cooperative societies. However, the demand for the service continues to exceed the supply significantly due to the myriad of potential clients who have remained unattended. The poor profitability of saving and credit cooperative societies over the years has been a source of concern. This is as it affects the intermediation roles performed by these firms. Empirical studies on firm characteristics and profitability were largely based on other countries; studies focused on the Kenyan context were largely in the context of commercial banks. The study sought to fill the gap in literature and specifically establish the effect of firm characteristics and profitability of deposit taking saving and credit cooperative societies in Nairobi, Kenya. The specific objectives are to determine the effect of firm size, capital adequacy and liquidity on profitability of deposit taking saving and credit cooperative societies in Nairobi, Kenya. The current study made use of Market Power Theory, Capital Buffer Theory and Agency Theory to support the independent and dependent variables of the study. Causal research design was applied on a population made up of all the licensed deposit taking saving and credit cooperative societies under SASRA in Nairobi County, Kenya for the period 2014 to 2017 which are 34 in number. The study was based on a census approach. The study used panel data which was sourced from the financial statements of the respective saving and credit cooperative societies with the aid of a data collection guide. Data analyzed using panel regression model with the aid of stata version 14. Descriptive and inferential statistics were used to analyze the research data where various diagnostic tests such as multicollinearity, heteroskedasticity and hausman tests were one. Data was presented in form of tables. Ethical considerations were duly observed in the course of this study. The study findings on the descriptive analysis indicate that firm size and profitability Deposit Taking saving and credit cooperative societies in Nairobi Kenya had high fluctuations whereas capital adequacy and liquidity had minimal fluctuations over the study period. The study concluded that firm size had significant effect on profitability of Deposit taking saving and credit cooperative societies in Nairobi Kenya. The study concluded that capital adequacy and liquidity insignificant effect on profitability of deposit taking saving and credit cooperative societies in Nairobi, Kenya. The study therefore recommends that deposit taking saving and credit cooperative societies should put in place a well-functioning structure in line with growing firm size. This should be done for purposes of eliminating the bureaucracies that comes along with a growing firm size which in turn will ensure the profitability of deposit taking saving and credit cooperative societies in Nairobi, Kenya. The study suggests that further studies can focus on other institutions in the financial sector such as microfinance banks and commercial banks.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

World Council of Credit Unions (WOCCU) (2016) put forward that globally unions faced similar plights which have led to tougher regulations to avoid future financial crisis. Voinea (2014) posits that credit unions over the world need to regulate their staff for prudent reports and minimized operations costs. Further rapid changes in technology have seen most SACCOs losing their business while those that have survived are forced to invest heavily on technology development. As Voinea (2014) reports, most customers want credit unions that have adopted both the online access and mobile platforms. In addition, operators of credit unions are now required to put extra efforts to reach out to all persons of all ages since worldwide most savers and borrowers are found to be aged over 48. There is also need for credit unions to change the perceived notion that unions are poor man's bank which can be realized by expanding their pool of products and services offered. Cooperatives in developed countries such as the United States have over time impacted positively on the livelihood of citizens and as such, they have been fully embraced.

In Africa, it has been reported that over 60 million people are dependent on SACCOs (Churk, 2015). The challenges faced by SACCOs in Africa are similar to that of other parts of the world. Notably, it is the economy under which SACCOs operate that is being characterized by weak systems of governance and poor regulatory framework. In particular, the challenges that threaten SACCO's survivals financially are categorized into internal and external. Internal challenges include ethics and integrity, inadequate resources, insufficient technology, leadership issues, mismanagement and increased demand for quality services (Wanjiru & Muturi, 2016). The external challenges faced by SACCOs include increased competition, the ever changing cooperative legislation, the desire to move with the current technological trend

and globalization to meet ever changing and complex market demand (Okumu & Oyugi, 2016).

SACCOs in Sub Saharan Africa (SSA) is faced with the needs to adopt new technology and intensify their competition capabilities with large financial institutions that offer similar products and services (Wanjiru & Muturi, 2016). In Sub Saharan Africa, SACCOs are characterized of loan delinquency, loan loss, nonearning assets, charging small interest rate, and increased level of illiquid assets, high operating costs and supporting non-financial operations for the small business (Meyer, 2015). In Tanzania, Churk (2015) reports that credit unions are challenged by poor loan repayment since most savers depend on unpredictable agriculture sector. Churk recommended that sustainable strategies to address root causes to financial problems that would lead to poverty alleviation.

In Kenya, a number of SACCOs have gone through rapid transformation over the years which have brought their existence to the common man. Generally, SACCOs in Kenya and other places are established in line with members sharing the same environmental conditions such as work, place of origin and/or facing similar needs (Onyango, 2016). The SACCO members come together to form a group referred to as societies which primary aim is to save and get credit from the same societies. The services of SACCOs may be considered to be more extensive and deeper than the other financial institutions as they consist of members who are presumed to share common success and difficulties (Wanjiru & Muturi, 2016). SACCOs in terms of the cost structure experience the lowest cost source of funding and administrative cost as a result of the small savings involved (Onyango, 2016). The main goals of SACCOs are hinge on serving the welfare members via the disbursement of credit facilities acquired within a specified savings period. SACCOs are reported to be capable of mobilizing more than 200 billion shillings in savings, making a 30% of the total National Domestic savings (Government of Kenya, 2009). As reported by Ondieki, Okioga, Okwena

and Onsas (2011) SACCOs contribute about 45% to the GDP of Kenya as they possess over 210 billion shillings worth of assets. Notably, some of the SACCOs such as Kenya Women Trust Fund and Unaitas are at the level of bank banking status. This advancement has given Kenyan SACCOs opportunity to compete in liberalized market.

1.1.1 Firm Characteristics

Firm characteristics refer to the internal competencies peculiar to a SACCO that are within the SACCO management control. Therefore, they are based on how the firm managers operate whether efficiently or inefficiently. Sacco characteristics include; size, liquidity, capital adequacy and asset quality (Okumu & Oyugi, 2016).

Firm size is a specific variable which relates to economies and diseconomies of scales. Firm size Higher firm size leads to improved financial performances of SACCOs by allowing them benefit from economies of scale (Kwakwa, 2014). Notably, increased firm size provides SACCOs with the benefits of spreading their fixed costs that in turn can be over a higher asset base, thereby leading to reduction in the average costs of firms (Kajuju, 2016).

The capital adequacy of SACCOs provides them with liquidity because customer deposits tend to be prone to runs. Capital adequacy protects SACCOs against credit, market and operational risks so that it can absorb any losses that may arise and protects debtors. They go on to explain that capital adequacy is assessed based on capital adequacy ratio (CAR). CAR reflects the SACCOs resilience during crisis situations. Profitability is positively influenced by capital adequacy as it determines its expansion to profitable ventures though risky ones.

Liquidity in the financial sector represents a SACCO's capacity to provide adequate finances to its transactions. Liquidity serves as vital indicator of financial stability as the shortfall of liquidity of one institution in the financial sector can bring about systematic crises in the entire sector due to the level of interconnections which they have (Kiganda, 2014).

1.1.2 Profitability

Profitability of financial institutions can be assessed using various indicators of which ROA, NIM and ROE are regarded as the key ones (Mirzaei, Liu & Moore, 2011). ROE refers to a ratio which measures the level of earned profits by firms compared in comparison with its invested equity of shareholders. ROE is the ratio which is considered by shareholders in assessing their investment returns. As such, high ROE of a firm means the firm has high capacity of raising internal funds. Therefore, an increase in ROE is good for firms when it comes to generation of profits. ROE serves as an indication of how well firm management is utilizing the shareholders. Therefore, this can be concluded that more effective the utilization of capital of shareholders is indicated by higher ROE (Khrawish, 2011)

ROA serves as a key financial ratio which is used to assess firm profits. It refers to the ratio of net income of a firm to its total asset (Wanjiru & Muturi, 2016). The ratio indicates the firm's ability to raise profits from the assets of a firm. It serves as an indication of a firm's management effectiveness in generating income from all organizational resources (Nzuve, 2016). Increasing ROA evidences that firms are efficient in resources utilization. The current study utilized ROA in measuring profitability of SACCOs.

1.1.3 Deposit Taking SACCOs in Nairobi County

Kenya's SACCO sector stands as the largest in the African and seventh global contexts respectively. Kenya's SACCO movement comprises of 20 percent savings of the country (Makori, Munene, & Muturi, 2013). This therefore implies that SACCOs remain important to the social development and economy of Kenya. DT SACCOs in Kenya are registered and licensed for purposes of providing variety of services and products to customers and as well as members. They therefore carry out vital functions of promoting access to saving and credit and thrift culture in the economy of Kenya.

Deposit Taking SACCOs function in maintaining high accounting and transparency standards business management (Chahayo, Bureti, & Juma, 2013). This is as they are expected to strongly comply underlying regulatory and legal guidelines in the various operations and dealings of the business as they strive to success and earn profitability in an ever changing business environment (Wanyoike & Kenyatta, 2015). The DT SACCOs which operate in Nairobi County and Kenya in general inevitably have to compete with banking and other non-banking institutions in attracting and retaining business clientele (Wanjohi & Njeru, 2016). These SACCOs often experience challenges as regarding their profitability which is mostly at variance with stakeholders' expectations especially those that are shareholders of the main SACCO which emanate the DT SACCOs. The SACCOs are expected to have the share growth rates increased, market share expanded and profitability increased which is the seeming challenge for many of the DT SACCOs (SASRA 2014).

The sector is regarded as a two-tiered sector which is due to the variety of services being offered to members and also regulatory regime. The traditional SACCOs are Non-Deposit Taking Saccos and Deposit Taking with the former providing limited products of savings and credit. They are supervised and registered in line with the Cooperative Services Act (CAP 490) (SASRA, 2015). The latter provides traditional banking services of payments services, deposits' demand and quasi banking services (ATMs) (that is apart from the basic products of savings and credit being rendered). They are supervised and licensed in line with the 2008 Act of Sacco Societies. In general, SACCOs kick off operations as non DT SACCOs and then metamorphose to DT SACCOs by expanding services rendered to its members (Wang & Wafula, 2016).

1.1.4 Sacco Societies Regulatory Authority

The Sacco Societies Regulatory Authority (SASRA) serves as the regulatory body which has the responsibility of regulating deposit-taking Sacco in the context of Kenya. It is vested with

the mandate of regulating and supervising Sacco societies and levy contributions in accordance with the *Sacco Societies Act no 14 of 2008*. In exercise of the powers conferred to the Minister of co-operative development and marketing by section 68 of the act above, the regulations for SACCOs were gazetted in the year 2010 creating more precise provisions aimed at achieving the core benefits of safeguarding savings of stakeholders in the SACCO sector (Kariuki & Wafula, 2016). Kenya (Sacco) movement over four decades evolved to a formidable force which contributes to the economic and social transformation of the people of Kenya.

The SASRA regulatory framework spells out the minimum required prudential standards and operational regulations of a deposit-taking Sacco societies. The regulator Authority was formed under the act with the main objective of licensing SACCO societies to conduct activities of deposit taking in line stipulated act and to undertake regulation and supervision of SACCOS (Njeri, 2017). SASRA also has mandate to protect interests of all the stakeholders of the SACCOS and to promote development of the SACCO sector. The key considerations in this framework include; Capital adequacy provisions which spell out the specific capital ratios that SACCOs are required to maintain.

The regulatory framework also specifies the nature on investments that SACCOs can undertake which is aimed at curtailing risk prone investments. The regulatory framework also guides SACCOs on the desirable liquidity levels, Sacco's procedural policies and credit management (Kariuki & Wafula, 2016). The framework also emphasizes corporate governance by ensuring elected board members are competent and adhere to best practices in stewardship of SACCOs in order to safeguard members' interests.

1.2 Statement of the Problem

Over the years, there has been continued growth and development in SACCOs which are so beneficial but also costly. Forming cooperative societies is based on the intention of empowering members via borrowings and savings (Mudibo, 2005). By so doing, SACCOs are ensuring sustainability in the long term through sensible financial strategies and practices. The contributions and value addition of SACCOs to members and GDP of a nation remains enormous. Various changes have taken place and still undergoing thereby serving as a challenge to SACCOs. Increasing new developments demand diverse resources for purposes of continuity and growth. Also, new legislations relating to SACCOs are also being passed for the regulation and supervision of SACCOs in a move to safeguard the interests of members. However, fact on the ground show that SACCOs are still faced with several challenges such as insufficient capital funding, loan delinquency, assessment and exposure (risk) management (Onyango, 2016), poor governance, loss of member's confidence (Ademba, 2010), management inefficiency, poor investment decisions (Ndung'u, 2010), poor financial stewardship and delayed member payments (Thabo & Gichira, 2003). This leads to decline in profitability of SACCOS.

Notably, Millions of people across Kenya have been able to access formal financial services from saving and credit cooperative societies (SACCOs). However, the demand for the service continues to exceed the supply significantly due to the myriad of potential clients who have remained unattended. In comparison with the unending needs of their financial clients and the limited resources, SACCOs are often constrained in terms of capital. A situation which further impedes the expansion of SACCO programs, thereby serving as a serious challenge (Rai & Rai, 2012). SACCOs are key in providing financial intermediation role especially to the unbanked population. However, these roles are often difficult to execute especially when the increase in demand is increasingly exceeding that of supply of funds. All these in turn are

detrimental to the profitability of SACCOs. The profitability of SACCOs is often linked to their SACCO specific characteristics. This subsector contributed notably 8.8, 5.63 and 5.59% respectively in the periods 2013, 2014, and 2015 to GDP (CBK, 2016; 2015; 2014). Decreasing contribution of the subsector has been witnessed significantly which were attributed to unfavorable conditions of 2014 and 2015 such as low opportunities of growth, high rates of interest, poor conditions of weather and insecurity (CBK, 2016, 2015). The profitability of SACCOs in Kenya was indicated to be generally on a declining trend, 13% decrease was reported in 2014, while 2015 and 2016 had a further decline of 6% and 10% in profits respectively (SASRA, 2017). SACCOs in 2017 were reported to have made losses running into billions of Kenyan Shillings with notable SACCOs losing KSh1b. Regardless of the linkage of firm characteristics and financial performance, there is lack of sufficient empirical evidence documenting this in the context of SACCOs in Kenya.

Okumu & Oyugi (2016) reported that SACCOs are being faced with severe liquidity problems. Rapid growth in demand to their cheap loans and withdrawals of savings are posing a great threat of collapse to the SACCOs (Ondieki, *et al.*, 2011). The preceding studies however relied on the multiple regression analysis but the current study employed the panel regression analysis. Another observation indicates that slowly SACCOs are losing loyalty of their members due to questions about their survival in the future which has been fronted by unmet demand for their clients. Integration issues and changes are inevitable for the SACCOs thus further intensifying the problem. All these challenges are emanating from the handling of SACCO characteristics. Evidently, funds provided by members are insufficient to meet the rapid growth and expansion as expected.

SACCO characteristics and profitability has over time sparked the interest of researchers with studies including Buyinza (2010), Onjala (2012), Kaguri (2013), Okumu and Oyugi (2016). The researches were however, largely based on the context of other countries; studies focused on the Kenyan context were largely in the context of commercial banks. The study sought to fill the gap in literature and specifically establish the effect of SACCO characteristics and profitability of deposit taking SACCOS in Nairobi, Kenya. Furthermore, the current study used panel regression analysis for the analysis of data where relevant diagnostic tests additionally were carried out before inferential analysis.

1.3 Objectives of the Study

1.3.1 General objective

To examine the effect of Firm characteristics on profitability of deposit taking SACCO in Nairobi City County, Kenya.

1.3.2 Specific Objectives

- i. To evaluate the effect of firm size on profitability of deposit taking SACCOs in Nairobi City County, Kenya
- ii. To assess the effect of capital adequacy on profitability of deposit taking SACCOs in Nairobi City County, Kenya.
- iii. To establish the effect of liquidity on profitability of deposit taking SACCOs in Nairobi City County, Kenya.

1.4 Research Hypotheses

H₀₁: Firm size has no significant effect on profitability of deposit taking SACCOs in Nairobi City County, Kenya.

H₀₂: Capital adequacy has no significant effect on profitability of deposit taking SACCOs in Nairobi City County, Kenya.

H₀₃: Liquidity has no significant effect on profitability of deposit taking SACCOs in Nairobi City County, Kenya.

1.5 Scope of the study

The study variables are firm characteristics proxied by firm size, capital adequacy and liquidity and also profitability proxied by return on assets. DT SACCOs in Nairobi were covered which are licensed by SASRA Nairobi City County that were in operation from the years 2014 to 2017. The choice of this period is based on the fact that most studies on SACCOs focused on earlier period, this therefore serves as the most recent. The study used panel regression analysis.

1.6 Significance of Study

The study is of value to different interest groups. SACCOs managers will benefit from the outcome of this study as recommendations were presented as regards SACCO characteristics and profits. This study thus acts as a guide to them as they make decisions regarding the specific characteristics of Sacco and how they can influence profitability.

The policy makers will also find the study important to them as it furnishes them with adequate policy recommendations. This will include the regulatory body for the Sacco; SASSRA and the ministry in charge of cooperative societies in Kenya. Through this study they can be guided on the best policies that can transform the cooperative societies in Kenya.

Lastly, the academicians will find this study vital as it serves as a reference point while laying foundation for future researchers. They will be guided by the areas that are recommended by this study for subjection to further research.

1.7 Limitations of the study

The limitation of the study is attributed to the kind of data to be applied in the inquiry. The use of secondary data comes with its own challenges where the most common is the issue of accuracy of research data. This is linked to the fact that various websites are characterized by various data. The researcher handled this limitation by ensuring that official data are collected from authorized bodies such as SASRA so as to ensure that original data is collected. Similarly, the financial statements were relied on only if they have been subjected to audit. Also, the collected data was checked carefully for outliers in the data set.

1.8 Organization of the Study

This project is segmented as outlined: the chapter 1 presents the introduction, research purpose and study importance, limitations and scope. Secondly, chapter 2 contains literature review of empirical works on SACCO characteristics and performances of SACCOs. Thirdly, chapter 3 methodology is presented, it provides description of data was obtained and analyzed. Chapter four contains the research findings and discussions and lastly chapter 5, the summary, conclusion and recommendations are presented in chapter five.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

Chapter comprises of the review of literature, this span from theoretical views to empirical review of theories and studies respectively in line with firm characteristics and profitability. The summary of past works and research gaps is also contained in this chapter. The chapter further encompasses the conceptual framework.

2.2 Theoretical Literature Review

The current study made use of Market Power Theory, Capital Buffer Theory and Agency Theory to support the independent and dependent variables of the study.

2.2.1 Market Power Theory

The theory was introduced by Bhagwati (1965). The theory is concerned with how firms exert influences on items prices by exercising firm controls of supply and demand, sometimes concurrently. Perfect competition model asserts that market players are presumed to possess no market power. As such, other market players are forced to operate with the current prices in the market price without having the capacity to change the prices (Kamande, 2017). The Market Power theory asserts that increasing external market forces bring about improves firm performances (Mulwa, 2015). Additionally, the hypothesis imply that firms with large sizes or market shares are coupled with a portfolio of products that is well differentiated portfolio are the only ones which can have monopolistic or abnormal profits.

In relevance to this research, the theory asserts that size of organizations can impact directly on firm profits. This is in variety of ways, considering that larger firms enjoy the benefit of economies of scales and which may further derive benefits resulting from their market powers which provides enablement for them in generating abnormal (high) profits. Karkrah

and Ameyaw (2010) documented that the size of an institution is used in the industry to capture potential economies and diseconomies of scales. In general, the influence of large firms on profits has over time been positive, notably, to an extent. However, the impact of firm size can be inverse for those firms which have become large extremely, this is largely attributed to bureaucratic reasons and agency costs. As such, the firms sizes reflects their market power and economies of scales. The theory therefore supports the link between firm size and profitability of SACCOs.

2.2.2 Capital Buffer Theory

Buffer Capital Theory was brought forth by Calem and Rob (1996). As financial institutions engage in their day to day operations, the regulatory bodies for instance SASSRA requires them to maintain adequate level of capital to shield them in case of losses. Consequently most of them endeavour top keep the capital levels beyond the minimum regulatory requirements (Lotto, 2016). Milne and Whalley (2001) suggests that as a result of penalties that are imposed by regulatory authorities to those that do not meet or maintain the minimum set amount, financial institutions are inclined towards increasing their capital levels beyond the minimum requirement.

According to Alamdar and Tariq (2016), there are many other reasons why financial institutions hold their capital beyond the minimum levels. The first reason is that they act as insurance mostly when an institution is undercapitalized. Secondly, by holding the excess capital, they are able to substantially check on their asset risk profile thus determining their risk taking behavior. Lastly, by holding the buffer capital, they are considered by other financial institutions to be healthy financially hence well protected against losses. Capital Buffer Theory underpinnings therefore link capital adequacy and its relationship with the profitability of SACCOs.

2.2.3 Agency Theory

Agency theory was advanced by Jensen and Meckling (1976). It is concerned with the cost arising from asymmetry of information between owners of the firm and their managers. These costs comprises of the measurement, monitoring and the residual loss of agent performance and the engineering of incentive mechanisms. According to this theory, management and owners pursue different interests. As such, agency costs will be incurred where firms have separate functions (Lambert, 2001). Firms incurring low agency costs are indicative of their superior performance. There are two identifiable agency costs according to Jensen and Meckling. They include debt and equity costs. Owners and managers conflicts transition to equity costs and the conflict of owners and debt-holders creates agency costs of debt. Commonly, executives are concerned in attaining their personal targets which might vary from the value of the firm. The shareholders might try to monitor and regulate the executives' actions. These regulation activities generate agency costs of equity.

When a creditor provides debt to a firm, the finance cost is centered on the risk level of the business. Executives may try to transfer value from debt-holders to owners of the firm. This will in turn affect performance and hence value of the firm. Thus, profitability as a firm characteristic will be affected hence this affects financial performance. The prepositions of Agency Theory support the variable profitability. The profitability of SACCOs is therefore a function of the relationship between owners and management of SACCOs.

2.3 Empirical Literature Review

This section reviews the earlier studies carried out on the relationship between Sacco characteristics and SACCO profits.

2.3.1 Firm Size and Profitability of Deposit Taking SACCOS

Okumu and Oyugi (2016) examined variables which influenced the factors influencing performance of Kenyan SACCOs (Kisumu). The research adopted survey research design,

and collected primary data among twenty two (22) finance managers of the SACCOs. Primary data was collected using semi structured questionnaires. Quantitative data was analyzed using descriptive methods and inferential statistics while qualitative data was transformed by the use of using content and thematic analysis. Outcome indicated significant linkages of firm size and Sacco performances. It was concluded that it is important to enhance the asset base of Sacco as such to foster superior firm performances.

Kaguri (2013) studied firm specifics effect on life insurance firms' profits while focusing on Kenya. It was documented that premiums of insurance firms were positively affecting insurance firms' performances. This outcome showed that life insurance firms specifics considered were key in influencing profits as designated by the affirmative mean values and their corresponding standard deviations. Specifically, results shows that firm size significant affect profitability of Insurance companies were however the research focuses and not SACCOs. Life Insurance companies which were the study focused are guided by varying guidelines as compared to SACCOs, thus the underlying contextual gap.

Onjala (2012) carried out an explanatory research in order to assess the main drivers of Kenya commercial banks' profits. The research used descriptive methods while regression and correlation analyses were done as well in determining relationships. The test was based on 5 percent level of significance. IT was concluded in the research that firm size positively influence bank equity returns. Generally, the independent variables represented for 95.3% movements in equity returns. Furthermore, outcome depict that bank size had positive effects on ROA.

An enquiry was undertaken by Buyinza (2010) for purposes of examining commercial banks' profits with emphasize on SSA nations. The analyses was centered on profitability of twenty (23) banking institutions which covered the years 1999 – 2006. Panel data methodology was

applied in the research. The findings indicate that sizes have strong influences on bank profitability. Though the study is key to this investigation, cross country analyses (commercial banks) was the approach which was used whereas country specific analysis (Kenyan SACCOs) were explored, thus providing having findings specific to Kenya.

2.3.2 Capital adequacy and Profitability of Deposit Taking SACCOS

A study was conducted by Onyango (2018) for examining the relationship which exists between capitals and performance of DT Sacco in Meru, Kenya. 14 deposit taking SACCOs in Meru were targeted in the examination and the data was sourced from the audited statements of the respective SACCOs. The results obtained from a panel regression method revealed that the ratio of institutional capital to total assets had direct and strong effect on the return on asset which was used in assessing performances of the SACCOs. The analysis however used a small sample size and was confined to one region in Kenya. This analysis examined the SACCOs within Nairobi City County, Kenya.

Barus, Muturi, Kibati and Koima (2017) examined the link between capital adequacy and Kenyan SACCOs performances. An explanatory research design was employed in this investigation with a target population of 83 Sacco operating from 2011 to 2015. A census methodology was used and data was from both primary as well as secondary sources. Based on the findings, it became apparent to the fact that capitals positively and insignificantly influence on the financial performance of Sacco in Kenya. In analyzing the relationship, a multiple regression method was used. The current study used a panel regression model.

Njeri (2017) also did a study on capital adequacy determinants of SACCOs in Kenya by considering the DT SACCOs. Thirty five (35) licensed DT SACCOs were studied and a causal research design was used. Liquidity and total deposit was considered as the predictor variable with capital adequacy being the dependent variable. All the variables were found to

significantly influence capitals. Deposits had inverse significant influences on capital adequacy while liquidity directly influenced capitals. The study however examined capital adequacy as a dependent variables which in the current study is examined as an independent variable.

Okumu and Oyugi (2016) researched on performances determinants of SACCOs in Kisumu county. Data was based primary sources among thirty one SACCOs' managers twenty two (22) finance managers functioning in Kisumu. Inferential and descriptive techniques were plied so as to analyse research data while content and thematic analyses were further applied. The findings from the regression analysis show that capitals have weak impact on Sacco performances. The enquiry however utilized multiple regression techniques and panel regression methods was the case for this analysis.

2.3.3 Liquidity and Profitability of Deposit Taking SACCOS

Wanjiru and Muturi (2016) researched on the variables impacting on SACCOs performances in Kiambu County. This was based on descriptive research design were secondary data was used for the five (5) year period ranging from 2010 to 2014. Both descriptive and inferential statistics were applied in analyzing data. Regression output shows an inverse and insignificant link between liquidity and Sacco performances. Additionally, the research did not conduct panel data diagnostic tests for stationarity, multicollinearity, normality and fixed and random effect tests.

A study was carried out by Kombo (2014) on firm factors and profits of MFIs in Nakuru, Kenya. The regression analysis results into firm characteristics effects on performances of microfinance reported that liquidity had a strong influence on financial performances of microfinance institutions of the area. The study concluded that firm characteristics had

significant positive effects of the profitability of Micro Financial Institutions in Nakuru, Kenya. The research was focused on MFIs while SACCOs was the concern of this research.

A study was done by Onjala (2012) the determinant of bank profitability in Kenya. The research employed descriptive techniques where regression and correlation analyses were used in transforming data. The test was based on 5% level of significance. Findings indicate that liquidity had insignificant influence on both ROA and ROE. The predictors represented for variation of 95.3% in equity returns. The analyses however focused on commercial banking institutions unlike this research which was SACCOS.

Buyinza (2010) did an empirical analysis on the profits of commercial banking institutions in SSA countries. 23 commercial banks in SSA were considered for the period 1999 to 2006. Panel data regression was used and outcome indicates that liquidity ratio has weak influences banking institutions' profits level. Notably, cross country approach was the focus based on commercial banks and not SACCOs. The research was on Kenya based on SACCOs, thereby presenting country specific findings.

2.3.4 Profitability of Deposit Taking SACCOS

The profitability of SACCOs is key for the efficient operations and survival of SACCOs. Various studies have indicated firm characteristics to predict the profitability of SACCOs. Onyango (2018) examined the relation between capital adequacy and performances of DT Sacco in Meru, Kenya. 14 DT SACCOs in Meru. Findings show that firm characteristics impact on the performance of the SACCOs. This research however used a small sample size and was confined to one region in Kenya. This investigation examined the SACCOs within Nairobi City County, Kenya.

Barus *et al.* (2017) did a study on performances of Kenyan SACCOs. The analyses established that capital adequacy directly and strongly influence on performances of Sacco in

Kenya. Similarly, Njeri (2017) did a research covering the determining variables for capital adequacy of SACCOs in Kenya by considering the DT SACCOs. 35 licensed DT SACCOs were studied and a causal research design was applied. The research established linkages of capital adequacy and profitability.

Okumu and Oyugi (2016) examined factors which influence performances of Kenya SACCOs (Kisumu County). The study revealed that capital adequacy and bank firm size significantly impact on Sacco performances. The conclusion was that there is the need to enhance the asset base of Sacco as such to foster superior firm performance. Buyinza (2010) studied the profits of banking institutions in SSA nations. The panel data regression indicated that liquidity ratio strongly and positively impacts bank profits. Notably, however, cross country methods were used based on commercial banks and not SACCOs. This analysis focused on Kenya based on SACCOs, as such providing unique outcome for Kenya.

2.4 Summary of Literature Review and Research Gaps

Review of the section of empirical review provides a number of research gaps ranging from contextual to methodological gaps. Most of the studies which centered on firm specifics and profits were focusing on other nations. As such, due to the different economic situations possessed by each country, such findings cannot be extended to the SACCOs in Kenya. Also, the studies carried in the context of Kenya which mostly on the banking sector as they major centered on commercial banks. Similarly, findings from such studies may not be applicable to SACCOs due to the unique nature of SACCOs.

Table:2.1: Summary of literature review and gaps.

Researcher (year)	Focus	Key findings	Research Gaps	Focus of current research
Buyinza (2010)	Focus on profits banking institutions in SSA	The findings of the study indicate that sizes strongly	Based on commercial banks. Based on a cross	Was on Kenyan SACCOs, thereby providing

		influence profits	country analysis	country unique findings. Was country specific (Kenya)
Onjala (2012)	The key drivers of profitability of banking organizations in Kenya.	The conclusion was that firm size had direct influence on equity returns.	Focus was commercial banking	Was based on SACCOs
Kaguri (2013)	Firms characteristics and profitability of life insurance companies	Firm size has significant effect on profitability.	Focus is on insurance companies	Focus on Sacco
Kombo (2014)	Firms characteristics and profitability of MFIs in Nakuru.	Liquidity had significant positive effect on profitability.	Focused on MFIs	SACCOs were the focus.
Kariuki, Muturi and Ngugi (2016)	Examined the link between asset quality and intermediation efficiency among SACCOs in Kenya.	An inverse and strong relationship between leverage of leverage and efficiency of SACCOs in Kenya.	The study was however centered on efficiency of SACCOS	Was on performance of SACCOs.
Okumu and Oyugi (2016)	Factors determining performances (SACCOs)	Significant positive relationship for sizes and SACCOs	Analysis was done using content analysis Focused on performance	Panel regression methods was used. Focus profitability
Wanjiru and Muturi (2016)	Variables impacting on the performances of SACCOs in Kiambu County	An inverse and strong between liquidity and Sacco performances.	The research did not conduct panel data diagnostic tests for stationarity, multicollinearity, normality and fixed and random effect tests. Focused on Kiambu County Focused on performances	This study carried out diagnostics tests as pertaining panel regression analysis. Focus was Nairobi County Looked at profitability
Barus <i>et al.</i> (2017)	Capital adequacy and financial performance of Sacco.	Strong direct link of capitals and performances	Multiple regression utilized Looked at financial performance	Panel regression used Was on profitability
Njeri	Determining factors of	Deposits had a	Capital adequacy	Capital adequacy

(2017)	capital adequacy in Kenyan SACCO	Negative strong influences on capitals	examined as dependent variable	examined as independent variable
Onyango (2018)	Capitals and performances of DT SACCOs in Meru, Kenya.	Institutional to total assets had strong direct effects on performances	14 deposit taking SACCO examined.	35 deposit taking SACCOs were examined.

Source: Researcher (2020)

2.5 Conceptual Framework

This provides association between the study's dependent and the independent variables in a form of a diagram. For this study, dependent variable is profitability, while SACCO size, capital adequacy and liquidity are the independent variables.

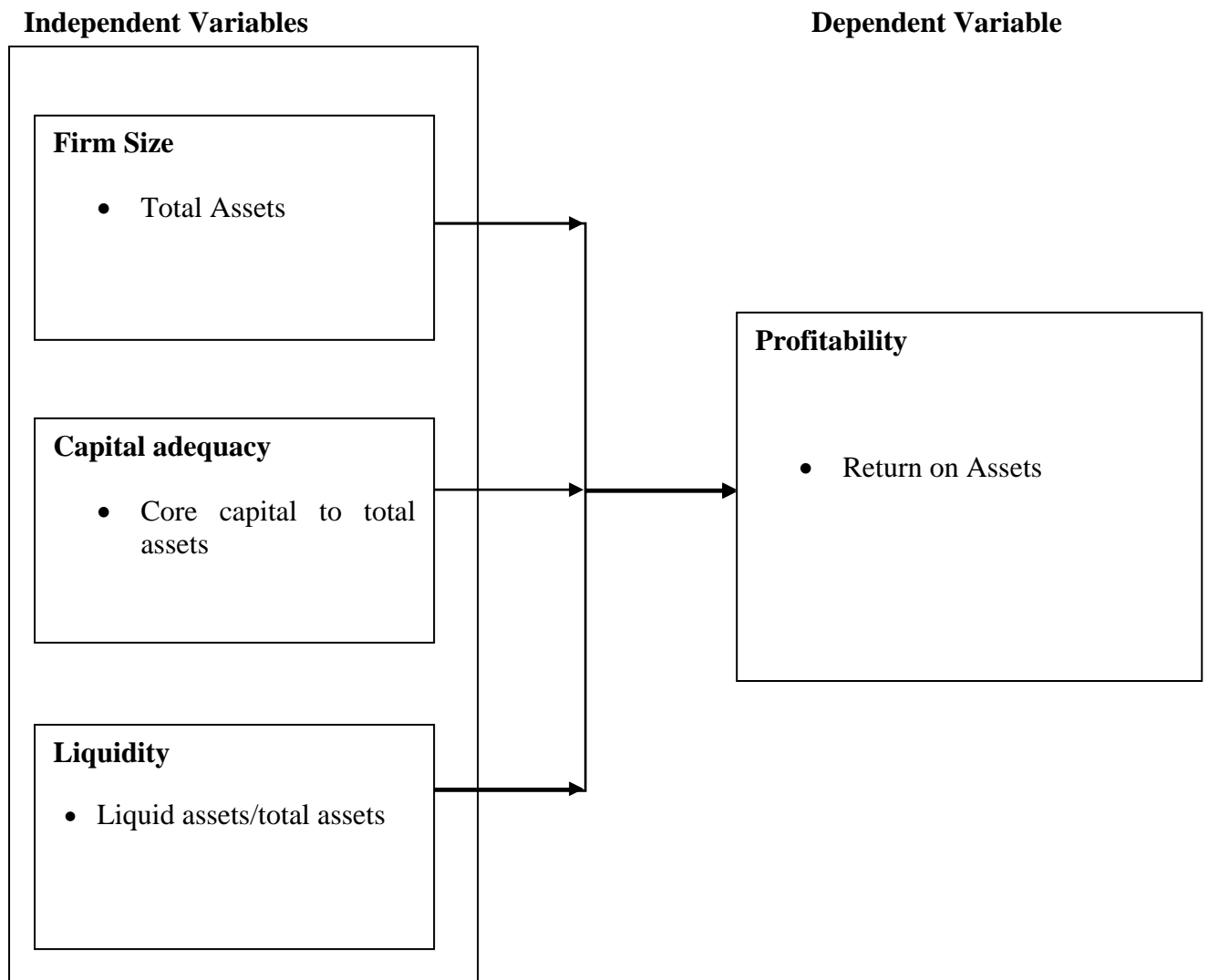


Figure 2.1 Conceptual Framework

Source: Researcher (2020)

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter comprises of methodological approaches to be utilized in the research. This spans from research design, sample, collection of data, population, empirical model, data analyses and diagnostic tests. Lastly, the current chapter presents the various ethical considerations to be observed in the course of the study.

3.2 Research Design

Causal research design was utilized in the course of this research which is used when ascertaining the effect and cause relationships among research variable. Causal design is therefore best for the investigation as it sought to assess the effects of firm characteristics and profits of deposit taking SACCOS in Nairobi, Kenya.

3.3 Target Population

The population is made up of all DT SACCOS under SASRA in Nairobi County, Kenya that have been in existence from 2014 to 2017 which are 34 in number (SASRA, 2018). Cooper and Schindler (2009) are of the view that population is the entire elements to be covered in a research for purposes of making inferences.

3.4 Sampling Design

The analyses were based on a purposive sampling design as it focused on the 34 SACCOS licensed in Nairobi Kenya by SASRA for the period spanning from 2014 to 2017. Mugenda and Mugenda (2011) indicated that purposive sampling is utilized in a research where the researcher uses his or her judgment in selecting the sample of the study. This therefore makes it appropriate for the current study as it deems reasonable to use the SACCOS which were

operational within the study period. The sample size was therefore be thirty four (34) SACCOs.

3.5 Data Collection

The research made use of secondary data. The data was extracted from the financial statements of the 34 SACCOs located in Nairobi, Kenya and also SASRA (that is, regulatory organization) of SACCOs in Kenya. The study is focused on 2014 to 2017 period. Data was obtained from the financial statements of the 34 SACCO in Nairobi. The collection of data was carried out using a collection guide (document review as seen in appendix II).

3.6 Empirical Model

Panel data methodology was used where the profitability of SACCOs is written as a function of Sacco sizes, capital adequacy and liquidity.

$$Y_{it} = \beta_0 + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \epsilon_{it}$$

Where:

Y_{it} – Profitability of SACCOs

β_0 - Constant

X_{1it} – Sacco Sizes

X_{2it} – Capital adequacy

X_{3it} – Liquidity

i – Firms (1-34)

t – Time period (2014-2017)

β = Regression coefficients

ϵ = Error term

3.7 Operationalization and Measurement of Research Variables

This section presents the operationalization and measurement of variables.

Table 3.1: Operationalization and Measurement of Study Variables

Variable	Type	Operationalization	Measurement
Profitability	Dependent Variable	Firms' ability of generating returns through the use of assets	Return on assets
Firm size	Independent Variable	Total volume of assets of a firm	Log of total assets
Capital adequacy	Independent Variable	Capital levels of a firm in line with stipulated requirements	Core capital/total assets
Liquidity	Independent Variable	Ability to meet short term obligations when they are due	Liquid assets/total assets

Source: Researcher, 2020

3.8 Data Analysis and Presentation

The analysis of data is performed so as to transform the research data into usable format. Secondary (panel) was applied which was analyzed with the aid of a statistical software known as Stata version 14. Descriptive and inferential statistics were applied. Descriptive analyses span from standard deviation, mean and as well as frequency distributions. Inferential analysis was done using regression methods based on 95 percent confidence interval that is 5 percent significance level. Therefore, the null hypothesis of the study was based on 5 percent significance level.

3.9 Diagnostics Tests

The study undertook diagnostic tests for ensuring the assumptions of panel regression analysis are met before the inferential analysis. The diagnostic tests include multicollinearity test, heteroskedasticity test and fixed effect and random effect test.

3.9.1 Multicollinearity Test

In checking on the multicollinearity, a Variance Inflation factor will be employed. The standard is such that where the value of less than 10, implies that the multicollinearity levels

can be tolerated. The absence of multicollinearity is evidenced where the VIF for predictor and dependent variables less than 3 whereas a VIF of greater than 3 implies an existence of multicollinearity. A value of more than 10 indicates an adverse problem of multicollinearity, (Myers,1990). In such a case, an elimination of certain variables can be necessary.

3.9.2 Heteroskedasticity Test

Heteroscedasticity test was done for purposes of examining if the error terms across periods are. The null hypothesis under this test is that residuals are homoscedastic. The findings reveal 0.2697 as p-value, therefore, there was no issues of heteroskedasticity. As such, the null hypothesis which stated that the residuals are homoscedastic was not rejected.

3.9.3 Test for Fixed and Random Effect

The study carried out the test for fixed and random effect which was based on hausman test. The test is done in order to choose between fixed or random effect model for purposes of estimation. The test is based on the null hypothesis that the preferred model is the random effect model. A p-value of 0.0012 was found which at 0.05 significance level implies the rejection of the null hypothesis that the random effect model is the preferred model. The fixed effect model was therefore used for purposes of estimation.

3.10 Ethical Considerations

In agreement with Mugenda and Mugenda (2013), ethical considerations are conducts, and rules that are followed in the course of research works. All researches are governed by laid down rules and regulations. Regulations and standards of research works in Kenya and Kenyatta University were observed. Kenyatta University provided an approval letter and NACOSTI also provided the research permit.

CHAPTER FOUR
RESEARCH FINDINGS AND DISCUSSIONS

4.1 Introduction

This chapter comprises of the data analysis, presentation and interpretation. The data analysis of the study is based on descriptive analysis, diagnostic tests and panel regression analysis. The interpretation of the regression outcome is further carried out with comparisons with previous studies while providing possible reasons for the results obtained.

4.2 Descriptive Analysis

This section presents the descriptive analysis of the study which contains the basic features of research variables. It presents statistics such as standard deviation, mean, min and maximum number of observation and as well as the total number of observation. These statistics aid in providing more understanding of the research variables. The descriptive statistics are therefore presented in Table 4.1.

Table 4.1 Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
Profitability	136	1.93	2.02	0.01	15.12
Firm Size	136	21.31	1.30	16.29	24.20
Capital Adequacy	136	0.12	0.08	-0.06	0.31
Liquidity	136	15.04	15.56	-85.48	64

Source: Study Data (2020)

Table 4.1 captures the descriptive analysis of the study which was based on the research variables. The descriptive statistics shows that all the research variables namely firms size, profitability, capital adequacy and liquidity had a total observation of 136 each which is an indication that the study was based on panel data. Profitability had a mean of 1.93 and

standard deviation of 2.02. Also, minimum and maximum values of 0.01 and 15.12 are attributed to profitability.

Firm size had mean of 21.31 and standard deviation of 1.30, this therefore indicates high fluctuations in firm size of deposit Taking SACCOs in Nairobi, Kenya over the study period. Capital adequacy had mean of 0.12 and standard deviation of 0.08 with a minimum of -0.06 and maximum of 0.31. Liquidity of Deposit Taking SACCOs in Nairobi Kenya had mean of 15.04 and standard deviation of 15.56 which indicates that over the study period, liquidity had minimal fluctuations.

4.3 Diagnostic Tests

This section presents the various diagnostic contains the various diagnostic tests that were carried out in the study. The diagnostic tests were test for multicollinearity, heteroskedasticity as well as Test for Fixed Effect and Random Effect.

4.3.1 Multicollinearity Test

Multicollinearity is considered as the scenario where the independent variables are highly correlated. To assess the multicollinearity levels of the predictor variables, the VIF was used. Results are presented in Table 4.2

Table 4.2: Multicollinearity Test Results

Variables	VIF	Remark
Firm Size	1.04	No Multicollinearity
Capital Adequacy	1.16	No Multicollinearity
Liquidity	1.12	No Multicollinearity

Source: Study Data (2020)

Table 4.2 provides the results of the VIF test for assessing the level of collinearity. The threshold is that for multicollinearity to be tolerated, VIF values of 1.04, 1.16 and 1.12 were

obtained for firm size, capital adequacy and liquidity respectively. The test had a mean VIF value of 1.107, therefore both individually and collectively, the research variables are not characterized by excessive collinearity levels. The variables are therefore in good condition for inferential analysis.

4.3.2 Heteroskedasticity Test

Heteroscedasticity test was done for purposes of examining if the error terms across periods are. The test was done using Breusch-Pagan technique and findings contained in Table 4.3.

Table 4.3: Heteroscedasticity Test Results

Breusch-Pagan / Cook-Weisberg test for heteroscedasticity		
Ho: Constant variance		
Variable: fitted values		
chi2(1)	=	1.22
Prob> chi2	=	0.2697

Source: Study Data (2020)

Table 4.3 contains the output from the heteroscedasticity test. The null hypothesis under this test is that residuals are homoscedastic. The findings reveal 0.2697 as p-value, therefore, there was no issues of heteroskedasticity. As such, the null hypothesis which stated that the residuals are homoscedastic was not rejected.

4.3.3 Test for Fixed Effect and Random Effect

The study carried out the test for fixed and random effect which was based on hausman test. The test is done in order to choose between fixed or random effect model for purposes of estimation.

Table 4.4 Hausman Test

The hausman test was carried out so as to select the best model for estimation between the fixed effect model and random effect model.

	Coefficients			
	(b) Fixed	(B) Random	(b-B) Difference	sqrt(diag(V_b-V_B)) S.E.
FirmSize	-.1364239	-.1405376	.0041137	.0087867
CapitalAde~y	.0118621	-.0658055	.0776676	.0306948
Liquidity	-.0262454	.0187415	-.0449869	.0126203

b = consistent under Ho and Ha; obtained from xtreg
 B = inconsistent under Ha, efficient under Ho; obtained from xtreg

Test: Ho: difference in coefficients not systematic

chi2(3) = (b-B)' [(V_b-V_B)^(-1)] (b-B)
 = 15.86
 Prob>chi2 = 0.0012

Source: Study Data (2020)

Table 4.4 presents the findings of the study on hausman test which is based on the null hypothesis that the preferred model is the random effect model. A p-value of 0.0012 was found which at 0.05 significance level implies the rejection of the null hypothesis that the random effect model is the preferred model. The fixed effect model was therefore used for purposes of estimation.

4.4 Regression Analysis

The inferential analysis of the study was based on panel regression analysis based where the fixed effect model was used. The study findings from the regression analysis are documented in Table 4.5.

Table 4.5 Regression Analysis Results

Profitability	Coef.	Std. Err.	T	P> z	[95% Conf. Interval]
Firm Size	-0.1364239	0.034133	-4.00	0.000	-0.2041597 -0.0686881
Capital Adequacy	0.0118621	0.0874064	0.14	0.892	-0.1615931 0.1853173

Liquidity	-0.0262454	0.0207793	-1.26	0.210	-0.0674813	0.0149905
_cons	4.217858	0.7794739	5.41	0.000	2.671017	5.764698

R²=0.1546

F statistics=5.97

Prob> chi2=0.0009

Source: Study Data (2020)

Table 4.5 contains the output of the inferential analysis which was done using panel regression analysis. An R squared of 0.1546 was found with an F statistics of 5.97. A p-value of 0.0000 was obtained which revealed that the model is significant therefore, firm size, capital adequacy and liquidity are key in predicting the financial performance of deposit taking SACCOs in Nairobi City County, Kenya. A constant value of 4.22 was found for the model thereby implying that in the absence of firm characteristics (firm size, capital adequacy and liquidity), the value of financial performance of deposit taking SACCOs in Nairobi City County, Kenya is 4.22.

4.5 Hypothesis Testing

The study was based on three null hypotheses which were formulated and tested in line with the various specific objectives of the study. The hypotheses are: firm size has no significant effect on profitability of deposit taking SACCOs in Nairobi City County, Kenya. Capital adequacy has no significant effect on profitability of deposit taking SACCOs in Nairobi City County, Kenya. Liquidity has no significant effect on profitability of deposit taking SACCOs in Nairobi City County, Kenya. The hypotheses were all tested at 0.05 level of significance.

4.5.1 Hypothesis One

The first specific objective was to examine the effect of firm size on profitability of deposit taking SACCOs in Nairobi City County, Kenya. In order to achieve this objective, a null

hypothesis was formulated which stated that firm size has no significant effect on profitability of deposit taking SACCOs in Nairobi City County, Kenya. A coefficient of -0.14 and a p-value of 0.0000 were obtained which is an indication that firm size had significant effect on profitability of deposit taking SACCOs in Nairobi City County, Kenya. The null hypothesis which stated that firm size has no significant effect on profitability of deposit taking SACCOs in Nairobi City County, Kenya was therefore rejected. Higher firm size implies more procedural activities in firms, as a result due to growing bureaucracies; the financial performance of deposit taking SACCOs can adversely be impacted.

The study findings correspond with those of previous empirical literature. Okumu and Oyugi (2016) examined variables which influenced the factors influencing performance of Kenyan SACCOs (Kisumu). Outcome indicated significant linkages of firm size and Sacco performances. It was concluded that it is important to enhance the asset base of Sacco as such to foster superior firm performances.

Kaguri (2013) studied firm specifics effect on life insurance firms' profits while focusing on Kenya. Specifically, results shows that firm size significant affect profitability of Insurance companies were however the research focuses and not SACCOs. Additionally, Onjala (2012) carried out an explanatory research in order to observe the key drivers of Kenya commercial banks' profits and found out that firm size had significant effects on ROA. Buyinza (2010) based on panel data methodology documented that sizes have strong influences on bank profitability.

4.5.2 Hypothesis Two

The second specific objective was to examine the effect of capital adequacy on profitability of deposit taking SACCOs in Nairobi City County, Kenya. In view of this objective, a null hypothesis was tested which stated that capital adequacy has no significant effect on

profitability of deposit taking SACCOs in Nairobi City County, Kenya. The regression output depicts a coefficient of 0.01 and p-value of 0.892. Therefore, capital adequacy had insignificant effect on profitability of deposit taking SACCOs in Nairobi City County, Kenya. Firms largely strive to meet up with the capital adequacy requirements as stipulated by SASRA. Firms upon reaching the minimum capital requirements strive to create additional buffers, thereby, increases in capitals does may not directly increase the profits of deposit taking SACCOs.

The study findings on the effect of capital adequacy on profitability of deposit taking SACCOs in Nairobi City County, Kenya concur with literature. Barus *et al.* (2017) examined the link between capital adequacy and Kenyan SACCOs profitability and documented that capitals positively and insignificantly influence on the profitability of Sacco in Kenya. Okumu and Oyugi (2016) researched on performances determinants of SACCOs in Kisumu county. The findings from the regression analysis show that capitals have weak impact on Sacco performances.

4.5.3 Hypothesis Three

The third specific objective was to examine the effect of liquidity on profitability of deposit taking SACCOs in Nairobi City County, Kenya. In order to achieve this objective, a null hypothesis was formulated which stated that liquidity no significant effect on profitability of deposit taking SACCOs in Nairobi City County, Kenya. The study findings reveal -0.02 and p-value of 0.210 as coefficient and p-value respectively. This notably indicates non significance therefore liquidity has insignificant effect on profitability of deposit taking SACCOs in Nairobi City County, Kenya. The null hypothesis was therefore not rejected at 0.00 significance level. SACCOs majorly source for income through the intermediation role of lending, higher liquidity levels imply lower loan uptake by customers, thus the

insignificant effect of liquidity on profitability of deposit taking SACCOs in Nairobi City County, Kenya.

The study findings on liquidity and profitability of deposit taking SACCOs in Nairobi City County, Kenya are in line with past studies. Wanjiru and Muturi (2016) researched on the variables impacting on SACCOs performances in Kiambu County. Regression output shows an inverse and insignificant link between liquidity and Sacco performances. A study was done by Onjala (2012) the determinant of bank profitability in Kenya. The research employed descriptive exploration with correlation and regression analyses were utilized in transforming data. Findings indicate that liquidity had insignificant influence on both ROA and ROE.

Buyinza (2010) did an empirical analysis on the profits of commercial banking institutions in SSA countries. 23 commercial banks in SSA were considered for the period 1999 to 2006. Panel data regression was used and outcome indicates that liquidity ratio has weak influences banking institutions' profits level. Notably, the effect of liquidity on financial performance may also be influenced by other firm characteristics of deposit taking SACCOs in Nairobi City County, Kenya which include their lending practices.

CHAPTER FIVE

SUMMARY, RECOMMENDATION AND CONCLUSION

5.1 Introduction

This chapter provides the conclusion, recommendations and summary which are informed by the study findings. The suggestions for additional studies are also contained in this section. These are informed by the study hypotheses as well as specific objectives.

5.2 Summary of the Study

SACCOs provide significant value addition to members as well as the GDP of countries. The transformation witnessed in the sub sector has been accompanied by challenges to the SACCOs. In order to sustain new developments, diverse resources are required so as to support growth. New legislations are being passed for the regulation and supervision of SACCOs in a move to safeguard the interests of members. However, fact on the ground show that SACCOs are still faced with several challenges such as insufficient capital funding, loan delinquency, assessment and exposure (risk) management, loss of member's confidence, poor governance, management inefficiency, poor investment decisions which leads to decline in profitability of SACCOS.

The study sought to establish the effect of firm characteristics and profitability of deposit taking SACCOS in Nairobi, Kenya. The specific objectives are to determine the effect of SACCO size, capital adequacy and liquidity on profitability of deposit taking SACCOS in Nairobi, Kenya. The current study utilized Market Power Theory, Capital Buffer Theory and Agency Theory to support the independent and dependent variables of the study. The study used causal research design. The target population is made up of all the licensed deposit taking SACCOS under SASRA in Nairobi County, Kenya for the period 2014 to 2017 which are 34 in number.

The study findings on the descriptive analysis indicate that firm size and profitability Deposit Taking SACCOs in Nairobi Kenya had high fluctuations whereas capital adequacy and liquidity had minimal fluctuations over the study period. The profitability of Deposit Taking SACCOs in Nairobi Kenya was found to be significantly influenced by firm size. The study found that capital adequacy had insignificant effect on profitability of deposit taking SACCOS in Nairobi, Kenya. The study also documented that liquidity had insignificant effect on profitability of deposit taking SACCOS in Nairobi, Kenya.

5.3 Conclusion

Based on the study findings from the panel regression analyses, various conclusions have been made. On the effect of firm size on profitability, the study concluded that firm size is key in influencing the profitability of Deposit Taking SACCOs in Nairobi Kenya. This can be linked to the notion that a growing firm entails more bureaucratic procedures which in turn hamper on profitability of Deposit Taking SACCOs in Nairobi Kenya.

However, with respect to the effect of capital adequacy on profitability, the study concluded that capital adequacy was not a key determinant of Deposit Taking SACCOs in Nairobi Kenya. Firms mostly strive to reach the minimum capital requirements and upon achieving that, they strive to add more buffers for purposes of absorbing shocks in the operating environment. Additionally, on the effect of liquidity on profitability, the study concluded that liquidity was not significant in predicting the profitability of deposit taking SACCOS in Nairobi, Kenya.

5.4 Policy Recommendations

Various policy recommendations have been derived which are informed by the study findings. Specifically, the policy recommendations are based on variables which significantly predict the profitability of deposit taking SACCOS in Nairobi, Kenya. The study concluded that firm size had a significant effect on profitability of deposit taking SACCOS in Nairobi, Kenya.

The study therefore recommends that deposit taking SACCOS should put in place a well-functioning structure in line with growing firm size. This should be done for purposes of eliminating the bureaucracies that comes along with a growing firm size which in turn will ensure the profitability of deposit taking SACCOS in Nairobi, Kenya.

5.5 Suggestions for Further Studies

The study focused on the effect of firm characteristics on the profitability of deposit taking SACCOS in Nairobi, Kenya. Further studies can focus on other institutions in the financial sector such commercial banks and Microfinance banks.

REFERENCE

- Almazari, A., & Alamri, A. (2017). The effect of capital adequacy on profitability. A comparative study between study between Samba and Saab bank of Saudi Arabia. *International Journal of Economics, Commerce and management*, 5(11),86-102.
- Barus, J.J., Muturi, W., Kibati, P., & Koima, J. (2017). Effect of capital adequacy on the financial performance of Savings and credit societies in Kenya. *American Journal of Finance*. Vol.1,Issue 4 No.1,pp 1-12.
- Chahayo, S. M., Bureti, P., & Juma. (2013). Analysis of Financial Mismatch in Cooperative Societies: A case Study of Kakamega County Kenya. *International Journal of Management Science and Technology*, 3-29.
- Chen, H., & Chen, T. J. (2003). Governance Structures in Strategic Alliances: Transaction Cost versus Resource-Based Perspective. *Journal of World Business*, 38(1), 1-14.
- Churk, J.P. (2015). Contributions of Savings and Credit Cooperative Society on Improving Rural Livelihood in Makungu ward Iringa, Tanzania. Proceedings of the Second European Academic Research Conference on Global Business, Economics, Finance and Banking.EAR15Swiss Conference. Retrieved from http://globalbizresearch.org/Swiss_Conference/pdf/Z550.pdf [on 3/3/2017]
- Dang, U. (2011).The CAMEL Rating System in Banking Supervision. A case Study.
- Dierickx, I., & Cool, K. (1989). Asset Stock Accumulation and Sustainability of Competitive Advantage. *Management Science*, 35(12), 1504-1511.
- Jensen, M. C., &Meckling, W. H. (1976). Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure. *Journal of Financial Economics*, 3(4), 305-360.
- Kaguri, A. (2013). *Relationship Between Firm Characteristics and Financial Performance of Life Insurance Companies in Kenya*, Doctoral dissertation, Doctoral dissertation, University of Nairobi.
- Kariuki, P.W., & Wafula, F.O., (2016). Capital Adequacy and Financial Performance of Deposit Taking Saving and Credit Cooperative Societies in Kenya, the *International Journal Of Business & Management*, 4 (9), 20-25.
- Kariuki, P.W., Muturi, W. M., &Ngugi, P.K., (2016). Asset Quality and Intermediation Efficiency: A Study of Deposit Taking Saving and Credit Cooperative Societies in Kenya, *Journal of Emerging Issues in Economics, Finance and Banking*, 5 (2), 1843-1859.
- Kimuyu, P. (1998). *Industrial Policies for the Twenty First Century-Productivity, Competitiveness and Export Participation by Manufacturing Enterprises in Kenya*. In IPAR Annual Conference held at Safari Park Hotel, Nairobi, and April 15-16.

- Kombo, D. K., & Tromp, D. L. (2006). *Proposal and Thesis Writing: An Introduction*. Nairobi: Paulines Publications Africa, 10-45.
- Lotto, J. (2016). Efficiency of capital adequacy requirement in reducing risk-taking behavior of Tanzanian commercial banks. *Research journal of finance and Accounting*, 7(22), 110-118.
- Makori, J., Munene, C., & Muturi, W. (2013). The Challenges Facing Deposit Taking Savings and Credit Cooperatives Societies Regulatory Compliance in Kenya: A Case Study of Gusii Region. *Interdisciplinary Journal of Contemporary Research in Business*, 1013-1081.
- Mudibo, E. K. (2005). *Corporate Governance in Co-operatives the East African Experience*. Conf. Pan-African Consultative Forum on Corporate Governance 2005, Dakar, Senegal.
- Muller, G.H., Steyn-Bruwer, B.W., & Hamman, W.D. (2012). What is the best way to predict financial distress of companies? *Leaders' lab Finance Agenda No 2*.
- Ndung'u, G. (2010). Orderly movement. *Business Post*, 1, 28-30.
- Njeri, C.M. (2017). Determinants of capital adequacy in Kenya's Sacco: A case study of deposit taking saccos in Nairobi. MBA dissertation, USIU.
- Okumu, O.J. & Oyugi, L., (2016). Factors Influencing Financial Performance Among Savings and Credit Cooperative Societies in Kisumu, Kenya, *International Journal of Current Research*, 8(5), 31293-31310.
- Omweri, K.L. (2015). Factors influencing financial sustainability of non-governmental organizations: a survey of NGOs in Nakuru county, Kenya. *International Journal of Economics, Commerce and Management*, 3(9), 704-744.
- Ondieki, A.N., Okioga, C., Okwena, D.K., & and Onsase, A. (2011). Assessment of the effect of external financing on financial performance of savings and credit cooperatives in Kisii Central District, Kenya, 382-399
- Onjala, V. N. (2012). Determinants of Financial Performance of Commercial Banks in Kenya Doctoral dissertation, University of Nairobi.
- Onyango, C. (2018). Effect of capital adequacy on the financial performance of deposit taking savings and credit societies in Meru County, Kenya. MBA Dissertation, University of Nairobi.
- SASRA, (2015) .The SACCO Societies (deposit – taking sacco business) regulations, Kenya Gazette Supplement, Government Printer, Nairobi, Kenya.
- SASRA.A. (2014). *Sacco Supervision Annual Report (Vol. 254)*.
- Wang, P., & Wafula, F. O. (2016). Capital Adequacy and Financial Performance of Deposit Taking Saving and Credit Cooperative Societies in Kenya,. *The international journal of business & management*, 4(9), 20–25.

- Wanjiru, N. A., & Muturi, W., (2016). Factors Affecting Financial Performance of Savings and Credit Co-Operative Societies: Case Study Kiambu County, *International Journal of Management and Commerce Innovations*, 3 (2), 197-205.
- Wanjohi, F. M., & Njeru, A. . (2016). Influence of the Level of Capital Adequacy on Credit Risk for Deposit Taking Saccos in Kenya. . *The Strategic Journal of Business & Change Management*, , 3(2), 920–935.
- Wanyoike, D. M., & Kenyatta, J. (2015). Assessment Of Credit Risk Management Practices On Financial Performance Among Deposit Taking Saccos In Nakuru East Sub County, Kenya . *IJMSS International Journal in Management*.

APPENDICES

Appendix I: List of Deposit Taking Saccos in Nairobi County, Kenya

NO	SACCO NAME
1	Afya SACCO
2	Airports SACCO
3	Asili SACCO
4	Chai SACCO
5	Chuna SACCO
6	Comoco SACCO
7	Harambee SACCO
8	Hazina SACCO
9	Jamii SACCO
10	Kenpipe SACCO
11	Kenversity SACCO
12	Kenya bankers SACCO
13	Kenya police SACCO
14	Kingdom SACCO
15	Magereza SACCO
16	Maisha bora SACCO
17	Mwalimu national SACCO
18	Mwito SACCO
19	Nacico SACCO
20	Nafaka SACCO
21	Naku SACCO
22	Nasefu SACCO
23	Nation SACCO
24	Orthodox SACCO
25	Safaricom SACCO
26	Sheria SACCO
27	Stima SACCO
28	Tembo SACCO
29	Ukulima SACCO
30	United Nations SACCO
31	Wanaanga SACCO
32	Wanandege SACCO
33	Waumini SACCO
34	Nyati SACCO

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Appendix II: Data Collection Guide

SACCO	Year	Return on Asset	Firm Size	Capital Adequacy	Liquidity
1	2014				
1	2015				
1	2016				
1	2017				